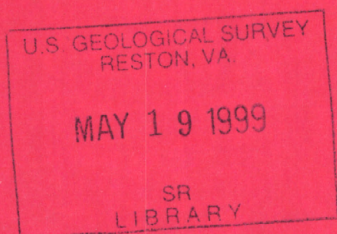
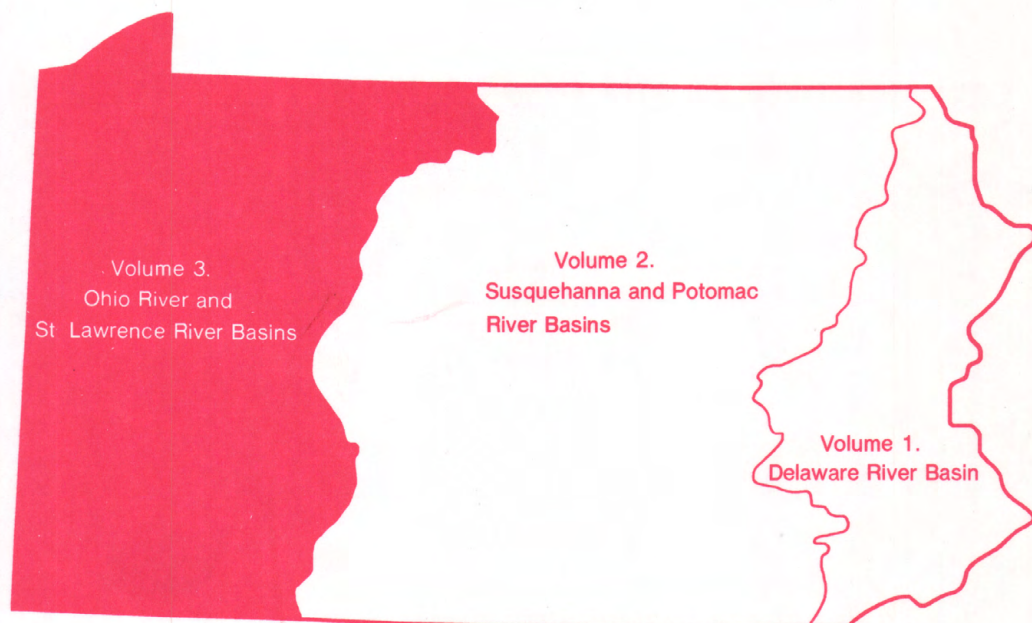


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Water Resources Data Pennsylvania Water Year 1997

Volume 3. Ohio River and St. Lawrence River Basins



U.S. GEOLOGICAL SURVEY WATER-DATA REPORT PA-97-3
Prepared in cooperation with the Pennsylvania Department
of Environmental Protection, the Pittsburgh District of
the U.S. Army Corps of Engineers, and with other State,
municipal, and Federal agencies



CALENDAR FOR WATER YEAR 1997

1996

OCTOBER							NOVEMBER							DECEMBER						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
		1	2	3	4	5						1	2	1	2	3	4	5	6	7
6	7	8	9	10	11	12	3	4	5	6	7	8	9	8	9	10	11	12	13	14
13	14	15	16	17	18	19	10	11	12	13	14	15	16	15	16	17	18	19	20	21
20	21	22	23	24	25	26	17	18	19	20	21	22	23	22	23	24	25	26	27	28
27	28	29	30	31			24	25	26	27	28	29	30	29	30	31				

1997

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

APRIL							MAY							JUNE						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
		1	2	3	4	5					1	2	3	1	2	3	4	5	6	7
6	7	8	9	10	11	12	4	5	6	7	8	9	10	8	9	10	11	12	13	14
13	14	15	16	17	18	19	11	12	13	14	15	16	17	15	16	17	18	19	20	21
20	21	22	23	24	25	26	18	19	20	21	22	23	24	22	23	24	25	26	27	28
27	28	29	30				25	26	27	28	29	30	31	29	30					

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U.S. DEPARTMENT OF THE INTERIOR
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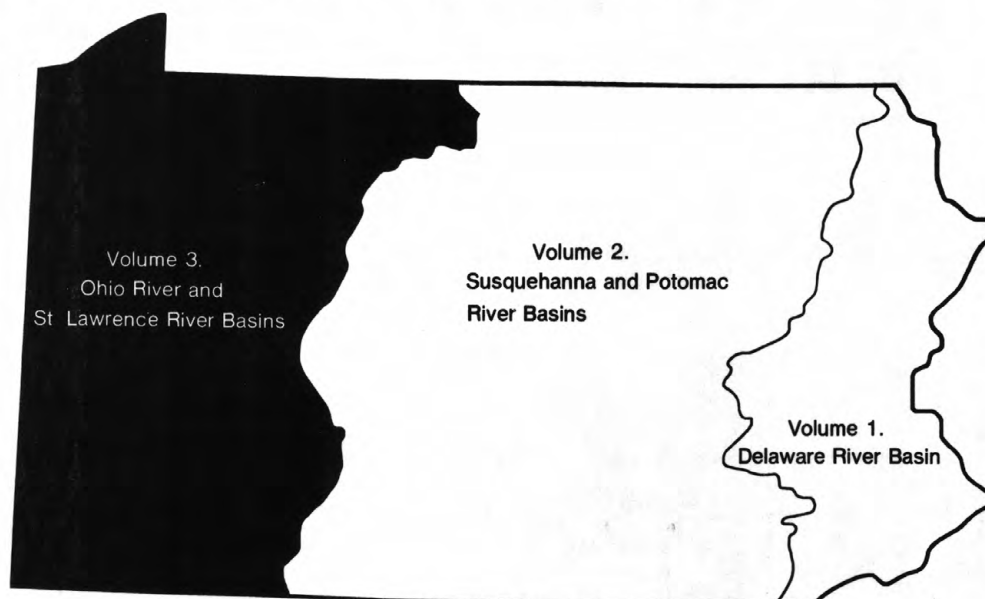
1998



Water Resources Data Pennsylvania Water Year 1997

Volume 3. Ohio River and St. Lawrence River Basins

by Martin B. Coll, Jr. and Raymond W. Siwicki



U.S. GEOLOGICAL SURVEY WATER-DATA REPORT PA-97-3
Prepared in cooperation with the Pennsylvania Department
of Environmental Protection, the Pittsburgh District of
the U.S. Army Corps of Engineers, and with other State,
municipal, and Federal agencies

PREFACE

This volume of the annual water resources 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, municipal, 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 River and Potomac River Basins
- Volume 3. Ohio River and St. Lawrence River Basins

Volume 3 was prepared in cooperation with the Commonwealth of Pennsylvania and other agencies under the general supervision of Gary N. Paulachok, District Chief, Pennsylvania District; Robert A. Hainly, Assistant District Chief for Hydrologic Surveillance and Data Management; Martin B. Coll Jr., Chief of the Hydrologic Surveillance Program, Pittsburgh, and Steven McAuley, Chief, Pittsburgh Project Office. It is the product of a team effort by dedicated personnel of the U.S. Geological Survey who collected, compiled, analyzed, verified, and organized 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:

B. Anderson	S. Coulson	W. Schachner
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13. ABSTRACT (Maximum 200 words) Water resources data for the 1997 water year for Pennsylvania consists of records of discharge and water quality of streams; contents and elevations of lakes and reservoirs; and water levels of ground-water wells. This report, Volume 3, includes records from the Ohio and St. Lawrence River Basins. Specifically, it contains: (1) discharge records for 63 continuous record streamflow-gaging stations and 18 partial-record and miscellaneous streamflow stations; (2) elevation and contents records for 11 lakes and reservoirs; (3) water-quality records for 10 streamflow-gaging stations and 18 partial-record stations; and (4) water-level records for 15 network observation wells. Additional water data were collected at various sites not involved in the systematic data-collection program and are published as miscellaneous measurements and analyses. These data, together with the data in Volume 1 and 2, represent that part of the National Water Data System operated by the U.S. Geological Survey and cooperating State, Municipal, Local, and Federal agencies in Pennsylvania.				
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CONTENTS

	Page
Preface.....	iii
List of surface-water stations, in downstream order, for which records are published.....	vii
List of ground-water wells, by county, for which records are published.....	ix
List of discontinued continuous-record surface-water discharge stations.....	x
List of discontinued continuous-record surface-water-quality stations.....	xiii
Pennsylvania District office locations and addresses.....	xiv
Introduction.....	1
Cooperation.....	1
Summary of hydrologic conditions.....	2
Streamflow.....	2
Ground water.....	3
Special networks and programs.....	5
Explanation of records.....	5
Station identification numbers.....	5
Downstream-order system.....	6
Latitude longitude system.....	6
Records of stage and water discharge.....	6
Data collection and computation.....	7
Data presentation.....	7
Station manuscript.....	8
Data table of daily mean values.....	9
Statistics of monthly mean data.....	9
Summary statistics.....	9
Identifying estimated daily discharge.....	10
Accuracy of the records.....	10
Other records available.....	10
Records of surface-water quality.....	10
Classification of records.....	10
Arrangement of records.....	11
On-site measurements and sample collection.....	11
Water temperature.....	11
Sediment.....	11
Laboratory measurements.....	12
Data presentation.....	12
Remark codes.....	12
Water quality-control data.....	13
Records of ground-water levels.....	13
Data collection and computation.....	13
Data presentation.....	14
Data table of water-levels.....	14
Records of ground-water quality.....	14
Data collection and computation.....	14
Data presentation.....	14
Access to USGS water data.....	15
Definition of terms.....	16
Publications on Techniques of Water-Resources Investigations.....	23
Special Notes, Remark Codes, and Selected Constituent definitions.....	29
Station records, surface-water	
Continuous surface-water and water-quality station records.....	32
Discharge at partial-record stations and miscellaneous sites	
Crest-stage partial-record stations	270
Miscellaneous sites.....	272
Analyses of streamflow samples collected at special-study sites	
Synoptic survey of streams in the Lower Cheat River Basin, WV.....	274
Analyses of streambed sediments and fish tissue at special study sites.....	294
Station records, ground water	
Ground-water levels.....	310
Ground-water data collected at special-study sites	
Allegheny and Monongahela River Basin NAWQA Project.....	325
Index.....	337

ILLUSTRATIONS

	<u>Page</u>
Figure 1. Comparison of monthly and annual mean discharges during water 1997 with the medians of monthly and annual mean discharges during water years 1961-90.....	2
2. Relation between mean 1997 seasonal water levels and long-term water levels.....	4
3. System for numbering wells and miscellaneous sites.....	6
4-9. Maps showing:	
4. Location of continuous-record data-collection stations and network observation wells.....	26
5. Location of partial-record data-collection stations.....	27
6. Location of surface-water-quality fixed network in the Allegheny-Monongahela River Basin NAWQA Study Unit.....	28
7. Location of sites sampled in streams of the lower Cheat River Basin, WV...	275
8. Location and local identification number of streambed sediments and fish tissue collection sites in the Allegheny-Monongahela River Basin NAWQA Study Unit.....	294
9. Location and extent of study-unit survey in the Glaciofluvial Sediments of the Appalachian Plateau Physiographic Province.....	325
10. Location and local identification number of wells sampled in the subunit of Glaciofluvial Sediments of the Appalachian Plateau Physiographic Province.....	326

TABLES

Table 1. Pesticide analyzed in groundwater.....	328
2. Volatile organic compounds analyzed in groundwater.....	329

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

(Letters after station name designates type of data: (d) discharge, (c) chemical, (sc) specific conductance, (t) water temperature, (b) biological, (e) elevation, gage heights, or contents.

	Station number	Page
OHIO RIVER BASIN		
Allegheny River (head of Ohio River) at Port Allegany (d).....	03007800	32
Allegheny River at Eldred (d,b).....	03010500	34
OSWAYO CREEK BASIN		
Oswayo Creek at Shinglehouse (d).....	03010655	36
Allegheny River at Salamanca, NY (d).....	03011020	38
KINZUA CREEK BASIN		
Kinzua Creek near Guffey (d).....	03011800	40
CONEWANGO CREEK BASIN		
Lakes and Reservoirs in Allegheny River Basin (e).....		58
Conewango Creek at Russell (d,b).....	03015000	42
BROKENSTRAW CREEK BASIN		
Brokenstraw Creek at Youngsville (d).....	03015500	44
EAST HICKORY CREEK BASIN		
East Hickory Creek near Queens (d,c,t,b).....	03015795	46
Allegheny River at West Hickory (d).....	03016000	56
OIL CREEK BASIN		
Oil Creek at Rouseville (d).....	03020500	60
FRENCH CREEK BASIN		
French Creek near Wattsburg (d).....	03021350	62
Lakes and Reservoirs in French Creek Basin (e).....		73
French Creek at Meadville (d,b).....	03023100	64
French Creek at Utica (d,c,t,b).....	03024000	66
Allegheny River at Franklin (d).....	03025500	74
CLARION RIVER BASIN		
East Branch Clarion River:		
Sevenmile Run near Rasselas (d).....	03026500	76
Lake in Clarion River Basin (e).....		78
West Branch Clarion River at Wilcox (d).....	03028000	80
Clarion River at Cooksburg (d).....	03029500	82
Clarion River near Piney (d).....	03030500	84
Allegheny River at Parker (d).....	03031500	86
REDBANK CREEK BASIN		
Redbank Creek at St. Charles (d).....	03032500	88
MAHONING CREEK BASIN		
Mahoning Creek at Punxsutawney (d).....	03034000	90
Little Mahoning Creek at McCormick (d).....	03034500	92
Allegheny River at Kittanning (d).....	03036500	94
CROOKED CREEK BASIN		
South Branch Plum Creek at Five Points (d,c,sc,t,b).....	03037350	96
Crooked Creek at Idaho (d).....	03038000	112
KISKIMINETAS RIVER BASIN		
Stonycreek River (head of Kiskiminetas River):		
Bens Creek:		
North Fork Bens Creek at North Fork Reservoir (d).....	03039925	114
Stonycreek River at Ferndale (d,c,sc,ph,t,b).....	03040000	116
Conemaugh River (continuation of Stonycreek River) at Seward (d).....	03041500	128
Blacklick Creek at Josephine (d).....	03042000	130
Lake in Kiskiminetas River Basin (e).....	03042260	132
Two Lick Creek:		
Yellow Creek near Homer City (d).....	03042280	134
Two Lick Creek at Graceton (d).....	03042500	136
Loyalhanna Creek at Kingston (d).....	03045000	138
Kiskiminetas River at Vandergrift (d).....	03048500	140
BUFFALO CREEK BASIN		
Buffalo Creek near Freeport (d).....	03049000	142
Allegheny River at Natrona (d).....	03049500	144
Allegheny River at New Kensington (c,t,b).....	03049625	146
DEER CREEK BASIN		
Deer Creek near Dorseyville (d,c,sc,t,b).....	03049646	152
PINE CREEK BASIN		
Pine Creek:		
Little Pine Creek near Etna (d).....	03049800	176

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

	Station number	Page
<u>OHIO RIVER BASIN--Continued</u>		
<u>MONONGAHELA RIVER BASIN</u>		
<u>CHEAT RIVER BASIN</u>		
Cheat River near Mount Nebo, WV (d,c,sc,ph,t,b).....	03070350	180
Dunkard Creek at Shannopin (d,c,sc,ph,t,b).....	03072000	192
Monongahela River near Masontown (d).....	03072655	204
Redstone Creek at Waltersburg (d).....	03074500	206
Monongahela River at Elizabeth (d).....	03075070	208
Lakes and Reservoirs in Monongahela Basin (e).....		178, 241
<u>YOUGHIOGHENY RIVER BASIN</u>		
Youghiogheny River at Friendsville, MD (d).....	03076500	210
Casselman River at Grantsville, MD (d).....	03078000	212
Casselman River at Markleton (d).....	03079000	214
Laurel Hill Creek at Ursina (d,b).....	03080000	216
Youghiogheny River below Confluence (d).....	03081000	222
Youghiogheny River at Connellsville (d).....	03082500	224
Youghiogheny River at Sutersville (d,c,t,b).....	03083500	226
Monongahela River at Braddock (d,c,t,b).....	03085000	234
<u>Ohio River:</u>		
<u>CHARTIERS CREEK BASIN</u>		
Chartiers Creek at Carnegie (d).....	03085500	242
Ohio River at Sewickley (d).....	03086000	244
<u>BEAVER RIVER BASIN</u>		
<u>Mahoning River (head of Beaver River):</u>		
Shenango River at Pymatuning Dam (d).....	03101500	246
Little Shenango River at Greenville (d).....	03102500	248
Shenango River near Transfer (d).....	03102850	250
Beaver River at Wampum (d).....	03105500	252
Connoquenessing Creek near Zelienople (d).....	03106000	254
<u>Slippery Rock Creek:</u>		
Muddy Creek near Portersville (d).....	03106300	256
Slippery Rock Creek at Wurtemburg (d).....	03106500	258
Beaver River at Beaver Falls (d).....	03107500	260
Lakes and Reservoirs in Beaver River Basin (e).....		262
<u>RACCOON CREEK BASIN</u>		
Raccoon Creek at Moffatts Mill (d).....	03108000	264
<u>STREAMS TRIBUTARY TO LAKE ERIE</u>		
Conneaut Creek at Conneaut, Ohio (d).....	04213000	266
<u>Elk Creek:</u>		
Brandy Run near Girard (d).....	04213075	268
<u>Discharge at partial-record stations and miscellaneous sites</u>		
Crest-stage partial-record stations.....		270
Miscellaneous sites.....		272
<u>Analyses of streamflow samples collected at special-study sites</u>		
Synoptic survey of Lower Cheat River Basin, WV.....		274
Analyses of streambed sediments and fish tissue at special-study sites.....		294

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

GROUND-WATER LEVELS

	Page
<u>ALLEGHENY COUNTY</u>	
Well 403734080063001 Local number AG 700.....	310
<u>BEAVER COUNTY</u>	
Well 403006080252301 Local number BV 156.....	311
<u>BUTLER COUNTY</u>	
Well 410501079524401 Local number BT 311.....	312
<u>CRAWFORD COUNTY</u>	
Well 413542080245002 Local number CW 413.....	313
<u>ELK COUNTY</u>	
Well 412458078324601 Local number EK 108.....	314
<u>ERIE COUNTY</u>	
Well 415607080044601 Local number ER 82.....	315
<u>FAYETTE COUNTY</u>	
Well 394843079351401 Local number FA 17.....	316
<u>FOREST COUNTY</u>	
Well 412823079030601 Local number FO 11.....	317
<u>GREENE COUNTY</u>	
Well 394655080014301 Local number GR 118.....	318
<u>LAWRENCE COUNTY</u>	
Well 410538080280801 Local number LA 1201.....	319
<u>MERCER COUNTY</u>	
Well 412350080223701 Local number MR 1364.....	320
<u>SOMERSET COUNTY</u>	
Well 400008079142801 Local number SO 2.....	321
<u>WARREN COUNTY</u>	
Well 414159079213601 Local number WR 50.....	322
<u>WASHINGTON COUNTY</u>	
Well 400233080261301 Local number WS 155.....	323
<u>WESTMORELAND COUNTY</u>	
Well 402138079031802 Local number WE 300.....	324
<u>GROUND-WATER DATA COLLECTED AT SPECIAL-STUDY SITES</u>	
Allegheny and Monongahela River Basin NAWQA project.....	325

WATER RESOURCES DATA - PENNSYLVANIA, 1997

DISCONTINUED CONTINUOUS-RECORD SURFACE-WATER DISCHARGE STATIONS

The following continuous-record surface-water discharge stations (listed in downstream order) 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)
OHIO RIVER AND ST. LAWRENCE RIVER BASINS			
Newell Creek near Port Allegany	03008000	7.79	1965-78
Allegheny River at Larabee	03010000	530	1920-21 1925-39
Kinzua Creek at Dewdrop	03012000	171	1909-16
Allegheny River at Kinzua Dam	03012550	2,180	1935-91
Jackson Run near North Warren	03015280	12.8	1962-78
Allegheny River at Warren	03015310*	3,131	1988-94
Tionesta Creek at Sheffield	03016500	128	1941-46
South Branch Tionesta Creek at Barnes	03017000	85.3	1941-46
Tionesta Creek at Lynch	03017500*	233	1939-79
Tionesta Creek at Mayburg	03018000	307	1941-46
Tionesta Creek at Butler Bridge (near Nebraska)	03018500	420	1919-23
Tionesta Creek at Nebraska	03019000	469	1909-11 1923-40
Tionesta Creek at Tionesta Dam	03020000	479	1940-91
Oil Creek near Rouseville	03021000	315	1909-32
West Branch French Creek near Lowville	03021410	52.3	1975-93
French Creek at Carters Corners	03021500	208	1910-71
French Creek near Union City	03021520	221	1972-91
Little Conneauttee Creek near McKean	03021700	3.60	1960-78
French Creek at Venango	03022000*	597	1938-46
French Creek at Saegerstown	03022500	629	1921-39
Woodcock Creek at Blooming Valley	03022540	31.1	1974-95
Woodcock Creek at Woodcock Creek Dam	03022554	45.6	1974-91
Cussewago Creek near Meadville	03023000	90.2	1910-38
French Creek at Carlton	03023500	998	1908-25
Sugar Creek at Wyattville	03024500	153	1910-16
Sugar Creek at Sugar Creek	03025000*	166	1932-79
Patchel Run near Franklin	03025200	5.69	1967-78
East Branch Clarion River at East Branch Clarion River Dam	03027500	73.2	1948-91
Clarion River at Johnsonburg	03028500	204	1945-95
Clarion River at Ridgway	03029000*	303	1940-53

WATER RESOURCES DATA - PENNSYLVANIA, 1997

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

Station name	Station number	Drainage area (mi ²)	Period of record (water years)
OHIO RIVER AND ST. LAWRENCE RIVER BASINS			
Toms Run at Cooksburg	03029400	12.6	1959-78
Clarion River near Clarion	03030000	930	1919-23
Clarion River at St. Petersburg	03031000	1,246	1941-53 1973-75
Big Run near Sprinkle Mills	03031950	7.38	1963-81
Allegheny River near Rimer	03033000	8,389	1938-45
Stump Creek at Cramer	03033500	22.1	1942-46
Mahoning Creek at Dayton	03035000	321	1920-40
Mahoning Creek at Mahoning Creek Dam	03036000	344	1938-91
Crooked Creek at Creekside	03037000	67.6	1942-46
South Branch Plum Creek at Willet	03037500	30.0	1941-46
Crooked Creek at Crooked Creek Dam	03039000	278	1909-91
Clear Run near Buckstown	03039200	3.68	1964-78
Stony Creek at Hollsopple	03039500	244	1937-40
Little Conemaugh River at East Conemaugh	03041000	183	1939-95
Little Yellow Creek near Strongstown	03042200	7.36	1960-78 1986-88
Yellow Creek near Penn Run	03042250	50.4	1963-67
Blacklick Creek at Blacklick	03043000	390	1908-51
Conemaugh River at Tunnelton	03044000	1,358	1939-91
Loyalhanna Creek at New Alexandria	03045500	265	1919-23 1925-40
Loyalhanna Creek at Loyalhanna Dam	03047000	292	1939-91
Kiskiminetas River at Avonmore	03047500	1,723	1908-37
Monongahela River at Point Marion	03063000	2,720	1936-55
Stony Fork Tributary near Gibbon Glade	03070420	0.93	1977-94
Stony Fork near Elliottsville	03070455	7.44	1977-85
Monongahela River at Greensboro	03072500	4,367 ^a	1938-95
Georges Creek at Smithfield	03072590	16.3	1963-78
Tenmile Creek near Clarksville	03072840	133	1968-79
South Fork Tenmile Creek at Jefferson	03073000	180	1931-95
Dunlap Creek at Allison	03074000	33.1	1942-51
Lick Run at Hopwood	03074300	3.80	1966-78

^a Formerly published as 4,407.

WATER RESOURCES DATA - PENNSYLVANIA, 1997

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

Station name	Station number	Drainage area (mi ²)	Period of record (Water years)
OHIO RIVER AND ST. LAWRENCE RIVER BASINS			
Youghiogheny River at Youghiogheny River Dam	03077500	436	1939-91
Big Piney Run near Salisbury	03078500	24.5	1932-70
Youghiogheny River at Ohio Pyle	03081500	1,062	1927-50
Poplar Run near Normalville	03082200	9.27	1961-78
Green Lick Run at Green Lick Reservoir	03083000	3.07	1941-79
Abers Creek near Murrysburg	03084000	4.39	1949-93
Turtle Creek at Trafford	03084500	55.9	1920-52
Chartiers Creek at Crafton	03085500	270	1971-75
Big Sewickley Creek near Ambridge	03086100	15.6	1967-78
Shenango River near Turnersville	03100000	152	1912-22
Sugar Run at Pymatuning Dam	03101000	9.34	1934-55
Shenango River near Jamestown	03102000	181	1919-34
Pymatuning Creek near Orangeville	03103000	169	1914-23 1925-63
Shenango River at Sharpsville	03103500	584	1938-91
Shenango River at Sharon	03104000	608	1910-38
Shenango River at New Castle	03104500*	792	1910-11 1912-34
Cool Spring Creek near Jackson Center	03104580	13.0	1961-68
Harthegig Run near Greenfield	03104760	2.26	1968-81
Neshannock Creek at Eastbrook	03105000	228	1918-23
Wolf Creek near Slippery Rock	03106140	86.6	1976-82
Ohio River at Montgomery Island Dam	03108500	22,960 ^b	1941-51
Brush Run near Buffalo	03111150	10.3	1960-78 1982-85
Enlow Fork near West Finley	03111585	38.1	1979-85
Raccoon Creek near West Springfield	04213040	2.53	1969-95

^b About.

WATER RESOURCES DATA - PENNSYLVANIA, 1997

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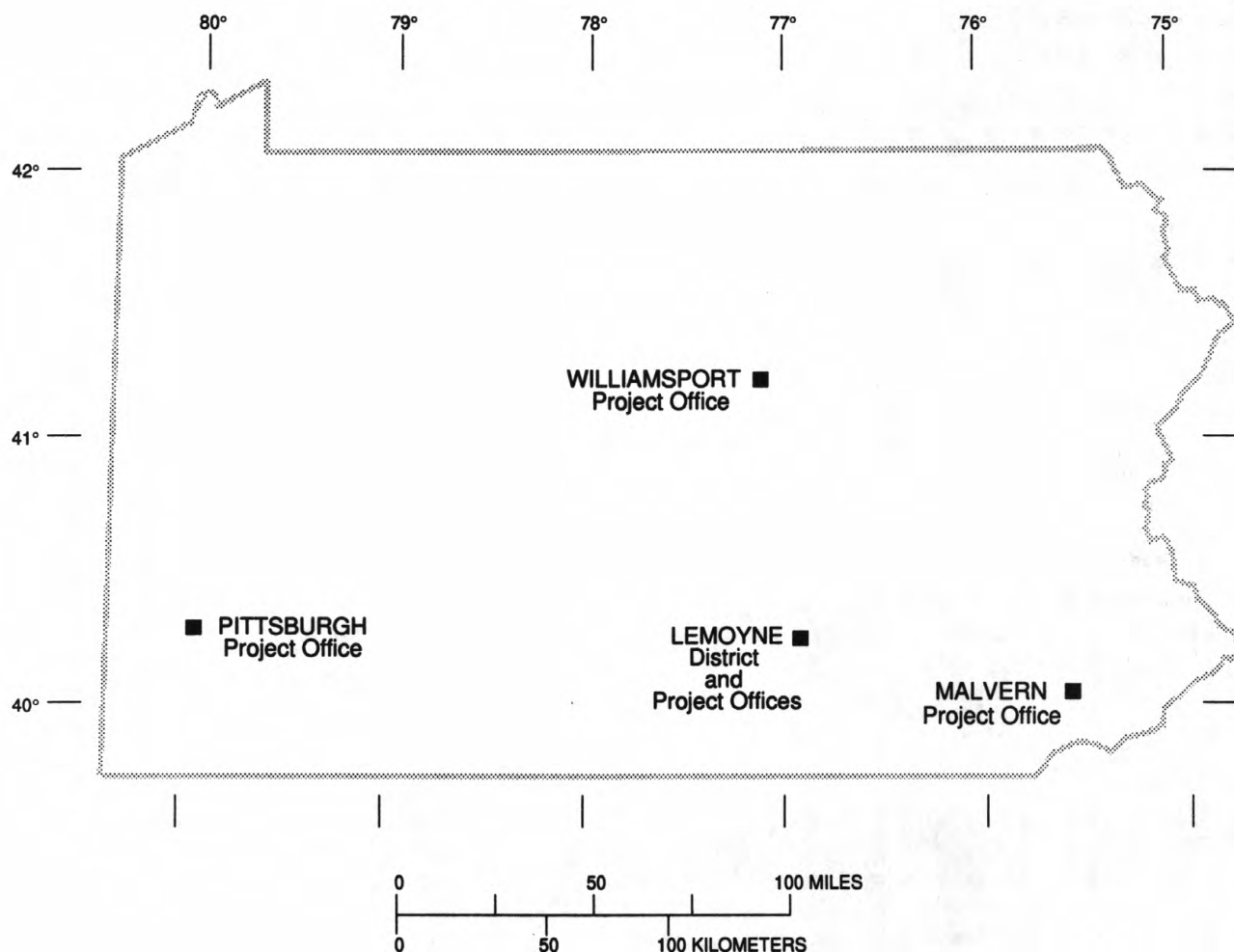
DISCONTINUED CONTINUOUS-RECORD SURFACE-WATER-QUALITY STATIONS

The following stations were discontinued as continuous-record surface-water-quality stations. Daily records of water temperature, specific conductance, pH, or suspended sediment concentration were collected and published for the period shown for each station.

The following abbreviations are used to identify the record type: Sc (specific conductance); pH (pH); Temp (water temperature); Sed (sediment concentration and discharge).

Station name	Station number	Drainage area (mi ²)	Type of record	Period of record (Water years)
OHIO RIVER AND ST. LAWRENCE RIVER BASINS				
Brokenstraw Creek at Youngsville	03015500	321	Sed.	1968-70
Oil Creek at Rouseville	03020500	300	Sed.	1970-73
French Creek at Utica	03024000	1,028	Sed.	1971-72
Sugar Creek at Sugarcreek	03025000	166	Sed.	1971-72
Clarion River at Cooksburg	03029500	807	Sed.	1971-73
Redbank Creek at St. Charles	03032500	528	Sed.	1968-70 1976-79
Beaver Run near Troutville	03033222	2.21	Sed.	1979-81
East Branch Mahoning Creek near Big Run	03033225	29.6	Sed.	1979-81
Stonycreek River at Ferndale	03040000	451	Sed., Temp.	1978-79
Loyalhanna Creek at Kingston	03045000	172	Sed.	1970-77
Allegheny River at New Kensington	03049625	11,500	Sed.	1976-79
Stony Fork near Farmington	03070415	2.50	Sed.	1980-81
Stony Fork Tributary near Gibbon Glade	03070420	0.93	Sed., Temp., S.C., pH	1977-88
Stony Fork near Elliottsville	03070455	7.44	Sed., Temp., S.C., pH	1977-85
Whiteley Creek near Kirby	03072670	5.95	Sed.	1979-82
South Fork Tenmile Creek at Jefferson	03073000	180	Sed.	1968-69
Castle Run at Clarksville	03073030	6.21	Sed.	1979-81
Big Meadow Run at Ohiopyle	03081600	35.9	Temp., S.C., pH	1988
Indian Creek at Jones Mills	03082020	17.4	Sed., Temp., S.C., pH	1986-87
Champion Run at Melcroft	03082120	13.8	Sed.	1985-87
Poplar Run near Normalville	03082190	8.83	Sed., Temp., S.C., pH	1986-89
Indian Creek at White Bridge	03082237	91.2	Temp., S.C., pH	1985-87
Monongahela River at Braddock	03085000	7,337	Sed.	1973-79
Enlow Fork near West Finley	03111585	38.1	Sed.	1979-85

PENNSYLVANIA DISTRICT OFFICE LOCATIONS AND ADDRESSES



District and Project Offices:
U.S. Geological Survey
Water Resources Division
 840 Market Street
 Lemoyne, PA 17043-1586
 (717) 730-6900
 FAX (717) 730-6997

Williamsport Project Office:
U.S. Geological Survey
Water Resources Division
 Hepburn Plaza
 439 Hepburn Street
 Williamsport, PA 17701
 (717) 323-7127
 FAX (717) 323-2137

Pittsburgh Project Office:
U.S. Geological Survey
Water Resources Division
 1000 Church Hill Road
 Pittsburgh, PA 15205
 (412) 490-3800
 FAX (412) 490-3828

Malvern Project Office:
U.S. Geological Survey
Water Resources Division
 Great Valley Corporate Center
 111 Great Valley Parkway
 Malvern, PA 19355
 (610) 647-9008
 FAX (610) 647-4594

WATER RESOURCES DATA - PENNSYLVANIA, 1997

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 River and Potomac River Basins; and Volume 3, the Ohio River and St. Lawrence River Basins.

This report, Volume 3, contains: (1) discharge records for 63 continuous-record streamflow-gaging stations, 18 partial-record and miscellaneous streamflow sites; (2) elevation and contents records for 11 lakes and reservoirs; (3) water-quality records for 10 streamflow-gaging stations; and (4) water-level records for 15 ground-water network observation wells.

Publications similar to this report are published annually by the Geological Survey for all States. For the purpose of archiving, these official reports have an identification number consisting of the two-letter State abbreviation, the last two digits of the water year, and the volume number. For example, this volume is identified as "U.S. Geological Survey Water-Data Report PA-97-3." These water-data reports, beginning with the 1971 water year, are for sale as paper copy or microfiche by the National Technical Information Service, U.S. Department of Commerce, Springfield, VA 22161.

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

Prior to the introduction of this series and for several years concurrent with it, water-resources data for Pennsylvania were published in U.S. Geological Survey Water-Supply Papers. Data on stream discharge and stage and on lake or reservoir contents and stage, through September 1960, were published annually under the title "Surface-Water Supply of the United States," which was released in numbered parts as determined by natural drainage basins. For the 1961-70 water years, 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 under the title "Ground-Water Levels in the United States." The above mentioned Water-Supply Papers may be consulted in the libraries of the principal cities of the United States and may be purchased from U.S. Geological Survey at USGS Information Services, Box 25286, Denver, CO 80225.

Information for ordering specific reports may be obtained from the Pennsylvania District Office at the address on the back of the title page or by phoning the Scientific and Technical Products Section at (717) 730-6940. Information on the availability of unpublished data or statistical analyses may be obtained from the District Hydrologic Surveillance Program at (717) 730-6900, or FAX (717) 730-6997.

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 acknowledged in station manuscripts. Organizations that assisted in collecting data for this report through cooperative agreements with the Survey are listed below.

The Commonwealth of Pennsylvania Department of Environmental Protection, James M. Seif, Secretary through the following:

Office of Water Management, Hugh V. Archer, PhD, Deputy Secretary;
Bureau of Water Supply Management, Glenn E. Maurer, Director;

Indiana County Municipal Authority, Michael Duffalo, Executive Director.

Harmony Water Authority, Thomas Grech, Chairman.

New York State Department of Environmental Conservation, John P. Cahill, Commissioner.

Federal Energy Regulatory Commission Licensee:
Pennsylvania Electric Company.

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

Corps of Engineers, U.S. Army, in collecting records for 42 gaging stations and 2 crest-stage gages.

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

The following organizations aided in collecting records: Allegheny Power Service Corp.; Latrobe Municipal Authority; and Pennsylvania Electric Co.

WATER RESOURCES DATA - PENNSYLVANIA, 1997

SUMMARY OF HYDROLOGIC CONDITIONS

Streamflow

Streamflows in the Upper Ohio and St. Lawrence River Basins during water year 1997 were above normal¹. The 1997 annual mean discharge was 109 percent of the median of 1961-90 annual mean discharges at the Ohio River index gaging station-Oil Creek at Rouseville, PA, 03020500. The monthly mean discharges were below normal for the month of April, normal for the months of January, March, May June, July, August, September, and above normal for the months of October, November, December, and February.

A comparison of the monthly and yearly mean discharge during the 1997 water year with that of the 1961-90 reference period for Oil Creek at Rouseville, Pa., is shown in figure 1.

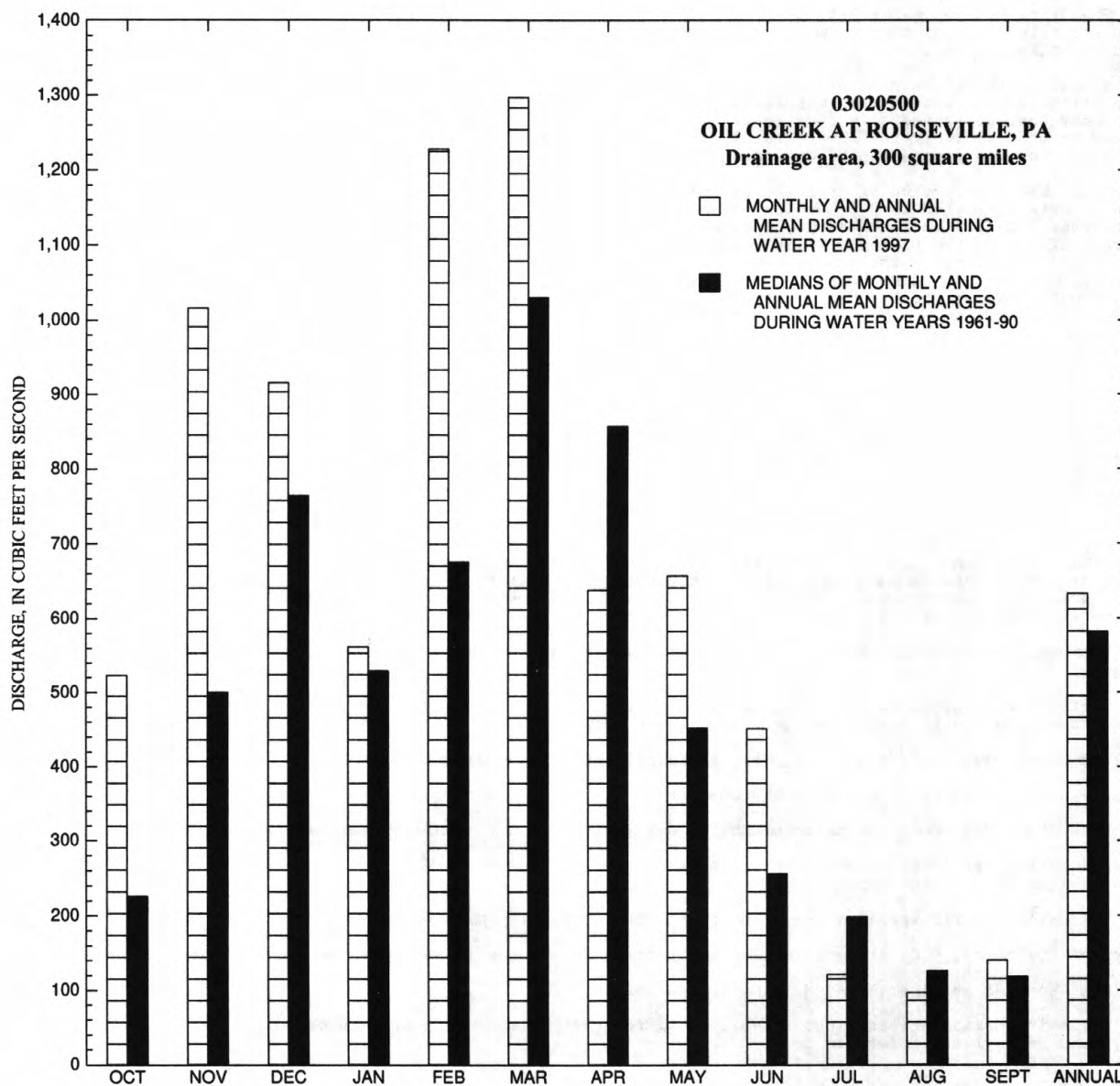


FIGURE 1.--COMPARISON OF MONTHLY AND ANNUAL MEAN DISCHARGES DURING WATER 1997 WITH THE MEDIANS OF MONTHLY AND ANNUAL MEAN DISCHARGES DURING WATER YEARS 1961-90.

1. Above normal--greater than 75 percent quartile discharge; Normal--between 75 percent quartile and 25 percent quartile discharge; and below normal--below 25 percent quartile discharge.

WATER RESOURCES DATA - PENNSYLVANIA, 1997Ground Water

During the 1997 water year, ground-water levels reached annual highs in most observation wells during the late winter or spring. Ground-water levels in most observation wells during the 1997 water year reached annual lows during the late summer of 1997.

The seasonal distribution of water levels for 14 network observation wells during the 1997 water year is shown in figure 2. Water levels during the 1997 water year were averaged by season and compared to the long-term water levels for these seasons. Long-term water levels were calculated from records ranging from 15 to 60 years in length. The water-level records for the Elk County well (EK-108) are published in this report, but are not used in the seasonal distribution evaluation. Water levels at the Elk County well were adversely affected by land use activities and are inappropriate for seasonal evaluation.

In the fall of 1996, seasonal water levels were much-above normal in ten wells, above normal in one well, and normal in three wells. During the winter and spring of 1997, seasonal ground-water levels continued to be normal, above normal, or much-above normal (fig. 2). These high ground-water conditions declined through the summer of 1997 during a period of below-normal precipitation in most of western Pennsylvania. Water levels at only two wells were much-above normal in comparison to long-term summer water levels. Ground-water levels during the summer of 1997 at three wells were above normal and ground-water levels were normal at seven wells.

WATER RESOURCES DATA - PENNSYLVANIA, 1997

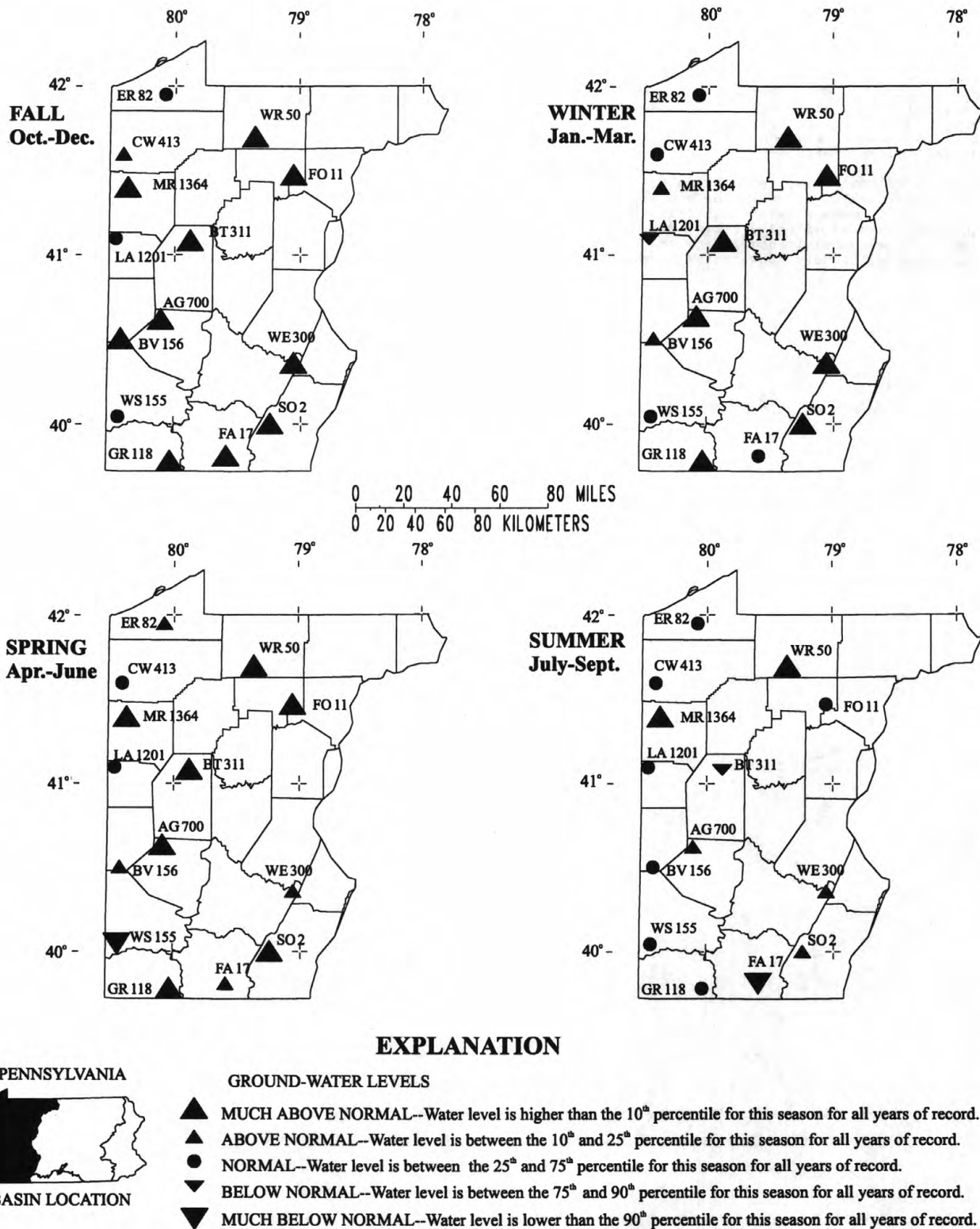


Figure 2.--Relation between 1997 seasonal water levels and long-term water levels. [Seasonal percentile values were determined by ranking the average monthly water levels for each month in the season from highest to lowest for all years of record and averaging the ranks for the three months. A water level that is higher than the seasonal 10th percentile value would be expected to occur only once in a ten-year period. Conversely, a water level that is lower than the seasonal 90th percentile value also would be expected to occur only once during a ten-year period.]

WATER RESOURCES DATA - PENNSYLVANIA, 1997

SPECIAL NETWORKS AND PROGRAMS

Hydrologic Bench-Mark Network is a network of 50 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. There are no stations in the Ohio and St. Lawrence Basins in Pennsylvania participating in this program.

The **National Stream-Quality Accounting Network (NASQAN)** monitors the water quality of large rivers within four of the Nation's largest river basins--the Mississippi, Columbia, Colorado, and Rio Grande. The network consists of 39 stations. Samples are collected with sufficient frequency that the flux of a wide range of constituents can be estimated. The objective of NASQAN is to characterize the water quality of these large rivers by measuring concentration and mass of a wide range of dissolved and suspended constituents, including nutrients, major ions, dissolved and sediment-bound heavy metals, common pesticides, and inorganic and organic forms of carbon. This information will be used (1) to describe the long-term trends and changes in concentration and transport of these constituents; (2) to test findings of the National Water-Quality Assessment Program (NAWQA); (3) to characterize processes unique to large-river systems such as storage and re-mobilization of sediments, and chemicals for assessing human effects on the world's oceans and for determining global cycles of carbon, nutrients, and other chemicals. There are no stations in the Ohio or St. Lawrence River Basins in Pennsylvania currently participating in this program.

The **National Atmospheric Deposition Program/National Trends Network (NADP/NTN)** provides continuous measurement and assessment of the chemical climate of precipitation throughout the United States. As the lead federal agency, the USGS works together with over 100 organizations to accomplish the following objectives; (1) Provide a long-term, spatial and temporal record of atmospheric deposition generated from a network of 191 precipitation chemistry monitoring sites, (2) Provide the mechanism to evaluate the effectiveness of the significant reduction in SO₂ emissions that began in 1995 as implementation of the Clean Air Act Amendments (CAAA) occurred, and (3) Provide the scientific basis and nationwide evaluation for implementation of the Phase II CAAA emission reductions for SO₂ and NO_x scheduled to begin in year 2000.

Data from the network, as well as information about individual sites, are available through the world wide web at [<http://nadp.nrel.colostate.edu/NAPD>].

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, representative part of the Nation's ground-and surface-water resources; provide an improved understanding of the primary natural and human factors affecting these observed conditions and trends; and provide information that supports development and evaluation of management, regulatory, and monitoring decisions by other agencies.

Assessment activities are being conducted in 53 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.

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

EXPLANATION OF RECORDS

The surface-water and ground-water records in this report are for the 1997 water year that began October 1, 1996, and ended September 30, 1997. 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 4 and 5. 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 a stream site or a well, is assigned a unique identification number. This number is unique in that it applies specifically to a given station and to no other. The number usually is assigned when a station is first established and is retained for that station indefinitely. The systems used by the U.S. Geological Survey to assign identification numbers for surface-water stations and for ground-water well sites differ, but both are based on geographic location. The "downstream order" system is used for regular surface-water stations and the "latitude-longitude" system is used for wells and, in Pennsylvania, for some miscellaneous surface-water sites where infrequent water-quality samples or discharge measurements are made.

WATER RESOURCES DATA - PENNSYLVANIA, 1997

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 03020500, includes a 2-digit part number "03" plus a 6-digit downstream-order number "020500." The part number designates major river basins; for example, part "03" is the Ohio River and St. Lawrence River Basins.

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 3 below.

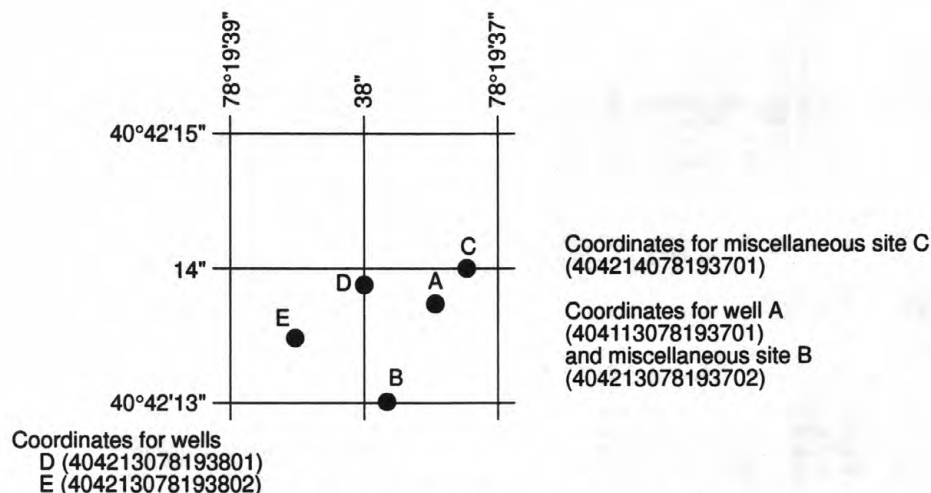


Figure 3.--System for numbering wells and miscellaneous sites (latitude and longitude).

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 4 and 5.

WATER RESOURCES DATA - PENNSYLVANIA, 1997

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 relation 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-back-water 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

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.

WATER RESOURCES DATA - PENNSYLVANIA, 1997

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.

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.

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

REVISIONS.--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.

WATER RESOURCES DATA - PENNSYLVANIA, 1997

Data table of daily mean values

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

Statistics of monthly mean data

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

Summary statistics

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

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

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.

WATER RESOURCES DATA - PENNSYLVANIA, 1997

ANNUAL RUNOFF.--Indicates the total quantity of water in runoff for a drainage area for the year. Runoff figures may be omitted if there is extensive regulation or diversion. 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 feet.

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 discharge measurements at low-flow partial-record stations, and the second is a table of annual maximum stage and discharge at crest-stage 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 flood or drought 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 Estimate".

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

Information on the availability of unpublished data or statistical analyses may be obtained from the Hydrologic Surveillance Program (telephone (717) 730-6900).

Records of Surface-Water Quality

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

Classification of Records

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

A careful distinction needs to be made between "continuing records" as used in this report and "continuous recordings," which refers to a continuous graph or a series of discrete values punched at short intervals on a paper tape. Some records of water quality, such as temperature and specific conductance, may be obtained through continuous recordings; however, because of costs, most data are obtained only monthly or less frequently. Locations of stations for which records on the quality of surface water appear in this report are shown in figures 4 and 5.

WATER RESOURCES DATA - PENNSYLVANIA, 1997

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.

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 Water-Quality Assessment Program (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.

WATER RESOURCES DATA - PENNSYLVANIA, 1997

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 U.S. Geological Survey National Water-Quality 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 laboratory 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. Methods used by other laboratories are approved by the U.S. Geological Survey, Water Resources Division.

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.

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, NWIS, and subsequently by 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. Descriptive statements are generally not given for these records. Each station is published with its own station number and name in the regular downstream-order sequence.

Remark Codes

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

<u>PRINTED OUTPUT</u>	<u>REMARK</u>
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
V	Analyte was detected in both the environmental sample and the associated blanks.
ND	Material specifically analysed for but not detected.

WATER RESOURCES DATA - PENNSYLVANIA, 1997

Water quality-control data

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

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

Ambient blank.--a blank solution that is put in the same type of sample container used for an environmental sample, kept with the set of sample bottles before sample collection, and opened at the site and exposed to the ambient conditions.

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

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

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

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

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

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

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

Canister blank.--a blank solution that is taken directly from a stainless steel canister just before the VOC sample is submerged to obtain a field sample.

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

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

Sequential samples.--a type of replicate sample in which environmental samples are collected one after the other, typically within a short time.

Split sample.--a type of replicate sample in a sample is split into subsamples contemporaneous in time and space.

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

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 figure 4. Ground-water data are grouped by counties, arranged in alphabetical order, and are listed on page viii.

Data Collection and Computation

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

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

Water-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.

WATER RESOURCES DATA - PENNSYLVANIA, 1997

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 station 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-levels by knowing whether they are based on hourly, daily, 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 values of one daily water-level statistic (maximum, mean, or instantaneous) reported in the data tables for the period of published record with respect to land-surface datum, (or occasionally sea level), and the dates of their occurrence. For example, if the highest and lowest of these daily maximum values for the period of record. Depending on the statistic reported in the table of water levels, extremes would be determined from daily maximum, mean, or instantaneous values.

Data table of water-levels

A table of water levels follows the station description for each well. These tables usually report water-level data as maximum depth (in feet) above or below land-surface datum, but may report daily mean or instantaneous values depending upon the method used to obtain the record and how the record was published in the past. If water-level record is obtained from punched-tape recorders, electronic data loggers, or DCP's, in addition to data published in the table of water levels, the daily maximum, minimum, and mean water-levels are stored in computer files and available from the District Office as noted in the REMARKS paragraph for that well. The extremes of the water-levels reported in the table for the water year and their dates of occurrence are shown on a line below the table. Missing records are indicated by dashes in place of the water level. A hydrograph 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 ix, have water-quality data published in the report.

Data Collection and Computation

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

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.

WATER RESOURCES DATA - PENNSYLVANIA, 1997**ACCESS TO USGS WATER 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. The USGS provides near real-time stage and discharge data for many of the gaging stations equipped with the necessary telemetry and historic daily-mean and peak-flow discharge data for most current or discontinued gaging stations through the World Wide Web (WWW). This data may be accessed at [<http://water.usgs.gov>].

Some water-quality and ground-water data also are available through the WWW. In addition, data can be provided in various machine-readable formats on magnetic tape or 3-1/2 inch floppy disk. Information about the availability of specific types of data or products, and user charges, can be obtained locally from each of the Water Resources Division District Offices (See address on the back of the title page.)

For most streamgagers, "real-time" streamflow conditions are available on the World Wide Web (WWW) Pennsylvania District Home Page at [<http://www.pah2o.er.usgs.gov/>]. Daily streamflow values for the period of record, annual peak stream discharges, and streamflow conditions for surrounding states may also be obtained at this WWW address.

A wide variety of additional information, such as ordering U.S. Geological Survey maps and publications is available at the U.S. Geological Survey Home Page at [<http://www.usgs.gov/>].

WATER RESOURCES DATA - PENNSYLVANIA, 1997

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) 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 warm blooded animals. They are often used as indicators of the sanitary quality of the water. In the laboratory they are defined as all organisms that produce blue colonies within 24 hour 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.

WATER RESOURCES DATA - PENNSYLVANIA, 1997

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.

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.

¹ Until appropriate changes can be made to the NWIS database retrieval system, the unit abbreviations "CFS" and "CFSM" will appear on some computer-generated table headings and summaries.

WATER RESOURCES DATA - PENNSYLVANIA, 1997

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

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 50 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 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.

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.

WATER RESOURCES DATA - PENNSYLVANIA, 1997

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 disintegrations per minute (dpm).

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

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

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

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

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

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

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

Milligrams of carbon per area 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.

WATER RESOURCES DATA - PENNSYLVANIA, 1997

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 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 Seal 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) $\times$ discharge (ft^3/s) $\times 0.0027$.

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 ($Q_7,10$) is the discharge at the 10-year recurrence interval taken from a frequency curve of annual values of the lowest mean discharge for 7 consecutive days (the 7-day low flow).

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

Solute is any substance that is dissolved in water.

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

WATER RESOURCES DATA - PENNSYLVANIA, 1997

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 plexiglas strips for periphyton collection.

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

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

Surrogate refers to a chemical compound added to a sample as one quality assurance method to monitor the performance of laboratory analytical techniques. USGS gas chromatography methods use surrogates for most any analysis of organic compounds. Percent recoveries of surrogates are published with analysis of organic compounds in fish tissue, bed sediment, and water samples in this report. Gas chromatograms are reviewed thoroughly at the laboratory when surrogate recoveries are low. USGS methods for fish tissue analysis require a sample to be reanalyzed when a surrogate recovery is less than 30 percent.

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
Species.....	Hexagenia limbata

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

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

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

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

WATER RESOURCES DATA - PENNSYLVANIA, 1997

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.

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.

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- 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 programed text for self-instruction*, by G. D. Bennett: USGS—TWRI Book 3, Chapter B2. 1976. 172 pages.
- 3-B3. *Type curves for selected problems of flow to wells in confined aquifers*, by J. E. Reed: USGS—TWRI Book 3, Chapter B3. 1980. 106 pages.
- 3-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.

WATER RESOURCES DATA - PENNSYLVANIA, 1997

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.

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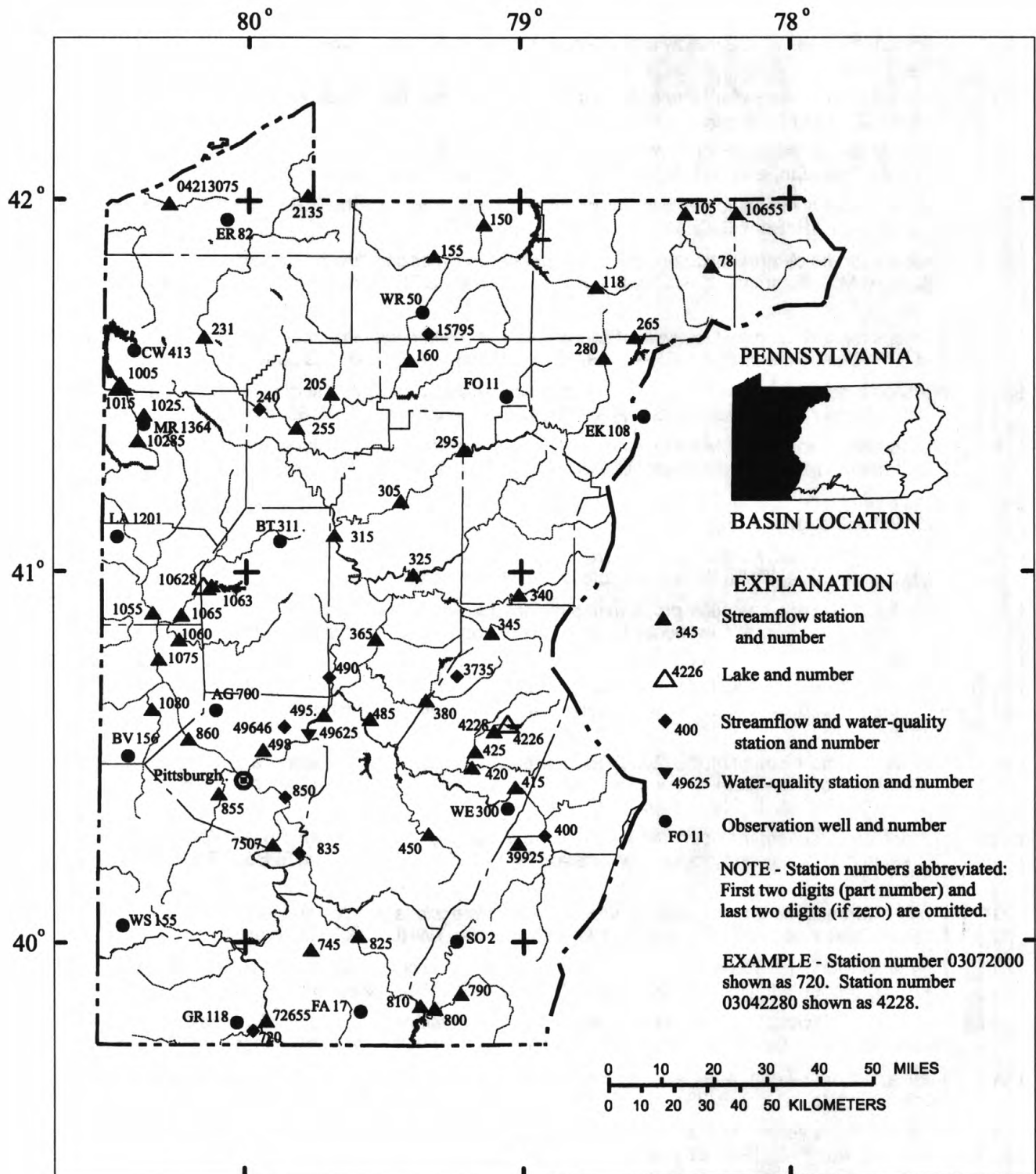


Figure 4. Location of continuous-record data-collection stations and network observation wells.

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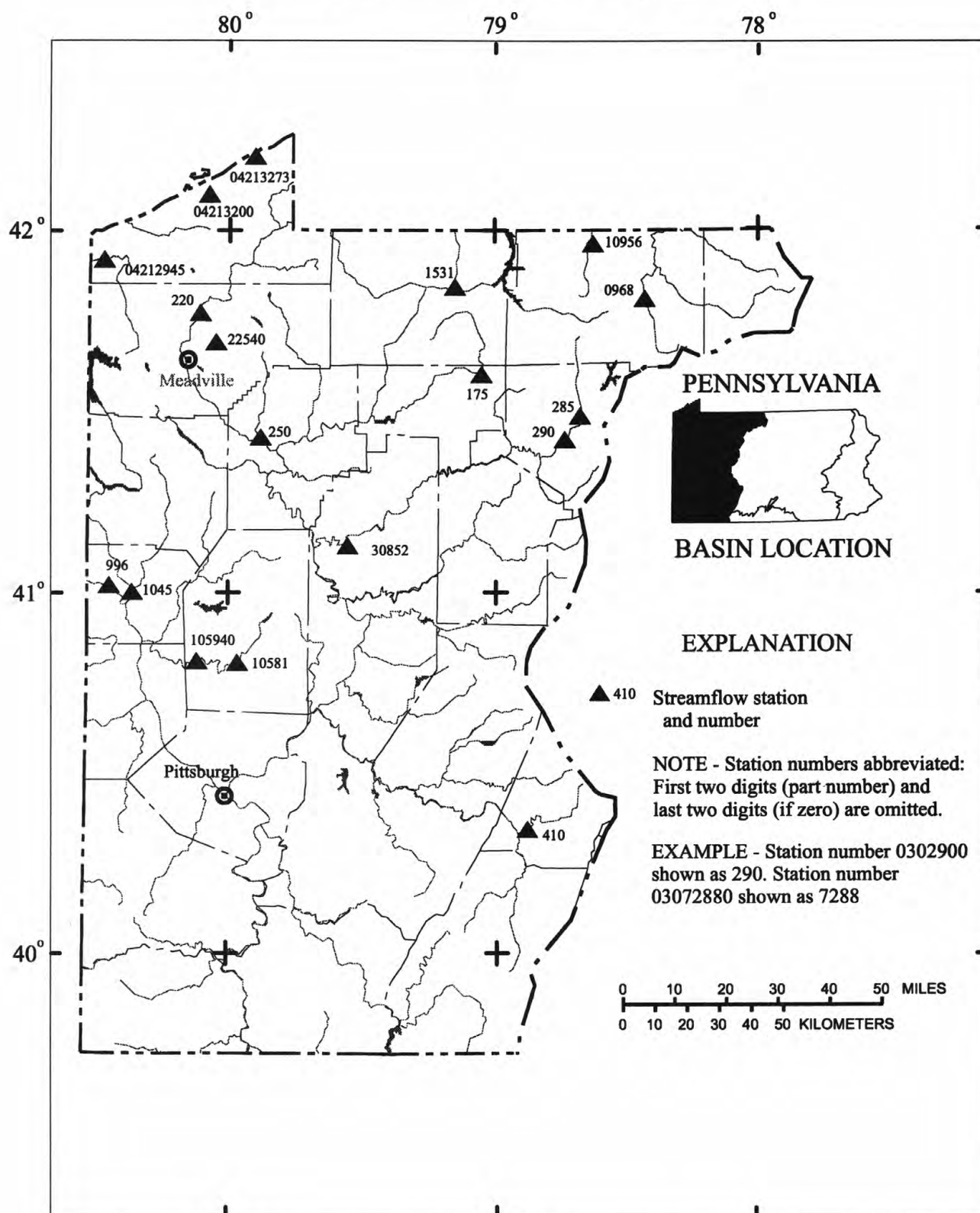


Figure 5. Location of partial-record data-collection stations.

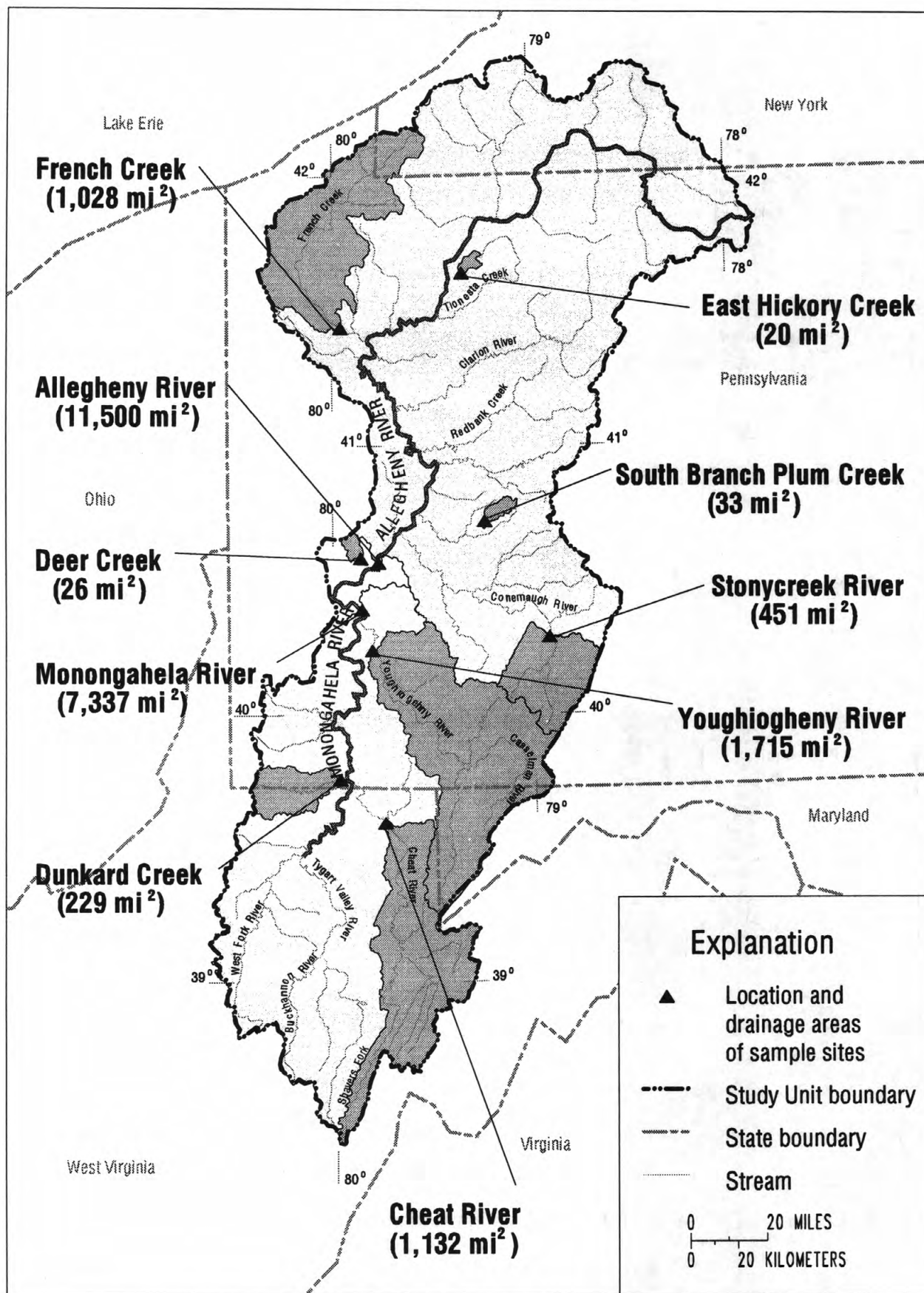


Figure 6. Location of surface water quality fixed site network in the Allegheny – Monongahela River Basin NAWQA Study Unit

WATER RESOURCES DATA - PENNSYLVANIA, 1997

SPECIAL NOTES, REMARK CODES, AND SELECTED CONSTITUENT DEFINITIONS

NOTES--Traditionally, dissolved trace-element concentrations have been reported at the microgram per liter ($\mu\text{G/L}$) 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 $\mu\text{G/L}$ level should be viewed with caution. Such data may actually represent elevated environmental concentrations from natural or human causes; however, these data could reflect contamination introduced during sampling, processing, or analysis. To confidently produce dissolved trace-element data with insignificant contamination, the U.S. Geological Survey began using new trace-element protocols at some stations in water year 1994. Full implementation of the protocols took place during the 1995 water year.

--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:

$$\text{MBASCOR} = M - 0.0088N - 0.00019C$$

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:

<u>PRINTED OUTPUT</u>	<u>REMARK</u>
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
--	Data not available
%	Percent

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

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

(82398) SAMPLE METHOD CODES:

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

(84164) SAMPLER TYPE: (partial list)

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

WATER RESOURCES DATA - PENNSYLVANIA, 1997

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

(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 Protection

WATER RESOURCES DATA - PENNSYLVANIA, 1997

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.)
CENTRIF	centrifuge
COLS/100 ML	colonies per 100 milliliters
DEG C or °C	degrees centigrade
DIS	dissolved
FET	fixed end-point titration
FLD	field (Measurement determined at field site.)
FLTRD	filtered
F/S	feet per second
G/M	gallons per minute
G/SQM; MG/M2	grams or milligrams per square meter
INST	instantaneous
IT	incremental titration
KF AGAR	nutrient medium for growth of fecal streptococcal bacteria
μG/G	micrograms per gram
μG/L	micrograms per liter
μS/CM	microsiemens per centimeter
MG/L	milligrams per liter
MG/M2	milligrams per square meter
ML	milliliters
MM	millimeters
MM OF HG	millimeters of mercury
NONCARB	noncarbonate
NTU	nephelometric turbidity unit
PCI/L	picocuries per liter
REC	recoverable
SED	sediment
SUS or SUSP	suspended
TOT	total
T/DAY	tons per day
UNF or UNFLTRD	unfiltered
WAT	water
WH	whole
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.)

SURFACE-WATER AND WATER-QUALITY STATION RECORDS

OHIO RIVER MAIN STEM

03007800 ALLEGHENY RIVER AT PORT ALLEGANY, PA

LOCATION.--Lat 41°49'07", long 78°17'35", McKean County, Hydrologic Unit 05010001, on right bank 40 ft upstream from bridge on U.S. Highway 6 at Port Allegany, 1.1 mi upstream from Twomile Creek, 1.4 mi downstream from Allegheny Portage Creek, at mile 285.5.

DRAINAGE AREA.--248 mi².

PERIOD OF RECORD.--October 1974 to current year. Discharge measurements obtained by U.S. Army Corps of Engineers March 1971 to October 1974.

GAGE.--Water-stage recorder. Datum of gage is 1,454.88 ft above sea level.

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

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 23, 1972 reached a stage of at least 17.5 ft, discharge, 21,700 ft³/s, from U.S. Army Corps of Engineers discharge measurement.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than a base discharge of 2,500 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Oct. 20	0100	3,440	9.12	Mar. 2	1530	2,870	8.15
Nov. 9	1400	*5,610	*11.26	Mar. 6	0800	2,740	7.96
Feb. 22	1930	3,760	9.47	Mar. 26	0700	2,690	7.89
Feb. 27	2400	3,260	8.76				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	887	844	1080	382	e210	2430	1420	337	504	232	58	71
2	685	759	1830	381	e200	2580	1160	324	524	252	55	67
3	560	650	1620	393	e190	2490	979	415	662	203	53	71
4	438	552	1340	353	e180	1950	843	520	670	168	54	65
5	362	482	1040	375	e340	1580	715	444	642	150	66	57
6	306	424	886	394	356	2450	627	530	557	131	58	54
7	272	395	730	342	311	2120	547	504	466	119	53	52
8	244	2540	614	e310	285	1770	467	472	402	131	50	52
9	227	5470	520	e290	260	1390	414	472	335	252	47	50
10	220	3830	445	e280	245	1240	364	460	281	267	46	50
11	192	2120	455	e260	e220	1070	331	412	245	174	44	89
12	173	1460	658	e250	e210	878	391	367	218	149	45	169
13	158	1090	1070	e230	e200	743	555	351	211	134	51	107
14	147	871	1500	e220	e190	859	453	312	190	121	64	97
15	136	703	1440	e210	e170	967	432	296	160	110	53	91
16	127	592	1190	e200	e165	797	431	273	144	113	136	85
17	120	524	981	e190	e160	706	526	253	274	98	188	79
18	129	501	810	e180	e160	668	540	233	283	98	170	87
19	2030	491	666	e180	e150	611	493	319	358	120	107	78
20	3180	449	543	e170	e460	603	466	422	262	88	87	72
21	2710	417	463	e165	e1000	556	440	373	314	80	92	70
22	2410	394	424	e160	e3800	1040	421	393	256	91	101	64
23	1890	362	392	e280	3010	1020	441	385	226	82	112	61
24	1420	340	591	288	1950	971	428	360	214	97	108	59
25	1050	379	591	358	1380	953	373	370	210	86	94	57
26	809	821	549	339	1080	2300	342	366	555	78	89	57
27	643	797	562	294	2410	2010	313	302	397	75	87	55
28	588	819	559	e260	3030	1760	408	262	326	77	114	51
29	506	777	535	e240	---	1710	374	242	276	90	88	148
30	986	682	480	e230	---	1720	345	234	238	69	78	167
31	934	---	434	e220	---	1660	---	233	---	62	72	---
TOTAL	24539	30535	24998	8424	22322	43602	16039	11236	10400	3997	2520	2332
MEAN	792	1018	806	272	797	1407	535	362	347	129	81.3	77.7
MAX	3180	5470	1830	394	3800	2580	1420	530	670	267	188	169
MIN	120	340	392	160	150	556	313	233	144	62	44	50
CFSM	3.19	4.10	3.25	1.10	3.21	5.67	2.16	1.46	1.40	.52	.33	.31
IN.	3.68	4.58	3.75	1.26	3.35	6.54	2.41	1.69	1.56	.60	.38	.35

e Estimated.

03007800 ALLEGHENY RIVER AT PORT ALLEGANY, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1975 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	314	498	541	429	574	866	896	503	385	196	172	239
MAX	964	1018	1082	1088	1572	1730	2006	1127	1484	598	1175	1226
(WY)	1991	1997	1978	1979	1976	1979	1993	1996	1989	1977	1994	1977
MIN	31.2	61.7	171	78.2	98.0	326	359	142	48.5	28.5	27.0	20.7
(WY)	1983	1992	1990	1981	1980	1993	1976	1985	1991	1991	1991	1991

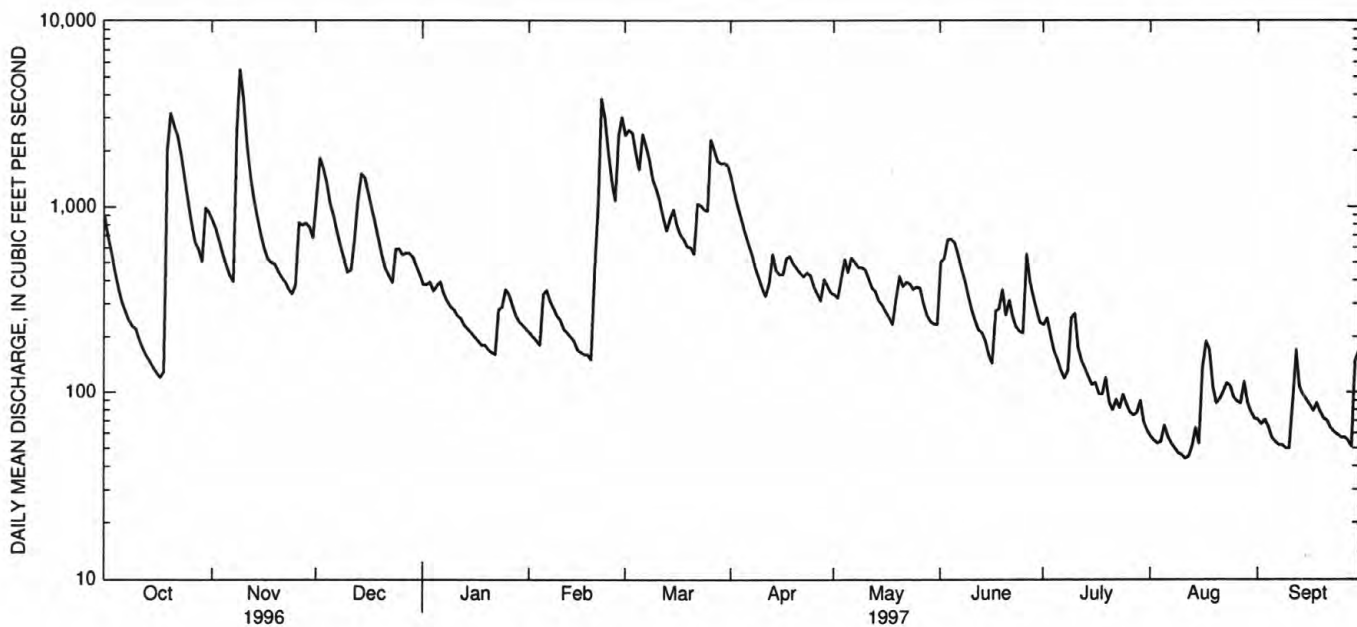
SUMMARY STATISTICS

FOR 1996 CALENDAR YEAR

FOR 1997 WATER YEAR

WATER YEARS 1975 - 1997

ANNUAL TOTAL	231673	200944	467
ANNUAL MEAN	633	551	670
HIGHEST ANNUAL MEAN			1994
LOWEST ANNUAL MEAN			326
HIGHEST DAILY MEAN	8860	Jan 20	5470
LOWEST DAILY MEAN	32	Sep 4	44
ANNUAL SEVEN-DAY MINIMUM	35	Aug 31	48
INSTANTANEOUS PEAK FLOW			5610
INSTANTANEOUS PEAK STAGE			11.26
INSTANTANEOUS LOW FLOW			44
ANNUAL RUNOFF (CFSM)	2.55	2.22	1.88
ANNUAL RUNOFF (INCHES)	34.75	30.14	25.56
10 PERCENT EXCEEDS	1430	1380	1050
50 PERCENT EXCEEDS	424	342	260
90 PERCENT EXCEEDS	68	72	55



October 1, 1996 to September 30, 1997

OHIO RIVER MAIN STEM

03010500 ALLEGHENY RIVER AT ELDRED, PA

LOCATION.--Lat 41°57'48", long 78°23'11", McKean County, Hydrologic Unit 05010001, on right bank at site of former highway bridge, 600 ft upstream from bridge on State Highway 346, 1,000 ft upstream from Knapp Creek, 0.5 mi north of Eldred, at mile 267.8.

DRAINAGE AREA.--550 mi².

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

GAGE.--Water-stage recorder. Datum of gage is 1,416.53 ft above sea level.

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

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than a base discharge of 5,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Oct. 21	1300	5,980	13.98	Feb. 24	0100	5,230	13.24
Nov. 10	1500	*7,800	*15.66	Mar. 1	0400	5,710	13.72

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1610	2110	1830	906	e720	5560	2360	852	839	436	134	148
2	1310	1790	3250	871	e700	4920	1990	819	1100	545	124	142
3	1130	1550	3470	933	e650	4700	1720	838	1630	510	117	140
4	919	1350	3030	892	e600	4490	1500	1280	1440	379	123	142
5	746	1220	2340	900	e1000	3720	1330	1070	1320	329	161	123
6	646	1080	1930	1230	1570	3540	1200	1050	1180	292	153	111
7	573	977	1640	1010	1280	3920	1070	1160	1000	262	123	108
8	521	2410	1430	902	1130	3750	931	1020	861	251	108	108
9	480	5180	1260	e800	965	3110	827	992	730	783	99	102
10	499	7600	1090	e730	816	2550	734	975	625	1240	93	100
11	475	6810	1000	e670	e700	2360	672	918	543	620	90	130
12	392	4860	1480	e600	e630	1960	695	799	482	445	86	319
13	353	3150	1820	e550	e570	1630	1310	773	470	354	95	267
14	325	2050	2540	e500	e520	1690	1110	705	444	302	122	197
15	300	1630	2490	e480	e480	2520	953	675	377	278	121	172
16	279	1390	2210	e440	e440	2010	903	648	325	402	175	157
17	265	1260	1910	e400	e420	1670	979	616	453	310	407	145
18	271	1210	1650	e400	e400	1540	1160	571	724	243	472	144
19	2690	1260	1400	e400	e970	1420	1050	613	1220	320	327	149
20	4510	1160	1210	e400	2630	1360	961	1040	732	279	212	136
21	5830	1060	953	e400	2510	1270	890	892	626	210	186	128
22	5410	976	989	e650	3840	1900	847	835	542	218	223	121
23	4570	892	882	e1500	4770	2060	919	805	467	220	314	112
24	3550	829	1280	1420	4930	1850	1050	752	414	231	306	108
25	2400	880	1700	1280	3720	1740	911	716	435	248	239	106
26	1740	2020	1350	1430	2340	2960	831	818	1090	204	207	106
27	1400	2120	1300	1190	3630	3510	746	682	1030	184	189	103
28	1260	1830	1280	e1000	4980	3280	910	592	694	193	209	99
29	1220	1690	1280	e900	---	2830	1080	532	574	224	207	333
30	1630	1520	1170	e850	---	2760	906	510	490	186	170	658
31	2740	---	1040	e750	---	2680	---	501	---	148	155	---
TOTAL	50044	63864	52204	25384	47911	85260	32545	25049	22857	10846	5747	4914
MEAN	1614	2129	1684	819	1711	2750	1085	808	762	350	185	164
MAX	5830	7600	3470	1500	4980	5560	2360	1280	1630	1240	472	658
MIN	265	829	882	400	400	1270	672	501	325	148	86	99
CFSM	2.94	3.87	3.06	1.49	3.11	5.00	1.97	1.47	1.39	.64	.34	.30
IN.	3.38	4.32	3.53	1.72	3.24	5.77	2.20	1.69	1.55	.73	.39	.33

e Estimated.

OHIO RIVER MAIN STEM

03010500 ALLEGHENY RIVER AT ELDRED, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	465	842	1080	1028	1108	1906	2057	1192	799	426	256	328
MAX	1894	3175	2390	3359	3250	4697	5314	3273	6490	3893	1699	2340
(WY)	1991	1951	1973	1952	1976	1945	1940	1943	1972	1942	1994	1977
MIN	41.6	62.0	55.1	87.3	213	728	385	292	109	57.8	43.4	34.6
(WY)	1965	1965	1961	1961	1980	1993	1946	1985	1991	1966	1957	1959

SUMMARY STATISTICS

FOR 1996 CALENDAR YEAR

FOR 1997 WATER YEAR

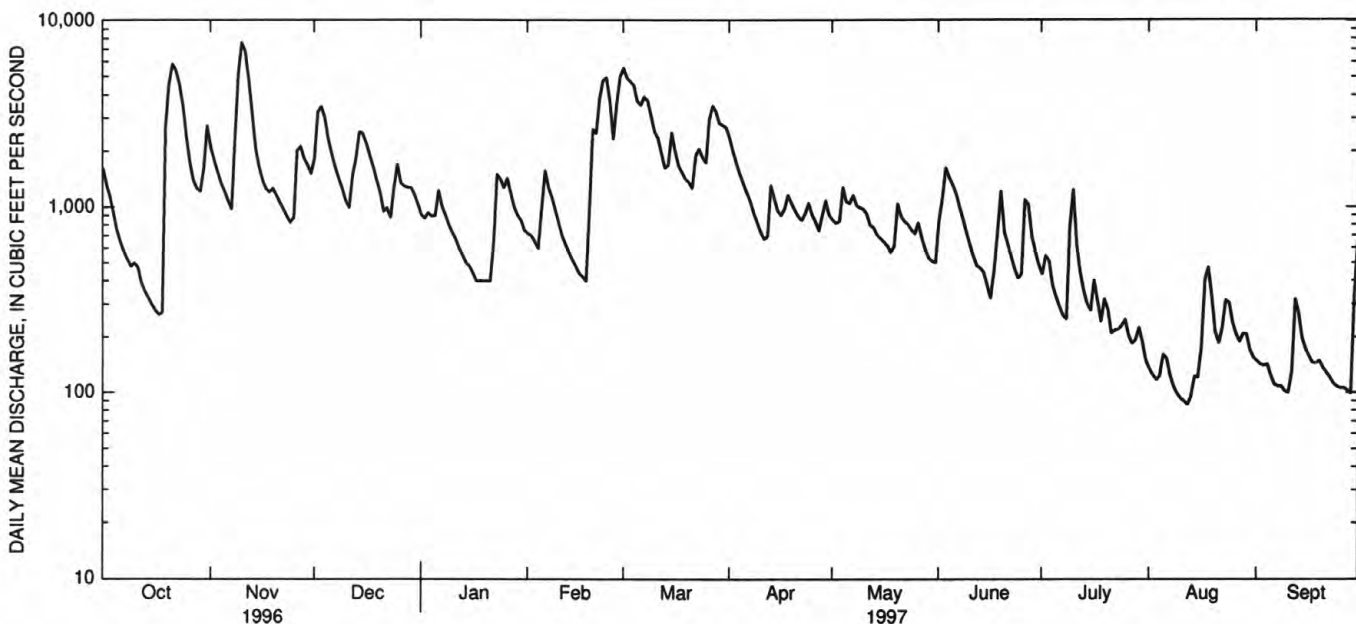
WATER YEARS 1940 - 1997

ANNUAL TOTAL	495888			426625								
ANNUAL MEAN	1355			1169						956		
HIGHEST ANNUAL MEAN										1475		1972
LOWEST ANNUAL MEAN										631		1962
HIGHEST DAILY MEAN	e16700	Jan 20		7600	Nov 10					55700	Jun 23	1972
LOWEST DAILY MEAN	65	Sep 4		86	Aug 12					19	Sep 16	1991
ANNUAL SEVEN-DAY MINIMUM	73	Aug 31		99	Aug 8					22	Sep 10	1991
INSTANTANEOUS PEAK FLOW				7800	Nov 10					a65400	Jun 23	1972
INSTANTANEOUS PEAK STAGE				15.66	Nov 10					b29.05	Jun 23	1972
INSTANTANEOUS LOW FLOW				85	Aug 12, 13					17	Sep 16	1991
ANNUAL RUNOFF (CFSM)	2.46			2.13						1.74		
ANNUAL RUNOFF (INCHES)	33.54			28.86						23.61		
10 PERCENT EXCEEDS	3020			2650						2290		
50 PERCENT EXCEEDS	977			852						520		
90 PERCENT EXCEEDS	150			149						85		

a From rating curve extended above 21,000 ft³/s on basis of slope-area measurement at gage height 27.6 ft.

b From floodmark.

e Estimated.



October 1, 1996 to September 30, 1997

OSWAYO CREEK BASIN

03010655 OSWAYO CREEK AT SHINGLEHOUSE, PA

LOCATION.--Lat 41°57'42", long 78°11'54", Potter County, Hydrologic Unit 05010001, on right bank 200 ft upstream from bridge on State Highway 44 at Shinglehouse and 0.7 mi upstream from Honeoye Creek.

DRAINAGE AREA.--98.7 mi².

PERIOD OF RECORD.--October 1974 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,460.34 ft above sea level (U.S. Army Corps of Engineers bench mark).

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

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than a base discharge of 1,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Oct. 20	1400	1,350	8.24	Feb. 27	1300	1,440	8.41
Nov. 9	1000	*2,500	*10.02	Mar. 2	1400	1,070	7.71
Feb. 22	1900	1,260	8.09				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	238	320	320	138	e84	808	409	87	147	61	26	21
2	193	286	511	137	e82	851	351	85	162	66	24	19
3	165	240	488	140	e80	768	303	98	227	56	23	21
4	132	202	416	126	e120	619	260	115	253	48	35	18
5	112	175	333	137	e190	491	220	109	238	45	36	16
6	97	155	286	137	130	636	196	129	204	39	25	15
7	88	142	239	124	111	567	173	131	172	40	22	16
8	81	904	205	e115	e100	506	151	126	147	42	20	16
9	77	2310	177	e110	e90	402	135	126	125	165	19	15
10	77	1390	154	e100	e85	365	120	124	107	145	18	15
11	68	735	158	e95	e80	315	110	113	94	113	17	23
12	60	497	204	e90	e76	262	126	105	87	96	17	35
13	56	372	301	e85	e73	222	159	104	82	82	20	26
14	52	298	432	e80	e70	256	140	94	76	70	20	24
15	48	241	444	e77	e66	260	140	93	65	62	17	22
16	45	206	382	e75	e63	221	141	88	58	62	31	21
17	43	184	322	e72	e62	203	158	83	98	50	43	21
18	42	174	266	e70	e60	193	159	79	101	50	42	25
19	575	164	223	e68	e130	174	150	131	148	72	30	21
20	1300	152	188	e67	255	165	142	189	112	52	26	21
21	1120	141	179	e65	418	157	134	194	133	47	26	20
22	899	133	149	e67	1070	280	129	192	115	51	28	19
23	660	123	140	e150	1010	307	126	174	102	43	37	18
24	475	117	203	e115	633	308	120	156	106	42	34	17
25	352	129	198	e130	431	300	110	145	91	38	30	17
26	271	264	203	e150	337	714	100	131	112	35	28	18
27	218	268	211	e120	1040	665	92	112	92	33	27	17
28	198	288	207	e105	1170	545	106	99	81	44	29	16
29	170	271	196	e95	---	493	96	90	74	40	26	54
30	313	238	174	e90	---	458	89	86	67	31	23	77
31	323	---	157	e86	---	463	---	82	---	27	22	---
TOTAL	8548	11119	8066	3216	8116	12974	4845	3670	3676	1847	821	684
MEAN	276	371	260	104	290	419	162	118	123	59.6	26.5	22.8
MAX	1300	2310	511	150	1170	851	409	194	253	165	43	77
MIN	42	117	140	65	60	157	89	79	58	27	17	15
CFSM	2.79	3.76	2.64	1.05	2.94	4.24	1.64	1.20	1.24	.60	.27	.23
IN.	3.22	4.19	3.04	1.21	3.06	4.89	1.83	1.38	1.39	.70	.31	.26

e Estimated.

OSWAYO CREEK BASIN

03010655 OSWAYO CREEK AT SHINGLEHOUSE, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1975 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	105	170	194	160	205	293	313	180	129	72.2	59.0	70.9
MAX	331	371	318	388	561	517	755	489	612	238	396	452
(WY)	1991	1997	1978	1979	1976	1979	1993	1996	1989	1977	1994	1977
MIN	8.35	23.1	52.6	28.5	41.2	120	131	50.8	6.28	7.69	7.12	6.08
(WY)	1992	1992	1989	1981	1987	1981	1976	1993	1993	1993	1991	1991

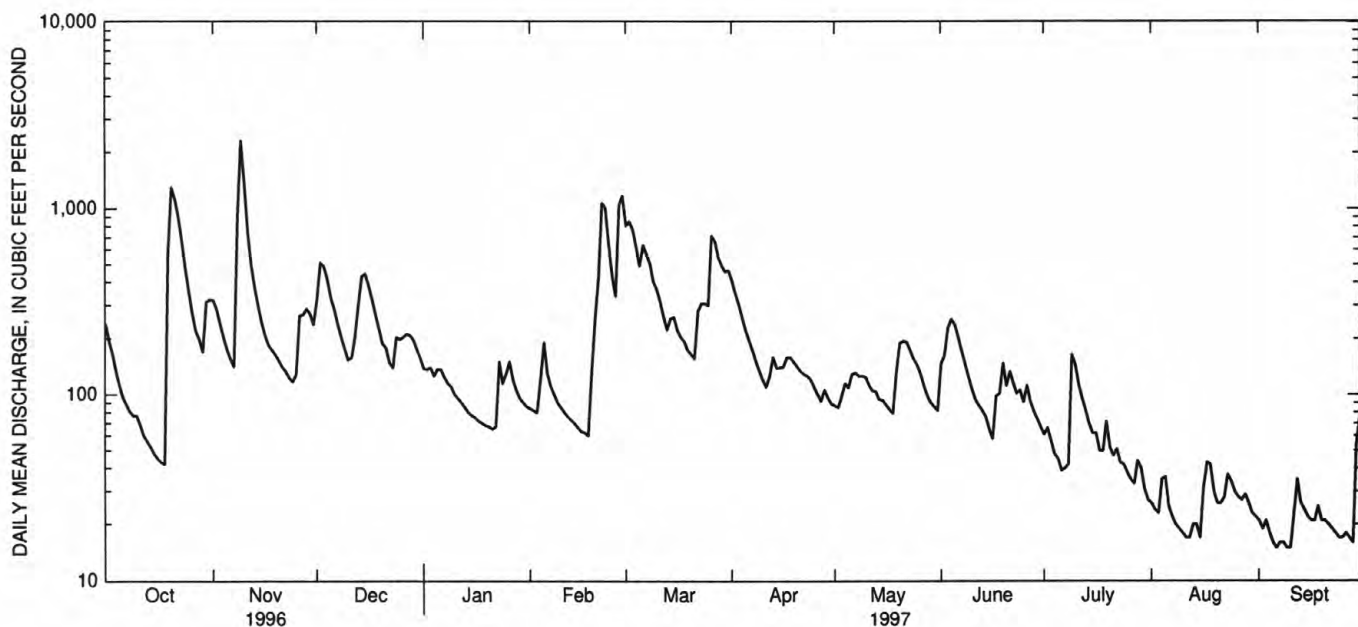
SUMMARY STATISTICS

FOR 1996 CALENDAR YEAR

FOR 1997 WATER YEAR

WATER YEARS 1975 - 1997

ANNUAL TOTAL	84206	67582	162
ANNUAL MEAN	230	185	222
HIGHEST ANNUAL MEAN			118
LOWEST ANNUAL MEAN			1994
HIGHEST DAILY MEAN	2990	Jan 20	2310
LOWEST DAILY MEAN	12	Sep 3	15
ANNUAL SEVEN-DAY MINIMUM	13	Aug 31	16
INSTANTANEOUS PEAK FLOW			2500
INSTANTANEOUS PEAK STAGE			10.02
INSTANTANEOUS LOW FLOW			15
ANNUAL RUNOFF (CFSM)	2.33		1.88
ANNUAL RUNOFF (INCHES)	31.74		25.47
10 PERCENT EXCEEDS	476		417
50 PERCENT EXCEEDS	151		115
90 PERCENT EXCEEDS	28		24



October 1, 1996 to September 30, 1997

OHIO RIVER MAIN STEM

03011020 ALLEGHENY RIVER AT SALAMANCA, NY

LOCATION.--Lat 42°09'23", long 78°42'56", Cattaraugus County, Hydrologic Unit 05010001, on left bank 230 ft upstream from Main Street bridge in Salamanca, 1.3 mi downstream from Great Valley Creek, and 1.6 mi upstream from Little Valley Creek.

DRAINAGE AREA.--1,608 mi².

PERIOD OF RECORD.--September 1903 to current year. Monthly discharge only for some periods, published in WSP 1305. Prior to October 1964, published as "at Red House."

REVISED RECORDS.--WSP 1385: 1907, 1909-12, 1913(M), 1914-15, 1916-17(M), 1925, 1927. WSP 1907: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,358.00 ft above sea level (Corps of Engineers bench mark). Prior to Sept. 3, 1917, nonrecording gage and Sept. 4, 1917 to Sept. 30, 1964, water-stage recorder at site 7.5 mi downstream at different datum. Oct. 1, 1964 to Sept. 30, 1967, at present site at datum 0.04 ft lower.

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

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 17,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 9	1300	18,200	10.33	Feb. 28	0100	*19,900	*10.88

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3900	4810	5360	2470	2020	14300	6710	2250	3500	1370	532	458
2	3020	4040	10500	2420	1950	12800	5570	2120	5140	1530	485	440
3	2540	3610	9290	2670	1880	11800	4740	2180	9440	1450	454	567
4	2150	3270	7960	2670	1810	10000	4130	3030	7070	1210	475	565
5	1770	3060	6410	2850	3100	8710	3600	2860	4840	1050	652	484
6	1530	2820	5160	4070	3710	9730	3240	2850	3820	938	588	415
7	1360	2600	4410	3450	3100	9240	2940	3030	3250	843	494	388
8	1230	6760	3820	2930	2610	8630	2590	2740	2870	858	427	373
9	1150	17600	3340	e2400	2250	7580	2290	2590	2410	3260	384	359
10	1300	17300	2920	e2300	e1900	6920	2060	2770	2030	5160	365	346
11	1370	15600	2640	e1900	e1800	6760	1890	2720	1740	2780	359	374
12	1200	12100	3350	e1500	e1600	5690	1930	2490	1560	1860	405	805
13	1040	8620	4010	e1400	e1400	4570	3520	2330	1660	1450	428	889
14	945	6040	5620	e1400	e1350	4980	3380	2160	1520	1200	539	668
15	869	4700	5540	e1400	e1300	7460	2800	2070	1330	1060	473	553
16	810	3960	5120	e1300	e1250	6050	2560	2220	1150	1330	450	495
17	762	3550	4550	e1200	e1200	4770	2620	2300	1840	1120	783	454
18	750	3590	4020	e1200	e1300	4380	2980	2100	3810	917	987	481
19	7750	4140	3470	e1200	2410	3930	2880	7430	7430	1080	896	473
20	15500	3880	2920	e1100	6760	3640	2590	10300	4330	1080	667	469
21	13500	3430	e2300	e1100	8620	3410	2390	6420	2760	848	546	454
22	12700	3060	e2250	e1500	15700	4690	2240	4270	2230	801	559	427
23	10500	2770	2290	e3400	14300	5540	2370	3520	1800	788	1040	392
24	8310	2520	4040	3630	11300	4730	2470	2950	1860	817	1080	371
25	6060	2680	5520	3200	8900	4580	2330	2600	2220	837	833	356
26	4370	7450	4250	e3200	6520	10400	2080	2440	4120	761	684	365
27	3640	7900	3710	e2700	12700	10400	1920	2220	3620	676	610	362
28	3240	5800	3500	e2500	18400	8770	2310	1880	2400	743	591	348
29	2990	4910	3590	e2200	---	7800	2800	1680	1860	943	604	1480
30	3240	4340	3320	e2000	---	7620	2470	1590	1550	731	550	3580
31	5540	---	2920	e2000	---	7710	---	1560	---	603	487	---
TOTAL	125036	176910	138100	69260	141140	227590	88400	93670	95160	40094	18427	18191
MEAN	4033	5897	4455	2234	5041	7342	2947	3022	3172	1293	594	606
MAX	15500	17600	10500	4070	18400	14300	6710	10300	9440	5160	1080	3580
MIN	750	2520	2250	1100	1200	3410	1890	1560	1150	603	359	346
CFSM	2.51	3.67	2.77	1.39	3.13	4.57	1.83	1.88	1.97	.80	.37	.38
IN.	2.89	4.09	3.19	1.60	3.27	5.27	2.05	2.17	2.20	.93	.43	.42

e Estimated.

OHIO RIVER MAIN STEM

03011020 ALLEGHENY RIVER AT SALAMANCA, NY--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1904 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1361	2566	3105	3320	3176	6017	5841	3480	2030	1100	724	847
MAX	5801	8605	9147	10200	9683	14850	15540	9574	11520	6074	3882	7477
(WY)	1991	1928	1928	1913	1976	1936	1940	1943	1972	1942	1977	1977
MIN	124	146	189	255	550	1983	970	796	299	150	119	118
(WY)	1931	1931	1961	1961	1905	1937	1946	1985	1934	1934	1930	1932

SUMMARY STATISTICS

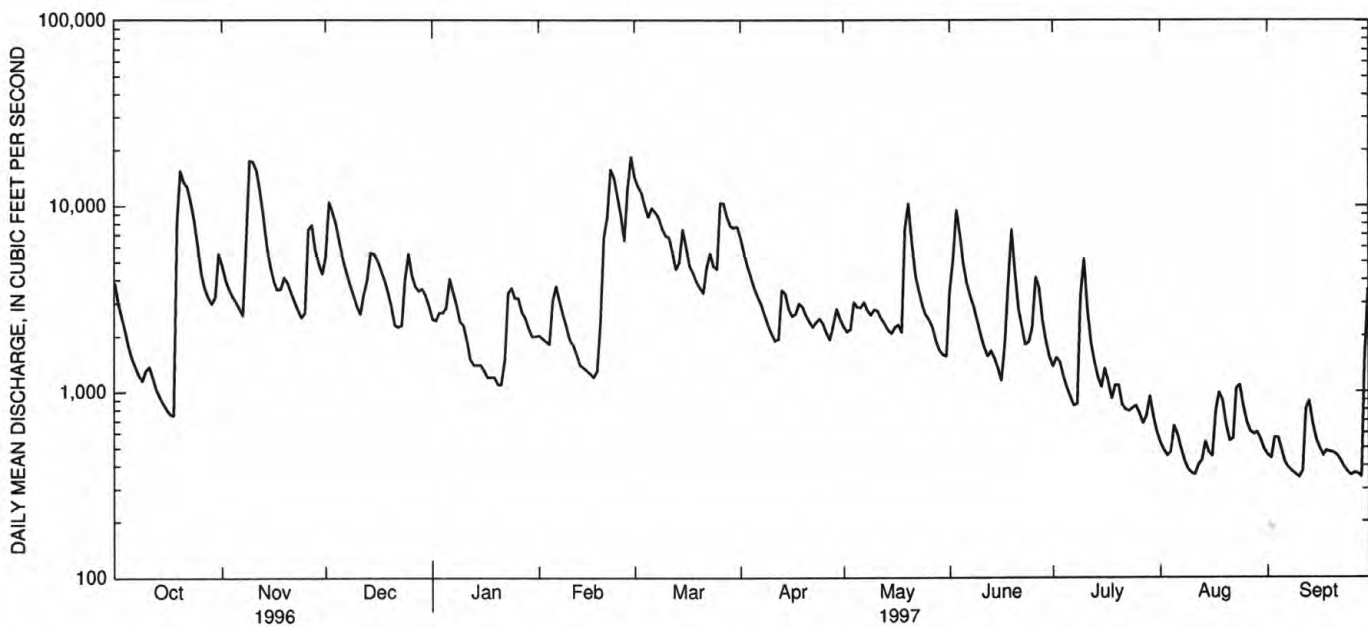
FOR 1996 CALENDAR YEAR

FOR 1997 WATER YEAR

WATER YEARS 1904 - 1997

ANNUAL TOTAL	1434954	1231978	
ANNUAL MEAN	3921	3375	2794
HIGHEST ANNUAL MEAN			4174
LOWEST ANNUAL MEAN			1784
HIGHEST DAILY MEAN	36300	Jan 20	18400
LOWEST DAILY MEAN	242	Sep 5	346
ANNUAL SEVEN-DAY MINIMUM	271	Aug 31	374
INSTANTANEOUS PEAK FLOW			19900
INSTANTANEOUS PEAK STAGE			10.88
ANNUAL RUNOFF (CFSM)	2.44		2.10
ANNUAL RUNOFF (INCHES)	33.20		28.50
10 PERCENT EXCEEDS	8950		7730
50 PERCENT EXCEEDS	2620		2470
90 PERCENT EXCEEDS	554		536

a From floodmarks.



October 1, 1996 to September 30, 1997

KINZUA CREEK BASIN

03011800 KINZUA CREEK NEAR GUFFEY, PA

LOCATION.--Lat 41°45'59", long 78°43'08", McKean County, Hydrologic Unit 05010001, in Allegheny National Forest, on right bank 130 ft upstream from bridge on U.S. Highway 219, 0.2 mi upstream from Wintergreen Run, 1.0 mi downstream from Pine Run, and 1.5 mi west of Guffey.

DRAINAGE AREA.--46.4 mi².

PERIOD OF RECORD.--Occasional low-flow measurements, published as "at Tallyho," water years 1959-65. October 1965 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 1,540 ft above sea level, from topographic map.

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

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than a base discharge of 500 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Oct. 19	1700	*781	a5.33	Feb. 27	--	Unknown	Ice jam
Nov. 8	1800	754	5.27	Mar. 2	1300	534	4.70
Feb. 22	1000	545	4.73				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	96	145	247	68	e64	308	124	71	72	46	20	14
2	84	129	277	69	e58	424	106	68	99	54	19	14
3	77	114	195	82	e54	265	96	82	120	43	18	15
4	67	101	171	75	e50	191	88	95	88	38	20	13
5	59	96	144	110	e100	189	81	73	78	35	21	12
6	54	88	129	117	77	339	76	76	72	30	19	12
7	50	86	112	90	66	192	70	72	65	28	16	11
8	47	485	100	e80	61	167	63	66	61	30	15	12
9	47	440	88	e72	e54	144	59	65	55	66	14	11
10	53	320	79	e68	e52	176	54	67	50	72	13	12
11	47	230	93	e62	e48	154	52	66	47	43	14	23
12	41	184	143	e58	e45	125	73	60	45	32	13	34
13	39	153	158	e54	e42	107	115	62	47	27	21	22
14	36	131	142	e52	e40	202	80	56	41	24	17	17
15	34	113	125	e48	e38	192	68	60	37	60	16	15
16	32	100	117	e46	e36	142	64	60	34	96	24	13
17	31	92	110	e44	e35	125	87	58	54	47	41	13
18	56	104	99	e42	e33	116	88	53	101	54	40	15
19	611	116	88	e41	e50	107	79	59	108	70	23	13
20	399	102	75	e39	e70	102	72	76	61	45	17	15
21	316	91	80	e38	e100	93	66	60	51	40	19	17
22	242	86	75	e70	e220	181	67	55	46	45	22	12
23	187	79	69	e210	e190	126	88	53	41	39	37	12
24	154	75	147	164	e120	109	94	51	40	37	29	12
25	126	103	119	e135	e80	123	75	57	49	35	22	12
26	105	262	92	e110	e56	287	71	59	126	32	19	12
27	91	164	86	e98	e450	167	65	50	69	29	17	11
28	99	140	90	e88	436	149	96	46	53	33	17	12
29	89	127	95	e80	---	150	87	43	48	31	16	89
30	242	115	85	e74	---	150	75	44	43	24	15	95
31	179	---	76	e68	---	150	---	47	---	21	14	---
TOTAL	3790	4571	3706	2452	2725	5452	2379	1910	1901	1306	628	590
MEAN	122	152	120	79.1	97.3	176	79.3	61.6	63.4	42.1	20.3	19.7
MAX	611	485	277	210	450	424	124	95	126	96	41	95
MIN	31	75	69	38	33	93	52	43	34	21	13	11
CFSM	2.63	3.28	2.58	1.70	2.10	3.79	1.71	1.33	1.37	.91	.44	.42
IN.	3.04	3.66	2.97	1.97	2.18	4.37	1.91	1.53	1.52	1.05	.50	.47

a Maximum gage height, 5.38 ft., Feb. 27 (backwater from ice).

e Estimated.

KINZUA CREEK BASIN

03011800 KINZUA CREEK NEAR GUFFEY, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	50.9	88.2	107	76.8	90.1	140	137	85.8	74.6	35.2	30.9	40.4
MAX	137	166	281	153	251	269	289	182	272	99.0	126	155
(WY)	1991	1971	1984	1993	1976	1979	1994	1989	1989	1992	1980	1977
MIN	6.69	15.3	32.6	19.8	18.4	61.6	67.9	23.8	9.49	6.29	4.96	5.16
(WY)	1992	1992	1990	1981	1987	1970	1976	1985	1991	1991	1991	1991

SUMMARY STATISTICS

FOR 1996 CALENDAR YEAR

FOR 1997 WATER YEAR

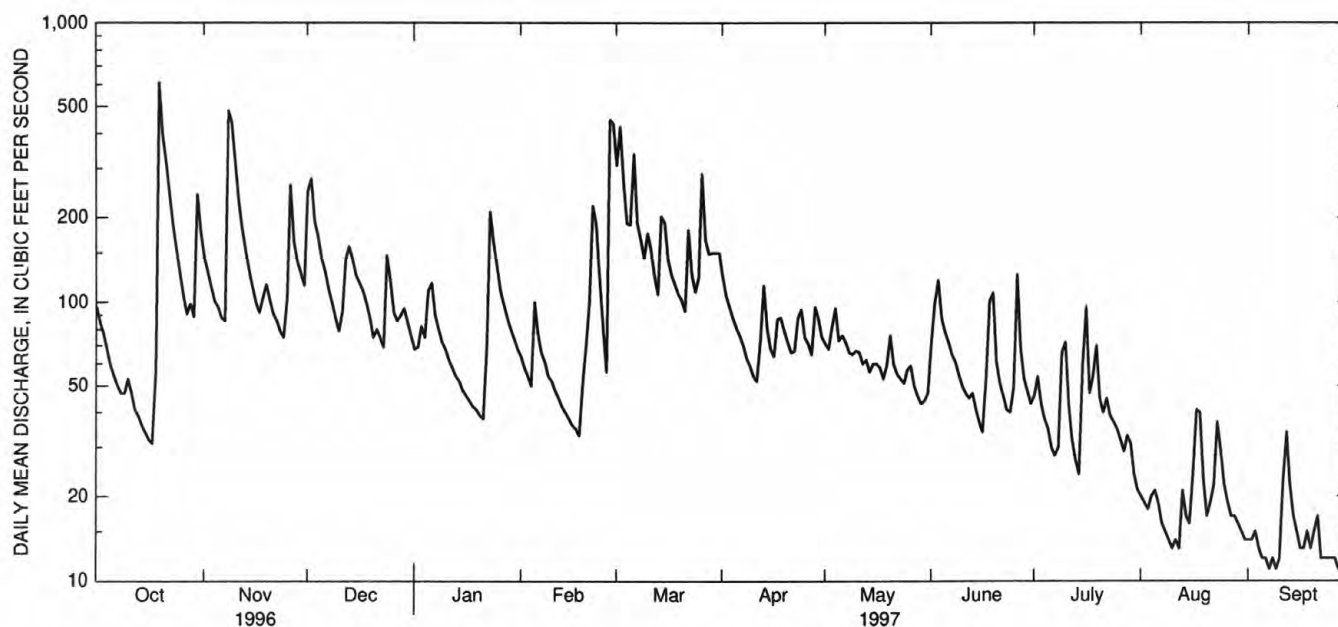
WATER YEARS 1966 - 1997

ANNUAL TOTAL	38088		31410									
ANNUAL MEAN	104		86.1							79.6		
HIGHEST ANNUAL MEAN										113		1984
LOWEST ANNUAL MEAN										58.9		1988
HIGHEST DAILY MEAN	e1200	Jan 19				611	Oct 19			2120	Jun 23	1972
LOWEST DAILY MEAN	11	Sep 3				11	Sep 7, 9, 27			2.2	Sep 30	1995
ANNUAL SEVEN-DAY MINIMUM	13	Aug 31				12	Sep 4			3.3	Sep 10	1991
INSTANTANEOUS PEAK FLOW						781	Oct 19			a5220	Jun 22	1972
INSTANTANEOUS PEAK STAGE						b5.33	Oct 19			8.99	Jun 22	1972
INSTANTANEOUS LOW FLOW						11	Sep 9, 27, 28			2.0	Jul 29	1978
ANNUAL RUNOFF (CFSM)	2.24					1.85				1.72		
ANNUAL RUNOFF (INCHES)	30.54					25.18				23.32		
10 PERCENT EXCEEDS	223					165				173		
50 PERCENT EXCEEDS	79					68				51		
90 PERCENT EXCEEDS	19					17				13		

a From rating curve extended above 1,300 ft³/s on basis of slope-area measurement at gage height 8.33 ft.

b Maximum gage height, 5.38 ft., Feb. 27 (backwater from ice).

c Estimated.



October 1, 1996 to September 30, 1997

CONEWANGO CREEK BASIN

03015000 CONEWANGO CREEK AT RUSSELL, PA

LOCATION.--Lat 41°56'17", long 79°08'00", Warren County, Hydrologic Unit 05010002, on left bank at highway bridge at Russell, 0.5 mi upstream from Akeley Run, and 8.0 mi upstream from mouth.

DRAINAGE AREA.--816 mi².

PERIOD OF RECORD.--October 1939 to current year. Monthly discharge only for October, November 1939, published in WSP 1305.

REVISED RECORD.--WSP 1083: 1936 (M).

GAGE.--Water-stage recorder. Datum of gage is 1,221.77 ft above sea level. Prior to Apr. 10, 1941, nonrecording gage at same site and datum.

REMARKS.--Records good except for estimated daily discharges, which are fair. Flow regulated by Chautauqua Lake. Several measurements of water temperature were made during the year. U.S. Army Corps of Engineers satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of March 1936 reached a stage of 10.9 ft from floodmark, discharge, 14,600 ft³/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3640	1980	3160	1970	1620	5490	3300	1020	1220	e600	329	237
2	3240	1780	3710	1700	1590	5790	3010	864	3630	e1000	280	223
3	2420	1680	3710	1860	1610	5890	2690	951	2740	e900	247	269
4	1720	1640	3670	2070	1690	5760	2340	1580	2520	e500	235	337
5	1400	1680	3450	2390	3330	5500	1950	1610	1770	e400	236	380
6	1240	1730	3050	3040	3410	5390	1700	1480	1350	e350	232	315
7	838	1700	2680	2920	3170	5150	1600	1550	1110	e320	232	270
8	579	3490	2330	2570	2810	4870	1360	1620	927	e300	224	245
9	469	4710	2020	2090	2240	4550	1110	1460	783	1180	210	235
10	604	4760	1810	e1800	1770	4480	1020	1650	680	2100	199	230
11	1380	4760	1720	e1500	1600	4520	969	2100	601	1810	201	244
12	1540	4790	1950	e1300	1300	4460	1100	2130	549	1450	213	459
13	1250	4750	2230	e1150	e1100	4340	2420	2060	844	1130	227	528
14	1000	4600	2360	e1050	e1000	4500	2720	1890	952	925	229	437
15	737	4300	2300	e1000	e900	4780	2510	1740	648	537	213	348
16	519	3820	1980	e950	e800	4740	2110	1830	516	1390	216	298
17	456	3300	1670	e900	e700	4670	1840	2160	e800	942	399	259
18	497	3410	1660	e850	e700	4530	1950	2140	e1500	519	421	253
19	3490	3720	1600	e839	e870	4150	1810	3440	e1100	379	329	268
20	4520	3680	1530	e830	e2000	3660	1510	4580	e850	330	269	305
21	4550	3570	1280	e830	3980	3180	1320	4880	e650	303	240	480
22	4700	3150	1290	e1100	4500	3090	1200	5100	e540	292	239	512
23	4720	2790	1330	2580	4680	3050	1100	5100	e420	282	517	403
24	4590	2430	2490	2710	4940	2780	1070	4870	e360	285	900	328
25	4310	2470	3110	3030	4960	2520	959	4390	e500	307	649	298
26	3720	3970	3010	3170	4710	3780	830	3550	e2800	309	452	297
27	2930	4020	2740	2940	5130	3850	715	2640	e1100	287	392	289
28	2290	3770	2450	2630	5360	3810	1030	2030	e700	287	348	275
29	1890	3390	2640	2300	---	3650	1440	1470	e500	535	313	1110
30	1990	2930	2620	1900	---	3370	1270	1200	e400	612	278	2640
31	2080	---	2370	1690	---	3400	---	1020	---	429	251	---
TOTAL	69309	98770	73920	57659	72470	133700	49953	74105	33060	20990	9720	12772
MEAN	2236	3292	2385	1860	2588	4313	1665	2390	1102	677	314	426
MAX	4720	4790	3710	3170	5360	5890	3300	5100	3630	2100	900	2640
MIN	456	1640	1280	830	700	2520	715	864	360	282	199	223
CFSM	2.74	4.03	2.92	2.28	3.17	5.29	2.04	2.93	1.35	.83	.38	.52
IN.	3.16	4.50	3.37	2.63	3.30	6.10	2.28	3.38	1.51	.96	.44	.58

e Estimated.

CONEWANGO CREEK BASIN

03015000 CONEWANGO CREEK AT RUSSELL, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	873	1623	2138	1999	2096	3204	2825	1384	906	484	423	617
MAX	3276	4070	4261	4320	5320	6715	6503	4016	2927	2142	2391	3891
(WY)	1991	1986	1978	1952	1976	1945	1947	1943	1986	1986	1977	1977
MIN	66.1	119	111	215	533	1344	353	296	177	108	82.4	79.9
(WY)	1964	1961	1961	1961	1963	1960	1946	1985	1949	1963	1954	1941

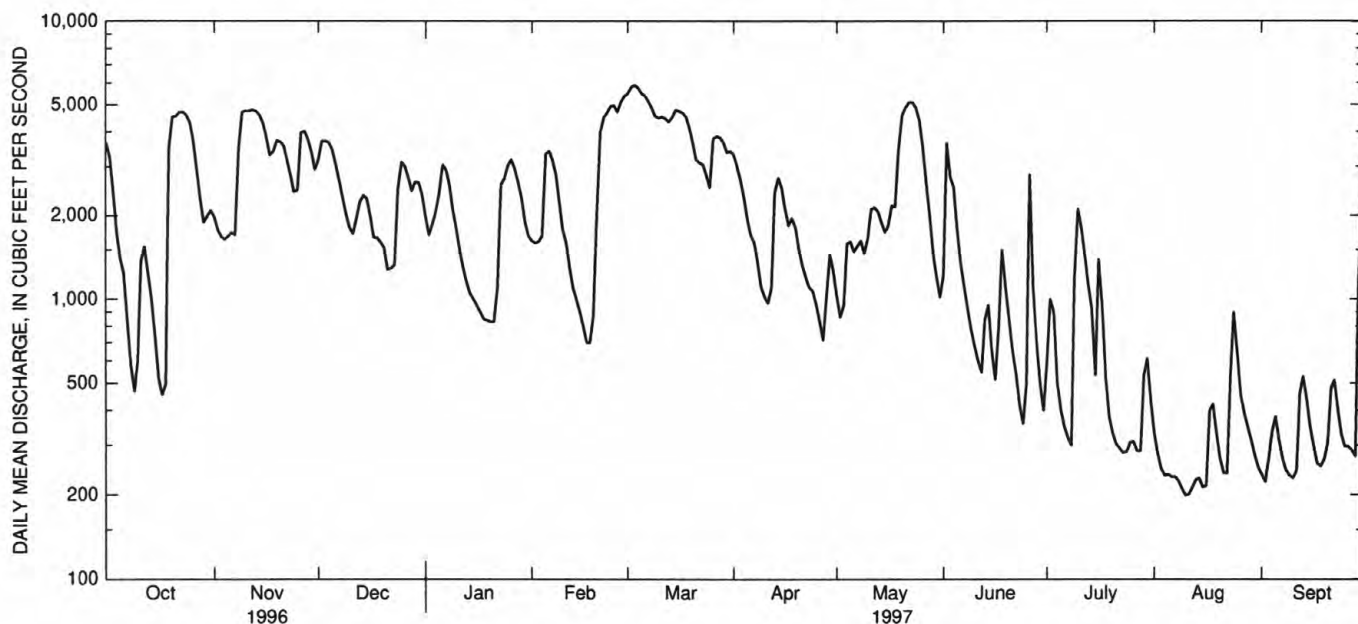
SUMMARY STATISTICS

FOR 1996 CALENDAR YEAR

FOR 1997 WATER YEAR

WATER YEARS 1940 - 1997

ANNUAL TOTAL	852719	706428	
ANNUAL MEAN	2330	1935	1544
HIGHEST ANNUAL MEAN			2057
LOWEST ANNUAL MEAN			974
HIGHEST DAILY MEAN	9190	Jan 22	5890
LOWEST DAILY MEAN	147	Sep 6	199
ANNUAL SEVEN-DAY MINIMUM	157	Sep 1	213
INSTANTANEOUS PEAK FLOW			6020
INSTANTANEOUS PEAK STAGE			7.56
ANNUAL RUNOFF (CFSM)	2.86		2.37
ANNUAL RUNOFF (INCHES)	38.87		32.20
10 PERCENT EXCEEDS	4710		4510
50 PERCENT EXCEEDS	1930		1610
90 PERCENT EXCEEDS	360		288



October 1, 1996 to September 30, 1997

BROKENSTRAW CREEK BASIN

03015500 BROKENSTRAW CREEK AT YOUNGSVILLE, PA

LOCATION.--Lat 41°51'09", long 79°19'03", Warren County, Hydrologic Unit 05010001, on right bank 150 ft downstream from bridge on Main Street at Youngsville, 500 ft upstream from Matthews Run, and 3.7 mi upstream from mouth. Records include flow of Matthews Run.

DRAINAGE AREA.--321 mi², including that of Matthews Run.

PERIOD OF RECORD.--October 1909 to current year. Monthly discharge only for some periods, published in WSP 1305. Flow of Matthews Run included in records since October 1938.

REVISED RECORDS.--WSP 743: Drainage area. WSP 1083: 1913 (M). WSP 1275: 1920, 1932, 1936. WSP 1305: 1910-15, 1928-29.

GAGE.--Water-stage recorder. Datum of gage is 1,186.92 ft above sea level. Prior to Sept. 30, 1933, nonrecording gage at site 150 ft upstream at datum 2.00 ft higher. Oct. 1, 1933 to June 15, 1939, nonrecording gage at site 150 ft upstream, and June 16, 1939 to Sept. 30, 1961, water-stage recorder at present site, both at datum 1.00 ft higher.

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

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than a base discharge of 4,500 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Feb. 21	2400	5,190	7.68	Feb. 27	1200	*7,080	*8.89

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1390	755	1680	803	553	2830	1140	482	835	230	67	80
2	628	576	2370	1020	1970	1980	848	421	1970	354	66	75
3	462	515	2150	1570	1840	1880	699	522	2880	308	65	76
4	362	485	1310	1250	1310	1410	602	802	2460	197	72	79
5	301	532	955	835	865	1000	532	638	1440	173	83	78
6	266	570	826	703	633	1720	489	827	711	156	71	71
7	236	561	719	675	554	1570	447	894	534	142	66	65
8	214	3050	639	526	565	1240	404	640	512	134	63	63
9	208	3400	582	e460	594	1130	372	591	429	175	61	61
10	319	3070	538	e400	525	1920	352	729	347	309	60	60
11	386	1940	625	e360	468	2200	328	1000	295	202	69	84
12	308	1320	1180	e340	431	1820	604	803	268	154	126	147
13	245	1090	1530	e320	362	1140	1560	747	310	131	121	121
14	213	982	1300	e290	e320	2260	1350	614	333	118	116	101
15	190	891	913	e280	e280	2850	851	585	257	117	90	89
16	176	815	737	e340	e260	2220	630	716	218	122	103	79
17	166	782	719	e300	e240	1290	574	756	463	111	185	73
18	358	1270	733	e270	e220	1030	532	614	548	102	203	73
19	2900	1750	619	e290	e740	919	466	1390	457	94	137	75
20	3060	1560	447	e500	2220	858	410	2280	349	88	100	81
21	2750	1140	381	e850	3420	796	373	2130	270	87	91	90
22	1860	860	385	e1400	4650	1190	370	1120	224	108	112	82
23	1190	727	457	1490	3200	1180	431	685	193	105	262	75
24	791	646	1770	1180	1610	805	564	545	174	96	230	72
25	609	870	1870	859	854	792	452	484	227	91	160	66
26	497	2840	1350	666	735	2140	383	470	1060	87	127	63
27	422	2470	892	602	5130	1830	347	375	488	84	110	62
28	394	1630	788	552	4670	1150	706	308	304	81	107	62
29	383	950	1080	522	---	887	826	283	231	78	105	752
30	851	785	942	507	---	992	601	285	186	73	93	980
31	1090	---	744	514	---	1270	---	283	---	69	84	---
TOTAL	23225	38832	31231	20674	39219	46299	18243	23019	18973	4376	3405	3935
MEAN	749	1294	1007	667	1401	1494	608	743	632	141	110	131
MAX	3060	3400	2370	1570	5130	2850	1560	2280	2880	354	262	980
MIN	166	485	381	270	220	792	328	283	174	69	60	60
CFSM	2.33	4.03	3.14	2.08	4.36	4.65	1.89	2.31	1.97	.44	.34	.41
IN.	2.69	4.50	3.62	2.40	4.55	5.37	2.11	2.67	2.20	.51	.39	.46

e Estimated.

BROKENSTRAW CREEK BASIN

03015500 BROKENSTRAW CREEK AT YOUNGSVILLE, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1910 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	321	631	758	788	771	1262	1023	603	383	231	181	231
MAX	1413	1817	1724	2459	2248	2851	2715	1528	1535	1039	994	1428
(WY)	1991	1986	1978	1913	1976	1936	1947	1943	1928	1986	1956	1977
MIN	31.7	57.3	85.9	124	161	297	251	135	62.0	37.8	32.3	31.6
(WY)	1932	1931	1961	1918	1987	1915	1946	1934	1934	1934	1934	1936

SUMMARY STATISTICS

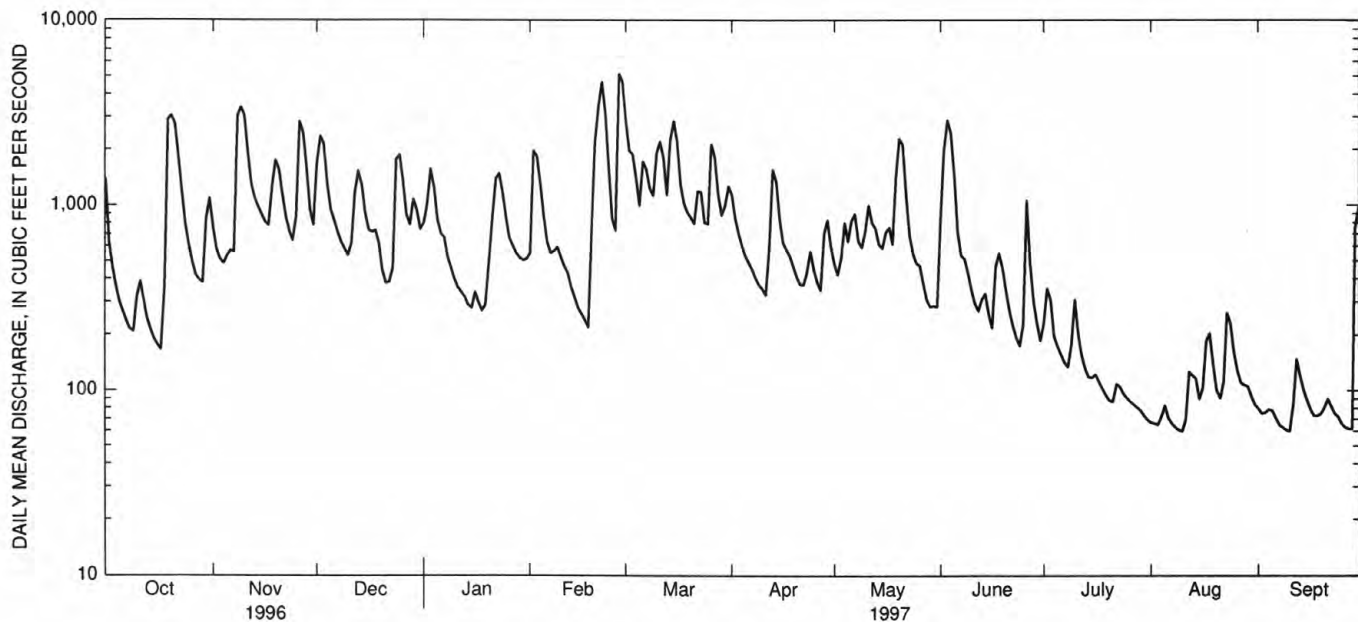
FOR 1996 CALENDAR YEAR

FOR 1997 WATER YEAR

WATER YEARS 1910 - 1997

ANNUAL TOTAL	329211		271431									
ANNUAL MEAN	899		744							597		
HIGHEST ANNUAL MEAN										864		1956
LOWEST ANNUAL MEAN										307		1931
HIGHEST DAILY MEAN	e10000	Jan 19		5130	Feb 27					14000	Mar 25	1913
LOWEST DAILY MEAN	65	Sep 3		60	Aug 10					19	Oct 14	1934
ANNUAL SEVEN-DAY MINIMUM	66	Aug 31		68	Aug 5					24	Oct 11	1934
INSTANTANEOUS PEAK FLOW				7080	Feb 27					a18000	Mar 25	1913
INSTANTANEOUS PEAK STAGE				8.89	Feb 27					14.20	Mar 25	1913
INSTANTANEOUS LOW FLOW				59	Aug 10, 11					b19	Oct 14	1934
ANNUAL RUNOFF (CFSM)	2.80			2.32						1.86		
ANNUAL RUNOFF (INCHES)	38.15			31.46						25.29		
10 PERCENT EXCEEDS	2100			1820						1440		
50 PERCENT EXCEEDS	538			522						305		
90 PERCENT EXCEEDS	151			83						68		

- a About.
b Minimum observed.
e Estimated.



October 1, 1996 to September 30, 1997

EAST HICKORY CREEK BASIN

03015795 EAST HICKORY CREEK NEAR QUEEN, PA

LOCATION.--Lat 41°38'31", long 79°20'18", Warren County, Hydrologic Unit 05010003, in the Allegheny National Forest, on right bank 20 ft downstream of Forest Service Road 119 bridge, 0.2 mi downstream of Camp Run, 0.5 mi upstream of Jaybuck Run, and 1.7 mi northeast of Queen, Pa.

DRAINAGE AREA.--20.3 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1996 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 1,270 ft above sea level, from topographic map.

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

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than a base discharge of 280 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 8	1630	407	4.79	Feb. 27	1015	*437	4.89
Feb. 5	--	Unknown	Ice jam	July 9	1415	285	4.32
Feb. 21	--	Unknown	Ice jam				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	36	51	119	e45	e28	e180	42	49	30	21	2.9	2.9
2	27	44	118	e50	103	e140	38	43	41	22	2.9	2.7
3	22	38	85	e70	e100	e100	35	49	52	14	2.8	3.0
4	18	33	68	e88	e60	e64	32	49	43	11	7.8	2.7
5	16	30	e49	e50	e40	e105	29	41	38	10	5.1	2.5
6	14	28	e41	e42	e35	e96	27	48	32	8.2	3.4	2.5
7	13	e30	e36	e39	e32	e86	25	44	28	7.1	2.9	2.3
8	12	460	e32	e37	e33	e70	23	42	24	6.8	2.8	2.4
9	12	249	e29	e30	e34	e90	22	42	20	79	2.7	2.4
10	15	158	e27	e26	e30	e135	21	40	17	45	2.6	2.6
11	12	105	e30	e23	e26	97	20	37	15	27	2.7	4.2
12	11	77	e50	e21	e23	74	39	35	22	19	2.9	11
13	11	62	e86	e19	e20	59	84	33	27	14	3.5	4.2
14	10	52	e70	e31	e18	175	56	30	17	11	3.3	3.5
15	9.9	43	e58	e26	e16	145	46	31	13	9.8	2.9	3.1
16	9.6	39	e46	e22	e14	95	40	34	12	9.0	6.0	2.9
17	9.6	36	e45	e18	e12	71	46	32	16	7.2	15	3.2
18	26	47	e45	e15	e20	59	40	30	30	6.2	8.2	5.0
19	252	51	e31	e16	e45	48	35	52	38	6.0	4.3	3.5
20	144	46	e24	e25	e100	42	32	79	27	5.1	3.4	4.1
21	104	42	e19	e45	e240	37	29	60	20	4.8	3.5	4.1
22	82	38	e19	e88	e190	39	29	49	16	6.9	4.6	3.2
23	62	34	e25	e68	e140	32	53	42	13	5.2	11	3.1
24	47	31	e100	e50	e100	28	103	36	10	5.1	5.3	3.0
25	36	40	e80	e40	e68	31	67	40	15	4.8	4.7	2.9
26	29	158	e56	e35	50	72	53	37	121	4.5	4.1	3.2
27	25	99	e43	e31	311	54	45	31	46	4.3	3.6	3.0
28	25	73	e41	e28	e260	48	92	27	31	4.4	3.3	3.2
29	23	60	e54	e27	---	46	69	25	23	4.2	3.0	44
30	69	52	e43	e25	---	44	58	25	17	3.4	3.0	28
31	62	---	e41	e27	---	52	---	24	---	3.1	2.8	---
TOTAL	1244.1	2306	1610	1157	2148	2414	1330	1236	854	389.1	137.0	168.4
MEAN	40.1	76.9	51.9	37.3	76.7	77.9	44.3	39.9	28.5	12.6	4.42	5.61
MAX	252	460	119	88	311	180	103	79	121	79	15	44
MIN	9.6	28	19	15	12	28	20	24	10	3.1	2.6	2.3
CFSM	1.98	3.79	2.56	1.84	3.78	3.84	2.18	1.96	1.40	.62	.22	.28
IN.	2.28	4.23	2.95	2.12	3.94	4.42	2.44	2.26	1.56	.71	.25	.31

a Maximum gage height, 5.32 ft., Feb. 5 (backwater from ice).
e Estimated.

EAST HICKORY CREEK BASIN

03015795 EAST HICKORY CREEK NEAR QUEEN, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1996 - 1997, BY WATER YEAR (WY)

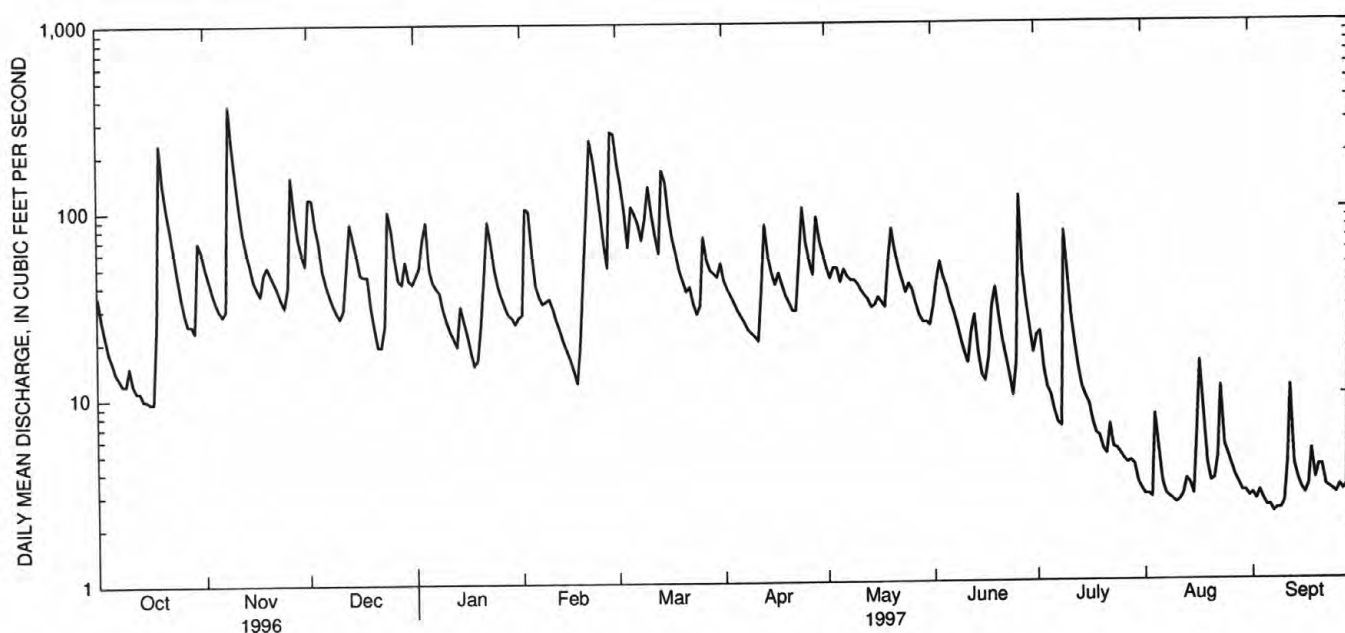
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	40.1	76.9	51.9	37.3	76.7	77.9	44.3	39.9	28.5	12.6	4.42	4.09
MAX	40.1	76.9	51.9	37.3	76.7	77.9	44.3	39.9	28.5	12.6	4.42	5.61
(WY)	1997	1997	1997	1997	1997	1997	1997	1997	1997	1997	1997	1997
MIN	40.1	76.9	51.9	37.3	76.7	77.9	44.3	39.9	28.5	12.6	4.42	2.57
(WY)	1997	1997	1997	1997	1997	1997	1997	1997	1997	1997	1997	1996

SUMMARY STATISTICS

FOR 1997 WATER YEAR

ANNUAL TOTAL	14993.6	
ANNUAL MEAN	41.1	
HIGHEST ANNUAL MEAN		
LOWEST ANNUAL MEAN		
HIGHEST DAILY MEAN	460	Nov 8
LOWEST DAILY MEAN	2.3	Sep 7
ANNUAL SEVEN-DAY MINIMUM	2.5	Sep 4
INSTANTANEOUS PEAK FLOW	565	Feb 27
INSTANTANEOUS PEAK STAGE	a4.89	Feb 27
INSTANTANEOUS LOW FLOW	2.1	Sep 7
ANNUAL RUNOFF (CFSM)	2.02	
ANNUAL RUNOFF (INCHES)	27.48	
10 PERCENT EXCEEDS	88	
50 PERCENT EXCEEDS	31	
90 PERCENT EXCEEDS	3.4	

a Maximum gage height, 5.32 ft., Feb. 5 (backwater from ice).



October 1, 1996 to September 30, 1997

EAST HICKORY CREEK BASIN

03015795 EAST HICKORY CREEK NEAR QUEEN, PA--Continued
(National Water-Quality Assessment station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1996 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: October 1996 to current year.

INSTRUMENTATION.--Daily record measured and collected at hourly intervals using an in-situ probe with an electronic data logger.

REMARKS.--All water-quality samples were collected and analyzed by the U.S. Geological Survey. Interruptions in the daily record were due to malfunctions of the equipment. Additional sites in the (NAWQA) fixed-station network are shown in figure 6 on page 28. An explanation of selected abbreviations used in the water-quality tables are given on pages 29-31.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum, 23.5°C, July 29; minimum, 0.0°C, many days during winter periods.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE	TIME	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)	OXYGEN, DIS- SOLVED (MG/L) (00300)	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)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)
OCT											
30...	1115	102	39	6.6	10.0	729	10.6	11	2.6	1.2	1.3
NOV											
14...	1400	50	39	6.2	2.0	736	14.3	--	--	--	--
DEC											
05...	1130	53	39	6.0	4.0	723	12.6	12	2.5	1.3	1.2
JAN											
14...	1430	74	42	6.6	0.0	733	13.3	12	2.7	1.3	1.4
FEB											
25...	1345	67	41	6.1	0.0	723	14.7	11	2.5	1.2	1.3
MAR											
10...	1300	123	38	6.2	4.0	724	12.8	11	2.4	1.1	1.2
APR											
21...	1345	29	41	6.6	5.0	718	12.0	12	2.6	1.3	1.3
MAY											
06...	1700	50	39	6.5	10.5	725	11.0	11	2.5	1.2	1.3
JUN											
24...	1245	10	44	6.9	18.0	728	8.9	14	3.1	1.5	1.9
JUL											
30...	1245	3.2	46	7.2	16.0	732	8.9	14	3.2	1.5	2.1
AUG											
20...	1215	3.2	49	7.2	15.5	721	8.9	15	3.5	1.6	2.2
SEP											
29...	1230	47	42	6.9	13.0	712	9.6	13	3.0	1.3	1.5

EAST HICKORY CREEK BASIN

03015795 EAST HICKORY CREEK NEAR QUEEN, PA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	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)	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)	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)
OCT 30...	1.0	6	8.8	1.3	<0.10	5.7	30	0.010	0.120	0.020	0.20
NOV 14...	--	6	--	--	--	--	--	<0.010	0.200	<0.015	<0.20
DEC 05...	0.70	4	9.6	1.3	<0.10	6.0	23	0.010	0.190	<0.015	<0.20
JAN 14...	0.80	5	9.6	1.6	0.10	6.2	31	<0.010	0.210	0.020	<0.20
FEB 25...	0.50	2	10	1.4	<0.10	5.8	27	0.020	0.330	0.040	<0.20
MAR 10...	0.70	8	9.4	1.3	<0.10	4.9	25	<0.010	0.220	<0.015	0.20
APR 21...	0.80	3	9.8	1.4	<0.10	5.5	27	<0.010	0.221	0.017	<0.20
MAY 06...	0.71	3	9.7	1.4	<0.10	5.4	27	<0.010	0.174	<0.015	<0.20
JUN 24...	0.71	8	7.9	1.6	<0.10	5.7	39	<0.010	0.178	<0.015	<0.20
JUL 30...	0.81	10	6.1	1.3	<0.10	5.7	35	<0.010	0.189	0.068	<0.20
AUG 20...	0.87	11	5.2	1.3	<0.10	5.6	38	<0.010	0.136	<0.015	<0.20
SEP 29...	1.1	6	8.1	1.3	<0.10	4.8	41	<0.010	0.174	<0.015	0.45

DATE	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)	IRON, DIS- SOLVED (µG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (µG/L AS MN) (01056)	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)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
OCT 30...	<0.20	0.020	<0.010	<0.010	91	36	3.2	1.2	21	65
NOV 14...	<0.20	<0.010	<0.010	<0.010	--	--	1.2	0.10	1	60
DEC 05...	<0.20	<0.010	<0.010	<0.010	34	21	1.3	0.20	1	67
JAN 14...	<0.20	<0.010	<0.010	<0.010	37	24	0.90	0.10	2	50
FEB 25...	<0.20	<0.010	<0.010	0.020	18	21	1.0	0.10	2	56
MAR 10...	<0.20	0.030	<0.010	<0.010	25	32	2.2	0.10	5	81
APR 21...	<0.20	0.026	<0.010	<0.010	41	15	1.1	0.20	1	67
MAY 06...	<0.20	<0.010	<0.010	<0.010	46	19	1.6	0.20	4	29
JUN 24...	<0.20	<0.010	0.016	<0.010	290	21	2.1	0.50	6	67
JUL 30...	<0.20	<0.010	<0.010	0.012	190	15	2.6	0.20	6	83
AUG 20...	<0.20	0.023	<0.010	<0.010	280	18	3.1	0.30	4	88
SEP 29...	0.33	0.020	0.027	<0.010	240	84	6.0	1.3	16	70

EAST HICKORY CREEK BASIN

03015795 EAST HICKORY CREEK NEAR QUEEN, PA--Continued

REMARKS.--The following data are for analytes from the National Water Quality Laboratory (NWQL) schedule 2010--pesticides in filtered water. Samples are filtered through a glass-fiber membrane filter with openings that are 0.7 microns in size to remove sediment and microorganisms. The filtered water is field extracted on C-18 solid phase extraction cartridges and analyzed by a gas chromatography/mass spectrometric detector.

The method detection limit (MDL) provides an index to indicate where measurement uncertainty is increased. When an analyte is detected and all criteria for a positive result are met, the concentration is reported. If the concentration is less than the MDL, an 'E' code will be reported with the value. If the analyte is qualitatively identified as present, but the quantitative determination is substantially more uncertain, the NWQL will identify the result with an 'E' code even though the measured value is greater than the MDL. A value reported with an 'E' code should be used with caution. When no analyte is detected in a sample, the default reporting value is the MDL preceded by a less-than sign (<).

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE	TIME	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 (MG/L) (00300)	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	2,6-DI-ETHYL ANILINE WAT FLT 0.7 µ GF, REC (µG/L) (82660)	ACETO-CHLOR, WATER, FLTRD REC (µG/L) (49260)	ALA-CHLOR, WATER, DISS, REC, (µG/L) (46342)	ATRA-ZINE, WATER, DISS, REC (µG/L) (39632)	
JUN 24...	1245	10	44	6.9	18.0	728	8.9	8	<0.003	<0.002	<0.002	<0.001	
DATE		METHYL AZIN-PHOS WAT FLT 0.7 µ GF, REC (µG/L) (82686)	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)	DISUL-FOTON WATER FLTRD 0.7 µ GF, REC (µG/L) (82677)
JUN 24...	<0.001	<0.002	<0.002	<0.003	<0.003	<0.004	<0.004	<0.002	<0.002	<0.002	<0.001	<0.017	
DATE		EPTC 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)	METO-LACHLOR WATER DISSOLV (µG/L) (39415)	METRI-BUZIN SENCOR WATER DISSOLV (µG/L) (82630)	MOL-INATE WATER FLTRD 0.7 µ GF, REC (µG/L) (82671)	NAPROP-AMIDE WATER FLTRD 0.7 µ GF, REC (µG/L) (82684)	PARA-THION, DIS-SOLVED (µG/L) (39542)
JUN 24...	<0.002	<0.004	<0.003	<0.003	<0.004	<0.002	<0.005	<0.002	<0.004	<0.004	<0.003	<0.004	
DATE		METHYL PARA-THION WAT FLT 0.7 µ GF, REC (µG/L) (82667)	PEB-ULATE WATER FLTRD 0.7 µ GF, REC (µG/L) (82669)	PENDI-METH-ALIN WAT FLT 0.7 µ GF, REC (µG/L) (82683)	PHORATE WATER FLTRD 0.7 µ GF, REC (µG/L) (82664)	PRO-METON, WATER, DISS, REC (µG/L) (04037)	PROP-CHLOR, WATER, DISS, REC (µG/L) (04024)	PRO-PANIL WATER FLTRD 0.7 µ GF, REC (µG/L) (82679)	PRO-PARGITE WATER FLTRD 0.7 µ GF, REC (µG/L) (82685)	PRON-AMIDE WATER FLTRD 0.7 µ GF, REC (µG/L) (82676)	SI-MAZINE, WATER, DISS, REC (µG/L) (04035)	TEBU-THIURON WATER FLTRD 0.7 µ GF, REC (µG/L) (82670)	TER-BACIL WATER FLTRD 0.7 µ GF, REC (µG/L) (82665)
JUN 24...	<0.006	<0.004	<0.004	<0.002	<0.018	<0.007	<0.004	<0.013	<0.003	<0.005	<0.010	<0.007	
DATE		TER-BUFOS WATER FLTRD 0.7 µ GF, REC (µG/L) (82675)	THIO-BENCARB WATER FLTRD 0.7 µ GF, REC (µG/L) (82681)	TRIAL-LATE WATER FLTRD 0.7 µ GF, REC (µG/L) (82678)	TRI-FLUR-ALIN WAT FLT 0.7 µ GF, REC (µG/L) (82661)	ALPHA BHC DIS-SOLVED (µG/L) (34253)	PER-METHRIN CIS WAT FLT 0.7 µ GF, REC (µG/L) (82687)	P, P' DDE DISSOLV (µG/L) (34653)	DIAZ-INON D10 SRG WAT FLT 0.7 µ GF, REC (µG/L) (91063)	TERBUTH YLAZINE SURROGT WAT FLT 0.7 µ GF, REC (µG/L) (91064)	HCH ALPHA D6 SRG WAT FLT 0.7 µ GF, REC (µG/L) (91065)	SAMPLE VOLUME SCHED-ULE 2010 (ML) (99857)	
JUN 24...	<0.013	<0.002	<0.001	<0.002	<0.002	<0.005	<0.006	98.2	116	104	925		

EAST HICKORY CREEK BASIN

03015795 EAST HICKORY CREEK NEAR QUEEN, PA--Continued

REMARKS.--The following data are for analytes from the National Water Quality Laboratory (NWQL) schedule 2051--pesticides in filtered water. Samples are filtered through a glass-fiber membrane filter with openings that are 0.7 microns in size to remove sediment and microorganisms. The filtered water is field extracted on Carbopak B solid phase extraction cartridge and analyzed by high performance liquid chromatography.

The method detection limit (MDL) provides an index to indicate where measurement uncertainty is increased. When an analyte is detected and all criteria for a positive result are met, the concentration is reported. If the concentration is less than the MDL, an 'E' code will be reported with the value. If the analyte is qualitatively identified as present, but the quantitative determination is substantially more uncertain, the NWQL will identify the result with an 'E' code even though the measured value is greater than the MDL. A value reported with an 'E' code should be used with caution. When no analyte is detected in a sample, the default reporting value is the MDL preceded by a less-than sign (<).

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE	TIME	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 HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	2,4,5-T DIS- SOLVED (μ G/L) (39742)	2,4-D, DIS- SOLVED (μ G/L) (39732)
JUN 24...	1245	10	44	6.9	18.0	728	8.9	8	<0.035	<0.035
DATE	2,4-DB WATER, FLTRD, GF 0.7 μ REC (μ G/L) (38746)	SILVEX, DIS- SOLVED (μ G/L) (39762)	3HYDRXY CARBO- FURAN WAT,FLT GF 0.7 μ REC (μ G/L) (49308)	DNOC WAT,FLT GF 0.7 μ REC (μ G/L) (49299)	ACIFL- UORFEN WATER, FLTRD, GF 0.7 μ REC (μ G/L) (49315)	ALDI- CARB, WATER, FLTRD, GF 0.7 μ REC (μ G/L) (49312)	ALDI- CARB SULFONE WAT,FLT GF 0.7 μ REC (μ G/L) (49313)	ALDICA- RB SUL- FOXIDE WAT,FLT GF 0.7 μ REC (μ G/L) (49314)	BENTA- ZON, WATER, FLTRD, GF 0.7 μ REC (μ G/L) (38711)	BRO- MACIL, WATER, FLTRD, DISS, REC (μ G/L) (04029)
JUN 24...	<0.035	<0.021	<0.014	<0.035	<0.035	<0.016	<0.016	<0.021	<0.014	<0.035
DATE	BRO- MOXYNIL WATER, FLTRD, GF 0.7 μ REC (μ G/L) (49311)	CAR- BARYL, WATER, FLTRD, GF 0.7 μ REC (μ G/L) (49310)	CARBO- FURAN, WATER, FLTRD, GF 0.7 μ REC (μ G/L) (49309)	CHLOR- AMBEN, WATER, FLTRD, GF 0.7 μ REC (μ G/L) (49307)	CHLORO- THALO- NIL, WAT,FLT GF 0.7 μ REC (μ G/L) (49306)	CLOPYR- ALID, WATER, FLTRD, GF 0.7 μ REC (μ G/L) (49305)	DACTHAL MONO- ACID, WAT,FLT GF 0.7 μ REC (μ G/L) (49304)	DICAMBA WATER, FLTRD, GF 0.7 μ REC (μ G/L) (38442)	DICHLO- BENIL, WATER, FLTRD, GF 0.7 μ REC (μ G/L) (49303)	DICHLOR PROP, WATER, FLTRD, GF 0.7 μ REC (μ G/L) (49302)
JUN 24...	<0.035	<0.008	<0.028	<0.011	<0.035	<0.050	<0.017	<0.035	<0.020	<0.032
DATE	DINOSEB WATER, FLTRD, GF 0.7 μ REC (μ G/L) (49301)	DIURON, WATER, FLTRD, GF 0.7 μ REC (μ G/L) (49300)	FEN- URON, WATER, FLTRD, GF 0.7 μ REC (μ G/L) (49297)	FLUO- METURON WATER, FLTRD, GF 0.7 μ REC (μ G/L) (38811)	LINURON WATER, FLTRD, GF 0.7 μ REC (μ G/L) (38478)	MCPA, WATER, FLTRD, GF 0.7 μ REC (μ G/L) (38482)	MCPB, WATER, FLTRD, GF 0.7 μ REC (μ G/L) (38487)	METHIO- CARB, WATER, FLTRD, GF 0.7 μ REC (μ G/L) (38501)	METH- OMYL, WATER, FLTRD, GF 0.7 μ REC (μ G/L) (49296)	NEB- URON, WATER, FLTRD, GF 0.7 μ REC (μ G/L) (49294)
JUN 24...	<0.035	<0.020	<0.013	<0.035	<0.018	<0.050	<0.035	<0.026	<0.017	<0.015
DATE	NORFLUR AZON, WATER, FLTRD, GF 0.7 μ REC (μ G/L) (49293)	ORY- ZALIN, WATER, FLTRD, GF 0.7 μ REC (μ G/L) (49292)	OXAMYL, WATER, FLTRD, GF 0.7 μ REC (μ G/L) (38866)	PIC- LORAM, WATER, FLTRD, GF 0.7 μ REC (μ G/L) (49291)	PRO- PHAM, WATER, FLTRD, GF 0.7 μ REC (μ G/L) (49236)	PRO- POXUR, WATER, FLTRD, GF 0.7 μ REC (μ G/L) (38538)	TRI- CLOPYR, WATER, FLTRD, GF 0.7 μ REC (μ G/L) (49235)	BDMC, SURROG, WATER, UNFLTRD REC PERCENT (99835)	SAMPLE VOLUME, SCHED- ULE 2051 (ML) (99847)	
JUN 24...	<0.024	<0.019	<0.018	<0.050	<0.035	<0.035	<0.050	117	900	

EAST HICKORY CREEK BASIN
03015795 EAST HICKORY CREEK NEAR QUEEN, PA--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997												
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	---	---	---	6.5	5.5	5.5	6.0	3.5	3.5	1.5	.5	.5
2	---	---	---	5.5	4.5	4.5	5.5	4.0	4.0	3.0	1.0	1.0
3	---	---	---	4.5	4.0	4.0	4.5	3.0	3.0	6.0	3.0	3.0
4	---	---	---	4.5	3.0	3.0	4.5	4.0	4.0	7.0	5.5	5.5
5	---	---	---	5.0	4.0	4.0	4.0	3.5	3.5	8.0	5.5	5.5
6	---	---	---	7.5	5.0	5.0	3.5	3.5	3.5	5.5	2.0	2.0
7	---	---	---	10.5	7.5	7.5	3.5	3.0	3.0	2.0	.5	.5
8	---	---	---	11.0	8.5	8.5	3.0	1.5	1.5	1.0	.5	.5
9	---	---	---	8.5	6.5	6.5	2.0	2.0	2.0	.5	.0	.0
10	---	---	---	6.5	5.5	5.5	2.5	1.5	1.5	.5	.0	.0
11	---	---	---	5.5	4.5	4.5	3.5	2.0	2.0	.0	.0	.0
12	---	---	---	4.5	3.5	3.5	5.0	3.5	3.5	.0	.0	.0
13	---	---	---	3.5	2.5	2.5	5.5	4.5	4.5	.0	.0	.0
14	---	---	---	2.5	1.0	1.0	5.0	4.0	4.0	.0	.0	.0
15	---	---	---	1.5	.0	.0	4.0	3.5	3.5	.0	.0	.0
16	---	---	---	1.5	.0	.0	4.5	3.5	3.5	.0	.0	.0
17	---	---	---	2.5	.5	.5	5.5	4.5	4.5	.0	.0	.0
18	---	---	---	4.0	2.5	2.5	5.0	3.0	3.0	.0	.0	.0
19	---	---	---	4.5	4.0	4.0	3.0	.0	.0	.0	.0	.0
20	---	---	---	4.0	3.0	3.0	.0	.0	.0	.0	.0	.0
21	---	---	---	3.0	3.0	3.0	.0	.0	.0	.0	.0	.0
22	---	---	---	3.0	2.5	2.5	.0	.0	.0	.0	.0	.0
23	---	---	---	3.0	2.0	2.0	.0	.0	.0	.0	.0	.0
24	---	---	---	3.5	3.0	3.0	3.0	.0	.0	.0	.0	.0
25	---	---	---	4.5	3.5	3.5	1.5	.5	.5	.0	.0	.0
26	---	---	---	5.0	3.5	3.5	1.5	.0	.0	.0	.0	.0
27	---	---	---	3.5	1.5	1.5	2.5	1.5	1.5	.0	.0	.0
28	---	---	---	2.0	1.0	1.0	3.5	2.5	2.5	.0	.0	.0
29	---	---	---	3.0	1.5	1.5	5.5	3.5	3.5	.0	.0	.0
30	---	---	---	3.5	2.0	2.0	5.0	3.0	3.0	.0	.0	.0
31	9.0	6.5	6.5	---	---	---	3.0	1.5	1.5	.0	.0	.0
MONTH	9.0	6.5	6.5	11.0	.0	3.3	6.0	.0	2.3	8.0	.0	.6

EAST HICKORY CREEK BASIN
03015795 EAST HICKORY CREEK NEAR QUEEN, PA--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997												
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	.0	.0	.0	6.0	4.0	4.0	5.0	1.5	1.5	10.0	8.0	8.0
2	.0	.0	.0	6.5	4.0	4.0	6.5	2.0	2.0	9.0	6.5	6.5
3	.0	.0	.0	4.0	3.5	3.5	7.0	3.5	3.5	10.0	8.5	8.5
4	.0	.0	.0	4.0	3.0	3.0	9.0	5.5	5.5	10.0	7.5	7.5
5	.0	.0	.0	5.0	4.0	4.0	9.5	7.0	7.0	10.0	6.0	6.0
6	1.5	.0	.0	4.5	2.5	2.5	12.0	9.0	9.0	10.0	8.0	8.0
7	2.0	1.5	1.5	3.0	1.0	1.0	11.5	7.0	7.0	9.0	6.0	6.0
8	1.5	1.0	1.0	3.0	2.0	2.0	7.0	4.0	4.0	7.5	5.5	5.5
9	1.0	.0	.0	3.5	1.5	1.5	4.0	2.0	2.0	8.5	7.0	7.0
10	.0	.0	.0	5.0	3.0	3.0	4.0	1.0	1.0	7.5	6.0	6.0
11	.0	.0	.0	4.0	3.0	3.0	4.0	2.5	2.5	9.5	4.5	4.5
12	.0	.0	.0	3.0	1.5	1.5	4.5	3.0	3.0	10.0	8.5	8.5
13	.0	.0	.0	2.5	.5	.5	5.0	4.0	4.0	10.0	7.5	7.5
14	.0	.0	.0	3.0	2.0	2.0	---	---	---	9.0	7.5	7.5
15	.0	.0	.0	3.0	1.0	1.0	---	---	---	9.0	8.0	8.0
16	.0	.0	.0	2.0	.5	.5	---	---	---	8.5	6.5	6.5
17	.0	.0	.0	3.0	.5	.5	---	---	---	9.0	7.0	7.0
18	.0	.0	.0	4.0	3.0	3.0	---	---	---	12.0	6.0	6.0
19	.0	.0	.0	4.5	2.0	2.0	---	---	---	13.0	11.0	11.0
20	2.5	.0	.0	4.0	2.5	2.5	---	---	---	12.0	9.5	9.5
21	4.0	2.5	2.5	5.0	2.5	2.5	---	---	---	9.5	8.0	8.0
22	4.0	2.5	2.5	5.5	3.0	3.0	6.0	4.0	4.0	10.0	6.5	6.5
23	2.5	2.0	2.0	3.0	1.0	1.0	6.0	5.0	5.0	11.0	6.5	6.5
24	2.5	1.0	1.0	2.0	.0	.0	8.0	5.0	5.0	13.0	9.0	9.0
25	1.0	.0	.0	4.0	2.0	2.0	8.5	5.0	5.0	12.0	10.0	10.0
26	2.5	.0	.0	4.0	2.5	2.5	9.5	5.0	5.0	13.0	9.0	9.0
27	5.0	2.0	2.0	6.5	2.0	2.0	8.0	5.5	5.5	12.0	8.5	8.5
28	5.0	3.0	3.0	7.0	4.0	4.0	8.0	6.0	6.0	13.0	9.5	9.5
29	---	---	---	8.0	6.5	6.5	10.0	5.0	5.0	12.0	10.0	10.0
30	---	---	---	7.5	6.0	6.0	11.0	6.5	6.5	12.0	10.0	10.0
31	---	---	---	6.0	2.5	2.5	---	---	---	13.0	11.0	11.0
MONTH	5.0	.0	.6	8.0	.0	2.5	12.0	1.0	4.5	13.0	4.5	7.8

EAST HICKORY CREEK BASIN
03015795 EAST HICKORY CREEK NEAR QUEEN, PA--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997												
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	13.0	12.5	12.5	17.5	17.0	17.0	17.0	14.5	16.0	17.5	16.0	16.5
2	12.5	12.0	12.5	18.5	16.5	17.5	19.0	16.5	17.5	21.5	15.5	17.0
3	13.0	11.0	12.0	18.5	18.0	18.5	20.0	17.0	18.5	17.5	13.0	15.0
4	13.5	9.5	11.5	18.0	15.5	17.0	18.5	17.5	18.0	13.5	10.0	12.0
5	14.0	10.0	12.5	16.5	14.5	15.5	18.0	16.0	17.5	13.0	9.0	11.5
6	14.5	11.5	13.0	16.0	13.5	15.0	16.5	14.0	15.5	15.0	12.0	13.5
7	14.0	12.5	13.0	17.0	14.0	15.5	16.0	12.5	14.5	16.0	13.0	14.5
8	14.0	11.5	12.5	18.0	14.0	16.5	18.0	13.0	15.0	16.0	14.0	15.0
9	15.0	12.0	13.5	17.0	14.5	16.5	19.0	13.5	16.0	15.5	12.0	14.0
10	16.0	13.0	14.5	16.0	13.0	14.5	18.5	14.5	16.5	15.5	15.0	15.5
11	16.0	13.5	15.0	16.5	13.0	14.5	18.5	16.5	17.5	16.0	15.5	15.5
12	16.0	14.5	15.0	17.0	14.0	15.5	20.5	16.5	18.0	16.0	15.0	15.5
13	16.0	14.5	15.0	17.5	15.5	16.5	19.0	18.0	18.5	16.5	15.5	15.5
14	16.5	14.5	15.5	19.0	16.5	18.0	18.0	16.5	17.5	16.0	15.0	15.5
15	15.0	12.5	14.0	20.5	18.5	19.5	17.0	15.5	16.0	16.0	14.0	15.0
16	16.0	13.0	15.0	20.5	19.0	19.5	18.5	17.0	17.5	16.5	14.5	15.5
17	17.5	16.0	16.5	21.0	18.0	19.5	18.5	18.0	18.0	16.5	15.0	16.0
18	17.0	15.5	16.5	22.0	18.0	20.0	19.0	16.5	18.0	16.5	15.0	16.0
19	17.5	14.5	16.0	20.0	13.5	17.5	17.5	14.5	16.0	15.5	13.5	15.0
20	18.0	16.0	17.0	19.5	11.0	15.5	16.0	15.0	15.5	16.0	14.0	15.5
21	19.5	16.5	18.0	20.0	14.5	17.5	16.5	15.5	15.5	14.0	11.0	12.5
22	19.5	18.0	19.0	19.0	17.0	18.0	15.5	14.5	15.0	11.5	9.0	10.5
23	18.5	16.5	17.5	17.5	16.5	17.0	15.0	14.0	14.5	12.5	11.0	11.5
24	19.5	16.5	18.0	17.5	16.0	17.0	14.5	13.0	13.5	11.5	9.5	10.5
25	21.0	18.5	19.5	18.5	16.0	17.0	15.5	14.0	14.5	10.5	7.5	9.5
26	18.5	15.5	16.5	20.0	16.0	18.0	16.0	14.0	15.0	11.5	10.0	10.5
27	17.0	14.0	15.5	23.0	18.0	19.5	17.5	15.5	16.5	10.5	8.0	9.5
28	17.5	13.5	15.5	21.0	16.5	19.0	17.5	16.0	16.5	12.0	9.0	10.5
29	18.0	14.5	16.5	23.5	12.5	16.5	16.5	15.5	16.0	---	---	---
30	17.5	16.0	17.0	17.5	10.0	14.5	16.5	14.5	15.5	---	---	---
31	---	---	---	17.5	14.0	16.0	16.0	14.0	15.5	---	---	---
MONTH	21.0	9.5	15.2	23.5	10.0	17.1	20.5	12.5	16.3	21.5	7.5	13.7

OHIO RIVER MAIN STEM

03016000 ALLEGHENY RIVER AT WEST HICKORY, PA

LOCATION.--Lat 41°34'15", long 79°24'29", Forest County, Hydrologic Unit 05010003, on right bank at downstream side of bridge on State Highway 127 at West Hickory, 0.6 mi upstream from Siggins Run, 0.8 mi downstream from East Hickory Creek, at mile 158.9.

DRAINAGE AREA.--3,660 mi².

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

REVISED RECORDS.--WRD PA-96-3: 1995(M).

GAGE.--Water-stage recorder. Datum of gage is 1,059.90 ft above sea level. Prior to Dec. 12, 1941, nonrecording gage at same site and datum.

REMARKS.--Records good except for estimated daily discharges, which are fair. Flow regulated by Allegheny Reservoir 39 mi upstream since October 1965 and since 1941 by Chautauqua Lake. Several measurements of water temperature were made during the year. U.S. Army Corps of Engineers satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13200	13400	13700	7070	e6200	18000	10700	5360	5380	3770	2520	2450
2	13500	12400	16000	6720	e5900	18400	10000	4960	8060	3590	2450	2420
3	12000	10200	15800	6300	e5950	20200	9430	5010	11100	3240	2430	2430
4	9040	8340	17800	6630	6870	17000	8220	5800	10800	2970	2440	2440
5	8310	8640	17300	7340	10500	19100	7120	6100	11400	2870	2420	2710
6	7580	10500	18200	9090	9900	19400	6620	6600	13400	2770	2580	2700
7	4560	10500	15500	8380	9240	19000	5810	6840	12800	2670	2580	2640
8	4020	17300	14700	7540	8250	21200	4990	7800	12300	2360	2480	2570
9	3280	20700	14200	6870	7360	20200	4570	7640	11800	2470	2560	2520
10	3340	19200	11900	e6000	6740	18100	3780	7380	10300	3960	2550	2500
11	3690	21800	8080	e5500	5790	19700	3020	7080	8240	6270	2550	2550
12	4280	24700	6720	e4700	5530	18900	3200	7120	7650	7030	2900	2790
13	4020	25300	7850	e4000	5290	17700	5730	6930	5250	6380	2910	2860
14	3670	28200	10300	e3300	4670	17700	6160	6720	5150	4920	2890	2780
15	3450	27300	9660	e2600	4630	18000	5530	6340	4250	3570	2850	2640
16	2760	21300	9470	e2300	4500	16200	4900	5550	3890	2850	3110	2570
17	2840	17800	10600	e2200	4370	15100	4590	6090	3530	3180	3200	2490
18	4720	16000	10500	e2160	4030	15900	4430	7170	4370	2670	3220	2450
19	12600	16000	10200	e2150	4320	15300	4410	8250	4890	2440	2770	2410
20	15200	15200	9860	e2200	8430	14600	4560	11800	6830	2290	2380	2490
21	13800	13000	9460	e2500	12100	13900	4280	14600	6840	2260	2050	2520
22	20000	11800	8830	e2950	18500	14100	4100	15500	6440	2260	2010	2590
23	22400	9610	7330	e3700	17300	14000	4260	15600	6120	2220	2310	2560
24	22100	9120	9440	e4650	19800	12900	5370	14700	5790	2240	2640	2410
25	23100	8890	11200	e5800	20200	10800	5620	11600	4860	2190	2630	2320
26	22200	11400	11800	e7400	19500	12500	5330	7560	7690	2510	2360	2280
27	21000	11200	11800	e9500	28400	10800	5120	7400	7340	2510	2180	2440
28	17300	14300	11200	e9100	21200	9900	5820	6640	6910	2480	2130	2470
29	16100	12900	11000	e8450	---	9530	6140	6250	6150	2510	2060	3580
30	15000	12100	9560	e7700	---	10500	6650	5820	4550	2710	2490	5270
31	14200	---	8650	e6800	---	10800	---	4750	---	2670	2490	---
TOTAL	343260	459100	358610	171600	285470	489430	170460	246960	224080	98830	79140	79850
MEAN	11070	15300	11570	5535	10200	15790	5682	7966	7469	3188	2553	2662
MAX	23100	28200	18200	9500	28400	21200	10700	15600	13400	7030	3220	5270
MIN	2760	8340	6720	2150	4030	9530	3020	4750	3530	2190	2010	2280
CFSM	3.03	4.18	3.16	1.51	2.79	4.31	1.55	2.18	2.04	.87	.70	.73
IN.	3.49	4.67	3.64	1.74	2.90	4.97	1.73	2.51	2.28	1.00	.80	.81

e Estimated.

OHIO RIVER MAIN STEM

03016000 ALLEGHENY RIVER AT WEST HICKORY, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1942 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	4173	6678	8688	8554	8163	12390	11830	7606	4862	3080	2270	2727
MAX	15890	17070	17950	21260	18970	29740	25970	20020	14730	15430	10160	12160
(WY)	1991	1993	1978	1952	1990	1945	1947	1943	1989	1972	1977	1977
MIN	324	659	581	844	1725	3378	2255	1333	1430	597	490	449
(WY)	1964	1961	1961	1961	1963	1969	1946	1985	1949	1955	1954	1955

SUMMARY STATISTICS

FOR 1996 CALENDAR YEAR

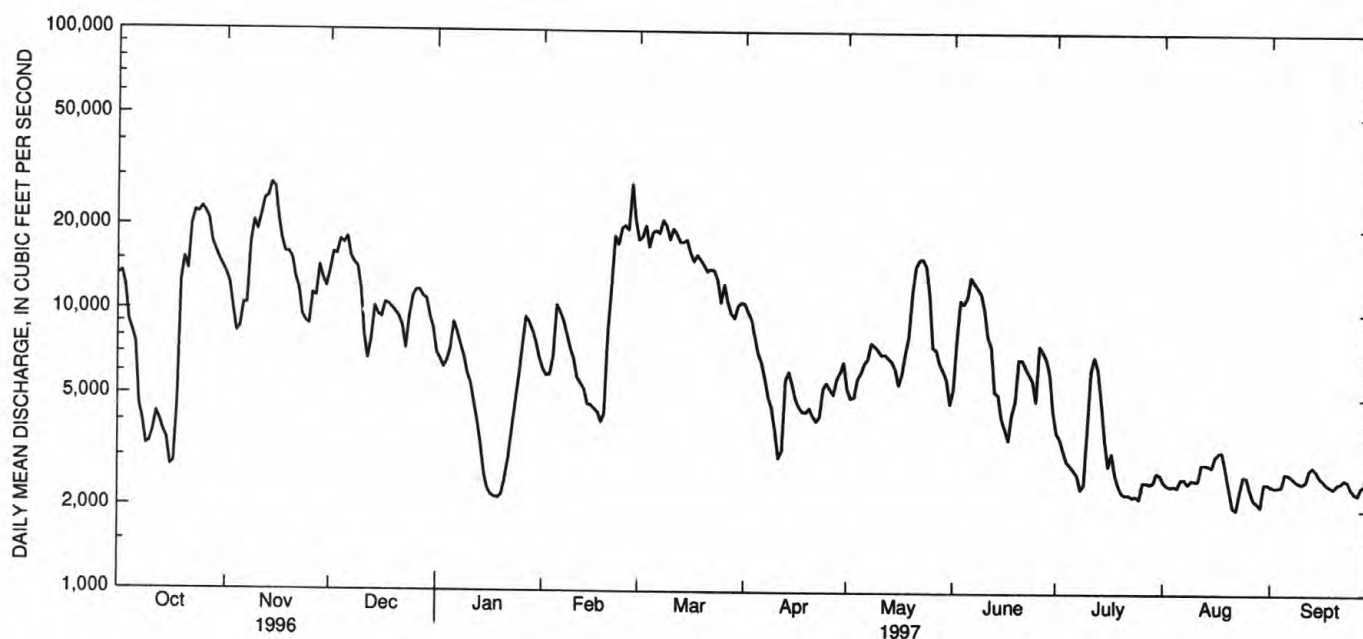
FOR 1997 WATER YEAR

WATER YEARS 1942 - 1997

ANNUAL TOTAL	3506980	3006790	
ANNUAL MEAN	9582	8238	6744
HIGHEST ANNUAL MEAN			9547
LOWEST ANNUAL MEAN			4455
HIGHEST DAILY MEAN	e33000	Jan 19	28400
LOWEST DAILY MEAN	1350	Aug 28	2010
ANNUAL SEVEN-DAY MINIMUM	1750	Aug 26	2270
INSTANTANEOUS PEAK FLOW			36800
INSTANTANEOUS PEAK STAGE			10.40
ANNUAL RUNOFF (CFSM)	2.62		2.25
ANNUAL RUNOFF (INCHES)	35.64		30.56
10 PERCENT EXCEEDS	20100		17700
50 PERCENT EXCEEDS	8350		6630
90 PERCENT EXCEEDS	2210		2470

a Maximum gage height, 17.83 ft., Jan. 25, 1964 (backwater from ice).

e Estimated.



October 1, 1996 to September 30, 1997

ALLEGHENY RIVER BASIN

LAKES AND RESERVOIRS IN ALLEGHENY RIVER BASIN

03013946 CHAUTAUQUA LAKE.--Lat 42°09'23", long 79°23'39", Chautauqua County, N.Y., Hydrologic Unit 05010002, 6 ft east of lake shore, 30 ft south of the intersection of Pauline Ave. and Lakeside Ave., 950 ft southeast of the ferry landing, at Bemus Point, N.Y. DRAINAGE AREA, 189 mi². PERIOD OF RECORD, November 1949 to current year. GAGE, water-stage recorder. Datum of gage is sea level. Prior to Dec. 21, 1956, non-recording gage at site near mouth of Big Inlet at datum 1,300.00 ft above sea level. Dec. 21, 1956 to Sept. 30, 1975, water-stage recorder at site at outlet of Muddy Creek at datum 1,300.00 ft above sea level.

Lake is regulated at outlet by Warner Dam. Capacity of lake not determined; area of water surface, 20.98 mi². Figures of change in contents computed from surface area multiplied by change in stage.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 1,311.23 ft, Mar. 5, 1976; minimum, 1,306.29 ft, Nov. 17, 1953.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 1,309.13 ft, Mar. 15; minimum, 1,307.37 ft, Feb. 18.

03012520 ALLEGHENY RESERVOIR.--Lat 41°50'17", long 79°00'15", Warren County, Hydrologic Unit 05010001, in Allegheny National Forest, at control house at Kinzua Dam on Allegheny River, 3 mi upstream from Hemlock Run, and 7 mi east of Warren. DRAINAGE AREA, 2,180 mi². PERIOD OF RECORD, October 1965 to current year. Prior to October 1966 published as Allegheny River Reservoir. GAGE, water-stage recorder. Datum of gage is sea level. Reservoir is formed by a concrete gravity dam with a gated spillway and with an earthfill section, rockfaced, at right side. Storage began during construction and reservoir acted as retention basin from October 1965 to December 1966. Dam became operational in January 1967. Reservoir first reached minimum pool elevation during period of construction. Capacity, 1,180,000 acre-ft between elevations 1,205.0 ft (invert of low level sluices) and 1,365.0 ft (full pool). Dead storage is 128 acre-ft. Minimum pool elevation, 1,240 ft (capacity, 24,240 acre-ft). Winter low-water pool elevation, 1,292 ft (capacity, 239,780 acre-ft). Summer low-water pool elevation, 1,328 ft (capacity, 572,610 acre-ft). Storage to summer pool normally occurs during period April to May. Depletion of low-water storage for augmenting flow in Allegheny River normally occurs during period July to December. Figures given herein represent total contents. Reservoir is used for flood control, low-flow augmentation and water-quality control of Allegheny River and downstream rivers, power generation, and recreation. Records furnished by U.S. Army Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 1,121,120 acre-ft June 27, 1972 (elevation, 1,362.20 ft); minimum (after first filling), 113,310 acre-ft Jan. 26, 1968 (elevation 1,268.68 ft).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 635,290 acre-ft June 5 (elevation, 1,332.99 ft); minimum, 288,510 acre-ft Jan 2 (elevation, 1,298.89 ft).

MONTHEND ELEVATION IN FEET ABOVE SEA LEVEL, AND CONTENTS AT 2400 HRS, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

Date	Elevation (feet)	Contents (acre- feet)	Change in contents (equivalent in ft ³ /s)	Elevation (feet)	Contents (acre- feet)	Change in contents (equivalent in ft ³ /s)
<u>03013946 Chautauqua Lake</u>				<u>03012520 Allegheny Reservoir</u>		
Sept. 30	1,308.53	-	-	1,325.85	547,090	-
Oct. 31	1,308.21	-	-70	1,316.74	447,800	-1,610
Nov. 30	1,308.22	-	+ 2.2	1,309.35	376,350	-1,200
Dec. 31	1,307.91	-	-67	1,299.71	294,800	-1,330
CAL YR 1996	-	-	+13	-	-	- 6.6
Jan. 31	1,307.71	-	-44	1,304.98	337,720	+ 698
Feb. 28	1,308.92	-	+291	1,318.04	461,180	+2,220
Mar. 31	1,308.50	-	-91	1,322.99	514,450	+ 866
Apr. 30	1,308.27	-	-52	1,329.03	585,150	+1,190
May 31	1,308.15	-	-26	1,329.31	588,620	+ 56
June 30	1,308.16	-	+ 2.2	1,328.70	581,130	- 126
July 31	1,307.93	-	-50	1,327.41	565,540	- 254
Aug. 31	1,308.07	-	+30	1,322.20	505,700	- 973
Sept. 30	1,308.64	-	+128	1,316.58	446,170	-1,000
WTR YR 1997	-	-	+ 2.0	-	-	- 139

OIL CREEK BASIN

03020500 OIL CREEK AT ROUSEVILLE, PA

LOCATION.--Lat 41°28'54", long 79°41'44", Venango County, Hydrologic Unit 05010003, on right bank 100 ft downstream from bridge on State Highway 8, about 300 ft upstream from Cherrytree Run, and 1 mi north of Rouseville. Records include flow of Cherrytree Run.

DRAINAGE AREA.--300 mi², including that of Cherrytree Run.

PERIOD OF RECORD.--June 1932 to current year.

REVISED RECORDS.--WSP 743: Drainage area. WSP 1053: 1936-37(M), 1943(M).

GAGE.--Water-stage recorder. Datum of gage is 1,028.32 ft above sea level. Prior to June 9, 1941, nonrecording gage at same site and datum.

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

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than a base discharge of 5,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Feb. 27	1400	*7,160	*8.29	No other peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	747	679	1950	492	492	1580	911	529	590	170	61	65
2	521	541	2010	519	469	1990	691	475	990	437	60	63
3	403	487	1150	689	467	1570	594	593	1900	244	59	68
4	322	444	892	652	594	1140	538	1140	1080	178	69	65
5	276	497	775	924	2500	997	484	675	680	155	115	60
6	243	493	701	1400	1680	2170	442	938	519	138	81	56
7	221	446	629	833	1050	1490	398	891	411	126	68	52
8	206	2960	582	658	781	1200	349	631	343	120	61	51
9	203	3500	536	e570	589	1240	335	723	301	142	57	51
10	245	2080	488	e420	530	2480	318	772	267	176	55	58
11	290	1430	634	e340	493	1960	286	916	238	125	53	123
12	210	1090	1970	e300	455	1260	734	674	298	109	61	347
13	185	916	1820	e260	342	904	2250	642	358	99	79	155
14	171	793	1220	e260	e280	2580	1110	529	266	94	105	108
15	155	683	873	e280	e320	3020	775	556	213	91	80	88
16	146	609	721	e320	e260	1480	616	662	189	103	79	81
17	140	582	727	e300	295	1100	639	645	329	102	183	75
18	163	1040	729	e270	395	984	600	528	436	89	213	99
19	1680	1330	595	e310	853	828	500	717	457	81	146	83
20	2040	904	420	e340	2410	716	429	1540	321	75	97	105
21	1120	715	397	e360	2630	633	394	873	243	74	86	112
22	1010	605	416	e350	3720	725	369	650	199	90	93	89
23	696	532	448	e470	1740	673	470	543	168	89	191	79
24	578	482	1870	e500	1070	527	923	470	152	108	214	72
25	476	560	1440	e1000	735	531	629	516	147	91	132	67
26	399	2310	845	e1280	652	1760	471	624	1270	81	106	64
27	351	1500	703	868	4550	1090	403	464	497	78	93	62
28	347	899	679	719	4040	796	949	386	279	74	85	62
29	373	720	891	585	---	717	911	348	211	72	78	988
30	1080	653	701	638	---	845	626	364	179	67	73	754
31	1220	---	569	528	---	1210	---	368	---	63	68	---
TOTAL	16217	30480	28381	17435	34392	40196	19144	20382	13531	3741	3001	4202
MEAN	523	1016	916	562	1228	1297	638	657	451	121	96.8	140
MAX	2040	3500	2010	1400	4550	3020	2250	1540	1900	437	214	988
MIN	140	444	397	260	260	527	286	348	147	63	53	51
CFSM	1.74	3.39	3.05	1.87	4.09	4.32	2.13	2.19	1.50	.40	.32	.47
IN.	2.01	3.78	3.52	2.16	4.26	4.98	2.37	2.53	1.68	.46	.37	.52

e Estimated.

OIL CREEK BASIN

03020500 OIL CREEK AT ROUSEVILLE, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1933 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	263	521	691	683	740	1118	934	592	393	231	175	207
MAX	1260	1560	1784	2385	2124	2574	1958	1706	1491	896	786	1304
(WY)	1991	1986	1978	1937	1976	1936	1940	1953	1989	1987	1980	1990
MIN	34.5	65.0	80.9	108	158	407	266	129	75.2	38.3	38.8	34.5
(WY)	1964	1992	1961	1984	1987	1969	1935	1934	1934	1934	1934	1934

SUMMARY STATISTICS

FOR 1996 CALENDAR YEAR

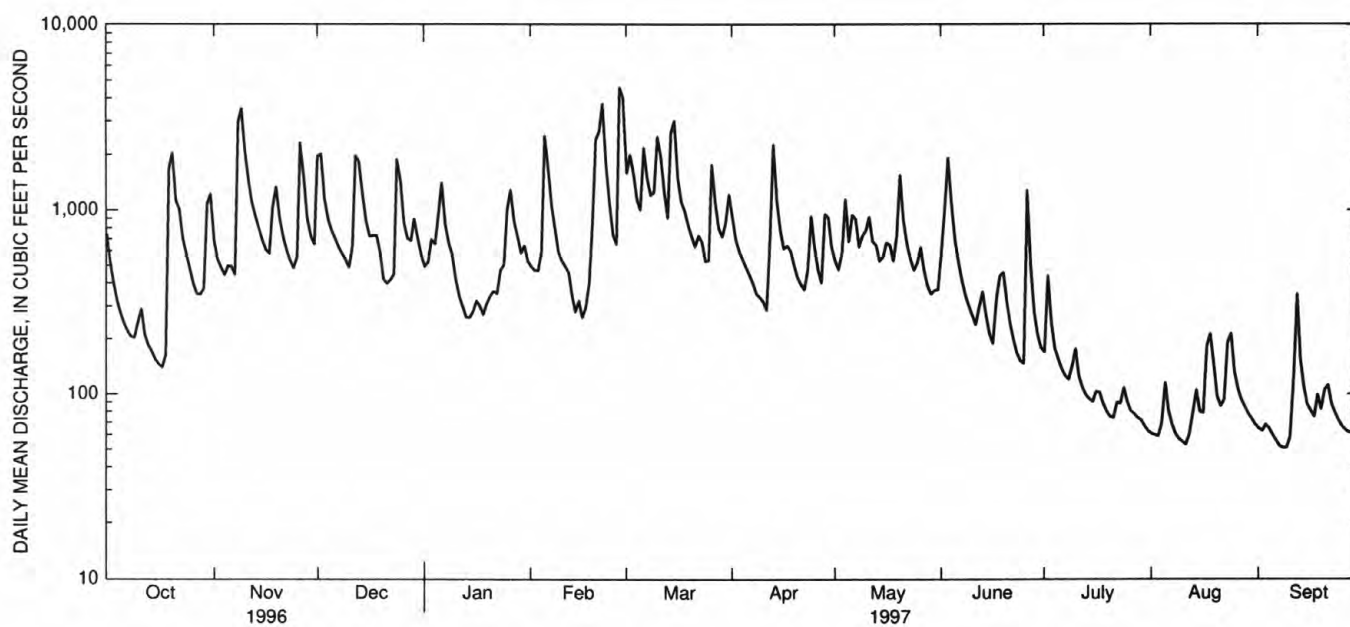
FOR 1997 WATER YEAR

WATER YEARS 1933 - 1997

ANNUAL TOTAL	271017	231102	
ANNUAL MEAN	740	633	
HIGHEST ANNUAL MEAN			544
LOWEST ANNUAL MEAN			746
HIGHEST DAILY MEAN	e8500	Jan 19	303
LOWEST DAILY MEAN	57	Sep 2	16300
ANNUAL SEVEN-DAY MINIMUM	59	Aug 31	23
INSTANTANEOUS PEAK FLOW			24
INSTANTANEOUS PEAK STAGE			21000
INSTANTANEOUS LOW FLOW			11.97
ANNUAL RUNOFF (CFSM)	2.47		1.81
ANNUAL RUNOFF (INCHES)	33.61		24.66
10 PERCENT EXCEEDS	1540		1250
50 PERCENT EXCEEDS	451		296
90 PERCENT EXCEEDS	128		64

a Result of upstream pumping.

e Estimated.



FRENCH CREEK BASIN

03021350 FRENCH CREEK NEAR WATTSBURG, PA

LOCATION.--Lat 42°00'55", long 79°46'58", Erie County, Hydrologic Unit 05010004, on right bank at downstream side of bridge on Tanner Road, 1,200 ft east of State Highway 74, 1.1 mi west of Pennsylvania-New York border, 1.5 mi northeast of Wattsburg, and 2.4 mi above confluence with West Branch French Creek.

DRAINAGE AREA.--92.0 mi².

PERIOD OF RECORD.--October 1974 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,304.84 ft above sea level (U.S. Army Corps of Engineers bench mark).

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

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than a base discharge of 2,500 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Feb. 22	0400	2,610	8.00	May 19	1900	2,670	8.07
Feb. 27	1500	*3,500	*9.00				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	207	174	1140	183	172	469	398	108	411	30	14	25
2	141	147	1020	241	178	1410	354	107	1130	66	13	24
3	107	157	383	422	185	770	259	129	1540	74	13	62
4	86	170	329	313	239	390	212	221	584	68	13	78
5	73	252	296	587	852	327	180	153	270	55	e15	44
6	63	310	244	656	537	725	166	303	183	48	e23	31
7	56	250	206	317	318	463	159	232	208	41	e19	e23
8	50	1300	187	e170	231	408	137	152	259	36	e16	e20
9	69	1610	173	e140	173	401	129	149	157	809	e15	e17
10	477	716	161	e120	e140	1110	120	646	116	506	e14	e16
11	330	540	187	e100	e120	944	110	640	96	160	e13	e18
12	176	488	512	e90	e105	518	306	381	87	85	e14	e30
13	124	462	654	e80	e92	319	695	355	87	58	e16	52
14	96	433	345	e72	e80	1160	392	217	77	47	e20	55
15	79	397	231	e72	e72	1220	268	233	65	39	e23	38
16	69	364	205	e94	e66	461	196	439	56	34	e17	31
17	61	354	269	e90	e60	335	266	320	122	28	e17	28
18	94	830	244	e88	e70	351	290	225	113	24	e41	48
19	1390	1030	178	e86	e250	310	193	1320	156	22	e52	50
20	1460	598	117	e500	e1200	299	151	1760	99	20	36	47
21	633	406	109	732	1710	289	133	485	73	19	30	50
22	706	312	107	572	2070	586	121	294	63	e19	85	37
23	372	267	150	e450	616	381	131	219	51	e23	344	29
24	251	241	1500	e370	328	249	140	175	42	e23	162	e25
25	197	454	752	e530	230	352	118	154	38	e27	84	e23
26	160	1400	356	e400	229	1100	97	142	52	e24	55	e22
27	141	678	274	e258	2630	477	86	117	46	e20	54	e22
28	136	347	415	258	1320	302	196	99	38	e19	58	22
29	131	267	584	202	---	267	210	91	33	17	41	445
30	291	246	352	195	---	392	137	95	31	15	33	635
31	283	---	253	171	---	544	---	106	---	14	28	---
TOTAL	8509	15200	11933	8559	14273	17329	6350	10067	6283	2470	1378	2047
MEAN	274	507	385	276	510	559	212	325	209	79.7	44.5	68.2
MAX	1460	1610	1500	732	2630	1410	695	1760	1540	809	344	635
MIN	50	147	107	72	60	249	86	91	31	14	13	16
CFSM	2.98	5.51	4.18	3.00	5.54	6.08	2.30	3.53	2.28	.87	.48	.74
IN.	3.44	6.15	4.83	3.46	5.77	7.01	2.57	4.07	2.54	1.00	.56	.83

e Estimated.

FRENCH CREEK BASIN

03021350 FRENCH CREEK NEAR WATTSBURG, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1975 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	170	324	315	243	317	448	322	150	131	71.7	84.1	130
MAX	375	669	547	592	792	779	627	409	477	334	272	563
(WY)	1982	1986	1978	1990	1976	1979	1994	1984	1986	1986	1977	1977
MIN	13.3	31.0	81.2	79.3	75.9	191	157	38.2	14.6	13.1	5.93	4.84
(WY)	1992	1992	1990	1977	1987	1981	1976	1985	1991	1995	1991	1995

SUMMARY STATISTICS

FOR 1996 CALENDAR YEAR

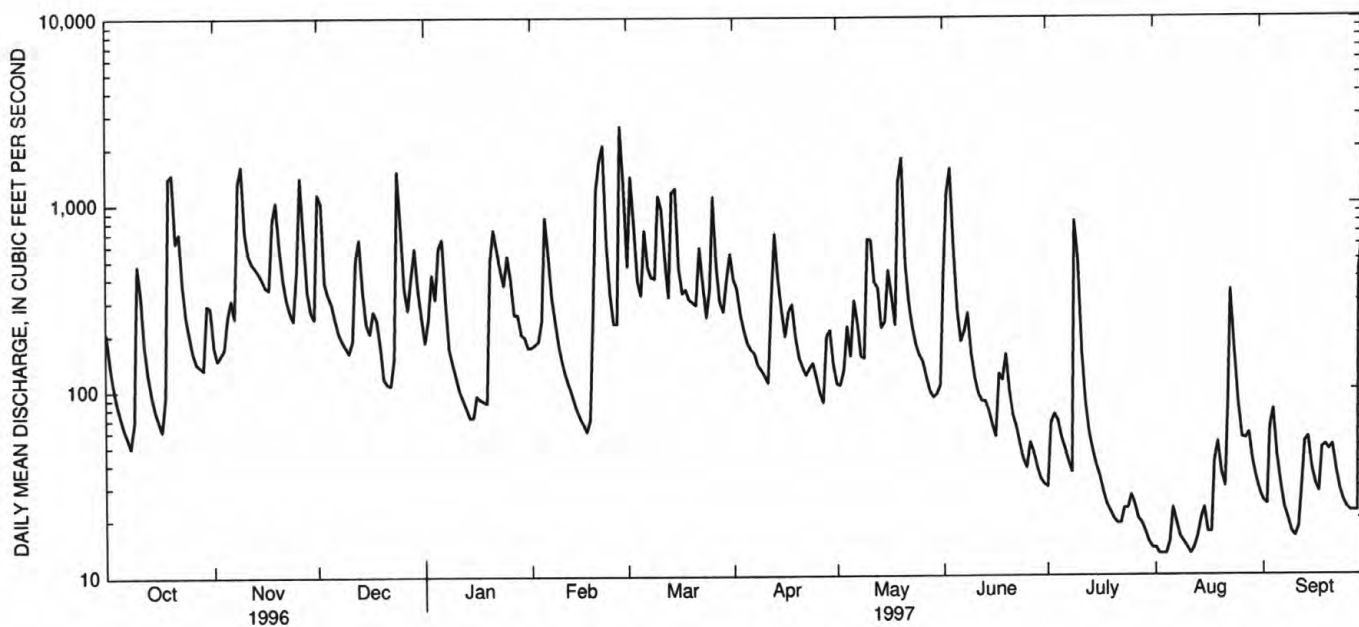
FOR 1997 WATER YEAR

WATER YEARS 1975 - 1997

ANNUAL TOTAL	117724	104398	225
ANNUAL MEAN	322	286	289
HIGHEST ANNUAL MEAN			1996
LOWEST ANNUAL MEAN			143
HIGHEST DAILY MEAN	e4900	Jan 19	e4900
LOWEST DAILY MEAN	12	Sep 4	2.5
ANNUAL SEVEN-DAY MINIMUM	a13	Aug 31	3.1
INSTANTANEOUS PEAK FLOW			6350
INSTANTANEOUS PEAK STAGE			11.95
INSTANTANEOUS LOW FLOW			2.3
ANNUAL RUNOFF (CFSM)	3.50		2.44
ANNUAL RUNOFF (INCHES)	47.60		33.21
10 PERCENT EXCEEDS	762		543
50 PERCENT EXCEEDS	170		105
90 PERCENT EXCEEDS	44		19

a Computed using estimated discharges.

e Estimated



FRENCH CREEK BASIN

03023100 FRENCH CREEK AT MEADVILLE, PA

LOCATION.--Lat 41°37'57", long 80°09'35", Crawford County, Hydrologic Unit 05010004, on left bank 30 ft upstream from bridge on Mercer Street at Meadville, 300 ft downstream from Mill Run, 2,600 ft downstream from Cussewago Creek, at mile 30.5.

DRAINAGE AREA.--788 mi².

PERIOD OF RECORD.--October 1988 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,058.83 ft above sea level (U.S. Army Corps of Engineers bench mark). Prior to October 27, 1989, water-stage recorder at site 2,300 ft upstream at different datum.

REMARKS.--Records good except for estimated daily discharges, which are fair. Flow regulated beginning October 1971 by Union City Reservoir 43 mi upstream, serving as a retarding basin, and Woodcock Creek Lake 9.0 mi upstream. Several measurements of water temperature were made during the year. U.S. Army Corps of Engineers satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge 25,800 ft³/s April 1947, gage height, 17.05 ft; maximum gage height 17.60 ft, January 1959 (backwater from ice), site and datum then in use.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3580	2040	3800	2090	e2700	7390	3130	997	1090	288	109	194
2	2610	1580	4610	1970	e2300	5680	2730	841	2340	356	102	178
3	2040	1380	3750	2160	e1900	5330	2350	919	4550	394	99	174
4	1700	1270	3260	2200	e2600	4400	2060	1250	5010	340	100	160
5	1520	1290	2890	2230	e3800	3730	1850	1310	3660	309	139	194
6	1380	1400	2610	2930	e5300	4490	1710	1650	2700	282	135	191
7	1220	1440	2380	2620	4310	4640	1550	1960	1940	253	113	160
8	1010	3280	2190	2210	2990	4210	1380	1620	1660	232	100	142
9	790	5950	2080	e1800	2120	4070	1190	1450	1500	235	93	140
10	1590	6180	1990	e1400	1770	5450	1010	1670	1350	561	89	174
11	1880	4920	2160	e1150	e1300	5960	857	2630	1210	965	89	172
12	1670	4170	3510	e980	e1100	5070	1400	2640	1040	913	100	215
13	1370	3780	4690	e920	e1000	3980	3260	2490	1190	694	140	252
14	1090	3390	3980	e900	e960	4970	2960	2080	802	401	139	240
15	848	2970	3210	e1000	e850	6700	2440	1880	627	284	140	230
16	698	2710	2670	e1200	e770	5930	1990	1990	517	254	144	212
17	624	2540	2760	e1150	e700	4440	1760	2060	604	241	259	191
18	942	3710	2820	e1100	e650	3780	1520	1830	935	213	497	179
19	3610	4740	2450	e1000	e1000	3250	1430	2830	997	191	529	177
20	5340	4200	1960	e980	4260	2740	1250	5060	1020	170	316	258
21	4800	3580	1510	e920	5150	2470	1090	4030	822	162	228	268
22	4010	3010	1330	e980	6180	2460	936	3230	616	162	234	262
23	3300	2570	1230	e1400	5100	2590	972	2350	496	158	444	231
24	2790	2320	3210	e2300	3530	2310	1080	1990	411	155	855	196
25	2320	2460	4130	e3800	2650	2210	1070	1900	442	152	741	172
26	2030	4680	3200	e6700	2340	3410	897	1910	624	147	479	156
27	1810	4990	2910	e6200	6650	3410	776	1690	734	146	365	145
28	1700	3820	2580	e5500	8960	2720	887	1460	512	135	333	153
29	1610	3120	2950	e4800	---	2330	1310	1300	376	130	297	373
30	2020	2670	2780	e3800	---	2500	1220	1100	307	122	257	1360
31	2540	---	2420	e3200	---	3210	---	877	---	114	220	---
TOTAL	64442	96160	88020	71590	82940	125830	48065	60994	40082	9159	7885	7149
MEAN	2079	3205	2839	2309	2962	4059	1602	1968	1336	295	254	238
MAX	5340	6180	4690	6700	8960	7390	3260	5060	5010	965	855	1360
MIN	624	1270	1230	900	650	2210	776	841	307	114	89	140
CFSM	2.64	4.07	3.60	2.93	3.76	5.15	2.03	2.50	1.70	.37	.32	.30
IN.	3.04	4.54	4.16	3.38	3.92	5.94	2.27	2.88	1.89	.43	.37	.34

e Estimated.

FRENCH CREEK BASIN

03023100 FRENCH CREEK AT MEADVILLE, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1228	2138	2020	2466	2200	2666	2402	1475	962	528	438	928
MAX	3181	3205	3039	4211	4190	4059	4023	2998	2659	1337	1291	2786
(WY)	1991	1997	1991	1993	1990	1997	1994	1996	1989	1992	1994	1990
MIN	104	154	786	834	757	1700	1556	451	155	135	97.1	52.6
(WY)	1992	1992	1990	1994	1993	1990	1995	1993	1991	1995	1991	1991

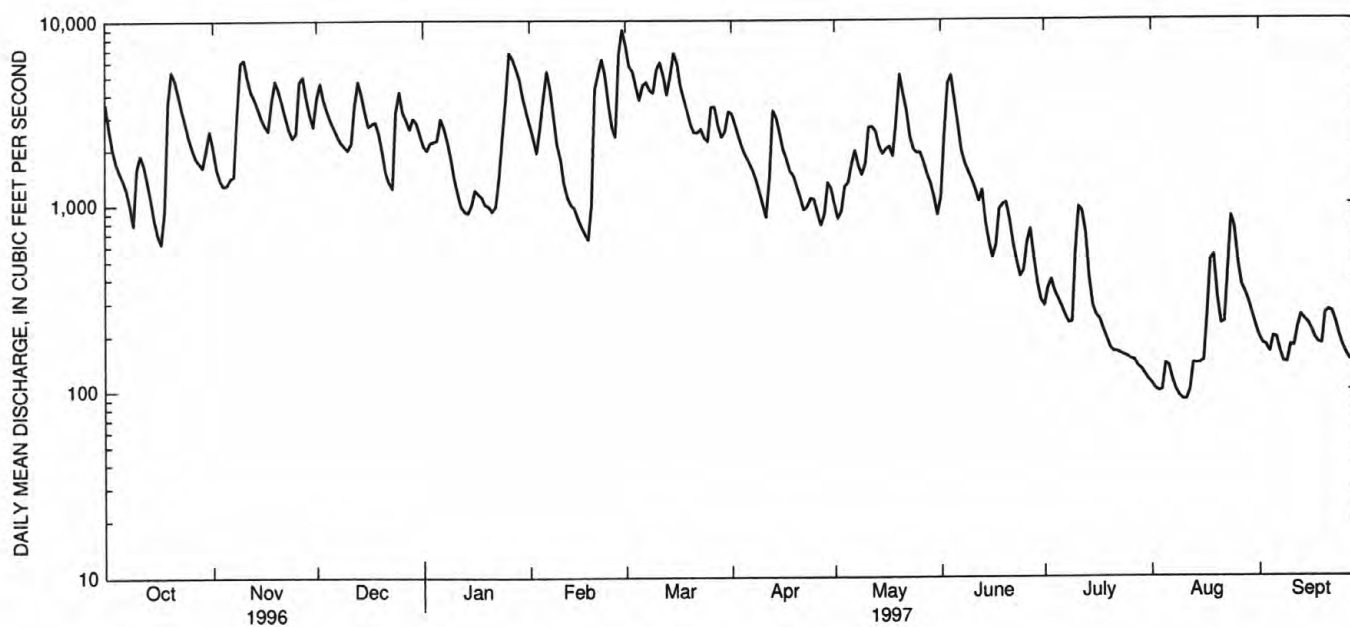
SUMMARY STATISTICS

FOR 1996 CALENDAR YEAR

FOR 1997 WATER YEAR

WATER YEARS 1989 - 1997

ANNUAL TOTAL	819970	702316	
ANNUAL MEAN	2240	1924	1617
HIGHEST ANNUAL MEAN			1982
LOWEST ANNUAL MEAN			1040
HIGHEST DAILY MEAN	14300	8960	14300
LOWEST DAILY MEAN	119	89	37
ANNUAL SEVEN-DAY MINIMUM	129	103	42
INSTANTANEOUS PEAK FLOW		9440	14800
INSTANTANEOUS PEAK STAGE		12.41	15.52
INSTANTANEOUS LOW FLOW		86	37
ANNUAL RUNOFF (CFSM)	2.84	2.44	2.05
ANNUAL RUNOFF (INCHES)	38.71	33.16	27.87
10 PERCENT EXCEEDS	4680	4350	3750
50 PERCENT EXCEEDS	1770	1510	1140
90 PERCENT EXCEEDS	422	172	149



FRENCH CREEK BASIN

03024000 FRENCH CREEK AT UTICA, PA
(National water-quality assessment station)

LOCATION.--Lat 41°26'15", long 79°57'22", Venango County, Hydrologic Unit 05010004, on right bank at upstream side of bridge on SR 3017 at Utica and 2,000 ft upstream from Mill Creek.

DRAINAGE AREA.--1,028 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1932 to current year.

REVISED RECORDS.--WSP 743: Drainage area. WSP 823: 1936 (M). WSP 1275: 1933, 1936.

GAGE.--Water-stage recorder. Datum of gage is 1,019.44 ft above sea level. Prior to Nov. 27, 1933, nonrecording gage at same site and datum.

REMARKS.--Records good except for estimated daily discharges, which are fair. Flow regulated since 1971 by Union City Reservoir 50 mi upstream, serving as a retarding basin, and since January 1974 by Woodcock Creek Lake, 25 mi upstream. Several measurements of water temperature were made during the year. U.S. Army Corps of Engineers satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1912, 15.7 ft in March 1913, discharge 35,600 ft³/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5220	2830	5050	2790	2480	10100	3860	1390	1310	512	152	259
2	3770	2170	5790	2540	2290	8240	3450	1190	3140	552	148	237
3	2900	1840	5090	2680	2230	7050	3020	1350	5400	571	141	227
4	2310	1690	4460	2810	2530	5910	2650	1930	6080	545	135	211
5	1970	1620	4000	2970	4970	5020	2360	1830	5160	499	134	199
6	1760	1680	3610	3580	5450	5760	2160	2240	4040	450	161	219
7	1570	1730	3290	3500	5090	5890	1980	2640	3010	411	166	217
8	1360	4060	3010	2940	4310	5390	1810	2320	2440	378	149	193
9	1110	6880	2810	2530	3450	5190	1610	2170	2120	360	134	175
10	1440	7550	2660	2340	2740	6780	1390	2150	1860	391	120	181
11	2190	6620	3010	2030	2270	7160	1210	3070	1650	879	109	255
12	2040	5630	4960	1430	1980	6560	1850	3310	1760	997	108	309
13	1730	5130	5970	1360	1580	5280	4250	3200	1830	867	127	286
14	1430	4640	5510	1270	e1400	6370	4010	2770	1390	631	160	293
15	1170	4080	4580	1260	e1250	8200	3350	2480	1070	425	163	276
16	959	3680	3900	e1190	e1150	7850	2820	2480	888	357	181	266
17	845	3390	3730	e1130	e1050	6040	2620	2600	940	329	248	245
18	908	4180	3880	e1130	e1000	5000	2220	2370	1210	304	379	233
19	3990	5400	3460	e1180	e1700	4320	2000	3110	1350	272	563	214
20	5890	5210	2860	e1200	4990	3650	1780	5520	1300	246	466	296
21	5870	4620	2240	1250	6000	3280	1580	5200	1170	227	333	356
22	5200	4000	1870	1390	7050	3150	1380	4170	942	241	281	324
23	4440	3470	1700	2960	6640	3270	1300	3280	781	230	342	301
24	3810	3080	3560	4090	5040	3000	1400	2660	656	224	647	265
25	3200	3040	5100	4770	3820	2770	1420	2530	604	221	818	233
26	2750	5280	4260	5060	3200	4010	1270	2590	1230	212	642	210
27	2350	5980	3910	4580	7190	4290	1120	2270	1030	205	460	191
28	2150	5080	3470	4020	9880	3560	1260	1940	861	196	408	185
29	2020	4230	3680	3660	---	3050	1550	1720	658	182	367	560
30	2520	3650	3650	3220	---	3010	1610	1530	550	171	332	992
31	3240	---	3240	2720	---	3750	---	1300	---	161	295	---
TOTAL	82112	122440	118310	79580	102730	162900	64290	79310	56430	12246	8869	8408
MEAN	2649	4081	3816	2567	3669	5255	2143	2558	1881	395	286	280
MAX	5890	7550	5970	5060	9880	10100	4250	5520	6080	997	818	992
MIN	845	1620	1700	1130	1000	2770	1120	1190	550	161	108	175
CFSM	2.58	3.97	3.71	2.50	3.57	5.11	2.08	2.49	1.83	.38	.28	.27
IN.	2.97	4.43	4.28	2.88	3.72	5.89	2.33	2.87	2.04	.44	.32	.30

e Estimated.

FRENCH CREEK BASIN

03024000 FRENCH CREEK AT UTICA, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1972 - 1997, BY WATER YEAR (WY) (SINCE REGULATION)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1315	2441	2942	2538	2890	3917	3015	1756	1409	889	699	963
MAX	3954	6309	6029	5426	6394	6466	5101	4081	4659	2629	3297	3409
(WY)	1991	1986	1978	1993	1976	1972	1994	1996	1986	1987	1980	1990
MIN	121	176	1049	869	629	2085	1655	452	209	192	112	71.7
(WY)	1992	1992	1990	1977	1987	1990	1976	1985	1991	1995	1991	1995

SUMMARY STATISTICS

FOR 1996 CALENDAR YEAR

FOR 1997 WATER YEAR

WATER YEARS 1972 - 1997

ANNUAL TOTAL	1068423	897625	
ANNUAL MEAN	2919	2459	2060
HIGHEST ANNUAL MEAN			2459
LOWEST ANNUAL MEAN			1349
HIGHEST DAILY MEAN	15600	Jan 20	10100
LOWEST DAILY MEAN	202	Sep 6	108
ANNUAL SEVEN-DAY MINIMUM	227	Aug 31	130
INSTANTANEOUS PEAK FLOW			10600
INSTANTANEOUS PEAK STAGE			8.81
ANNUAL RUNOFF (CFSM)	2.84		2.39
ANNUAL RUNOFF (INCHES)	38.66		32.48
10 PERCENT EXCEEDS	5810		5240
50 PERCENT EXCEEDS	2350		2120
90 PERCENT EXCEEDS	585		227

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1933 - 1971, BY WATER YEAR (WY) (PRIOR TO REGULATION)

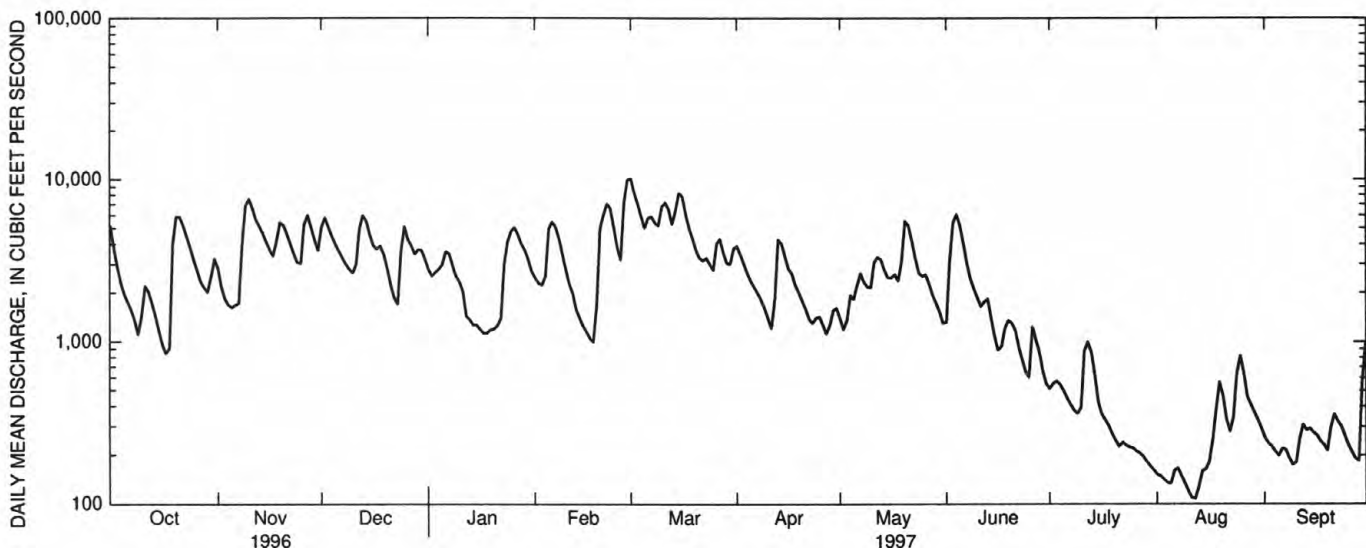
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	695	1506	2238	2590	2713	3915	3147	1684	953	555	408	440
MAX	3744	3983	4471	7284	5894	7359	6688	4160	3717	2015	1907	2148
(WY)	1946	1971	1951	1937	1938	1964	1947	1956	1947	1967	1956	1958
MIN	69.5	183	227	403	523	1768	575	349	124	77.1	77.8	80.4
(WY)	1964	1954	1961	1961	1934	1937	1946	1934	1934	1934	1954	1954

SUMMARY STATISTICS

WATER YEARS 1933 - 1971

ANNUAL MEAN	1732	
HIGHEST ANNUAL MEAN	2539	1956
LOWEST ANNUAL MEAN	1146	1934
HIGHEST DAILY MEAN	23000	Mar 6 1964
LOWEST DAILY MEAN	45	Sep 1 1933
ANNUAL SEVEN-DAY MINIMUM	48	Aug 27 1933
INSTANTANEOUS PEAK FLOW	23800	Mar 7 1964
INSTANTANEOUS PEAK STAGE	a13.2	Mar 7 1964
INSTANTANEOUS LOW FLOW	43	Jul 30 1934
ANNUAL RUNOFF (CFSM)	1.68	
ANNUAL RUNOFF (INCHES)	22.89	
10 PERCENT EXCEEDS	4350	
50 PERCENT EXCEEDS	909	
90 PERCENT EXCEEDS	144	

a From floodmark in gage well.



October 1, 1996 to September 30, 1997

FRENCH CREEK BASIN

03024000 FRENCH CREEK AT UTICA, PA--Continued
(National Water-Quality Assessment station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--February to October 1956, October 1959 to May 1973, December 1975 to August 1978, April 1996 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: October 1996 to current year.

SUSPENDED SEDIMENT DISCHARGE: October 1971 to September 1972.

INSTRUMENTATION.--Suspended-sediment samples were collected daily and more often during storm events by an observer from October 1971 to September 1972. Water temperature was measured and collected at hourly intervals using an in-situ probe with an electronic data logger from October 1996 to current year.

REMARKS.--All water-quality samples were collected and analyzed by the U.S. Geological Survey except those furnished by the Pennsylvania Department of Environmental Resources as noted. Interruptions in the daily records were due to malfunctions of the equipment. Additional sites in the (NAWQA) fixed-station network are shown in figure 6 on page 28. An explanation of selected abbreviations used in the water-quality tables are given on pages 29-31.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SEDIMENT CONCENTRATIONS: Maximum daily, 404 mg/L, June 24, 1972; minimum daily, 3 mg/L on several days during February 1972.

SEDIMENT DISCHARGES: Maximum daily, 10400 tons, June 24, 1972; minimum daily, 3.5 tons, September 11, 1972.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE	TIME	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)	OXYGEN, DIS- SOLVED (MG/L) (00300)	HARD- NESS TOTAL (MG/L AS CaCO ₃) (00900)	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)
OCT											
29...	1130	2020	203	7.6	10.5	730	10.0	78	24	4.5	5.9
NOV											
15...	1000	4090	184	7.4	2.0	748	12.2	--	--	--	--
DEC											
06...	0900	3620	177	7.5	3.0	725	12.2	66	20	4.0	5.9
JAN											
15...	1000	1320	222	7.5	0.0	733	13.7	92	28	5.3	7.6
FEB											
26...	0915	3210	157	7.5	1.0	732	13.4	55	17	3.1	6.9
MAR											
11...	0930	7200	143	7.4	4.0	726	12.4	49	15	2.9	6.2
APR											
22...	1045	1370	205	8.2	9.0	722	13.8	79	24	4.5	7.2
MAY											
07...	0930	2700	196	8.0	12.0	737	10.2	78	24	4.3	7.5
JUN											
25...	1015	588	253	8.1	24.0	731	7.1	100	32	5.8	8.8
JUL											
31...	1000	160	317	7.2	21.5	741	7.2	130	39	7.2	12
AUG											
21...	0940	338	296	8.0	20.0	724	7.8	120	36	6.8	9.1
SEP											
30...	0945	725	298	7.7	16.0	717	7.4	120	35	6.6	11

FRENCH CREEK BASIN
03024000 FRENCH CREEK AT UTICA, PA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	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)	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)	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)
OCT 29...	1.8	71	13	11	<0.10	5.0	110	0.020	0.490	0.020	0.30
NOV 15...	--	64	--	--	--	--	--	<0.010	0.540	0.020	0.40
DEC 06...	1.5	47	12	11	<0.10	4.4	94	0.020	0.590	0.030	0.30
JAN 15...	1.4	67	16	14	1.6	4.8	134	0.014	0.937	0.057	0.26
FEB 26...	0.94	40	12	12	<0.10	3.7	88	0.020	0.820	0.090	0.30
MAR 11...	0.90	39	11	11	<0.10	3.4	80	<0.010	0.680	0.030	0.50
APR 22...	1.3	62	14	14	<0.10	0.98	115	<0.010	0.436	0.019	0.24
MAY 07...	1.1	58	13	14	<0.10	1.8	108	0.012	0.349	<0.015	0.40
JUN 25...	1.4	86	12	14	0.12	1.3	151	0.015	0.531	<0.015	0.29
JUL 31...	1.8	108	16	19	<0.10	2.6	182	<0.010	0.496	0.018	0.36
AUG 21...	1.8	110	15	17	<0.10	3.4	174	0.030	0.644	0.050	0.28
SEP 30...	2.2	109	19	20	<0.10	2.2	170	0.022	0.541	0.070	0.55

DATE	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)	IRON, DIS- SOLVED (MG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (MG/L AS MN) (01056)	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)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
OCT 29...	0.40	0.030	0.010	0.010	72	25	4.2	0.40	9	94
NOV 15...	<0.20	0.020	0.020	0.010	--	--	4.2	0.40	8	89
DEC 06...	0.20	0.040	<0.010	<0.010	70	18	3.0	0.50	7	76
JAN 15...	0.22	<0.010	<0.010	<0.010	74	39	2.0	0.20	3	50
FEB 26...	<0.20	0.020	<0.010	<0.010	49	14	2.5	0.40	23	90
MAR 11...	<0.20	0.090	<0.010	<0.010	47	9.0	3.4	0.80	65	87
APR 22...	<0.20	0.018	<0.010	<0.010	130	35	2.9	0.60	3	83
MAY 07...	<0.20	0.016	<0.010	<0.010	140	34	3.7	>2.0	29	65
JUN 25...	0.25	0.029	0.033	0.013	130	27	4.0	0.60	21	76
JUL 31...	0.20	0.035	0.035	0.020	21	25	3.0	0.20	8	76
AUG 21...	0.21	0.032	<0.010	0.024	17	21	--	--	9	58
SEP 30...	0.42	0.074	0.063	0.039	50	16	3.9	1.0	21	28

FRENCH CREEK BASIN
03024000 FRENCH CREEK AT UTICA, PA.--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997												
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	---	---	---	9.0	7.5	8.5	4.5	2.5	3.5	2.0	1.5	1.5
2	---	---	---	7.5	6.0	7.0	4.5	3.5	4.0	3.0	1.5	2.5
3	---	---	---	6.0	5.0	6.0	3.5	3.0	3.0	4.5	3.0	4.0
4	---	---	---	6.5	4.5	5.0	3.0	3.0	3.0	5.5	4.5	5.0
5	---	---	---	6.0	5.0	5.5	3.0	2.5	3.0	7.0	5.5	6.5
6	---	---	---	7.5	5.5	6.5	3.0	2.5	3.0	6.5	4.5	5.5
7	---	---	---	9.5	7.5	8.5	3.0	2.5	3.0	4.5	2.5	3.5
8	---	---	---	9.5	9.5	9.5	2.5	2.0	2.5	2.5	1.0	1.5
9	---	---	---	9.5	8.0	9.0	2.0	1.5	2.0	1.0	.5	.5
10	---	---	---	8.0	6.5	7.0	2.0	1.5	1.5	.5	.0	.0
11	---	---	---	6.5	5.0	5.5	2.5	1.5	2.5	.0	.0	.0
12	---	---	---	5.0	3.5	4.0	3.5	2.5	3.0	.0	.0	.0
13	---	---	---	3.5	3.0	3.5	3.5	3.5	3.5	.0	.0	.0
14	---	---	---	3.5	2.5	3.0	3.5	3.5	3.5	.0	.0	.0
15	---	---	---	2.5	2.0	2.0	3.5	3.0	3.0	.0	.0	.0
16	---	---	---	2.0	1.5	2.0	3.5	3.0	3.0	.0	.0	.0
17	---	---	---	2.5	2.0	2.0	4.0	3.5	3.5	.0	.0	.0
18	---	---	---	3.5	2.5	3.0	4.0	3.0	3.5	.0	.0	.0
19	---	---	---	3.5	3.5	3.5	3.0	1.5	2.5	.0	.0	.0
20	---	---	---	3.5	3.0	3.0	1.5	.0	.5	.0	.0	.0
21	---	---	---	3.0	2.5	3.0	.0	.0	.0	.0	.0	.0
22	---	---	---	2.5	2.5	2.5	.0	.0	.0	.0	.0	.0
23	---	---	---	2.5	2.5	2.5	1.5	.0	.5	.0	.0	.0
24	---	---	---	3.0	2.5	3.0	2.5	1.5	2.0	.0	.0	.0
25	---	---	---	3.5	3.0	3.5	2.0	.0	1.0	.0	.0	.0
26	---	---	---	4.0	3.0	3.5	.0	.0	.0	.0	.0	.0
27	---	---	---	3.0	2.0	2.5	.5	.0	.5	.0	.0	.0
28	---	---	---	2.0	1.0	1.5	2.0	.5	1.5	.5	.0	.0
29	---	---	---	1.5	1.0	1.0	3.0	2.0	3.0	.0	.0	.0
30	11.0	10.0	10.5	2.5	1.5	2.0	3.0	2.5	3.0	.0	.0	.0
31	10.0	9.0	9.5	---	---	---	3.0	2.0	2.5	.0	.0	.0
MONTH	11.0	9.0	10.0	9.5	1.0	4.3	4.5	.0	2.3	7.0	.0	1.0

FRENCH CREEK BASIN

03024000 FRENCH CREEK AT UTICA, PA.--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	.0	.0	.0	5.0	4.0	4.5	6.0	4.5	5.5	13.0	11.5	12.5
2	1.0	.0	.5	6.0	5.0	6.0	7.0	5.5	6.0	13.0	10.5	12.0
3	1.5	.0	.5	6.0	4.5	5.0	7.5	6.5	7.0	14.0	11.0	12.5
4	.5	.0	.0	4.5	4.0	4.5	9.5	7.5	8.5	13.0	10.5	11.5
5	.5	.0	.0	5.0	4.5	4.5	10.0	8.0	9.0	14.0	11.0	12.0
6	.0	.0	.0	4.5	3.5	4.0	12.0	9.0	10.5	13.5	11.5	12.0
7	.0	.0	.0	3.5	2.5	3.0	13.0	9.5	11.5	13.5	11.5	12.0
8	.5	.0	.0	3.0	2.5	3.0	11.0	8.0	9.5	12.0	10.5	11.5
9	1.0	.0	.0	3.0	2.5	3.0	8.5	6.5	7.5	11.0	10.0	10.5
10	.5	.0	.0	4.0	3.0	3.5	9.5	5.5	7.0	10.5	9.0	10.0
11	.5	.0	.0	4.0	3.5	4.0	7.5	6.0	6.5	10.5	8.5	9.5
12	.5	.0	.0	3.5	3.0	3.5	6.5	6.0	6.0	11.0	9.5	10.5
13	.5	.0	.0	3.5	2.5	3.0	---	---	---	12.0	10.5	11.0
14	.5	.0	.0	2.5	2.5	2.5	---	---	---	12.0	11.5	11.5
15	1.0	.0	.5	2.5	1.5	2.0	---	---	---	13.0	11.0	12.0
16	.0	.0	.0	1.5	1.0	1.5	---	---	---	12.5	11.0	11.5
17	.5	.0	.0	2.0	1.0	1.5	---	---	---	12.5	11.0	12.0
18	2.5	.0	1.0	2.5	2.0	2.5	---	---	---	13.5	11.0	12.0
19	1.5	.5	1.0	3.5	2.5	3.0	---	---	---	15.5	12.5	14.0
20	1.5	1.0	1.0	3.5	2.5	3.0	---	---	---	15.0	13.5	14.5
21	3.5	1.5	2.5	4.5	3.0	3.5	---	---	---	14.5	13.5	14.0
22	4.0	3.5	3.5	5.0	4.0	4.5	---	---	---	14.0	13.0	13.5
23	3.5	1.5	2.5	4.0	2.5	3.5	9.5	8.0	9.0	14.5	13.0	13.5
24	1.5	1.5	1.5	4.0	2.5	3.0	10.5	8.5	9.5	16.0	14.0	15.0
25	1.5	.5	1.0	4.5	3.0	4.0	13.0	8.5	10.5	16.5	14.5	15.5
26	2.0	1.0	1.5	5.0	4.5	4.5	14.5	9.0	11.5	16.5	14.0	15.0
27	4.5	2.0	3.0	6.0	4.0	5.0	12.5	10.5	11.5	17.0	14.5	15.5
28	5.0	4.0	4.5	7.0	5.5	6.5	12.0	10.5	11.0	18.5	15.0	16.5
29	---	---	---	8.0	7.0	7.5	13.5	9.5	11.5	16.5	14.5	15.5
30	---	---	---	8.0	7.0	7.5	15.0	11.0	12.5	15.5	14.0	15.0
31	---	---	---	7.0	5.5	6.0	---	---	---	16.0	15.0	15.5
MONTH	5.0	.0	.9	8.0	1.0	4.0	15.0	4.5	9.1	18.5	8.5	12.9

FRENCH CREEK BASIN

03024000 FRENCH CREEK AT UTICA, PA.--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	16.0	15.5	15.5	22.5	21.5	22.0	---	---	---	---	---	---
2	15.5	15.0	15.0	25.0	21.0	23.0	---	---	---	---	---	---
3	15.0	14.5	14.5	24.0	22.5	23.0	---	---	---	---	---	---
4	16.0	14.5	15.0	22.5	20.5	21.5	---	---	---	---	---	---
5	17.5	15.5	16.5	23.5	19.0	21.0	---	---	---	---	---	---
6	18.0	17.0	17.5	23.5	18.5	20.5	---	---	---	---	---	---
7	18.0	17.0	17.5	23.5	19.0	20.5	---	---	---	---	---	---
8	19.0	17.0	18.0	25.0	17.5	21.0	---	---	---	---	---	---
9	20.0	17.5	18.5	21.5	14.0	19.0	---	---	---	---	---	---
10	21.5	18.0	19.5	24.5	12.5	18.5	---	---	---	---	---	---
11	22.0	19.0	20.5	24.0	20.0	21.5	---	---	---	---	---	---
12	21.5	18.5	19.5	25.0	20.0	22.5	---	---	---	---	---	---
13	21.0	18.5	19.5	25.5	21.0	23.0	---	---	---	---	---	---
14	22.0	19.0	20.0	26.5	21.5	24.0	---	---	---	---	---	---
15	22.5	18.5	20.0	27.0	22.5	24.5	---	---	---	---	---	---
16	22.0	18.5	20.0	27.0	19.0	22.5	---	---	---	---	---	---
17	22.5	19.5	21.0	27.0	18.5	23.0	---	---	---	---	---	---
18	21.5	20.0	21.0	27.0	20.0	23.0	---	---	---	---	---	---
19	22.0	19.0	20.5	23.0	14.0	19.0	---	---	---	---	---	---
20	23.5	20.0	21.5	25.0	12.0	17.0	---	---	---	---	---	---
21	25.0	21.0	23.0	24.5	14.5	19.0	---	---	---	---	---	---
22	26.5	22.0	24.0	22.5	17.5	20.0	---	---	---	---	---	---
23	31.0	18.5	22.5	20.0	17.5	18.5	---	---	---	---	---	---
24	29.5	17.5	23.5	21.5	17.5	19.0	---	---	---	---	---	---
25	29.0	19.5	24.5	23.5	17.0	19.5	---	---	---	---	---	---
26	24.0	22.0	23.0	23.0	16.0	20.0	---	---	---	---	---	---
27	25.0	21.0	22.5	27.0	19.0	22.0	---	---	---	---	---	---
28	25.5	21.0	23.0	27.0	17.0	21.5	---	---	---	---	---	---
29	25.5	21.5	23.5	24.0	12.5	17.5	---	---	---	---	---	---
30	23.5	22.0	23.0	25.5	11.0	16.5	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	31.0	14.5	20.1	27.0	11.0	20.8	---	---	---	---	---	---

LAKES AND RESERVOIRS IN FRENCH CREEK BASIN

03021518 UNION CITY RESERVOIR.--Lat 41°55'13", long 79°53'59", Erie County, Hydrologic Unit 05010004, in tower at left center of Union City Dam on French Creek, 1.4 mi upstream from South Branch French Creek, and 3.2 mi northwest of Union City. DRAINAGE AREA, 220 mi². PERIOD OF RECORD, July 1970 to current year. GAGE, water-stage recorder. Datum of gage is sea level (U.S. Army Corps of Engineers bench mark).

Reservoir is formed by earthfill dam with sidehill, concrete-lined spillway completed September 1971. Dam became operational in July 1970. Usable capacity 47,650 acre-ft between elevation 1,210.00 ft (invert of inlet of conduit) and 1,278.00 ft (crest of spillway). No dead storage. Figures given herein represent usable contents. Reservoir is used for flood control only. Records furnished by U.S. Army Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 34,840 acre-ft, Feb. 21, 1981 (elevation, 1,271.80 ft); minimum, 0.0 acre-ft, Aug. 31, 1995 (elevation, 1,211.08 ft).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 20,310 acre-ft, Feb. 28 (elevation, 1,263.00 ft); minimum, 2.0 acre-ft, Aug. 12 (elevation, 1,211.71 ft).

03022550 WOODCOCK CREEK LAKE.--Lat 41°41'50", long 80°06'06", Crawford County, Hydrologic Unit 05010004 in tower on right center and 200 ft upstream from center line of Woodcock Creek Dam on Woodcock Creek, 2.8 mi southeast of Saegerstown and 3.5 mi upstream from mouth. DRAINAGE AREA, 45.6 mi². PERIOD OF RECORD, January 1974 to current year. GAGE, water-stage recorder. Datum of gage is sea level (U.S. Army Corps of Engineers bench mark).

Lake is formed by a rolled earth embankment with an impervious core. Storage began in January 1974. Total storage 20,000 acre-ft between elevation 1,138 ft inlet invert and 1,209 ft crest of spillway. Figures given herein represent usable contents. Lake is used for flood control and recreation. Records furnished by U.S. Army Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 12,690 acre-ft, June 13, 1986 (elevation, 1,198.18 ft); minimum (after first filling) 676 acre-ft, Nov. 1, 1984 (elevation, 1,159.82 ft).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 6,220 acre-ft, Oct. 1 (elevation, 1,184.61); minimum, 1,230 acre-ft, Jan. 12 (elevation, 1,164.64 ft)

MONTHEND ELEVATION IN FEET ABOVE SEA LEVEL, AND CONTENTS AT 2400 HRS, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

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)
03021518 Union City Reservoir				03022550 Woodcock Creek Lake		
Sept. 30	1,252.60	10,000	-	1,184.64	6,230	-
Oct. 31	1,228.45	1,090	-145	1,177.82	3,940	-37
Nov. 30	1,246.94	6,750	+ 95	1,172.52	2,610	-22
Dec. 31	1,239.33	3,720	- 49	1,167.76	1,700	-15
CAL YR 1996	-	-	+ 5.0	-	-	+ .75
Jan. 31	1,231.67	1,640	- 34	1,166.04	1,430	- 4.4
Feb. 28	1,262.99	20,300	+336	1,181.18	4,990	-64
Mar. 31	1,248.04	7,320	-211	1,177.97	3,990	-16
Apr. 30	1,218.82	136	-121	1,181.56	5,120	+19
May 31	1,217.80	94	- .68	1,181.50	5,100	- .33
June 30	1,213.48	11	- 1.4	1,181.40	5,070	- .50
July 31	1,212.27	1.0	- .16	1,180.32	4,710	- 5.9
Aug. 31	1,213.03	7.0	+ .10	1,179.80	4,540	- 2.8
Sept. 30	1,231.33	1,580	+ 26	1,180.16	4,660	+ 2.0
WTR YR 1997	-	-	- 12	-	-	- 2.2

OHIO RIVER MAIN STEM

03025500 ALLEGHENY RIVER AT FRANKLIN, PA

LOCATION.--Lat 41°23'22", long 79°49'14", Venango County, Hydrologic Unit 05010003, on right bank at upstream side of Eighth Street bridge on U.S. Highway 322 at Franklin, 1,000 ft downstream from French Creek, at mile 124.4.

DRAINAGE AREA.--5,982 mi².

PERIOD OF RECORD.--October 1914 to current year. Monthly discharge only for some periods, published in WSP 1305. Gage-height records collected at same site since April 1905 are contained in reports of U.S. Weather Bureau.

REVISED RECORDS.--WSP 743: Drainage area. WSP 783: 1913 (M). WSP 1003: 1920 (M). WSP 1305: 1926 (M), 1928-29 (M). WSP 1385: 1920, 1932.

GAGE.--Water-stage recorder. Datum of gage is 955.84 ft above sea level. Prior to Sept. 16, 1932, nonrecording gage, and Sept. 16-30, 1932, water-stage recorder, at present site at datum 2.00 ft higher.

REMARKS.--Records good except for estimated daily discharges, which are fair. Flow regulated by Allegheny Reservoir 74 mi upstream since 1965, by Chautauqua Lake since 1941, by Tionesta Lake since 1940, by Union City Reservoir since 1971, and by Woodcock Creek Lake since January 1974. Several measurements of water temperature were made during the year. U.S. Army Corps of Engineers satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 17, 1865 reached a stage of 25.0 ft, and that of Mar. 26, 1913 a stage of 24.6 ft, from graph based on gage readings, discharge, 196,000 ft³/s and 191,000 ft³/s, respectively, from rating curve extended above 120,000 ft³/s. Maximum discharge since at least 1864 is that of Mar. 17, 1865.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23100	19500	24700	12900	12600	37800	19500	11000	9190	6440	3190	3000
2	21900	18600	29600	11800	12000	35200	18000	9770	14100	6830	3050	2910
3	19100	16500	27200	11400	11300	36200	16300	9700	21700	5800	3000	2880
4	15100	13700	28700	11800	11600	31000	14700	11600	22100	5300	2960	2820
5	12800	13200	26900	12900	20300	31300	13000	11700	20800	4870	3050	2930
6	11500	15100	26700	17400	22900	35700	12000	13000	21200	4360	3000	3150
7	8330	15500	23900	16800	21500	34100	10700	13600	19500	4150	3130	3100
8	6550	25300	21900	15200	19000	34700	9510	13800	18200	3840	3000	2970
9	5610	38200	20500	13300	16300	34100	8380	14200	17100	3580	2980	2910
10	5460	34700	18900	11900	13900	34800	7350	13900	15600	4780	2940	3000
11	6290	34500	15600	10800	11600	35200	6360	14000	12900	7660	2910	3340
12	6720	36500	19000	8340	10600	33100	7430	13900	12200	9620	3080	3850
13	6480	35500	19600	6180	9620	29600	15300	13500	11300	9110	3430	3740
14	5770	38000	21400	e5300	8800	31500	14800	12700	9100	7460	3430	3710
15	5200	36600	20100	e4600	e8000	37300	13900	12100	7620	5660	3390	3470
16	4610	31500	18300	e3800	e7300	32400	12000	11300	6790	4260	3700	3190
17	3730	26100	18800	e3600	e6600	28500	11300	11400	6520	4390	4450	3020
18	5290	24400	19000	e3600	e7000	27400	10500	12300	7340	4200	4430	3010
19	15500	25900	18100	e3500	8700	26000	10100	14100	9630	3530	4390	2920
20	26300	25100	16500	e3500	17800	24000	9620	21500	10700	3180	3740	3220
21	23700	22000	14700	e3600	23000	22300	8570	24200	11200	3060	3140	3320
22	28700	20100	13500	e4000	35000	21400	8020	24100	9870	3090	2670	3220
23	31500	16600	11700	e8700	32300	21700	7990	23100	9020	3010	2810	3280
24	30200	15200	15700	e13000	31700	20500	9790	21400	8340	3010	3600	3060
25	30800	14900	20700	16700	31500	18000	10400	19000	7290	2970	4100	2870
26	29400	21000	20400	19700	29900	20800	10100	15200	12400	3050	3640	2740
27	27100	23300	19800	18600	e40500	20800	9280	13500	12700	3240	3120	2690
28	23600	24100	18900	17800	46100	18600	10600	12200	12000	3170	2880	2840
29	21600	22800	19000	17100	---	17000	11800	11100	10200	3140	2730	5120
30	21300	20800	17400	15800	---	17900	12300	10500	7810	3240	2770	7150
31	22000	---	15700	13700	---	19500	---	9040	---	3380	3090	---
TOTAL	505240	725200	622900	337320	527420	868400	339600	442410	374420	143380	101800	99430
MEAN	16300	24170	20090	10880	18840	28010	11320	14270	12480	4625	3284	3314
MAX	31500	38200	29600	19700	46100	37800	19500	24200	22100	9620	4450	7150
CFSM	2.72	4.04	3.36	1.82	3.15	4.68	1.89	2.39	2.09	.77	.55	.55
IN.	3.14	4.51	3.87	2.10	3.28	5.40	2.11	2.75	2.33	.89	.63	.62

e Estimated.

OHIO RIVER MAIN STEM

03025500 ALLEGHENY RIVER AT FRANKLIN, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1915 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	5625	10150	13390	13840	13650	21310	19340	12150	7472	4484	3201	3574
MAX	22900	26030	33270	41420	32340	49850	49920	30070	24820	21440	13830	17730
(WY)	1991	1986	1928	1937	1976	1936	1940	1943	1989	1972	1977	1977
MIN	515	771	1125	1732	2929	6383	4203	2554	1106	555	414	435
(WY)	1931	1931	1961	1961	1963	1969	1946	1985	1934	1934	1930	1930

SUMMARY STATISTICS

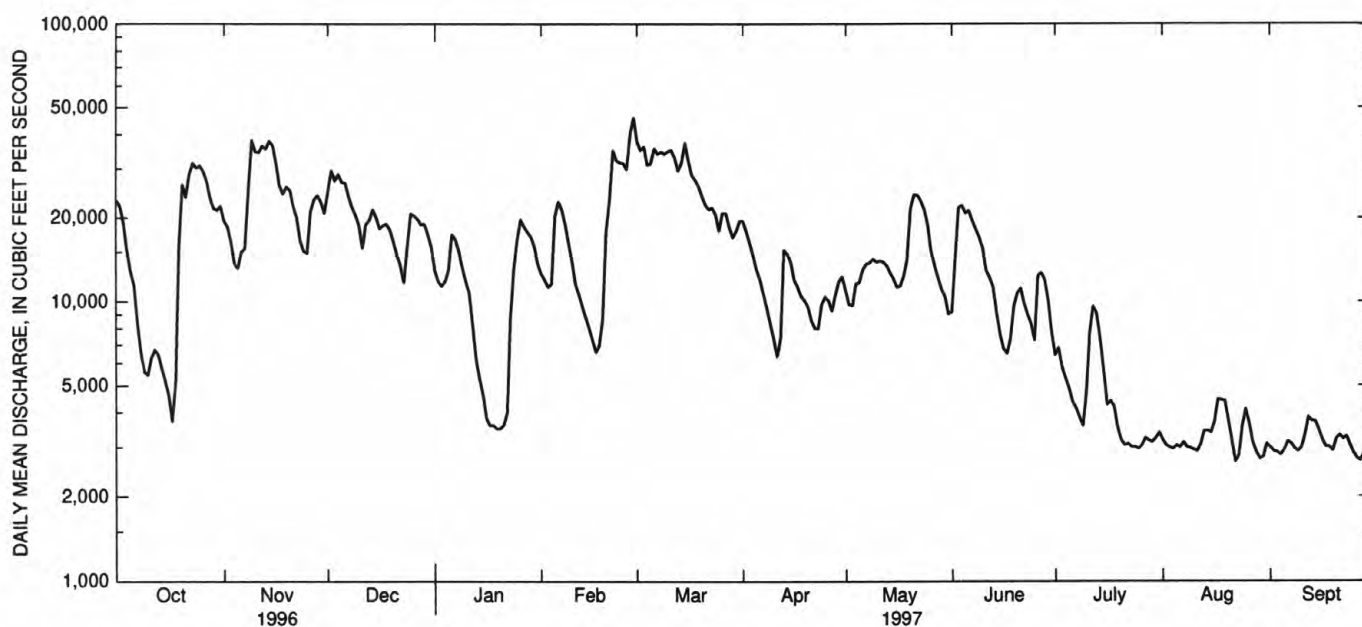
FOR 1996 CALENDAR YEAR

FOR 1997 WATER YEAR

WATER YEARS 1915 - 1997

ANNUAL TOTAL	5788420	5087520	
ANNUAL MEAN	15820	13940	10670
HIGHEST ANNUAL MEAN			15560
LOWEST ANNUAL MEAN			6482
HIGHEST DAILY MEAN	59400	May 12	46100
LOWEST DAILY MEAN	1800	Aug 29	2670
ANNUAL SEVEN-DAY MINIMUM	2090	Aug 28	2890
INSTANTANEOUS PEAK FLOW			58900
INSTANTANEOUS PEAK STAGE			13.23
ANNUAL RUNOFF (CFSM)	2.64		2.33
ANNUAL RUNOFF (INCHES)	36.00		31.64
10 PERCENT EXCEEDS	30600		29000
50 PERCENT EXCEEDS	14500		12000
90 PERCENT EXCEEDS	3360		3090
			25400
			6680
			1350

a Maximum gage height observed, 26.0 ft., Feb. 27, 1917 (backwater from ice), also Feb. 26, 1926 (backwater from ice).



October 1, 1996 to September 30, 1997

CLARION RIVER BASIN

03026500 SEVENMILE RUN NEAR RASSELAS, PA

LOCATION.--Lat 41°37'52", long 78°34'37", McKean County, Hydrologic Unit 05010005, on right bank 300 ft upstream from highway bridge, 600 ft upstream from Fivemile Run, and 3.2 mi northeast of Rasselas.

DRAINAGE AREA.--7.84 mi².

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

GAGE.--Water-stage recorder and concrete control. Datum of gage is 1,690.73 ft above sea level.

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

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than a base discharge of 200 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Oct. 19	1600	*259	*4.03	Feb. 27	1715	224	3.90

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22	28	74	15	e8.0	61	28	17	22	11	1.7	e2.0
2	18	24	77	15	e7.5	98	24	16	27	17	1.7	e1.9
3	15	20	49	17	e10	64	22	20	33	10	1.6	e2.0
4	13	18	39	16	e16	47	19	25	26	7.7	2.0	e1.9
5	11	16	32	20	e22	47	17	19	22	6.8	2.2	e1.8
6	9.4	15	28	21	e20	91	15	24	18	5.8	1.8	e1.8
7	8.3	14	24	17	e17	53	14	21	16	5.2	1.6	e1.6
8	7.3	104	21	e14	e13	43	12	19	14	4.2	1.4	e1.5
9	6.8	90	19	e12	e13	36	11	18	12	6.4	1.4	1.4
10	10	59	17	e10	e12	e60	9.8	18	11	5.7	1.2	1.5
11	7.9	43	19	e9.0	e11	e48	8.9	16	9.1	4.2	1.1	3.1
12	6.5	35	33	e7.5	e9.5	e34	14	15	8.2	3.6	1.2	3.4
13	6.3	29	42	e6.5	e8.5	e25	23	15	8.5	3.2	1.9	2.1
14	5.7	24	37	e5.5	e8.0	e65	16	13	7.5	3.0	1.9	1.8
15	5.3	21	31	e4.8	e7.5	e52	15	14	6.1	3.6	2.1	1.5
16	5.0	18	27	e4.8	e7.0	e38	14	13	5.4	6.4	5.2	1.5
17	4.8	17	25	e4.7	e6.5	e30	18	13	9.5	3.4	9.1	1.4
18	10	17	22	e4.6	e6.5	e30	17	12	14	3.9	6.3	1.4
19	181	20	19	e4.5	e12	26	15	22	20	5.5	3.4	1.4
20	96	18	17	e7.0	e23	26	14	25	11	3.2	2.7	1.4
21	65	16	18	e11	e47	22	13	21	8.6	2.7	3.0	1.4
22	50	15	19	e18	e90	30	13	19	7.1	3.3	3.7	1.3
23	39	14	16	e26	59	25	16	17	6.0	3.1	5.6	1.2
24	31	13	29	e20	51	21	19	16	5.4	3.2	3.8	1.2
25	25	16	26	e17	51	22	15	17	6.5	2.9	3.2	1.2
26	21	39	22	e14	51	58	14	17	40	2.7	2.8	1.2
27	18	29	20	e12	125	39	13	14	18	2.4	2.6	1.2
28	17	25	19	e11	89	33	25	12	13	2.9	e2.6	1.2
29	16	23	20	e10	---	34	20	11	10	2.8	e2.3	9.8
30	42	21	18	e9.0	---	33	18	11	8.9	2.1	e2.1	6.4
31	35	---	16	e8.5	---	34	---	12	---	1.9	e2.0	---
TOTAL	808.3	841	875	372.4	801.0	1325	492.7	522	423.8	149.8	85.2	62.5
MEAN	26.1	28.0	28.2	12.0	28.6	42.7	16.4	16.8	14.1	4.83	2.75	2.08
MAX	181	104	77	26	125	98	28	25	40	17	9.1	9.8
MIN	4.8	13	16	4.5	6.5	21	8.9	11	5.4	1.9	1.1	1.2
CFSM	3.33	3.58	3.60	1.53	3.65	5.45	2.09	2.15	1.80	.62	.35	.27
IN.	3.84	3.99	4.15	1.77	3.80	6.29	2.34	2.48	2.01	.71	.40	.30

e Estimated.

CLARION RIVER BASIN

03026500 SEVENMILE RUN NEAR RASSELAS, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1952 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	8.41	14.8	17.5	14.4	16.9	29.1	29.2	17.4	12.1	5.63	5.16	6.43
MAX	29.7	49.5	35.9	56.4	49.9	70.8	70.6	47.8	74.0	26.0	32.8	39.7
(WY)	1971	1986	1978	1952	1976	1964	1970	1953	1989	1992	1956	1987
MIN	.32	.66	.94	1.55	2.22	9.85	11.2	4.05	1.14	.50	.52	.28
(WY)	1965	1965	1961	1961	1987	1993	1976	1985	1991	1991	1966	1964

SUMMARY STATISTICS

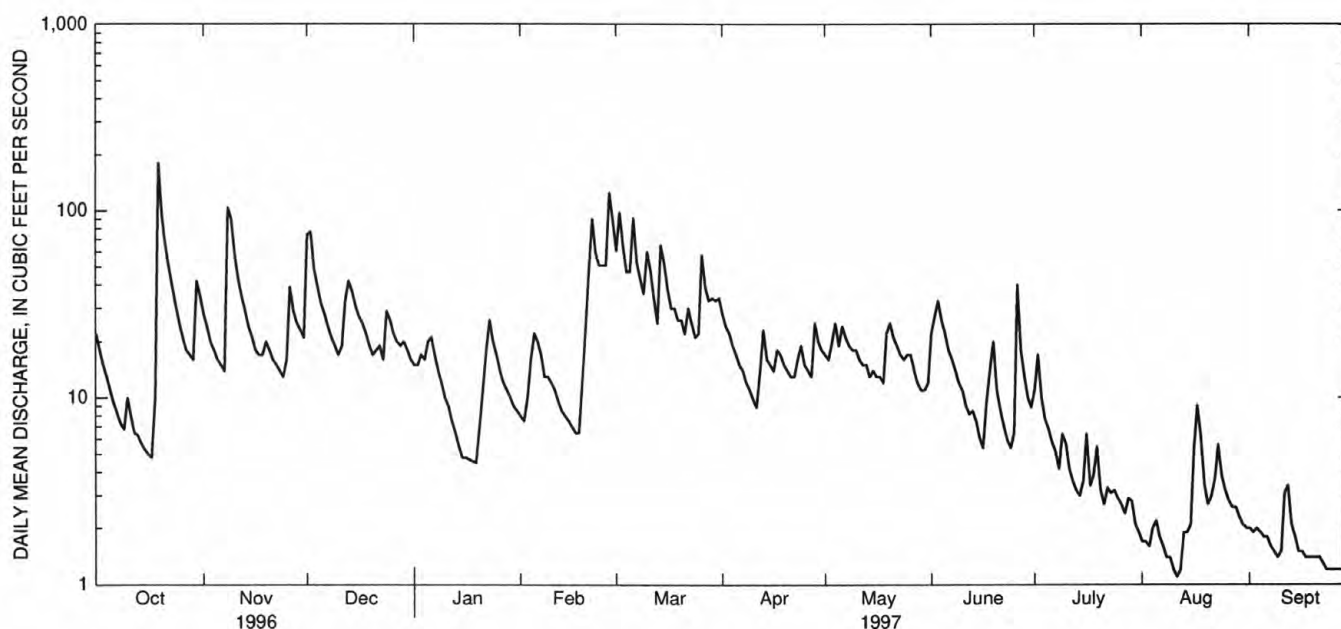
FOR 1996 CALENDAR YEAR

FOR 1997 WATER YEAR

WATER YEARS 1952 - 1997

ANNUAL TOTAL	6944.8	6758.7	
ANNUAL MEAN	19.0	18.5	14.7
HIGHEST ANNUAL MEAN			21.1
LOWEST ANNUAL MEAN			10.4
HIGHEST DAILY MEAN	181	Oct 19	465
LOWEST DAILY MEAN	1.1	Aug 20	.07
ANNUAL SEVEN-DAY MINIMUM	1.6	Aug 2	.14
INSTANTANEOUS PEAK FLOW		259	Oct 19
INSTANTANEOUS PEAK STAGE		4.03	Oct 19
INSTANTANEOUS LOW FLOW		1.1	Aug 11
ANNUAL RUNOFF (CFSM)	2.42	2.36	1.87
ANNUAL RUNOFF (INCHES)	32.95	32.07	25.43
10 PERCENT EXCEEDS	40	39	33
50 PERCENT EXCEEDS	15	14	8.2
90 PERCENT EXCEEDS	2.9	2.0	1.0

a From rating curve extended above 600 ft³/s on basis of slope-area measurement at gage height 4.60 ft and contracted-opening measurement at gage height 5.02 ft.



October 1, 1996 to September 30, 1997

CLARION RIVER BASIN
LAKE IN CLARION RIVER BASIN

03027000 EAST BRANCH CLARION RIVER LAKE.--Lat 41°33'35", long 78°35'40", Elk County, Hydrologic Unit 05010005, at control tower at East Branch Clarion River Dam on East Branch Clarion River, 1.7 mi northeast of Glen Hazel, and 7.5 mi upstream from confluence with West Branch Clarion River. DRAINAGE AREA, 72.4 mi² (figure from U.S. Army Corps of Engineers). PERIOD OF RECORD, June 1952 to current year. Prior to October 1970 published as "East Branch Clarion River Reservoir", GAGE, water-stage recorder. Datum of gage is sea level (U.S. Army Corps of Engineers bench mark).

Lake is formed by an earthfill dam rock-faced. Dam completed in 1952. Controlled storage began in June 1952. Capacity, 83,300 acre-ft between elevations 1,555 ft (sill of outlet gates) and 1,685 ft (full pool). Minimum pool elevation, 1,555 ft (capacity, 1,000 acre-ft). Winter low-water pool elevation, 1,651 ft (capacity, 45,600 acre-ft). Summer low-water pool elevation, 1,670 ft (capacity, 65,300 acre-ft). Storage to summer pool normally occurs during period Mar. 1 to Apr. 30. Depletion of low-water storage for augmenting flow in Clarion River occurs normally during period June to October. Figures given herein represent total contents. Lake is used for flood control, for low-flow augmentation of Clarion River and downstream rivers, and for recreation. Records furnished by U.S. Army Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 85,010 acre-ft, June 24, 1972 (elevation, 1,685.55 ft; minimum, 160 acre-ft, Nov. 9, 1952 (elevation, 1,541.07 ft).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 66,990 acre-ft, Apr. 24 (elevation, 1,671.44 ft); minimum 43,830 acre-ft, Sept. 28 (elevation, 1,649.10 ft).

MONTHEND ELEVATION IN FEET ABOVE SEA LEVEL, AND CONTENTS AT 2400 HRS, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

Date	Elevation (feet)	Contents (acre- feet)	Change in contents (equivalent in ft ³ /s)
Sept. 30	1,651.71	46,220	-
Oct. 31	1,651.47	46,000	- 3.6
Nov. 30	1,651.09	45,640	- 6.1
Dec. 31	1,651.17	45,720	+ 1.3
CAL YR 1996	-	-	+ .77
Jan. 31	1,650.89	45,460	- 4.2
Feb. 28	1,659.90	54,250	+158
Mar. 31	1,669.19	64,370	+165
Apr. 30	1,670.76	66,200	+ 31
May 31	1,670.59	66,000	- 3.3
June 30	1,669.95	65,250	- 13
July 31	1,662.98	57,490	-126
Aug. 31	1,656.83	51,140	-103
Sept. 30	1,649.18	43,900	-122
WTR YR 1997	-	-	- 3.2

CLARION RIVER BASIN

03028000 WEST BRANCH CLARION RIVER AT WILCOX, PA

LOCATION.--Lat 41°34'31", long 78°41'33", Elk County, Hydrologic Unit 05010005, on right bank 20 ft downstream from highway bridge at Wilcox, 100 ft downstream from Wilson Run, and 0.1 mi upstream from Penn Central Railroad bridge.

DRAINAGE AREA.--63.0 mi².

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

GAGE.--Water-stage recorder. Datum of gage is 1,502.02 ft above sea level. Prior to Nov. 18, 1953, nonrecording gage at site 20 ft upstream at same datum. Nov. 18 to Dec. 8, 1953, nonrecording gage at same site and datum.

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

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than a base discharge of 1,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Oct. 19	1600	*1,620	*5.04	Feb. 22	1200	1,050	4.14
Nov. 8	1900	1,350	4.62	Feb. 27	1900	1,290	4.51
Dec. 1	2100	1,230	4.42	Mar. 6	0300	1,100	4.22

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	179	249	617	115	e82	580	226	155	129	151	21	21
2	147	217	687	120	e76	777	200	141	143	194	21	19
3	127	185	486	135	e68	557	177	174	153	126	20	20
4	103	159	380	118	e60	435	159	176	134	108	24	19
5	89	142	293	182	e150	414	142	145	128	94	24	17
6	81	127	243	179	159	764	128	185	116	81	22	17
7	73	121	204	e135	142	516	113	161	104	69	20	16
8	68	846	174	e100	e110	421	101	156	93	62	19	16
9	66	833	152	e92	e94	334	93	156	83	81	18	16
10	78	604	133	e88	e84	377	85	150	74	65	18	17
11	62	437	164	e82	e76	320	81	137	66	52	18	25
12	56	339	281	e78	e70	265	133	124	66	46	19	31
13	53	265	346	e76	e66	221	178	121	69	43	27	21
14	51	217	328	e72	e60	476	135	109	59	40	23	19
15	47	181	292	e68	e56	475	128	109	51	42	30	17
16	45	160	249	e64	e52	374	126	104	47	56	53	16
17	42	147	216	e62	e48	311	157	99	78	37	75	16
18	84	152	184	e60	e44	263	146	91	118	36	48	17
19	1120	153	159	e58	e66	220	132	169	130	42	29	16
20	822	140	130	e54	e120	199	122	187	75	32	27	17
21	595	132	127	e52	e370	175	114	168	65	30	30	17
22	434	124	116	e80	943	226	112	159	59	35	34	15
23	339	115	113	e180	617	176	134	145	53	31	43	14
24	272	108	228	159	423	161	146	130	76	31	31	14
25	212	136	178	229	311	186	119	145	84	28	28	14
26	173	329	161	192	248	451	112	132	457	27	26	14
27	149	236	160	173	860	326	108	106	210	26	24	14
28	151	224	163	e135	775	291	210	96	157	30	24	14
29	132	205	158	e120	---	299	165	91	126	28	22	82
30	353	186	139	e105	---	273	158	90	101	23	21	54
31	280	---	127	e94	---	276	---	94	---	22	21	---
TOTAL	6483	7469	7388	3457	6230	11139	4140	4205	3304	1768	860	625
MEAN	209	249	238	112	223	359	138	136	110	57.0	27.7	20.8
MAX	1120	846	687	229	943	777	226	187	457	194	75	82
MIN	42	108	113	52	44	161	81	90	47	22	18	14
CFSM	3.32	3.95	3.78	1.77	3.53	5.70	2.19	2.15	1.75	.91	.44	.33
IN.	3.83	4.41	4.36	2.04	3.68	6.58	2.44	2.48	1.95	1.04	.51	.37

e Estimated.

CLARION RIVER BASIN

03028000 WEST BRANCH CLARION RIVER AT WILCOX, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1954 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	74.5	130	156	123	145	248	249	143	98.1	59.7	50.3	57.9
MAX	236	390	311	264	448	494	483	363	417	252	249	231
(WY)	1982	1986	1978	1996	1976	1964	1970	1984	1972	1992	1956	1987
MIN	7.60	12.9	12.4	18.5	27.6	96.4	109	40.9	20.4	12.3	8.30	7.68
(WY)	1964	1965	1961	1961	1987	1969	1976	1985	1991	1955	1991	1955

SUMMARY STATISTICS

FOR 1996 CALENDAR YEAR

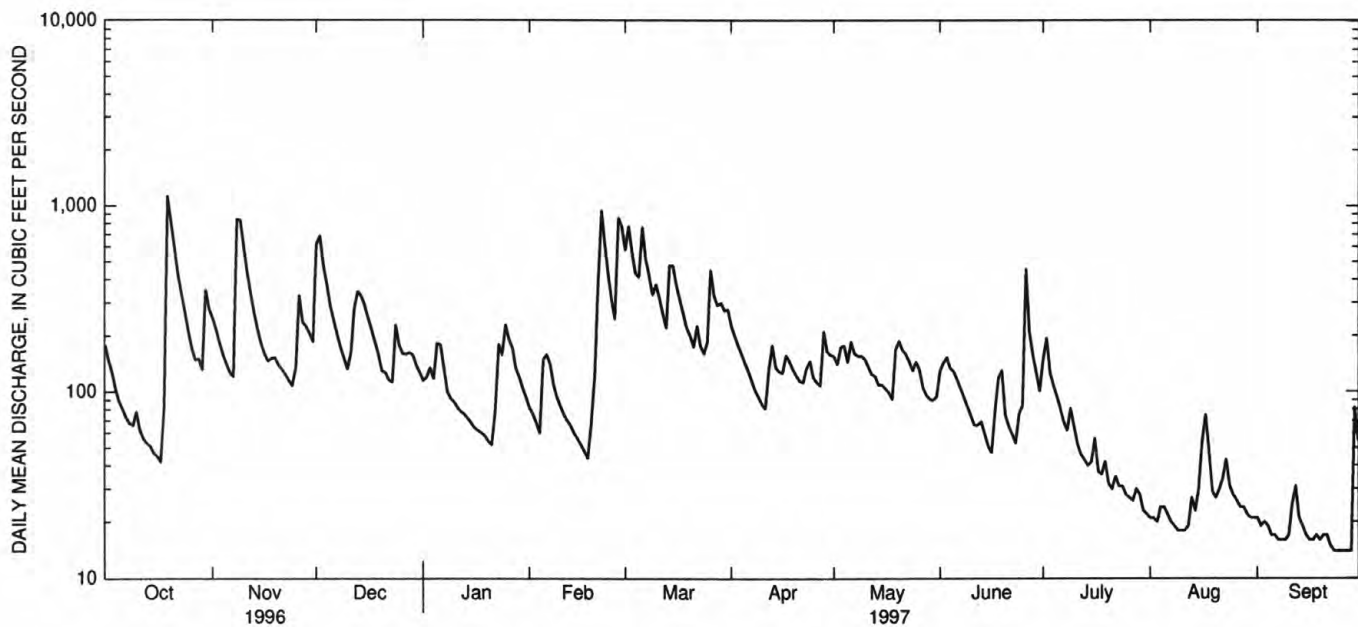
FOR 1997 WATER YEAR

WATER YEARS 1954 - 1997

ANNUAL TOTAL	59232	57068	
ANNUAL MEAN	162	156	
HIGHEST ANNUAL MEAN			128
LOWEST ANNUAL MEAN			184
HIGHEST DAILY MEAN	2600	Jan 19	1120
LOWEST DAILY MEAN	19	Sep 3	14
ANNUAL SEVEN-DAY MINIMUM	21	Aug 31	14
INSTANTANEOUS PEAK FLOW			1620
INSTANTANEOUS PEAK STAGE			5.04
INSTANTANEOUS LOW FLOW			14
ANNUAL RUNOFF (CFSM)	2.57	2.48	2.03
ANNUAL RUNOFF (INCHES)	34.98	33.70	27.54
10 PERCENT EXCEEDS	348	336	292
50 PERCENT EXCEEDS	112	119	76
90 PERCENT EXCEEDS	29	21	16

a From rating curve extended above 3,000 ft³/s.

e Estimated.



October 1, 1996 to September 30, 1997

CLARION RIVER BASIN

03029500 CLARION RIVER AT COOKSBURG, PA

LOCATION.--Lat 41°19'50", long 79°12'33", Jefferson County, Hydrologic Unit 05010005, on left bank at downstream side of bridge on State Highway 36 at Cooksburg, 300 ft downstream from Toms Run, and 2.7 mi upstream from Cathers Run.

DRAINAGE AREA.--807 mi².

PERIOD OF RECORD.--October 1938 to current year. Monthly discharge only for October, November 1938, published in WSP 1305.

REVISED RECORDS.--WSP 1305: 1939 (M). WDR PA-85-3: 1979 (M).

GAGE.--Water-stage recorder. Datum of gage is 1,147.00 ft above sea level. Prior to May 17, 1939, nonrecording gage at same site and datum.

REMARKS.--Records good except for estimated daily discharges, which are fair. Flow regulated by East Branch Clarion River Lake since June 1952 and at low flow by industrial plants above station. Several measurements of water temperature were made during the year. U.S. Army Corps of Engineers satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since 1935, 19 ft, Mar. 17, 1936, from floodmarks, discharge, about 56,000 ft³/s.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than a base discharge of 10,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Oct. 20	0200	13,200	10.01	Jan. 23	--	Unknown	Ice jam
Nov. 9	0400	*15,500	*10.76	Feb. 22	1200	12,000	9.62
Dec. 2	0800	10,400	9.02	Mar. 6	1400	14,400	10.41

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2450	2330	3400	1610	e1100	5780	2670	2000	1580	798	300	310
2	1940	2120	8840	1550	e1500	6370	2290	1800	1860	3480	293	298
3	1700	1930	5670	1730	e2100	6560	2050	1670	2690	2270	287	293
4	1520	1720	4580	1810	e2800	4820	1880	2430	2270	1420	295	308
5	1290	1560	3840	1760	e3600	4310	1730	2040	1990	1100	318	299
6	1150	1390	3330	2480	e3500	11100	1600	2000	1740	932	345	281
7	1010	1230	2930	2130	e2800	7950	1460	2280	1520	824	322	348
8	863	4430	2460	e1900	2220	5940	1300	1950	1350	760	271	363
9	780	12500	2120	e1600	1900	4910	1210	1950	1200	734	256	290
10	784	7350	1870	e1400	1630	4750	1150	1900	1030	889	249	274
11	809	5350	1790	e1250	1450	4670	1050	1800	876	767	245	288
12	686	4180	3870	e1100	1290	3930	1040	1630	805	629	256	419
13	614	3580	4370	e1000	1160	3360	2650	1530	951	568	356	406
14	581	3260	4690	e870	e1050	3780	2370	1390	971	528	638	338
15	539	2920	3820	e1500	e980	6610	1890	1270	778	518	500	304
16	502	2630	3270	e4500	e880	4620	1730	1230	668	779	698	290
17	480	2320	2980	e3300	e840	3700	1740	1150	772	646	1450	278
18	487	2060	2680	e2500	e780	3170	1820	1070	1210	520	1330	275
19	6580	1890	2350	e1900	e720	2750	1580	1540	1450	478	948	290
20	10300	1610	1920	e1500	e700	2420	1390	3240	1240	465	598	322
21	5840	1420	1510	e1300	e1900	2160	1260	2680	985	432	548	409
22	5600	1310	1400	e2500	10700	2140	1190	2340	838	435	621	415
23	4330	1210	1320	e4000	8410	2170	1230	2080	682	456	575	316
24	3740	1130	1660	e6400	5330	1740	1430	1760	584	444	565	280
25	3150	1130	2690	e4800	3870	1570	1390	1660	550	452	492	275
26	2700	2680	2040	e3500	3080	3750	1300	2460	1010	405	452	270
27	2370	3430	1840	e2600	4820	3880	1210	1900	1410	381	421	249
28	2210	2640	1790	e2000	8520	3140	1720	1610	940	359	388	250
29	2240	2410	1920	e1500	---	2840	2710	1460	824	351	361	467
30	2020	2210	2040	e1100	---	3180	2160	1370	734	348	340	1320
31	3030	---	1760	e840	---	3000	---	1270	---	313	321	---
TOTAL	72295	85930	90750	67930	79630	131070	50200	56460	35508	23481	15039	10525
MEAN	2332	2864	2927	2191	2844	4228	1673	1821	1184	757	485	351
MAX	10300	12500	8840	6400	10700	11100	2710	3240	2690	3480	1450	1320
MIN	480	1130	1320	840	700	1570	1040	1070	550	313	245	249
CFSM	2.89	3.55	3.63	2.72	3.52	5.24	2.07	2.26	1.47	.94	.60	.43
IN.	3.33	3.96	4.18	3.13	3.67	6.04	2.31	2.60	1.64	1.08	.69	.49

e Estimated.

CLARION RIVER BASIN

03029500 CLARION RIVER AT COOKSBURG, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1952 - 1997, BY WATER YEAR (WY) (SINCE REGULATION)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	812	1348	1818	1602	1754	2806	2562	1864	1225	803	643	651
MAX	2357	3906	3821	5654	4138	6185	4721	4086	5307	2565	2732	1995
(WY)	1991	1986	1978	1952	1976	1979	1994	1984	1972	1992	1994	1992
MIN	86.6	204	150	211	369	764	1217	566	365	139	117	109
(WY)	1952	1961	1961	1961	1987	1969	1976	1985	1991	1952	1952	1952

SUMMARY STATISTICS

FOR 1996 CALENDAR YEAR

FOR 1997 WATER YEAR

WATER YEARS 1952 - 1997

ANNUAL TOTAL	734704	718818	
ANNUAL MEAN	2007	1969	1489
HIGHEST ANNUAL MEAN			2066
LOWEST ANNUAL MEAN			1077
HIGHEST DAILY MEAN	22700	Jan 20	43200
LOWEST DAILY MEAN	250	Sep 3	59
ANNUAL SEVEN-DAY MINIMUM	283	Jan 11	67
INSTANTANEOUS PEAK FLOW			53300
INSTANTANEOUS PEAK STAGE			18.84
INSTANTANEOUS LOW FLOW			57
ANNUAL RUNOFF (CFSM)	2.49		1.85
ANNUAL RUNOFF (INCHES)	33.87		25.07
10 PERCENT EXCEEDS	4410		3250
50 PERCENT EXCEEDS	1320		913
90 PERCENT EXCEEDS	367		300

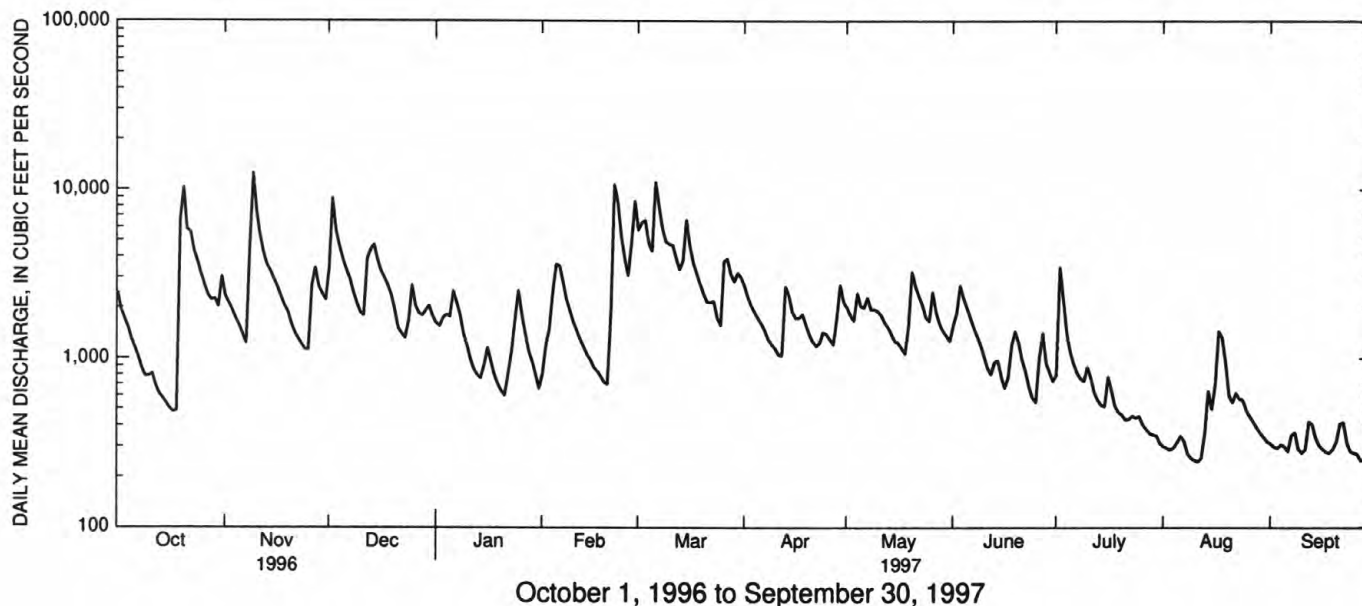
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 1951, BY WATER YEAR (WY) (PRIOR TO REGULATION)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	590	1085	1475	1891	1961	3055	2969	1971	1154	579	288	348
MAX	2134	4241	3050	3962	3881	6815	6288	3965	2789	1765	580	1078
(WY)	1946	1951	1941	1950	1951	1945	1940	1943	1946	1942	1950	1945
MIN	113	170	337	417	764	1610	725	606	261	158	94.2	82.8
(WY)	1950	1950	1944	1944	1941	1949	1946	1941	1939	1949	1944	1943

SUMMARY STATISTICS

WATER YEARS 1939 - 1951

ANNUAL MEAN	1444
HIGHEST ANNUAL MEAN	2023
LOWEST ANNUAL MEAN	953
HIGHEST DAILY MEAN	24600
LOWEST DAILY MEAN	43
ANNUAL SEVEN-DAY MINIMUM	50
INSTANTANEOUS PEAK FLOW	32700
INSTANTANEOUS PEAK STAGE	14.96
INSTANTANEOUS LOW FLOW	41
ANNUAL RUNOFF (CFSM)	1.79
ANNUAL RUNOFF (INCHES)	24.31
10 PERCENT EXCEEDS	3350
50 PERCENT EXCEEDS	793
90 PERCENT EXCEEDS	140



CLARION RIVER BASIN

03030500 CLARION RIVER NEAR PINEY, PA

LOCATION.--Lat 41°11'33", long 79°26'25", Clarion County, Hydrologic Unit 05010005, on left bank 0.2 mi downstream from hydroelectric plant of Pennsylvania Electric Co., 2.3 mi northeast of Piney, 2.4 mi upstream from Piney Creek, and 3 mi southwest of Clarion.

DRAINAGE AREA.--951 mi².

PERIOD OF RECORD.--October 1944 to current year (monthly discharge only October 1944 to September 1947).

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 1,002.06 ft above sea level (Pennsylvania Electric Co. bench mark). Prior to Dec. 23, 1947, records from hydroelectric plant 0.2 mi upstream.

REMARKS.--Records good except for estimated daily discharges, which are fair. Flow regulated by East Branch Clarion River Lake since June 1952 and by hydroelectric plant at Piney Dam 0.2 mi upstream since 1924, combined capacity of reservoirs, 113,200 acre-ft. Several measurements of water temperature were made during the year. Satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--The flood of Mar. 18, 1936 reached a discharge of 50,000 ft³/s, as determined by Pennsylvania Electric Co., elevation, 1,028.5 ft, at lower pool of dam.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3610	2920	3680	e2050	1830	5940	2540	2040	2090	1210	104	e600
2	2270	2250	9100	e2060	528	6560	2020	2250	2270	2700	165	e110
3	1730	2140	6180	e2020	1760	7120	2200	2360	3620	2380	284	95
4	2350	1710	5590	e1650	2090	5470	2490	2360	2580	1920	755	495
5	1370	1900	4990	e765	3900	5500	2610	2370	2380	1250	413	97
6	1090	2560	4670	e3080	3680	10500	452	2480	2320	1320	430	877
7	1340	2210	3150	e2120	2390	8430	1010	1910	1910	868	714	547
8	1430	3140	2050	e1980	3980	6380	1990	2840	1580	835	144	95
9	1420	11200	2610	e2120	1780	5560	2220	1980	1660	1210	475	101
10	943	7620	3240	e2180	2230	5440	1210	2110	1430	956	132	269
11	1200	5630	2820	1450	1820	5500	1110	1990	1150	491	136	958
12	643	5070	3050	765	2150	4160	1230	2070	1060	650	554	106
13	646	4130	5550	2390	1930	3710	2550	1640	1280	1190	868	137
14	988	3720	5460	1170	1360	4520	2410	2030	1640	665	703	490
15	765	3200	4180	991	1080	5960	2350	1320	1010	420	731	1010
16	472	2570	3970	1330	548	5680	2330	1680	1410	813	839	448
17	489	2980	4460	1110	1210	4070	2490	1370	1060	834	e1750	97
18	1120	2790	2270	590	1110	4090	2260	982	1120	517	e1770	698
19	4790	1700	2200	633	1270	2230	1460	2290	1760	78	e1630	84
20	9980	1690	1950	612	3390	2460	1060	3220	1760	82	e750	615
21	6150	1850	e2270	1060	3290	2020	1300	3380	1300	1310	e760	102
22	5650	2140	e975	970	9740	3920	2280	2560	1120	298	e780	599
23	4960	2120	e1880	1770	8560	980	1620	2270	576	532	e620	690
24	4090	586	e2190	2390	5860	1910	1180	2100	604	604	e110	99
25	3540	1780	e2310	2950	4640	2220	2130	1870	971	699	e580	95
26	3000	3110	e2250	1750	3510	4130	1490	3070	880	68	e760	544
27	2390	2910	e2440	2260	4300	3460	1240	2210	1500	68	e360	100
28	2080	3640	e1270	1860	8130	3350	2250	2200	1470	1110	e465	101
29	3830	2520	e1590	2970	---	4020	2420	2000	959	73	e530	780
30	2360	2250	e2230	2170	---	2760	2610	1660	731	560	e440	2020
31	2390	---	e2030	2080	---	2610	---	1410	---	599	e690	---
TOTAL	79086	94036	102605	53296	88066	140660	56512	66022	45201	26310	19442	13059
MEAN	2551	3135	3310	1719	3145	4537	1884	2130	1507	849	627	435
MAX	9980	11200	9100	3080	9740	10500	2610	3380	3620	2700	1770	2020
MIN	472	586	975	590	528	980	452	982	576	68	104	84
†	-27	-7.3	-5.8	-35	+237	-211	+48	+6.7	-23	-132	-92	-132

† Change in contents, equivalent in cubic feet per second, in East Branch Clarion River Lake and Piney Reservoir. Records of contents in Piney Reservoir furnished by Pennsylvania Electric Co. Records of contents in East Branch Clarion River Lake furnished by U.S. Army Corps of Engineers.

e Estimated.

CLARION RIVER BASIN

03030500 CLARION RIVER NEAR PINEY, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1948 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	921	1614	2199	2061	2330	3357	3105	2217	1478	953	730	739
MAX	2743	5013	4611	6884	5775	6703	5186	4644	6354	3220	3096	2469
(WY)	1991	1986	1978	1952	1976	1964	1970	1984	1972	1992	1994	1992
MIN	40.2	82.5	184	244	527	881	1517	700	345	167	135	120
(WY)	1950	1950	1961	1961	1987	1969	1968	1985	1991	1952	1952	1951

SUMMARY STATISTICS

FOR 1996 CALENDAR YEAR

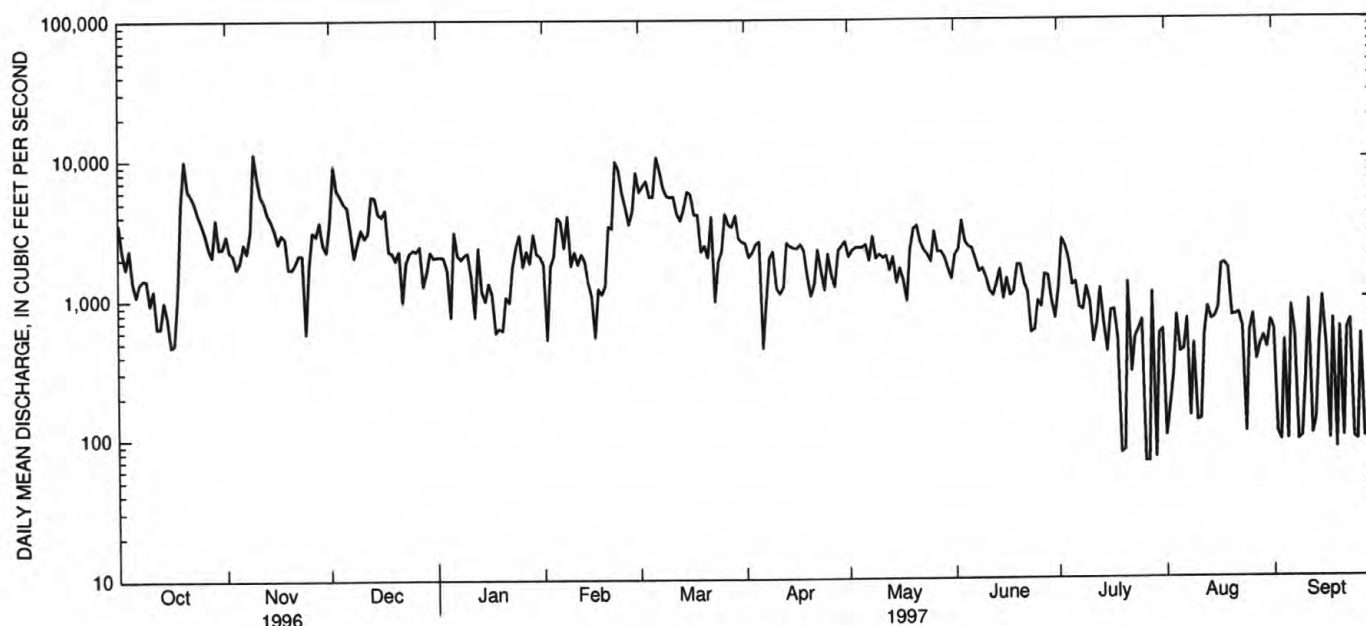
FOR 1997 WATER YEAR

WATER YEARS 1948 - 1997

ANNUAL TOTAL	890122		784295		1806	
ANNUAL MEAN	2432	†-.83	2149	†-5.3	2443	1994
HIGHEST ANNUAL MEAN					1223	1963
LOWEST ANNUAL MEAN					51600	Jun 23 1972
HIGHEST DAILY MEAN	26700	Jan 20	11200	Nov 9	11	Oct 1 1966
LOWEST DAILY MEAN	84	Aug 25	68	Jul 26, 27	26	Oct 16 1949
ANNUAL SEVEN-DAY MINIMUM	409	Aug 28	308	Sep 8	74500	Jun 23 1972
INSTANTANEOUS PEAK FLOW			15900	Nov 9	28.24	Jun 23 1972
INSTANTANEOUS PEAK STAGE			12.08	Nov 9	4110	
10 PERCENT EXCEEDS	5090		4360		1150	
50 PERCENT EXCEEDS	1760		1870		125	
90 PERCENT EXCEEDS	494		469			

† Change in contents, equivalent in cubic feet per second, in East Branch Clarion River Lake and Piney Reservoir. Records of contents in Piney Reservoir furnished by Pennsylvania Electric Co. Records of contents in East Branch Clarion River Lake furnished by U.S. Army Corps of Engineers.

a From floodmark.



October 1, 1996 to September 30, 1997

OHIO RIVER MAIN STEM

03031500 ALLEGHENY RIVER AT PARKER, PA

LOCATION.--Lat 41°06'02", long 79°40'53", Armstrong County, Hydrologic Unit 05010006, on right bank 500 ft downstream from bridge on State Highway 368 at Parker, 1.1 mi downstream from Clarion River, at mile 83.4.

DRAINAGE AREA.--7,671 mi².

PERIOD OF RECORD.--October 1932 to current year. Prior to October 1963, published as "at Parkers Landing." Gage-height records collected at same site since 1885 are contained in reports of U.S. Weather Bureau.

GAGE.--Water-stage recorder. Datum of gage is 845.14 ft above sea level. Prior to Oct. 1, 1932, U.S. Weather Bureau gages at different datums. Oct. 1-28, 1932, nonrecording gage at datum 27.00 ft lower.

REMARKS.--Records good except for estimated daily discharges, which are fair. Flow regulated since 1965 by Allegheny Reservoir, since 1949 by Chautauqua Lake, since 1941 by Tionesta Lake, since 1971 by Union City Reservoir, since 1974 by Woodcock Creek Lake, since 1952 by East Branch Clarion River Lake, and since 1924 by Piney Reservoir. Several measurements of water temperature were made during the year. U.S. Army Corps of Engineers satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 17, 1865 reached a stage of 29.4 ft, present datum, discharge, 250,000 ft³/s, from rating curve extended above 137,000 ft³/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	30000	24500	32900	17400	e18000	47600	24300	15600	10500	8440	4180	4120
2	26500	22500	44200	15600	e17000	45400	22400	12500	16000	8570	3510	3980
3	23900	20800	38400	15500	e15000	47700	20100	13000	26700	9850	3430	3480
4	20000	17700	37100	15600	e17000	40700	19200	14000	28000	8010	3490	3460
5	16700	15900	35100	15000	e21000	39900	17500	15000	25400	6240	4020	3780
6	14200	17600	34100	22200	31600	54800	14900	15500	24300	5800	3660	3630
7	12500	19000	29500	21600	27800	49100	12900	17000	23500	5700	3740	4430
8	9330	28400	27000	19500	26100	44700	12600	17200	21000	4790	4070	4050
9	8550	56000	24800	17900	21200	43200	11600	17500	19500	5320	3400	3520
10	7590	49500	25700	16000	17900	45200	10800	16600	18200	4870	3710	3570
11	7970	44400	21300	14900	15400	44700	8540	17100	14700	6870	3380	4440
12	8600	44200	29800	11700	e13000	41400	8190	16900	13300	9500	3350	5660
13	7990	42800	30700	9310	e11500	37100	20800	15800	14200	9770	4220	4540
14	7970	42800	30800	e7600	e10500	40900	20400	15500	11500	8930	4640	4330
15	7120	42200	28100	e7000	e9800	50400	18700	14700	9410	7280	4610	4730
16	6330	37400	25700	e6600	e9000	43000	16700	13100	8640	5550	4870	4410
17	5310	31700	25400	e6000	e8600	36800	15200	13300	7980	4890	6530	4040
18	5430	28900	24200	e5800	e8600	34800	14800	13000	8040	5430	6690	3580
19	15800	29100	22800	e5600	e10000	31000	13500	17200	11800	4560	6340	4080
20	40400	28500	21100	e5400	e17000	29000	11700	24500	11700	3700	5230	3780
21	34200	26500	18800	e6200	e25000	26700	11300	29200	13200	3690	4710	4690
22	35600	24000	17700	e7000	46200	27100	10700	28100	11400	4510	4200	3890
23	38400	21200	14900	e8600	45400	25600	10500	27000	9910	3800	4020	4300
24	36900	17900	18000	e12000	39700	24200	11000	24900	9060	3640	4230	4350
25	36000	17300	24800	e17000	38500	22300	12500	23300	8460	3940	4590	3570
26	34600	25100	25400	e23000	35200	26500	12900	22600	11200	3980	4920	3410
27	31300	30600	24600	e22000	43600	27600	11400	16800	14900	3550	4390	3720
28	28300	29500	22600	e22000	61000	25400	13100	16000	14400	3580	3840	3430
29	27100	28700	22500	e22000	---	23500	15800	13600	12100	4510	3760	4770
30	24900	26100	21900	e20000	---	22000	15500	12700	9420	3520	3710	8850
31	27300	---	20100	e19000	---	24100	---	12000	---	4140	3840	---
TOTAL	636790	890800	820000	435010	660600	1122400	439530	541200	438420	176930	133280	126590
MEAN	20540	29690	26450	14030	23590	36210	14650	17460	14610	5707	4299	4220
MAX	40400	56000	44200	23000	61000	54800	24300	29200	28000	9850	6690	8850
MIN	5310	15900	14900	5400	8600	22000	8190	12000	7980	3520	3350	3410
CFSM	2.68	3.87	3.45	1.83	3.08	4.72	1.91	2.28	1.91	.74	.56	.55
IN.	3.09	4.32	3.98	2.11	3.20	5.44	2.13	2.62	2.13	.86	.65	.61

e Estimated.

OHIO RIVER MAIN STEM

03031500 ALLEGHENY RIVER AT PARKER, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1933 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	7113	12620	17220	17630	17890	27130	24870	15580	10040	6183	4515	5040
MAX	28650	33760	38040	53560	40460	63020	58110	36220	35340	26090	16890	21370
(WY)	1991	1986	1978	1937	1976	1936	1940	1943	1989	1972	1994	1977
MIN	802	1655	1332	2111	3788	7746	5651	3610	1508	1069	1034	951
(WY)	1964	1961	1961	1961	1934	1969	1946	1934	1934	1934	1934	1936

SUMMARY STATISTICS

FOR 1996 CALENDAR YEAR

FOR 1997 WATER YEAR

WATER YEARS 1933 - 1997

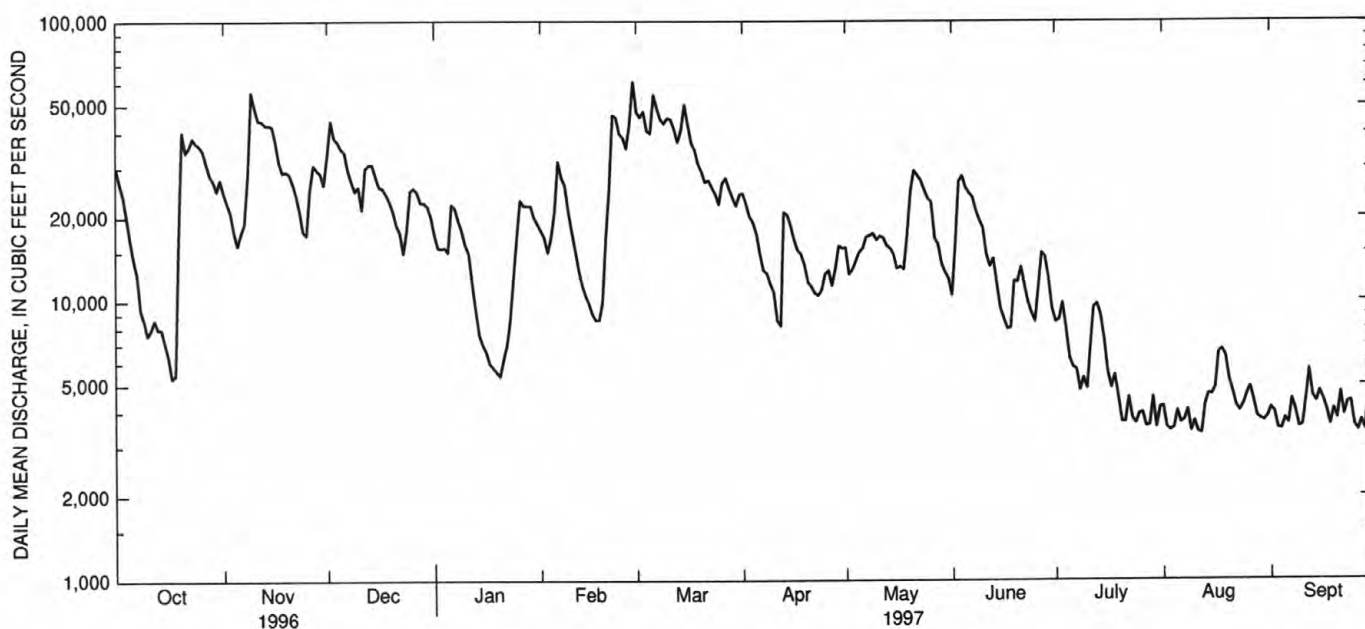
ANNUAL TOTAL	7425380	6421550	
ANNUAL MEAN	20290	17590	
HIGHEST ANNUAL MEAN			13800
LOWEST ANNUAL MEAN			19640
HIGHEST DAILY MEAN	102000	Jan 20	61000
LOWEST DAILY MEAN	2760	Aug 31	3350
ANNUAL SEVEN-DAY MINIMUM	3050	Aug 29	3620
INSTANTANEOUS PEAK FLOW			67100
INSTANTANEOUS PEAK STAGE			b12.76
INSTANTANEOUS LOW FLOW			3300
ANNUAL RUNOFF (CFSM)	2.64	2.29	
ANNUAL RUNOFF (INCHES)	36.01	31.14	
10 PERCENT EXCEEDS	39100	36800	32200
50 PERCENT EXCEEDS	18000	15500	8940
90 PERCENT EXCEEDS	4690	4000	2060

a About.

b Maximum gage height, 20.77 ft., Jan. 26 (backwater from ice).

c Backwater from ice.

d Also Aug. 30, 31, and Sept. 27, 28.



October 1, 1996 to September 30, 1997

REDBANK CREEK BASIN

03032500 REDBANK CREEK AT ST. CHARLES, PA

LOCATION.--Lat 40°59'40", long 79°23'40", Armstrong County, Hydrologic Unit 05010006, on left bank 400 ft downstream from highway bridge on SR 1005 at St. Charles, 0.3 mi downstream from Leatherwood Creek, and 3 mi west of New Bethlehem.

DRAINAGE AREA.--528 mi².

PERIOD OF RECORD.--Annual maximums, water years 1910-18. October 1918 to current year. Monthly discharge only for some periods, published in WSP 1305. Figures of daily discharge for November 1920 to June 1921, published in WSP 523, are unreliable and should not be used.

REVISED RECORDS.--WSP 743: Drainage area. WSP 1385: 1919, 1936-39. WDR PA-72-1: 1923 (M), 1926 (M), 1928 (M), 1936, 1937 (M), 1938 (M), 1943, 1945 (P), 1952 (M), 1953 (M), 1955 (M), 1956 (P), 1958 (M), 1959 (M), 1964, 1966 (M). See also PERIOD OF RECORD.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 973.14 ft above sea level. Prior to July 10, 1940, nonrecording gage at site 500 ft upstream at datum 3.10 ft higher.

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

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than a base discharge of 7,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 8	2100	8,700	10.09	Feb. 5	--	Unknown	Ice jam
Dec. 2	0300	9,120	10.28	Mar. 6	0700	*9,930	*10.63

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1740	901	4090	1150	e340	2380	1660	827	937	247	75	120
2	1350	795	6800	1140	e380	3060	1380	758	1360	2930	75	109
3	1090	730	4100	1230	e480	3180	1240	753	2110	1590	75	100
4	930	662	2900	1230	e1000	2600	1120	1180	1590	850	74	92
5	778	610	2240	1280	e4000	2710	e1000	1030	1230	596	77	93
6	679	576	1900	1510	3530	7630	e920	890	1000	438	82	86
7	608	569	1650	1260	2450	5160	e840	974	840	360	96	81
8	560	4100	1490	1070	1870	3550	e760	835	721	328	78	79
9	531	7020	1330	e900	1540	2720	e720	791	615	299	65	76
10	536	5130	1160	e760	1280	3030	e660	793	534	354	58	75
11	497	3410	1460	e660	e1100	2620	578	741	476	382	54	89
12	436	2410	4180	e580	e900	2090	614	667	425	270	55	99
13	393	1820	4080	e520	e800	1670	1020	620	461	215	92	99
14	365	1490	3590	e490	e700	2910	1040	569	564	191	227	109
15	334	1250	2730	e460	e640	4170	815	538	435	170	256	94
16	311	1080	2130	e670	e600	2890	706	499	341	170	186	80
17	298	982	1810	e620	e540	2260	743	467	472	184	488	74
18	340	964	1560	e540	e500	1880	808	443	651	194	1070	74
19	4860	974	1320	e480	e480	1550	706	551	1020	153	779	71
20	5760	887	1100	e440	e450	1350	636	971	841	129	422	170
21	3850	792	804	e400	e1000	1190	584	953	553	115	339	222
22	2810	718	828	e480	e4900	1100	551	706	440	115	354	206
23	2070	666	903	e660	4500	1030	560	604	366	119	283	151
24	1670	620	1170	e1000	3020	898	613	540	303	124	221	114
25	1370	618	1620	e1700	2110	821	e680	817	267	123	198	94
26	1130	1860	1210	e1100	1700	2210	e620	2090	299	116	174	82
27	966	2120	1010	e900	2410	2470	e600	1460	271	110	165	76
28	1020	1530	1060	e620	3220	1860	e800	1030	240	106	164	71
29	1200	1320	1330	e450	---	1730	e1050	868	207	97	151	275
30	1040	1240	1570	e350	---	1860	e960	783	181	86	137	703
31	1030	---	1320	e280	---	1830	---	740	---	78	130	---
TOTAL	40552	47844	64445	24930	46440	76409	24984	25488	19750	11239	6700	3864
MEAN	1308	1595	2079	804	1659	2465	833	822	658	363	216	129
MAX	5760	7020	6800	1700	4900	7630	1660	2090	2110	2930	1070	703
MIN	298	569	804	280	340	821	551	443	181	78	54	71
CFSM	2.48	3.02	3.94	1.52	3.14	4.67	1.58	1.56	1.25	.69	.41	.24
IN.	2.86	3.37	4.54	1.76	3.27	5.38	1.76	1.80	1.39	.79	.47	.27

e Estimated.

REDBANK CREEK BASIN

03032500 REDBANK CREEK AT ST. CHARLES, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1919 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	387	747	1089	1132	1214	1826	1480	1074	690	426	284	290
MAX	1385	2806	3151	4616	2707	5016	3337	2603	3887	2238	1498	2091
(WY)	1927	1922	1928	1937	1990	1936	1940	1919	1972	1996	1956	1996
MIN	40.3	50.9	75.9	96.8	179	358	367	180	123	61.1	33.5	29.2
(WY)	1931	1931	1961	1931	1934	1969	1925	1926	1936	1966	1930	1939

SUMMARY STATISTICS

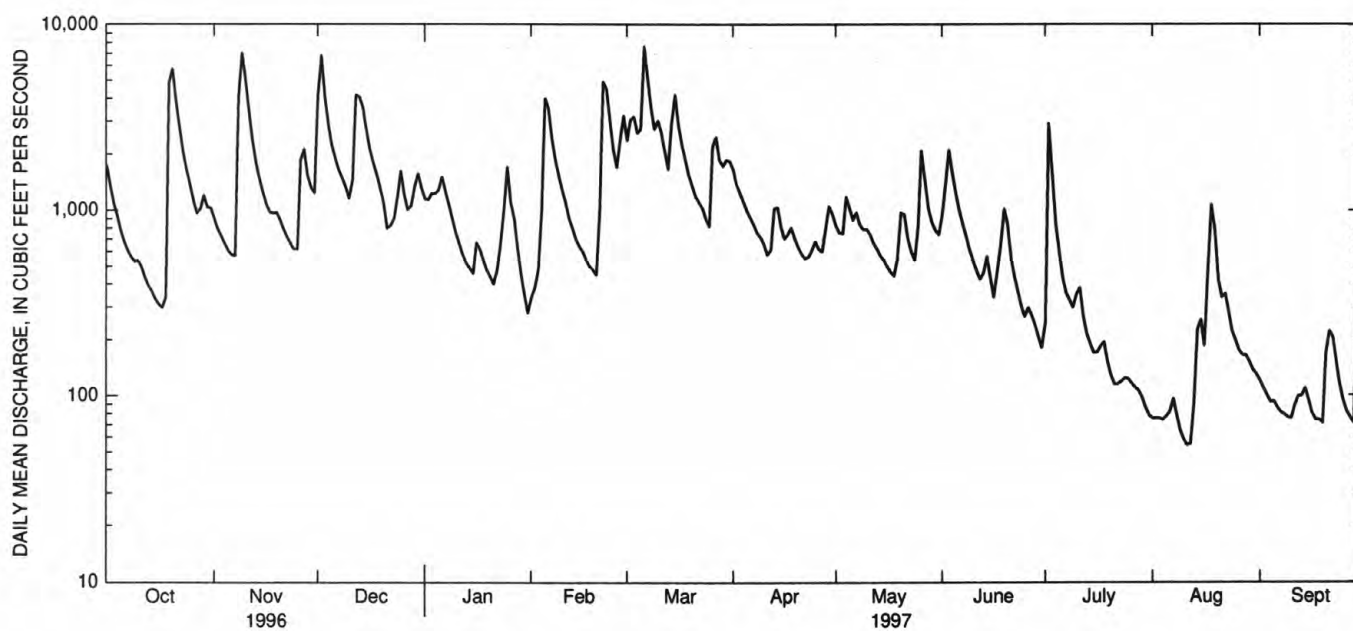
FOR 1996 CALENDAR YEAR

FOR 1997 WATER YEAR

WATER YEARS 1919 - 1997

ANNUAL TOTAL	590298		392645									
ANNUAL MEAN	1613		1076							884		
HIGHEST ANNUAL MEAN										1333		1996
LOWEST ANNUAL MEAN										430		1934
HIGHEST DAILY MEAN	28100	Jul 19				7630	Mar 6			28100	Jul 19	1996
LOWEST DAILY MEAN	108	Sep 3				54	Aug 11			20	Sep 28	1922
ANNUAL SEVEN-DAY MINIMUM	130	Aug 31				70	Aug 6			24	Aug 30	1939
INSTANTANEOUS PEAK FLOW						9930	Mar 6			66300	Jul 19	1996
INSTANTANEOUS PEAK STAGE						10.63	Mar 6			a23.90	Jul 19	1996
INSTANTANEOUS LOW FLOW						53	Aug 11,12			b19	Oct 1	1918
ANNUAL RUNOFF (CFSM)	3.05					2.04				1.67		
ANNUAL RUNOFF (INCHES)	41.59					27.66				22.76		
10 PERCENT EXCEEDS	3840					2520				2140		
50 PERCENT EXCEEDS	1000					740				465		
90 PERCENT EXCEEDS	294					104				85		

a From floodmarks.
b Minimum observed.



October 1, 1996 to September 30, 1997

MAHONING CREEK BASIN

03034000 MAHONING CREEK AT PUNXSUTAWNEY, PA

LOCATION.--Lat 40°56'21", long 79°00'31", Jefferson County, Hydrologic Unit 05010006, on right bank 75 ft downstream from Williams Run, 1.9 mi downstream from Sawmill Run, and 2 mi west of Punxsutawney.

DRAINAGE AREA.--158 mi².

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

REVISED RECORDS.--WDR PA-87-3: 1977-86 (P).

GAGE.--Water-stage recorder. Datum of gage is 1,206.14 ft above sea level (U.S. Army Corps of Engineers bench mark). Prior to Oct. 1, 1946, at site 2.9 mi upstream at datum 13.30 ft higher.

REMARKS.--Records good except for estimated daily discharges, which are fair. Diurnal fluctuations at low flow by mine pumpage into stream above station. Several measurements of water temperature were made during the year. U.S. Army Corps of Engineers satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 18, 1936 reached a stage of 15.6 ft, from floodmark at former site and datum, discharge, 12,500 ft³/s, from rating curve extended above 4,300 ft³/s.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than a base discharge of 2,500 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 8	1900	*2,900	*6.34	No other peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	413	278	1240	315	e130	423	381	178	386	150	41	60
2	335	258	1840	331	e140	624	336	169	538	230	39	56
3	297	241	1100	338	e200	612	312	187	566	151	39	53
4	253	222	812	319	e400	571	293	230	445	114	40	49
5	228	209	628	387	1650	641	270	187	361	97	45	47
6	208	200	546	438	1080	1680	254	189	299	88	48	47
7	196	195	466	366	744	1220	235	e170	256	82	41	47
8	184	1480	423	329	571	876	214	e160	229	79	37	45
9	177	2310	375	310	460	689	209	e170	204	79	37	45
10	171	1580	331	e280	383	811	197	e180	185	120	36	45
11	156	1030	543	e250	e320	693	187	e170	169	88	35	50
12	142	745	1950	e220	e280	575	197	e160	163	76	35	64
13	135	577	1640	e210	e250	483	246	e150	198	72	242	53
14	130	474	1240	e100	e230	750	204	e135	200	67	146	48
15	121	397	894	e180	e220	926	183	e125	155	63	72	46
16	117	345	705	e180	e210	695	174	e120	139	90	66	45
17	113	317	577	e170	e190	573	172	e110	186	72	287	43
18	184	307	479	e170	e180	497	168	e100	197	60	659	43
19	1350	295	411	e160	e400	425	160	e190	265	55	248	43
20	1610	267	340	e160	995	371	152	e370	181	51	186	136
21	921	243	296	e150	1150	330	146	e300	149	49	232	131
22	669	228	282	e170	1750	319	144	e230	132	49	166	75
23	517	214	275	e350	1120	279	155	168	118	69	137	60
24	429	204	385	343	763	253	158	158	108	59	117	54
25	351	206	404	460	562	245	140	567	100	54	104	50
26	303	514	317	e350	468	864	130	954	108	52	94	47
27	274	509	302	e250	525	648	124	574	99	50	84	45
28	345	421	332	e190	529	515	223	410	87	47	86	44
29	361	378	373	e170	---	476	214	320	80	48	80	412
30	321	354	391	e150	---	459	186	278	75	45	69	226
31	311	---	342	e140	---	448	---	270	---	42	63	---
TOTAL	11322	14998	20239	7936	15900	18971	6164	7679	6378	2448	3611	2209
MEAN	365	500	653	256	568	612	205	248	213	79.0	116	73.6
MAX	1610	2310	1950	460	1750	1680	381	954	566	230	659	412
MIN	113	195	275	100	130	245	124	100	75	42	35	43
CFSM	2.31	3.16	4.13	1.62	3.59	3.87	1.30	1.57	1.35	.50	.74	.47
IN.	2.67	3.53	4.77	1.87	3.74	4.47	1.45	1.81	1.50	.58	.85	.52

e Estimated.

MAHONING CREEK BASIN

03034000 MAHONING CREEK AT PUNXSUTAWNEY, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	121	218	332	337	412	571	464	336	213	158	108	96.5
MAX	394	715	769	1025	1013	1249	909	722	1210	855	670	572
(WY)	1987	1986	1973	1952	1975	1964	1994	1953	1972	1977	1956	1996
MIN	18.1	27.9	27.2	61.0	96.6	132	112	79.9	48.9	26.4	23.0	16.9
(WY)	1965	1954	1961	1961	1993	1969	1946	1941	1991	1988	1949	1964

SUMMARY STATISTICS

FOR 1996 CALENDAR YEAR

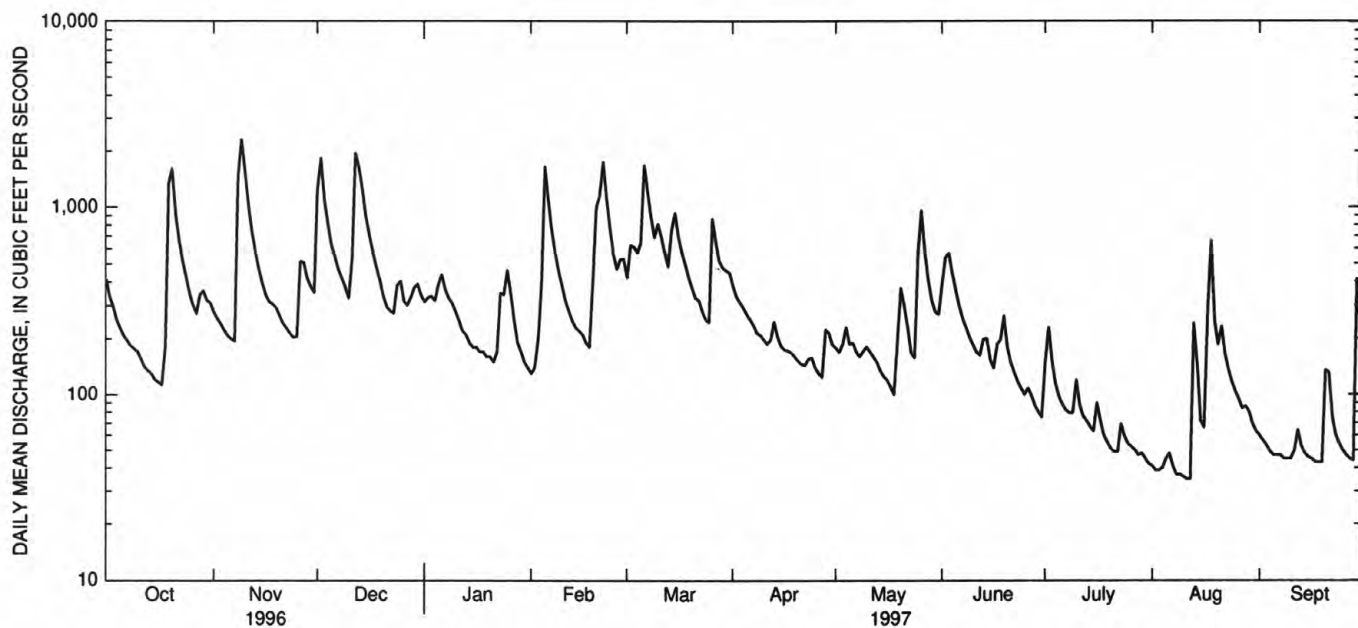
FOR 1997 WATER YEAR

WATER YEARS 1939 - 1997

ANNUAL TOTAL	179095	117855	
ANNUAL MEAN	489	323	280
HIGHEST ANNUAL MEAN			433
LOWEST ANNUAL MEAN			177
HIGHEST DAILY MEAN	11300	Jul 19	2310
LOWEST DAILY MEAN	58	Jul 13	35
ANNUAL SEVEN-DAY MINIMUM	68	Jul 7	38
INSTANTANEOUS PEAK FLOW			2900
INSTANTANEOUS PEAK STAGE			6.34
ANNUAL RUNOFF (CFSM)	3.10		2.04
ANNUAL RUNOFF (INCHES)	42.17		27.75
10 PERCENT EXCEEDS	957		677
50 PERCENT EXCEEDS	299		214
90 PERCENT EXCEEDS	107		50

a From rating curve extended above 4,300 ft³/s on basis of slope-area measurement at gage height 13.01 ft.

b From floodmark in gage well.



October 1, 1996 to September 30, 1997

MAHONING CREEK BASIN

03034500 LITTLE MAHONING CREEK AT McCORMICK, PA

LOCATION.--Lat 40°50'10", long 79°06'37", Indiana County, Hydrologic Unit 05010006, on left bank 200 ft upstream from highway bridge at McCormick, 1 mi west of Georgeville, 1.7 mi upstream from Ross Run, and 4 mi southeast of Smicksburg.

DRAINAGE AREA.--87.4 mi².

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

GAGE.--Water-stage recorder. Datum of gage is 1,164.88 ft above sea level (U.S. Army Corps of Engineers bench mark). Prior to May 10, 1940, nonrecording gage at site 200 ft upstream at same datum.

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

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than a base discharge of 2,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
May 25	2400	*1,830	*7.86				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	195	122	928	e170	e54	224	179	99	214	29	5.5	27
2	156	112	1130	e180	e52	367	150	92	331	36	3.9	23
3	137	102	552	e180	e150	344	136	99	279	26	3.8	21
4	114	92	409	e180	e300	332	126	168	200	20	5.5	20
5	100	86	319	e200	1170	408	113	121	160	16	11	18
6	89	83	285	e260	623	768	104	112	130	14	14	16
7	83	82	253	238	442	525	97	102	109	13	11	15
8	79	919	241	214	352	418	87	89	96	12	7.0	15
9	79	1160	226	e190	291	342	85	90	81	12	4.5	15
10	79	708	211	e160	258	417	79	92	69	14	3.4	16
11	75	435	386	e140	e230	349	75	87	60	12	3.0	24
12	64	298	1320	e125	e200	301	77	77	54	10	2.9	37
13	60	226	1010	e115	e170	266	118	72	92	9.8	198	30
14	57	184	664	e100	e150	431	94	66	160	8.7	112	21
15	53	153	452	e90	e140	475	81	61	86	8.2	45	18
16	51	135	347	e110	e125	348	75	57	61	58	41	15
17	55	125	e290	e105	e110	305	73	52	89	26	115	14
18	110	121	e250	e92	e130	279	72	49	93	15	263	15
19	939	123	e210	e88	e250	254	67	98	271	12	109	15
20	939	113	e170	e82	e500	233	62	200	119	9.4	84	39
21	462	103	e140	e78	562	217	59	133	86	9.3	146	67
22	362	95	e140	e86	686	211	57	107	68	8.7	91	35
23	269	88	e150	e230	454	192	58	92	55	17	82	24
24	220	82	e190	e190	348	176	74	81	44	20	65	21
25	178	82	238	e350	286	171	64	746	38	26	52	19
26	150	279	196	e270	258	661	55	1070	35	19	44	18
27	131	241	e170	e190	261	357	48	435	37	15	37	17
28	172	189	e180	e120	245	251	135	259	29	11	45	16
29	186	167	e200	e84	---	214	138	182	23	12	45	286
30	156	160	e260	e64	---	215	109	152	20	12	36	121
31	137	---	e200	e56	---	214	---	140	---	8.1	32	---
TOTAL	5937	6865	11717	4737	8797	10265	2747	5280	3189	519.2	1717.5	1038
MEAN	192	229	378	153	314	331	91.6	170	106	16.7	55.4	34.6
MAX	939	1160	1320	350	1170	768	179	1070	331	58	263	286
MIN	51	82	140	56	52	171	48	49	20	8.1	2.9	14
CFSM	2.19	2.62	4.32	1.75	3.59	3.79	1.05	1.95	1.22	.19	.63	.40
IN.	2.53	2.92	4.99	2.02	3.74	4.37	1.17	2.25	1.36	.22	.73	.44

e Estimated.

MAHONING CREEK BASIN

03034500 LITTLE MAHONING CREEK AT McCORMICK, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	67.4	132	199	205	240	311	237	170	97.7	76.0	56.4	49.4
MAX	251	378	436	569	715	756	525	358	458	445	294	296
(WY)	1955	1986	1991	1952	1975	1963	1948	1956	1972	1977	1958	1996
MIN	3.39	10.7	21.8	26.2	42.7	59.0	48.7	20.5	9.10	4.71	3.85	2.33
(WY)	1964	1940	1961	1940	1993	1969	1946	1941	1949	1966	1957	1952

SUMMARY STATISTICS

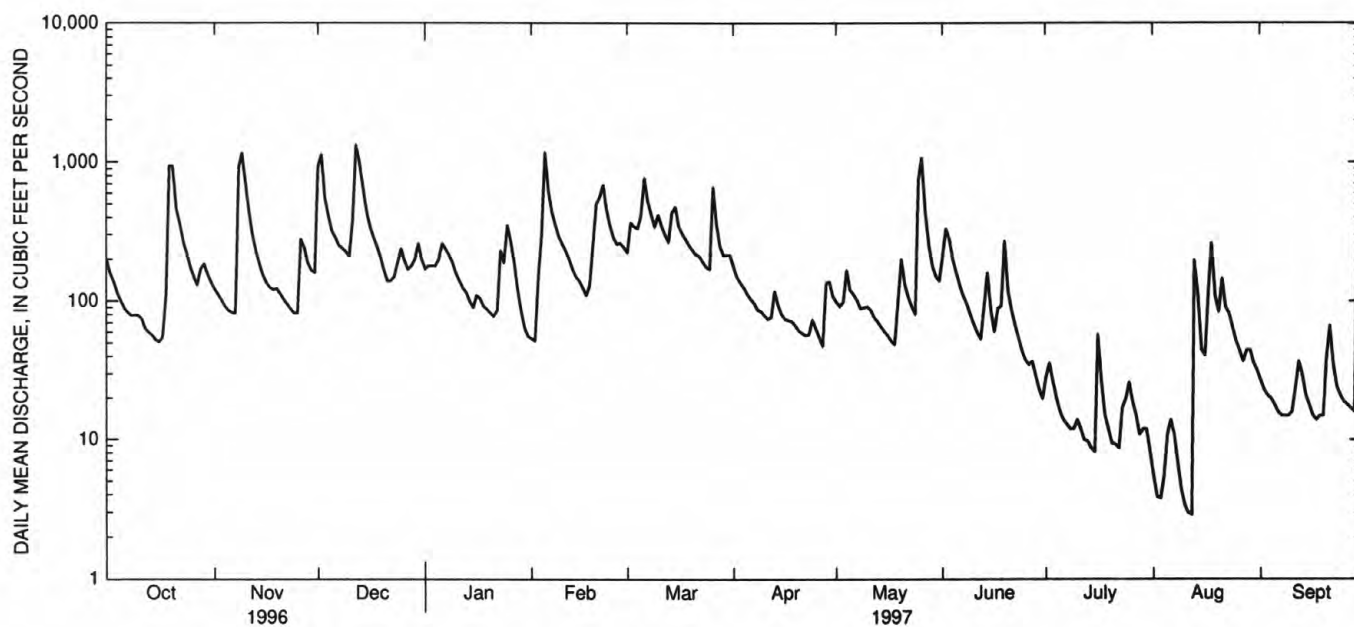
FOR 1996 CALENDAR YEAR

FOR 1997 WATER YEAR

WATER YEARS 1940 - 1997

ANNUAL TOTAL	87839	62808.7	153
ANNUAL MEAN	240	172	240
HIGHEST ANNUAL MEAN			98.6
LOWEST ANNUAL MEAN			1956
HIGHEST DAILY MEAN	e4400	Jan 19	1320
LOWEST DAILY MEAN	19	Aug 20	2.9
ANNUAL SEVEN-DAY MINIMUM	26	Jun 3	6.5
INSTANTANEOUS PEAK FLOW			1830
INSTANTANEOUS PEAK STAGE			7.86
INSTANTANEOUS LOW FLOW			2.8
ANNUAL RUNOFF (CFSM)	2.75	1.97	1.75
ANNUAL RUNOFF (INCHES)	37.39	26.73	23.79
10 PERCENT EXCEEDS	487	359	363
50 PERCENT EXCEEDS	141	109	74
90 PERCENT EXCEEDS	44	15	9.4

e Estimated.



OHIO RIVER MAIN STEM

03036500 ALLEGHENY RIVER AT KITTANNING, PA

LOCATION.--Lat 40°49'13", long 79°31'54", Armstrong County, Hydrologic Unit 05010006, on right bank 600 ft upstream from dam at lock 7 at Kittanning, 5.7 mi upstream from Crooked Creek, 9.7 mi downstream from Mahoning Creek, at mile 45.8.

DRAINAGE AREA.--8,973 mi².

PERIOD OF RECORD.--August 1904 to September 1928, October 1934 to current year. Monthly discharge only for some periods, published in WSP 1305.

REVISED RECORDS.--WSP 873: Drainage area. WSP 1305: 1906 (M), 1914, 1925. WSP 1435: 1936-37, 1939.

GAGE.--Water-stage recorder and concrete dam control. Datum of gage is 773.40 ft above sea level (U.S. Army Corps of Engineers bench mark). Prior to Sept. 30, 1928, nonrecording gage at site 4,000 ft downstream at different datum. Oct. 1, 1934 to Apr. 19, 1939, nonrecording gage, Apr. 20, 1939 to Sept. 27, 1990, water-stage recorder at present site at different datum.

REMARKS.--No estimated daily discharges. Records good. Flow regulated since 1924 by Piney Reservoir, since 1941 by Mahoning Creek Lake, and Tionesta Lake, since 1949 by Chautauqua Lake, since 1965 by Allegheny Reservoir, since 1971 by Union City Reservoir, and since 1974 by Woodcock Creek Lake. Several measurements of water temperature were made during the year. U.S. Army Corps of Engineers satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	33100	26500	35900	21000	20400	53900	26800	17600	12700	9380	3800	3800
2	29200	24700	53900	17900	18700	50100	25200	14600	16300	10700	3370	3800
3	26700	23100	47500	18000	17500	53400	23000	14800	26800	13000	3130	3080
4	23400	20400	43400	17900	18200	47400	21500	15400	31000	8940	3000	2990
5	19900	17300	42100	18100	32600	43800	19800	17100	28300	7090	3670	3380
6	16500	17700	39200	22400	40300	62700	17700	16100	26200	6280	3200	3290
7	14600	20000	35600	24800	36400	60400	14800	18900	25800	6180	3170	4170
8	11000	27600	31600	22900	32800	52400	13600	18000	22500	4980	3720	3630
9	9990	62000	27900	20400	27700	50100	13000	19200	20900	5380	2880	2880
10	9040	59300	28200	18700	23100	50500	12400	18500	20000	4900	3160	3570
11	8740	51800	24300	17000	20500	51000	9740	18100	18200	6520	2910	3910
12	9600	50400	36800	12900	17000	47700	9110	17900	14700	9020	2870	5800
13	9190	50100	38100	8790	14500	42000	18700	17600	16000	10400	4200	4160
14	8850	47400	38700	9530	13700	43800	23000	16400	13300	10100	4740	4330
15	8360	46800	35600	7550	12800	58000	20700	15900	11200	7650	4450	4380
16	7500	41800	32000	9340	11400	50000	18800	14400	9240	5700	5000	4040
17	6210	35100	30100	9040	10400	43000	16800	14200	10400	4910	7550	3840
18	5890	31400	28500	6830	10600	39600	16700	13700	9540	5360	9620	2900
19	15800	30600	27100	5810	12600	35500	15200	16600	13200	4440	7420	3980
20	43300	30200	24700	6360	22400	32900	13200	22800	13300	3530	6580	3650
21	41100	28400	21400	7440	32000	29400	12600	29600	14500	3050	5840	4590
22	39300	25700	20500	8660	48900	28700	11500	29400	13100	4340	5170	3580
23	42500	23700	16700	12500	55100	28300	12000	27900	11500	3660	4670	4150
24	41700	20400	18300	18500	46900	25600	11800	26000	10100	3490	4130	4280
25	40200	18100	25600	22400	44200	24400	13200	26500	9350	3580	4310	3130
26	38700	23600	27500	26600	39900	26800	14200	28400	10200	3650	5000	3120
27	35400	35100	26400	26500	42300	31900	12500	21600	15900	3040	4330	3470
28	32100	31900	25500	25500	66000	29300	13500	20900	15100	3310	3700	3080
29	29200	32800	24000	24900	---	26500	18600	18100	12900	3920	3430	4360
30	27100	28800	25000	22100	---	25000	17300	15900	10800	3530	3270	8790
31	28400	---	23500	21500	---	26200	---	13800	---	3210	3270	---
TOTAL	712570	982700	955600	511850	788900	1270300	486950	595900	483030	183240	135560	118130
MEAN	22990	32760	30830	16510	28180	40980	16230	19220	16100	5911	4373	3938
MAX	43300	62000	53900	26600	66000	62700	26800	29600	31000	13000	9620	8790
MIN	5890	17300	16700	5810	10400	24400	9110	13700	9240	3040	2870	2880
CFSM	2.56	3.65	3.44	1.84	3.14	4.57	1.81	2.14	1.79	.66	.49	.44
IN.	2.95	4.07	3.96	2.12	3.27	5.27	2.02	2.47	2.00	.76	.56	.49

OHIO RIVER MAIN STEM

03036500 ALLEGHENY RIVER AT KITTANNING, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1904 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	8535	14300	19000	20970	21000	32910	27640	18470	11500	7068	5119	5643
MAX	31750	37830	55850	62840	45020	74110	66140	43650	40230	28200	19250	23500
(WY)	1991	1986	1928	1937	1990	1936	1940	1919	1989	1972	1977	1926
MIN	848	1155	1636	2752	4688	10550	6585	4860	2893	1511	1274	930
(WY)	1924	1909	1961	1961	1963	1915	1946	1941	1936	1966	1910	1909

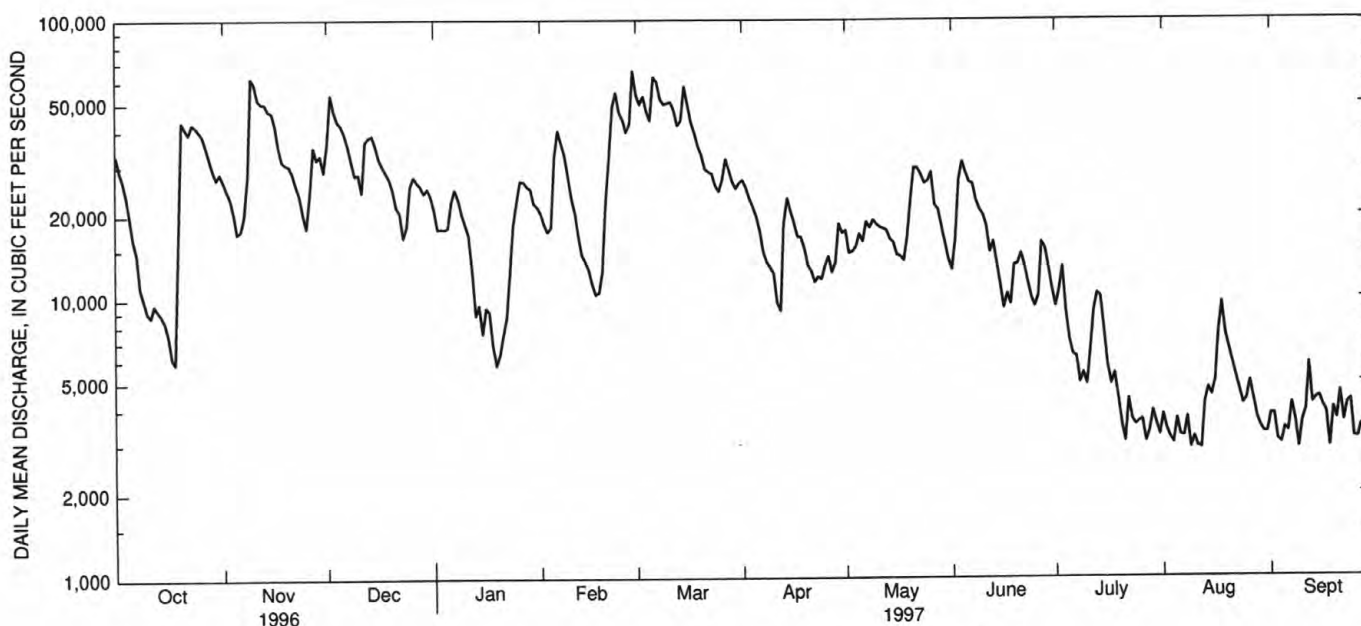
SUMMARY STATISTICS

FOR 1996 CALENDAR YEAR

FOR 1997 WATER YEAR

WATER YEARS 1904 - 1997

ANNUAL TOTAL	8610760	7224730	
ANNUAL MEAN	23530	19790	15990
HIGHEST ANNUAL MEAN			22400
LOWEST ANNUAL MEAN			10450
HIGHEST DAILY MEAN	138000	Jan 20	66000
LOWEST DAILY MEAN	3100	Aug 31 ^a	2870
ANNUAL SEVEN-DAY MINIMUM	3300	Aug 29	3130
INSTANTANEOUS PEAK FLOW			70400
INSTANTANEOUS PEAK STAGE			16.09
ANNUAL RUNOFF (CFSM)	2.62		2.21
ANNUAL RUNOFF (INCHES)	35.70		29.95
10 PERCENT EXCEEDS	46800		41900
50 PERCENT EXCEEDS	21200		17500
90 PERCENT EXCEEDS	5580		3670

^a Also Sept. 3.^b From Floodmark, site and datum then in use.^c Also Sept. 16, 17, 1913.

October 1, 1996 to September 30, 1997

CROOKED CREEK BASIN

03037350 SOUTH BRANCH PLUM CREEK AT FIVE POINTS, PA
(National water-quality assessment station)

LOCATION.--Lat 40°43'08", long 79°14'12", Indiana County, Hydrologic Unit 05010006, on left bank, about 0.6 mi downstream of Mudlick Run and about 2 mi upstream of the Indiana-Armstrong County boundary.

DRAINAGE AREA.--33.3 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1996 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 1,060 ft above sea level.

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

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	59	31	428	55	e28	33	42	27	63	13	.69	2.9
2	43	28	451	59	e27	88	35	23	131	14	.61	2.4
3	35	25	177	53	e28	88	32	34	113	7.6	.54	2.1
4	28	22	118	48	e60	111	30	43	82	5.6	.62	1.9
5	23	21	86	63	e450	152	26	33	59	4.3	3.6	1.7
6	20	20	77	62	212	307	25	33	44	3.7	2.7	1.6
7	18	21	68	53	124	180	21	27	34	3.1	1.7	1.6
8	16	389	64	46	89	121	19	24	27	2.9	1.0	1.5
9	16	464	58	43	68	87	18	23	21	2.7	.79	1.5
10	16	284	52	41	54	99	16	22	17	2.7	.67	1.7
11	14	156	117	35	46	80	15	19	15	2.3	.59	3.5
12	12	101	474	28	40	64	20	17	13	1.8	.61	7.1
13	12	72	351	23	e33	53	27	16	60	1.6	69	2.8
14	10	57	218	22	e30	147	20	14	38	1.5	22	2.2
15	9.4	44	133	22	e28	155	18	13	22	1.4	8.7	2.0
16	8.8	38	95	37	e26	106	17	12	17	3.0	10	1.7
17	8.6	33	74	29	e24	81	17	11	33	2.0	53	1.7
18	19	33	57	e24	e35	65	17	13	80	1.4	69	1.7
19	222	31	47	e22	e70	52	15	32	109	1.3	30	1.6
20	280	26	39	e21	159	44	14	24	56	1.3	28	11
21	155	23	43	e20	120	38	13	18	37	1.1	31	9.8
22	124	21	28	e22	98	34	13	16	26	.97	20	4.2
23	93	19	29	e30	70	27	13	14	19	1.3	16	3.1
24	71	18	50	e62	56	23	15	13	15	1.6	11	2.8
25	54	22	45	e135	45	22	12	546	12	1.5	9.6	2.3
26	43	93	38	e94	41	220	10	662	12	1.3	7.7	2.1
27	36	86	36	e70	42	130	9.9	179	10	1.1	6.2	1.9
28	48	70	50	e48	33	89	40	94	7.8	1.8	6.7	2.3
29	44	60	75	e35	---	72	34	62	6.5	2.4	5.2	56
30	39	64	80	e28	---	58	29	48	5.4	1.3	4.2	20
31	34	---	67	e23	---	54	---	53	---	.86	3.5	---
TOTAL	1610.8	2372	3725	1353	2136	2880	632.9	2165	1184.7	92.43	424.92	158.7
MEAN	52.0	79.1	120	43.6	76.3	92.9	21.1	69.8	39.5	2.98	13.7	5.29
MAX	280	464	474	135	450	307	42	662	131	14	69	56
MIN	8.6	18	28	20	24	22	9.9	11	5.4	.86	.54	1.5
CFSM	1.56	2.37	3.61	1.31	2.29	2.79	.63	2.10	1.19	.09	.41	.16
IN.	1.80	2.65	4.16	1.51	2.39	3.22	.71	2.42	1.32	.10	.47	.18

e Estimated.

CROOKED CREEK BASIN

97

03037350 SOUTH BRANCH PLUM CREEK AT FIVE POINTS, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1996 - 1997, BY WATER YEAR (WY)

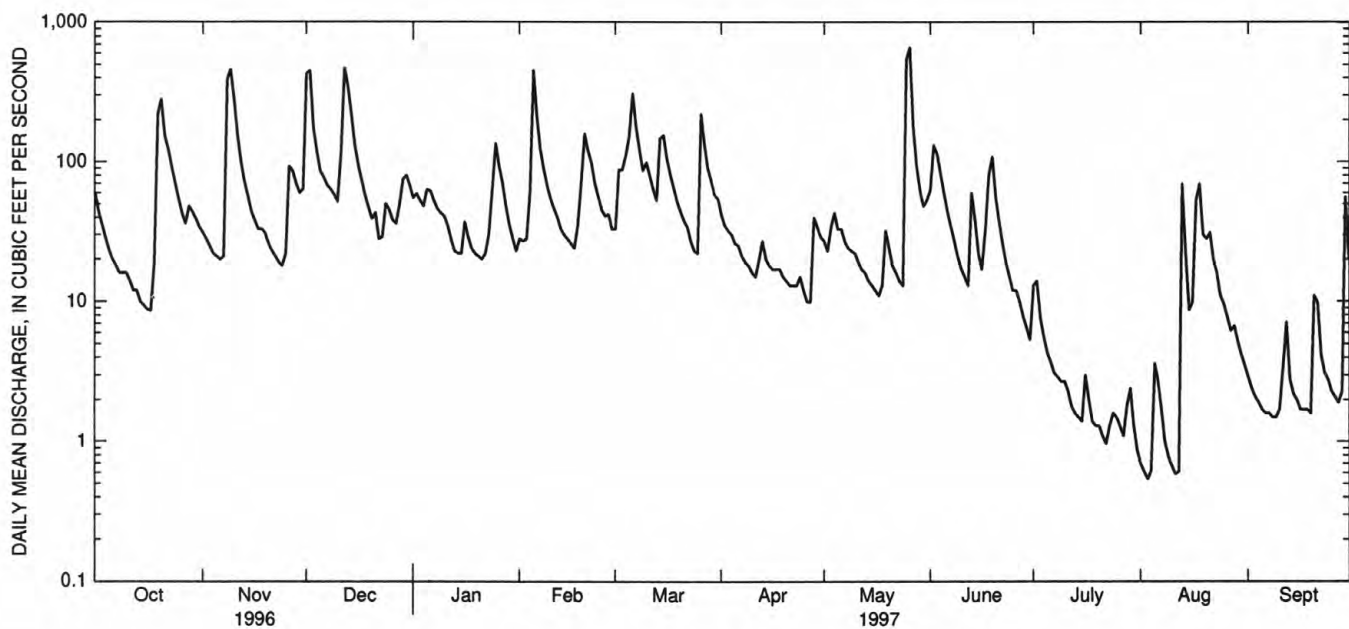
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	52.0	79.1	120	43.6	76.3	92.9	21.1	69.8	42.8	20.6	9.34	30.6
MAX	52.0	79.1	120	43.6	76.3	92.9	21.1	69.8	46.2	38.3	13.7	55.9
(WY)	1997	1997	1997	1997	1997	1997	1997	1997	1996	1996	1997	1996
MIN	52.0	79.1	120	43.6	76.3	92.9	21.1	69.8	39.5	2.98	4.98	5.29
(WY)	1997	1997	1997	1997	1997	1997	1997	1997	1997	1997	1996	1997

SUMMARY STATISTICS

FOR 1997 WATER YEAR

WATER YEARS 1996 - 1997

ANNUAL TOTAL	18735.45		
ANNUAL MEAN	51.3		51.3
HIGHEST ANNUAL MEAN			51.3 1997
LOWEST ANNUAL MEAN			51.3 1997
HIGHEST DAILY MEAN	662	May 26	662 May 26 1997
LOWEST DAILY MEAN	.54	Aug 3	.54 Aug 3 1997
ANNUAL SEVEN-DAY MINIMUM	1.0	Jul 29	1.0 Jul 29 1997
INSTANTANEOUS PEAK FLOW	1260	May 25	1260 May 25 1997
INSTANTANEOUS PEAK STAGE	5.77	May 25	5.77 May 25 1997
INSTANTANEOUS LOW FLOW	.53	Aug 11	.53 Aug 11 1997
ANNUAL RUNOFF (CFSM)	1.54		1.54
ANNUAL RUNOFF (INCHES)	20.93		20.94
10 PERCENT EXCEEDS	112		103
50 PERCENT EXCEEDS	27		23
90 PERCENT EXCEEDS	1.8		1.9



October 1, 1996 to September 30, 1997

CROOKED CREEK BASIN

03037350 SOUTH BRANCH PLUM CREEK AT FIVE POINTS, PA--Continued
(National Water-Quality Assessment station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--April 1996 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: March 1997 to September 1997.

WATER TEMPERATURE: October 1996 to current year.

INSTRUMENTATION.--Daily record measured and collected at hourly intervals with in-situ probes and electronic data loggers.

REMARKS.--All water-quality samples were collected and analyzed by the U.S. Geological Survey. Interruptions in the daily record were due to malfunctions of the equipment. Additional sites in the (NAWQA) fixed-station network are shown in figure 6 on page 28. An explanation of selected abbreviations used in the water-quality tables are given on pages 29-31.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum, 29.5°C, July 18, minimum 0.0°C, many days during winter periods.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE	TIME	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 (MG/L) (00300)	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)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)
OCT											
23...	1000	94	128	7.1	10.5	721	10.6	43	11	3.8	3.5
NOV											
19...	1000	31	146	7.2	6.0	728	11.6	50	13	4.3	5.0
DEC											
12...	1000	525	104	7.2	6.5	729	11.6	36	9.3	3.1	2.7
JAN											
17...	1000	26	171	7.1	0.0	732	14.0	48	12	4.4	7.8
FEB											
20...	0910	160	119	6.8	3.0	738	12.1	39	10	3.4	4.1
MAR											
14...	0900	134	120	7.0	3.5	722	12.4	39	10	3.4	4.6
APR											
03...	1000	32	130	7.3	6.0	734	11.7	44	11	3.9	4.7
MAY											
05...	0930	34	127	7.5	8.5	732	11.3	46	12	3.9	4.1
19...	1015	40	141	7.4	15.5	725	8.7	51	13	4.3	5.4
26...	0945	700	96	7.0	11.0	730	9.2	34	8.9	2.9	2.2
JUN											
04...	0905	86	116	7.3	11.0	731	10.0	43	11	3.8	3.4
JUL											
08...	1140	2.9	238	7.7	22.0	735	8.2	79	21	6.6	12
AUG											
05...	0930	4.6	303	7.7	21.0	729	7.1	100	27	8.7	15
SEP											
04...	0910	1.9	255	7.6	15.0	734	7.8	78	20	6.6	11

CROOKED CREEK BASIN

03037350 SOUTH BRANCH PLUM CREEK AT FIVE POINTS, PA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LINITY 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)	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)	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)
OCT 23...	1.7	22	20	6.0	<0.10	7.2	96	0.010	1.30	0.030	<0.20
NOV 19...	1.3	24	24	7.0	<0.10	6.7	77	<0.010	1.10	0.040	<0.20
DEC 12...	1.8	22	17	4.9	<0.10	5.5	62	0.010	1.30	0.060	0.60
JAN 17...	1.4	25	24	14	<0.10	5.7	89	<0.010	1.10	0.060	<0.20
FEB 20...	1.4	26	19	7.9	<0.10	5.3	69	0.010	1.40	0.040	0.40
MAR 14...	1.2	27	20	7.8	<0.10	5.0	66	<0.010	0.990	0.030	0.60
APR 03...	1.0	34	23	7.3	<0.10	4.8	77	<0.010	0.890	0.020	<0.20
MAY 05...	1.2	23	21	6.4	<0.10	4.9	73	<0.010	0.367	<0.015	<0.20
19...	1.4	28	20	8.2	<0.10	3.4	91	0.020	0.296	0.021	0.29
26...	1.4	11	18	4.1	<0.10	6.1	69	<0.010	1.41	0.024	0.54
JUN 04...	1.1	18	20	4.9	<0.10	6.3	74	<0.010	1.03	<0.015	<0.20
JUL 08...	2.3	44	35	17	<0.10	4.7	145	<0.010	0.472	0.019	0.21
AUG 05...	2.8	47	64	19	0.12	3.7	187	<0.010	<0.050	0.023	0.47
SEP 04...	2.7	51	33	16	0.11	2.8	139	<0.010	0.424	0.028	<0.20
DATE	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)	IRON, DIS- SOLVED (μG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (MG/L AS MN) (01056)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681)	CARBON, ORGANIC SUS- PENDED TOTAL (MG/L AS C) (00689)	SEDI- MENT, SUS- PENDED (MG/L) (80154)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)	
OCT 23...	<0.20	0.020	0.020	<0.010	23	69	1.7	0.40	9	88	
NOV 19...	<0.20	0.010	<0.010	<0.010	92	160	1.2	0.20	4	88	
DEC 12...	<0.20	0.120	0.020	<0.010	33	58	2.3	2.4	98	96	
JAN 17...	0.20	0.020	<0.010	<0.010	140	170	1.1	0.30	6	69	
FEB 20...	<0.20	0.090	<0.010	<0.010	18	50	1.9	1.2	86	94	
MAR 14...	<0.20	0.100	0.030	0.010	32	82	2.2	1.4	105	94	
APR 03...	<0.20	0.010	<0.010	<0.010	93	120	1.0	0.20	7	97	
MAY 05...	<0.20	0.025	<0.010	<0.010	62	91	1.4	0.30	6	76	
19...	0.23	0.023	<0.010	<0.010	72	108	3.1	0.80	28	96	
26...	0.20	0.093	<0.010	<0.010	31	186	2.6	1.3	115	85	
JUN 04...	<0.20	<0.010	<0.010	<0.010	46	79	1.3	0.10	20	95	
JUL 08...	<0.20	<0.010	<0.010	0.012	48	149	1.9	0.40	8	71	
AUG 05...	<0.20	0.011	<0.010	<0.010	16	220	2.6	1.2	11	36	
SEP 04...	0.29	<0.010	0.017	<0.010	23	123	2.2	0.30	6	83	

CROOKED CREEK BASIN

03037350 SOUTH BRANCH PLUM CREEK AT FIVE POINTS, PA--Continued

REMARKS.--The following data are for analytes from the National Water Quality laboratory (NWQL) schedule 2010--pesticides in filtered water. Samples are filtered through a glass-fiber membrane filter with openings that are 0.7 microns in size to remove sediment and microorganisms. The filtered water is field extracted on C-18 Solid Phase Extraction Cartridges and analyzed by a gas chromatography/mass spectrometric detector.

The method detection limit (MDL) provides an index to indicate where measurement uncertainty is increased. When an analyte is detected and all criteria for a positive result are met, the concentration is reported. If the concentration is less than the MDL, an 'E' code will be reported with the value. If the analyte is qualitatively identified as present, but the quantitative determination is substantially more uncertain, the NWQL will identify the result with an 'E' code even though the measured value is greater than the MDL. A value reported with an 'E' code should be used with caution. When no analyte is detected in a sample, the default reporting value is the MDL preceded by a less-than sign (<).

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON- DUCT- ANCE	PH WATER WHOLE FIELD (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	BARO- METRIC PRES- SURE (MM OF HG)	OXYGEN, DIS- SOLVED MG/L	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3	2,6-DI- ETHYL ANILINE WAT FLT 0.7 μ GF, REC	ACETO- CHLOR, WATER, FLTRD REC	ALA- CHLOR, WATER, DISS, REC,	ATRA- ZINE, WATER, DISS, REC	
		(00061)	(μS/CM) (00095)	(00400)	(00010)	(00025)	(00300)	(39086)	(82660)	(49260)	(46342)	(39632)	
JAN 17...	1000	26	171	7.1	0.0	732	14.0	25	<0.003	<0.002	<0.002	0.010	
FEB 20...	0910	160	119	6.8	3.0	738	12.1	26	<0.003	<0.002	<0.002	0.018	
MAR 14...	0900	134	120	7.0	3.5	722	12.4	27	<0.003	<0.002	<0.002	0.012	
25...	0845	23	141	7.3	4.5	733	12.1	35	<0.003	<0.002	<0.002	0.010	
APR 03...	1000	32	130	7.3	6.0	734	11.7	34	<0.003	<0.002	<0.002	0.008	
15...	0900	18	148	7.3	5.0	737	11.3	28	<0.003	<0.002	<0.002	0.006	
MAY 05...	0930	34	127	7.5	8.5	732	11.3	23	<0.003	<0.002	<0.002	0.017	
19...	1015	40	141	7.4	15.5	725	8.7	28	<0.003	0.011	0.008	0.075	
26...	0945	700	96	7.0	11.0	730	9.2	11	<0.003	0.034	E0.003	1.63	
JUN 04...	0905	86	116	7.3	11.0	731	10.0	18	<0.003	<0.002	<0.002	0.269	
16...	0920	26	159	7.5	17.0	727	9.0	31	<0.003	<0.002	<0.002	0.293	
JUL 08...	1140	2.9	238	7.7	22.0	735	8.2	44	<0.003	<0.002	<0.002	0.128	
AUG 05...	0930	4.6	303	7.7	21.0	729	7.1	47	<0.003	<0.002	<0.002	0.112	
SEP 04...	0910	1.9	255	7.6	15.0	734	7.8	51	<0.003	<0.002	<0.002	0.047	
DATE		METHYL AZIN- PHOS WAT FLT 0.7 μ GF, REC (μG/L) (82686)	BEN- FLUR- ALIN WAT FLD 0.7 μ GF, REC (μG/L) (82673)	BUTYL- ATE, WATER, DISS, GF, 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)	DISUL- FOTON WATER FLTRD 0.7 μ GF, REC (μG/L) (82677)
JAN 17...	<0.001	<0.002	<0.002	<0.003	<0.003	<0.004	<0.004	<0.004	<0.002	E0.014	<0.002	<0.001	<0.017
FEB 20...	<0.001	<0.002	<0.002	<0.003	<0.003	<0.004	<0.004	<0.004	<0.002	E0.012	<0.002	<0.001	<0.017
MAR 14...	<0.001	<0.002	<0.002	<0.003	<0.003	<0.004	<0.004	<0.004	<0.002	E0.006	<0.002	<0.001	<0.017
25...	<0.001	<0.002	<0.002	<0.003	<0.003	<0.004	<0.004	<0.004	<0.002	E0.007	<0.002	<0.001	<0.017
APR 03...	<0.001	<0.002	<0.002	<0.003	<0.003	<0.004	<0.004	<0.004	<0.002	E0.006	<0.002	<0.001	<0.017
15...	<0.001	<0.002	<0.002	<0.003	<0.003	<0.004	<0.004	<0.004	E0.002	E0.005	<0.002	<0.001	<0.017
MAY 05...	<0.001	<0.002	<0.002	<0.003	<0.003	<0.004	<0.004	<0.004	<0.002	E0.007	<0.002	<0.001	<0.017
19...	<0.001	<0.002	<0.002	E0.004	<0.003	E0.003	0.020	E0.001	E0.016	0.007	<0.001	<0.001	<0.017
26...	E0.033	<0.002	<0.002	E0.080	<0.003	0.010	0.058	<0.002	E0.033	<0.002	<0.001	<0.001	<0.017
JUN 04...	<0.001	<0.002	<0.002	<0.003	<0.003	E0.004	0.006	<0.002	E0.015	<0.002	<0.001	<0.001	<0.017
16...	<0.001	<0.002	<0.002	<0.003	<0.003	<0.004	0.007	<0.002	E0.028	<0.002	<0.001	<0.001	<0.017
JUL 08...	<0.001	<0.002	<0.002	<0.003	<0.003	<0.004	0.010	<0.002	E0.009	0.094	<0.001	<0.001	<0.017
AUG 05...	<0.001	<0.002	<0.002	<0.003	<0.003	<0.004	0.016	<0.002	E0.008	<0.002	<0.001	<0.001	<0.017
SEP 04...	<0.001	<0.002	<0.002	<0.003	<0.003	<0.004	0.044	<0.002	E0.013	<0.002	<0.001	<0.001	<0.017

CROOKED CREEK BASIN

03037350 SOUTH BRANCH PLUM CREEK AT FIVE POINTS, PA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE	EPTC 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)	METO- LACHLOR WATER DISSOLV (µG/L) (39415)	METRI- BUZIN WATER DISSOLV (µG/L) (82630)	MOL- INATE WATER FLTRD 0.7 µ GF, REC (µG/L) (82671)	NAPROP- AMIDE WATER FLTRD 0.7 µ GF, REC (µG/L) (82684)	PARA- THION, DIS- SOLVED (µG/L) (39542)
JAN 17...	<0.002	<0.004	<0.003	<0.003	<0.004	<0.002	<0.005	0.005	<0.004	<0.004	<0.003	<0.004
FEB 20...	<0.002	<0.004	<0.003	<0.003	<0.004	<0.070	<0.005	0.012	<0.004	<0.004	<0.003	<0.004
MAR 14...	<0.002	<0.004	<0.003	<0.003	<0.004	<0.002	<0.005	0.007	<0.004	<0.004	<0.003	<0.004
MAR 25...	<0.002	<0.004	<0.003	<0.003	<0.004	<0.002	<0.005	0.005	<0.004	<0.004	<0.003	<0.004
APR 03...	<0.002	<0.004	<0.003	<0.003	<0.004	<0.002	<0.005	E0.004	<0.004	<0.004	<0.003	<0.004
APR 15...	<0.002	<0.004	<0.003	<0.003	<0.004	<0.002	<0.005	0.004	<0.004	<0.004	<0.003	<0.004
MAY 05...	<0.002	<0.004	<0.003	<0.003	<0.004	<0.002	<0.005	0.005	<0.004	<0.004	<0.003	<0.004
MAY 19...	<0.002	<0.004	<0.003	<0.003	<0.004	<0.002	<0.005	0.030	<0.004	<0.004	<0.003	<0.004
MAY 26...	<0.002	<0.004	<0.003	<0.003	<0.004	<0.002	<0.005	0.851	0.007	<0.004	<0.003	<0.004
JUN 04...	<0.002	<0.004	<0.003	<0.003	<0.004	<0.002	<0.005	0.114	<0.004	<0.004	<0.003	<0.004
JUN 16...	<0.002	<0.004	<0.003	<0.003	<0.004	<0.002	<0.005	0.165	<0.004	<0.004	<0.003	<0.004
JUL 08...	<0.002	<0.004	<0.003	<0.003	<0.004	<0.002	<0.005	0.033	<0.004	<0.004	<0.003	<0.004
AUG 05...	<0.002	<0.004	<0.003	<0.003	<0.004	<0.002	<0.005	0.011	<0.020	<0.004	<0.003	<0.004
SEP 04...	<0.002	<0.004	<0.003	<0.003	<0.004	<0.002	<0.005	0.011	<0.004	<0.004	<0.003	<0.004
DATE	METHYL PARA- THION WAT FLT 0.7 µ GF, REC (µG/L) (82667)	PEB- ULATE WATER FILTRD 0.7 µ GF, REC (µG/L) (82669)	PENDI- METH- ALIN WAT FLT 0.7 µ GF, REC (µG/L) (82683)	PHORATE WATER FLTRD 0.7 µ GF, REC (µG/L) (82664)	PRO- METON, WATER, DISS, REC (µG/L) (04037)	PROP- CHLOR, WATER, DISS, REC (µG/L) (04024)	PRO- PANIL WATER FLTRD 0.7 µ GF, REC (µG/L) (82679)	PRO- PARGITE WATER FLTRD 0.7 µ GF, REC (µG/L) (82685)	PRON- AMIDE WATER FLTRD 0.7 µ GF, REC (µG/L) (82676)	SI- MAZINE, WATER, DISS, REC (µG/L) (04035)	TEBU- THIURON WATER FLTRD 0.7 µ GF, REC (µG/L) (82670)	TER- BACIL WATER FLTRD 0.7 µ GF, REC (µG/L) (82665)
JAN 17...	<0.006	<0.004	<0.004	<0.002	<0.018	<0.007	<0.004	<0.013	<0.003	<0.005	<0.010	<0.007
FEB 20...	<0.006	<0.004	<0.004	<0.002	<0.018	<0.007	<0.004	<0.013	<0.003	<0.005	<0.010	<0.007
MAR 14...	<0.006	<0.004	<0.004	<0.002	<0.018	<0.007	<0.004	<0.013	<0.003	<0.005	<0.010	<0.007
MAR 25...	<0.006	<0.004	<0.004	<0.002	<0.018	<0.007	<0.004	<0.013	<0.003	<0.005	<0.010	<0.007
APR 03...	<0.006	<0.004	<0.004	<0.002	<0.018	<0.007	<0.004	<0.013	<0.003	<0.005	<0.010	<0.007
APR 15...	<0.006	<0.004	<0.004	<0.002	<0.018	<0.007	<0.004	<0.013	<0.003	E0.003	<0.010	<0.007
MAY 05...	<0.006	<0.004	<0.004	<0.002	<0.018	0.011	<0.004	<0.013	<0.003	<0.005	<0.010	<0.007
MAY 19...	<0.006	<0.004	<0.004	<0.002	<0.018	E0.004	<0.004	<0.013	<0.003	0.007	<0.010	<0.007
MAY 26...	<0.006	<0.004	0.017	<0.002	E0.004	0.064	<0.004	<0.013	<0.003	0.088	0.018	<0.007
JUN 04...	<0.006	<0.004	<0.004	<0.002	E0.004	<0.007	<0.004	<0.013	<0.003	0.011	0.013	<0.007
JUN 16...	<0.006	<0.004	<0.004	<0.002	E0.004	<0.007	<0.004	<0.013	<0.003	0.015	0.021	<0.007
JUL 08...	<0.006	<0.004	<0.004	<0.002	<0.018	<0.007	<0.004	<0.013	<0.003	0.020	<0.010	<0.007
AUG 05...	<0.006	<0.004	<0.004	<0.002	<0.018	<0.007	<0.004	<0.013	<0.003	0.008	<0.010	<0.007
SEP 04...	<0.006	<0.004	<0.004	<0.002	<0.018	<0.007	<0.004	<0.013	<0.003	0.007	E0.007	<0.007

CROOKED CREEK BASIN

03037350 SOUTH BRANCH PLUM CREEK AT FIVE POINTS, PA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE	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)	ALPHA BHC DIS- SOLVED (μ G/L) (34253)	PER- METHRIN CIS WAT FLT 0.7 μ GF, REC (μ G/L) (82687)	P,P' DDE DISSOLV (μ G/L) (34653)	DIAZ- INON D10 SRG WAT FLT 0.7 μ GF, REC PERCENT (91063)	TERBUTH YLAZINE SURROGT WAT FLT 0.7 μ GF, REC PERCENT (91064)	HCH ALPHA D6 SRG WAT FLT 0.7 μ GF, REC PERCENT (91065)	SAMPLE VOLUME SCHED- ULE 2010 (ML) (99857)
JAN 1997											
17...	<0.013	<0.002	<0.001	<0.002	<0.002	<0.005	<0.006	106	101	86.4	--
FEB											
20...	<0.013	<0.002	<0.001	<0.002	<0.002	<0.005	<0.006	95.9	103	93.2	943
MAR											
14...	<0.013	<0.002	<0.001	<0.002	<0.002	<0.005	<0.006	102	101	106	970
25...	<0.013	<0.002	<0.001	<0.002	<0.002	<0.005	<0.006	91.4	96.9	92.7	943
APR											
03...	<0.013	<0.002	<0.001	<0.002	<0.002	<0.005	<0.006	92.0	98.5	99.3	934
15...	<0.013	<0.002	<0.001	<0.002	<0.002	<0.005	<0.006	92.8	89.8	72.3	934
MAY											
05...	<0.013	<0.002	<0.001	<0.002	<0.002	<0.005	<0.006	102	106	91.1	917
19...	<0.013	<0.002	<0.001	<0.002	<0.002	<0.005	<0.006	101	114	90.3	884
26...	<0.013	<0.002	<0.001	<0.002	<0.002	<0.005	<0.006	93.2	99.0	79.7	970
JUN											
04...	<0.013	<0.002	<0.001	<0.002	<0.002	<0.005	<0.006	104	107	82.0	961
16...	<0.013	<0.002	<0.001	<0.002	<0.002	<0.005	<0.006	97.2	114	110	943
JUL											
08...	<0.013	<0.002	<0.001	<0.002	<0.002	<0.005	<0.006	97.4	111	110	990
AUG											
05...	<0.013	<0.002	<0.001	<0.002	<0.002	<0.005	<0.006	91.9	102	101	952
SEP											
04...	<0.013	<0.002	<0.001	<0.002	<0.002	<0.005	<0.006	91.7	107	110	934

CROOKED CREEK BASIN

03037350 SOUTH BRANCH PLUM CREEK AT FIVE POINTS, PA--Continued

REMARKS.--The following data are for analytes from the National Water Quality laboratory (NWQL) schedule 2051--pesticides in filtered water. Samples are filtered through a glass-fiber membrane filter with openings that are 0.7 microns in size to remove sediment and microorganisms. The filtered water is field extracted on Caropak B solid phase extraction cartridge and analyzed by high performance liquid chromatography.

The method detection limit (MDL) provides an index to indicate where measurement uncertainty is increased. When an analyte is detected and all criteria for a positive result are met, the concentration is reported. If the concentration is less than the MDL, an 'E' code will be reported with the value. If the analyte is qualitatively identified as present, but the quantitative determination is substantially more uncertain, the NWQL will identify the result with an 'E' code even though the measured value is greater than the MDL. A value reported with an 'E' code should be used with caution. When no analyte is detected in a sample, the default reporting value is the MDL preceded by a less-than sign (<).

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE	TIME	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)	OXYGEN, DIS- SOLVED (MG/L) (00300)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	2,4,5-T DIS- SOLVED (μ G/L) (39742)	2,4-D, DIS- SOLVED (μ G/L) (39732)
JAN										
17...	1000	26	171	7.1	0.0	732	14.0	25	<0.035	<0.035
FEB										
20...	0910	160	119	6.8	3.0	738	12.1	26	<0.035	<0.035
MAR										
14...	0900	134	120	7.0	3.5	722	12.4	27	<0.035	<0.035
25...	0845	23	141	7.3	4.5	733	12.1	35	<0.035	<0.035
APR										
03...	1000	32	130	7.3	6.0	734	11.7	34	<0.035	<0.035
15...	0900	18	148	7.3	5.0	737	11.3	28	<0.035	<0.035
MAY										
05...	0930	34	127	7.5	8.5	732	11.3	23	0.930	1.01
19...	1015	40	141	7.4	15.5	725	8.7	28	<0.035	<0.035
26...	0945	700	96	7.0	11.0	730	9.2	11	<0.035	0.120
JUN										
04...	0905	86	116	7.3	11.0	731	10.0	18	<0.035	<0.035
16...	0920	26	159	7.5	17.0	727	9.0	31	<0.035	<0.035
JUL										
08...	1140	2.9	238	7.7	22.0	735	8.2	44	<0.035	<0.035
AUG										
05...	0930	4.6	303	7.7	21.0	729	7.1	47	<0.035	<0.035
SEP										
04...	0910	1.9	255	7.6	15.0	734	7.8	51	<0.035	<0.035

DATE	2,4-DB WATER, FLTRD, GF 0.7 μ REC (μ G/L) (38746)	SILVEX, DIS- SOLVED (μ G/L) (39762)	3HYDRXY CARBO- FURAN WAT,FLT GF 0.7 μ REC (μ G/L) (49308)	DNOC WAT,FLT GF 0.7 μ REC (μ G/L) (49299)	ACIFL- UORFEN WATER, FLTRD, GF 0.7 μ REC (μ G/L) (49315)	ALDI- CARB, WATER, FLTRD, GF 0.7 μ REC (μ G/L) (49312)	ALDI- CARB SULFONE WAT,FLT GF 0.7 μ REC (μ G/L) (49313)	ALDICA- RB SUL- FOXIDE, WAT,FLT GF 0.7 μ REC (μ G/L) (49314)	BENTA- ZON, WATER, FLTRD, GF 0.7 μ REC (μ G/L) (38711)	BRO- MACIL, WATER, DISS, REC (μ G/L) (04029)
JAN										
17...	<0.035	<0.021	<0.014	<0.035	<0.035	<0.016	<0.016	<0.021	<0.014	<0.035
FEB										
20...	<0.035	<0.021	<0.014	<0.035	<0.035	<0.016	<0.016	<0.021	<0.014	<0.035
MAR										
14...	<0.035	<0.021	<0.014	<0.035	<0.035	<0.016	<0.016	<0.021	<0.014	<0.035
25...	<0.035	<0.021	<0.014	<0.035	<0.035	<0.016	<0.016	<0.021	<0.014	<0.035
APR										
03...	<0.035	<0.021	<0.014	<0.035	<0.035	<0.016	<0.016	<0.021	<0.014	<0.035
15...	<0.035	<0.021	<0.014	<0.035	<0.035	<0.016	<0.016	<0.021	<0.014	<0.035
MAY										
05...	0.800	0.970	<0.014	E0.940	1.07	<0.016	<0.016	<0.021	E0.890	<0.035
19...	<0.035	<0.021	<0.014	<0.035	<0.035	<0.016	<0.016	<0.021	<0.014	<0.035
26...	<0.035	<0.021	<0.014	<0.035	<0.035	<0.016	<0.016	<0.021	<0.014	<0.035
JUN										
04...	<0.035	<0.021	<0.014	<0.035	<0.035	<0.016	<0.016	<0.021	<0.014	<0.035
16...	<0.035	<0.021	<0.014	<0.035	<0.035	<0.016	<0.016	<0.021	<0.014	<0.035
JUL										
08...	<0.035	<0.021	<0.014	<0.035	<0.035	<0.016	<0.016	<0.021	<0.014	<0.035
AUG										
05...	<0.035	<0.021	<0.014	<0.035	<0.035	<0.016	<0.016	<0.021	<0.014	<0.035
SEP										
04...	<0.035	<0.021	<0.014	<0.035	<0.035	<0.016	<0.016	<0.021	<0.014	<0.035

CROOKED CREEK BASIN

03037350 SOUTH BRANCH PLUM CREEK AT FIVE POINTS, PA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE	BRO-MOXYNIL WATER, FLTRD, GF 0.7µ REC (µG/L) (49311)	CAR-BARYL, WATER, FLTRD, GF 0.7µ REC (µG/L) (49310)	CARBO-FURAN, WATER, FLTRD, GF 0.7µ REC (µG/L) (49309)	CHLOR-AMBN, WATER, FLTRD, GF 0.7µ REC (µG/L) (49307)	CHLORO-THALO-NIL, WAT,FLT GF 0.7µ REC (µG/L) (49306)	CLOPYR-ALID, WATER, FLTRD, GF 0.7µ REC (µG/L) (49305)	DACTHAL-MONO-ACID, WAT,FLT GF 0.7µ REC (µG/L) (49304)	DICAMBA-WATER, FLTRD, GF 0.7µ REC (µG/L) (38442)	DICHLO-BENIL, WATER, FLTRD, GF 0.7µ REC (µG/L) (49303)	DICHLOR-PROP, WATER, FLTRD, GF 0.7µ REC (µG/L) (49302)
JAN 17...	<0.035	<0.008	<0.028	<0.011	<0.035	<0.050	<0.017	<0.035	<0.020	<0.032
FEB 20...	<0.035	<0.008	<0.028	<0.011	<0.035	<0.050	<0.017	<0.035	<0.020	<0.032
MAR 14...	<0.035	<0.008	<0.028	<0.011	<0.035	<0.050	<0.017	<0.035	<0.020	<0.032
MAR 25...	<0.035	<0.008	<0.028	<0.011	<0.035	<0.050	<0.017	<0.035	<0.020	<0.032
APR 03...	<0.035	<0.008	<0.028	<0.011	<0.035	<0.050	<0.017	<0.035	<0.020	<0.032
APR 15...	<0.035	<0.008	<0.028	<0.011	<0.035	<0.050	<0.017	<0.035	<0.020	<0.032
MAY 05...	0.990	<0.008	<0.028	<0.011	<0.035	<0.050	E1.01	E0.470	<0.020	0.940
MAY 19...	<0.035	<0.008	<0.028	<0.011	<0.035	<0.050	<0.017	<0.035	<0.020	<0.032
MAY 26...	<0.035	E0.030	<0.028	<0.011	<0.035	<0.050	<0.017	<0.035	<0.020	<0.032
JUN 04...	<0.035	E0.020	<0.028	<0.011	<0.035	<0.050	<0.017	<0.035	<0.020	<0.032
JUN 16...	<0.035	<0.008	<0.028	<0.011	<0.035	<0.050	<0.017	<0.035	<0.020	<0.032
JUL 08...	<0.035	<0.008	<0.028	<0.011	<0.035	<0.050	<0.017	<0.035	<0.020	<0.032
AUG 05...	<0.035	<0.008	<0.028	<0.011	<0.035	<0.050	<0.017	<0.035	<0.020	<0.032
SEP 04...	<0.035	<0.008	<0.028	<0.011	<0.035	<0.050	<0.017	<0.035	<0.020	<0.032
DATE	DINOSEB WATER, FLTRD, GF 0.7µ REC (µG/L) (49301)	DIURON, WATER, FLTRD, GF 0.7µ REC (µG/L) (49300)	FEN-URON, WATER, FLTRD, GF 0.7µ REC (µG/L) (49297)	FLUO-METURON WATER, FLTRD, GF 0.7µ REC (µG/L) (38811)	LINURON WATER, FLTRD, GF 0.7µ REC (µG/L) (38478)	MCPA, WATER, FLTRD, GF 0.7µ REC (µG/L) (38482)	MCPB, WATER, FLTRD, GF 0.7µ REC (µG/L) (38487)	METHIO-CARB, WATER, FLTRD, GF 0.7µ REC (µG/L) (38501)	METH-OMYL, WATER, FLTRD, GF 0.7µ REC (µG/L) (49296)	NEB-URON, WATER, FLTRD, GF 0.7µ REC (µG/L) (49294)
JAN 17...	<0.035	<0.020	<0.013	<0.035	<0.018	<0.050	<0.035	<0.026	<0.017	<0.015
FEB 20...	<0.035	<0.020	<0.013	<0.035	<0.018	<0.050	<0.035	<0.026	<0.017	<0.015
MAR 14...	<0.035	<0.020	<0.013	<0.035	<0.018	<0.050	<0.035	<0.026	<0.017	<0.015
MAR 25...	<0.035	<0.020	<0.013	<0.035	<0.018	<0.050	<0.035	<0.026	<0.017	<0.015
APR 03...	<0.035	<0.020	<0.013	<0.035	<0.018	<0.050	<0.035	<0.026	<0.017	<0.015
APR 15...	<0.035	<0.020	<0.013	<0.035	<0.018	<0.050	<0.035	<0.026	<0.017	<0.015
MAY 05...	0.920	<0.020	<0.013	<0.035	<0.018	0.940	E0.880	<0.026	<0.017	<0.015
MAY 19...	<0.035	<0.020	<0.013	<0.035	<0.018	<0.050	<0.035	<0.026	<0.017	<0.015
MAY 26...	<0.035	<0.020	<0.013	<0.035	<0.018	<0.050	<0.035	<0.026	<0.017	<0.015
JUN 04...	<0.035	<0.020	0.040	<0.035	E0.001	<0.050	<0.035	<0.026	<0.017	<0.015
JUN 16...	<0.035	<0.020	<0.013	<0.035	<0.018	<0.050	<0.035	<0.026	<0.017	<0.015
JUL 08...	<0.035	<0.020	<0.013	<0.035	<0.018	<0.050	<0.035	<0.026	<0.017	<0.015
AUG 05...	<0.035	<0.020	<0.013	<0.035	<0.018	<0.050	<0.035	<0.026	<0.017	<0.015
SEP 04...	<0.035	<0.020	<0.013	<0.035	<0.018	<0.050	<0.035	<0.026	<0.017	<0.015

CROOKED CREEK BASIN

03037350 SOUTH BRANCH PLUM CREEK AT FIVE POINTS, PA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE	NORFLUR AZON, WATER, FLTRD, GF 0.7 μ REC (μ G/L) (49293)	ORY- ZALIN, WATER, FLTRD, GF 0.7 μ REC (μ G/L) (49292)	OXAMYL, WATER, FLTRD, GF 0.7 μ REC (μ G/L) (38866)	PIC- LORAM, WATER, FLTRD, GF 0.7 μ REC (μ G/L) (49291)	PRO- PHAM, WATER, FLTRD, GF 0.7 μ REC (μ G/L) (49236)	PRO- POXUR, WATER, FLTRD, GF 0.7 μ REC (μ G/L) (38538)	TRI- CLOPYR, WATER, FLTRD, GF 0.7 μ REC (μ G/L) (49235)	BDMC, SURROG, WATER, UNFLTRD REC PERCENT (99835)	SAMPLE VOLUME, SCHED- ULE 2051 (ML) (99847)
JAN 17...	<0.024	<0.019	<0.018	<0.050	<0.035	<0.035	<0.050	86.0	--
FEB 20...	<0.024	<0.019	<0.018	<0.050	<0.035	<0.035	<0.050	102	963
MAR 14...	<0.024	<0.019	<0.018	<0.050	<0.035	<0.035	<0.050	115	982
MAR 25...	<0.024	<0.019	<0.018	<0.050	<0.035	<0.035	<0.050	104	974
APR 03...	<0.024	<0.019	<0.018	<0.050	<0.035	<0.035	<0.050	102	940
APR 15...	<0.024	<0.019	<0.018	<0.050	<0.035	<0.035	<0.050	93.0	937
MAY 05...	<0.024	<0.019	<0.018	E0.850	<0.035	<0.035	1.07	119	926
MAY 19...	<0.024	<0.019	<0.018	<0.050	<0.035	<0.035	<0.050	118	948
MAY 26...	<0.024	<0.019	<0.018	<0.050	<0.035	<0.035	<0.050	89.0	956
JUN 04...	<0.024	<0.019	<0.018	<0.050	<0.035	<0.035	<0.050	102	940
JUN 16...	<0.024	<0.019	<0.018	<0.050	<0.035	<0.035	<0.050	99.0	948
JUL 08...	<0.024	<0.019	<0.018	<0.050	<0.035	<0.035	<0.050	106	961
AUG 05...	<0.024	<0.019	<0.018	<0.050	<0.035	<0.035	<0.050	112	970
SEP 04...	<0.024	<0.019	<0.018	<0.050	<0.035	<0.035	<0.050	102	968

CROOKED CREEK BASIN

03037350 SOUTH BRANCH PLUM CREEK AT FIVE POINTS, PA--Continued

SPECIFIC CONDUCTANCE, $\mu\text{S}/\text{CM}$ @ 25 DEGREES CELSIUS, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997												
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	---	---	---	---	---	---	132	129	131	129	125	127
2	---	---	---	---	---	---	135	130	132	131	126	129
3	---	---	---	---	---	---	136	114	118	135	128	132
4	---	---	---	---	---	---	113	106	109	134	129	132
5	---	---	---	---	---	---	113	109	112	130	122	127
6	---	---	---	---	---	---	118	111	113	127	121	124
7	---	---	---	---	---	---	121	113	118	128	123	126
8	---	---	---	---	---	---	125	120	122	133	128	130
9	---	---	---	---	---	---	127	122	125	133	130	131
10	---	---	---	---	---	---	134	126	129	134	131	133
11	---	---	---	---	---	---	133	128	131	137	131	134
12	---	---	---	---	---	---	135	130	133	141	133	138
13	---	---	---	---	---	---	135	127	131	142	137	140
14	---	---	---	---	---	---	135	129	133	146	142	144
15	---	---	---	---	---	---	139	131	135	148	145	146
16	---	---	---	---	---	---	142	135	138	151	147	150
17	---	---	---	---	---	---	141	135	138	156	150	153
18	---	---	---	---	---	---	143	137	139	157	155	156
19	---	---	---	---	---	---	143	137	140	---	---	---
20	---	---	---	---	---	---	144	138	141	---	---	---
21	---	---	---	---	---	---	147	139	144	---	---	---
22	---	---	---	---	---	---	149	146	147	---	---	---
23	---	---	---	---	---	---	150	146	148	---	---	---
24	---	---	---	---	---	---	149	141	146	---	---	---
25	---	---	---	---	---	---	152	142	149	---	---	---
26	---	---	---	144	106	117	158	151	155	---	---	---
27	---	---	---	118	116	117	160	155	158	---	---	---
28	---	---	---	121	118	119	166	141	150	---	---	---
29	---	---	---	123	121	122	142	126	133	---	---	---
30	---	---	---	129	123	126	130	122	126	---	---	---
31	---	---	---	132	128	130	---	---	---	---	---	---
MONTH	---	---	---	144	106	122	166	106	134	157	121	136

CROOKED CREEK BASIN

03037350 SOUTH BRANCH PLUM CREEK AT FIVE POINTS, PA--Continued

SPECIFIC CONDUCTANCE, $\mu\text{S}/\text{CM}$ @ 25 DEGREES CELSIUS, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	---	---	---	205	179	201	270	261	265	232	220	225
2	---	---	---	204	174	183	265	262	263	234	226	232
3	---	---	---	218	204	213	265	261	263	240	234	237
4	---	---	---	217	210	213	268	263	265	---	---	---
5	---	---	---	223	215	217	---	---	---	---	---	---
6	---	---	---	230	223	226	245	222	231	---	---	---
7	---	---	---	240	230	233	241	223	235	---	---	---
8	---	---	---	245	236	242	228	218	219	---	---	---
9	---	---	---	250	244	247	229	219	227	---	---	---
10	---	---	---	261	249	254	243	229	240	---	---	---
11	---	---	---	261	256	257	251	243	248	---	---	---
12	---	---	---	264	257	259	254	249	253	---	---	---
13	---	---	---	271	264	267	301	150	211	---	---	---
14	---	---	---	276	271	274	183	150	167	---	---	---
15	---	---	---	281	275	279	204	183	193	---	---	---
16	---	---	---	294	280	287	209	195	206	---	---	---
17	---	---	---	287	243	259	206	168	178	---	---	---
18	---	---	---	254	244	247	177	163	170	---	---	---
19	---	---	---	260	254	258	174	172	172	---	---	---
20	---	---	---	268	260	262	182	172	178	---	---	---
21	---	---	---	278	267	273	177	173	175	---	---	---
22	---	---	---	281	276	278	178	177	177	---	---	---
23	160	154	158	276	271	273	182	177	180	---	---	---
24	170	160	166	303	276	285	188	181	184	---	---	---
25	177	169	173	308	300	306	195	187	190	---	---	---
26	181	176	178	300	271	285	201	193	196	---	---	---
27	186	177	181	271	266	268	209	200	203	---	---	---
28	193	184	188	278	252	273	217	206	209	---	---	---
29	201	192	194	309	262	284	219	211	213	---	---	---
30	205	197	200	309	281	298	226	217	221	---	---	---
31	---	---	---	281	267	273	231	216	222	---	---	---
MONTH	205	154	180	309	174	257	301	150	212	240	220	231

CROOKED CREEK BASIN

03037350 SOUTH BRANCH PLUM CREEK AT FIVE POINTS, PA--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	---	---	---	8.0	6.5	7.0	8.0	5.0	6.5	4.0	3.0	3.5
2	---	---	---	6.5	5.0	5.5	8.0	5.5	6.5	7.0	4.0	5.5
3	---	---	---	6.0	4.5	5.0	6.5	4.0	5.5	9.0	7.0	8.0
4	---	---	---	5.5	3.0	4.5	6.5	5.5	6.0	10.5	8.5	9.5
5	---	---	---	6.5	4.5	5.5	5.5	4.0	5.0	10.5	8.0	10.0
6	---	---	---	10.0	6.5	8.0	5.0	4.0	4.0	8.0	3.5	5.5
7	---	---	---	12.5	10.0	11.0	5.5	4.0	4.5	3.5	1.0	2.0
8	---	---	---	12.5	10.0	11.5	4.0	2.5	3.5	1.5	.0	.5
9	---	---	---	10.0	8.5	9.0	3.0	2.5	3.0	.5	.0	.5
10	---	---	---	8.5	7.0	7.5	4.0	2.0	3.0	1.0	.0	1.0
11	---	---	---	7.0	5.5	6.5	5.5	3.5	4.5	.0	.0	.0
12	---	---	---	5.5	4.0	5.0	7.5	5.5	6.5	.0	.0	.0
13	---	---	---	4.5	3.0	3.5	7.5	6.5	7.0	.0	.0	.0
14	---	---	---	4.0	2.5	3.5	6.5	5.5	6.5	.5	.0	.0
15	---	---	---	3.0	1.0	2.0	5.5	4.0	4.5	.5	.0	.0
16	---	---	---	3.5	1.0	2.0	6.0	4.0	5.0	.5	.0	.0
17	---	---	---	4.5	1.5	3.0	6.5	6.0	6.0	.0	.0	.0
18	---	---	---	6.5	4.5	5.5	6.0	4.5	5.5	.0	.0	.0
19	---	---	---	6.5	4.5	6.0	4.5	1.0	3.0	.0	.0	.0
20	---	---	---	4.5	3.5	4.0	1.0	.0	.0	.0	.0	.0
21	---	---	---	4.0	3.5	3.5	.0	.0	.0	.0	.0	.0
22	---	---	---	4.0	3.0	3.5	.5	.0	.0	.0	.0	.0
23	---	---	---	4.0	2.0	3.0	2.5	.5	1.5	.0	.0	.0
24	---	---	---	4.5	3.5	4.0	4.5	2.0	3.5	.0	.0	.0
25	---	---	---	6.0	4.5	5.0	3.0	.5	1.0	.5	.0	.0
26	---	---	---	6.5	4.5	6.0	1.5	.0	.5	.5	.0	.0
27	---	---	---	4.5	2.5	3.5	3.5	1.5	2.5	.5	.0	.5
28	---	---	---	2.5	1.5	2.0	6.0	3.0	4.5	2.0	.5	1.0
29	---	---	---	3.0	1.5	2.0	8.0	6.0	7.0	1.0	.0	.5
30	13.5	10.5	12.0	5.0	2.5	3.5	7.0	5.0	6.0	1.5	.0	.5
31	11.5	8.0	9.5	---	---	---	5.5	4.0	5.0	2.5	1.0	2.0
MONTH	13.5	8.0	10.8	12.5	1.0	5.1	8.0	.0	4.1	10.5	.0	1.6

CROOKED CREEK BASIN

03037350 SOUTH BRANCH PLUM CREEK AT FIVE POINTS, PA--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	3.0	2.0	2.5	9.0	5.5	7.0	8.5	2.5	5.5	15.5	12.0	14.0
2	4.5	2.5	3.5	9.5	7.0	9.0	10.5	4.0	7.0	15.0	10.0	12.5
3	4.5	3.0	3.5	7.0	3.5	4.5	10.5	5.5	8.0	14.5	11.5	13.0
4	3.0	2.0	2.5	5.0	3.5	4.5	13.5	8.5	11.0	14.0	10.0	12.0
5	3.5	2.0	3.0	6.0	4.0	4.5	13.5	10.5	12.0	14.5	8.5	11.5
6	4.0	3.0	3.5	6.0	4.0	5.0	15.0	11.0	13.0	15.0	11.0	13.0
7	4.0	3.0	3.5	5.5	2.0	4.0	14.0	10.5	12.0	15.0	9.0	12.0
8	3.5	3.0	3.0	5.0	3.5	4.5	10.5	7.0	8.5	12.0	8.5	9.5
9	3.5	1.5	2.5	6.0	3.0	4.5	7.0	4.5	5.5	12.5	10.0	11.0
10	2.5	1.5	2.0	7.5	4.5	6.0	8.0	2.0	5.0	11.0	8.0	9.5
11	2.5	1.5	2.0	6.0	3.5	4.5	7.5	5.0	6.5	15.0	6.5	11.0
12	2.0	.5	1.5	5.5	2.0	3.5	8.0	5.5	6.5	14.0	12.0	13.0
13	.5	.0	.0	4.0	2.5	3.0	8.0	6.0	7.5	16.0	11.0	13.5
14	.0	.0	.0	5.0	3.0	4.0	9.5	4.0	7.0	13.5	11.0	12.0
15	1.0	.0	.5	5.0	2.5	3.5	10.5	4.5	8.0	14.5	11.0	12.5
16	.5	.0	.0	3.5	1.0	2.5	11.5	6.5	9.5	13.5	9.5	11.5
17	1.0	.0	.5	4.0	2.0	2.5	10.5	7.0	9.0	14.0	10.5	12.0
18	3.0	.0	1.5	6.0	4.0	5.0	9.5	5.5	7.5	18.0	10.5	14.5
19	5.0	2.0	3.5	7.5	4.5	5.5	11.0	4.5	8.0	20.0	15.5	17.5
20	6.0	3.0	4.5	5.5	4.0	4.5	11.5	6.0	9.0	19.0	15.0	17.0
21	9.0	5.0	7.0	8.5	3.5	6.0	10.5	7.0	8.5	16.0	12.5	14.0
22	8.5	4.0	7.0	8.0	4.5	6.5	10.0	6.5	8.5	15.5	10.0	12.5
23	4.0	2.0	3.0	5.5	2.5	4.0	9.5	7.5	9.0	16.5	10.5	13.5
24	4.0	2.0	3.0	6.5	1.0	3.5	13.0	8.0	10.5	19.0	12.0	16.0
25	3.0	.5	1.5	15.0	4.0	6.5	13.0	9.5	11.5	18.0	12.0	14.0
26	4.0	.5	2.5	8.5	5.0	6.0	15.0	9.0	12.0	15.0	10.5	12.5
27	10.5	4.0	7.5	10.0	3.5	6.5	13.0	10.5	11.5	15.0	10.0	12.5
28	8.0	5.5	6.5	10.0	6.5	8.5	11.5	9.0	10.5	16.0	10.5	13.5
29	---	---	---	10.0	9.0	9.5	15.0	7.0	11.0	13.5	12.0	12.5
30	---	---	---	9.0	8.0	8.5	16.5	9.5	13.0	14.5	12.0	13.0
31	---	---	---	8.0	4.5	6.0	---	---	---	15.5	12.5	14.0
MONTH	10.5	.0	2.9	15.0	1.0	5.3	16.5	2.0	9.1	20.0	6.5	12.9

CROOKED CREEK BASIN

03037350 SOUTH BRANCH PLUM CREEK AT FIVE POINTS, PA--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	15.5	13.5	14.5	22.5	21.0	21.5	25.5	19.0	22.5	23.0	19.5	21.0
2	15.0	13.5	14.5	24.0	20.0	22.0	25.5	21.0	23.0	23.5	19.5	21.5
3	13.5	12.0	12.5	25.5	22.0	23.5	26.0	22.0	24.0	22.0	17.5	20.0
4	16.5	10.5	13.5	24.5	21.0	23.0	25.0	22.0	23.5	17.5	15.0	16.5
5	17.0	13.0	15.0	23.5	19.5	21.5	23.0	20.0	21.5	17.5	13.5	15.5
6	16.5	13.0	15.0	23.0	18.0	21.0	23.0	18.5	20.5	19.0	15.0	17.0
7	15.0	13.5	14.5	24.0	18.5	21.5	22.5	17.0	20.0	20.0	16.0	18.0
8	18.5	12.5	15.5	26.0	20.0	22.5	23.0	17.5	20.5	20.5	17.0	18.5
9	20.0	14.0	17.0	23.0	20.5	21.5	25.0	18.5	21.5	20.5	16.5	18.5
10	21.5	15.5	18.5	24.5	18.5	21.5	25.0	19.5	22.5	19.5	18.0	19.0
11	20.5	17.0	19.0	25.5	18.5	22.0	24.5	21.5	23.0	19.5	18.0	18.5
12	20.5	17.0	19.0	26.5	19.0	23.0	26.0	21.5	23.5	18.5	17.0	18.0
13	19.5	16.5	18.0	27.0	20.5	24.0	23.5	21.0	22.0	19.5	17.0	18.5
14	20.5	16.5	18.5	28.0	21.0	25.0	23.0	19.5	21.0	20.0	17.0	18.5
15	21.0	15.0	18.0	29.0	23.0	26.0	21.0	19.5	20.0	19.5	16.5	18.0
16	21.0	16.5	19.0	28.5	24.0	26.0	23.0	20.5	22.0	19.5	16.5	18.0
17	21.0	18.5	20.0	29.0	23.0	26.0	21.5	20.0	21.0	20.5	17.0	19.0
18	20.5	18.0	19.0	29.5	23.5	26.5	21.5	19.5	20.5	20.0	17.5	19.0
19	19.5	16.0	18.0	28.0	23.0	25.5	21.0	18.5	19.5	19.5	16.0	18.0
20	21.5	17.0	19.0	26.0	20.0	23.0	19.5	18.0	18.5	19.5	16.5	18.5
21	23.0	18.0	20.5	26.5	19.5	23.0	19.0	17.5	18.0	16.5	14.0	15.0
22	23.5	19.5	21.0	23.5	21.5	22.0	18.0	16.5	17.0	15.5	12.5	14.0
23	23.5	18.5	21.0	22.0	20.5	21.0	18.5	16.0	17.0	15.5	14.0	14.5
24	25.0	19.5	22.5	22.0	19.5	20.5	17.0	15.0	16.0	14.5	12.5	13.5
25	25.5	21.5	23.5	23.5	19.5	21.0	19.0	16.0	17.5	15.0	11.5	13.5
26	24.0	21.0	22.5	25.5	19.5	23.0	20.5	17.5	19.0	15.0	12.5	13.5
27	24.5	19.0	22.0	27.5	22.0	24.5	21.5	18.5	20.0	14.0	11.5	13.0
28	24.0	20.0	22.0	26.0	22.0	23.5	22.0	20.0	21.0	16.5	12.0	14.0
29	25.5	20.0	23.0	25.0	20.5	22.5	21.5	19.5	20.5	15.5	14.0	15.0
30	24.5	21.0	22.5	24.0	18.5	21.5	21.5	18.5	19.5	15.0	14.0	14.5
31	---	---	---	25.5	18.5	22.0	22.0	18.0	20.0	---	---	---
MONTH	25.5	10.5	18.6	29.5	18.0	22.9	26.0	15.0	20.5	23.5	11.5	17.0

CROOKED CREEK BASIN

03038000 CROOKED CREEK AT IDAHO, PA

LOCATION.--Lat 40°39'17", long 79°20'56", Armstrong County, Hydrologic Unit 05010006, on right bank at downstream end of old bridge abutment at Idaho, 0.4 mi downstream from Keystone Generation Station, 1.5 mi downstream from Plum Creek, and 2.4 mi west of Shelocta.

DRAINAGE AREA.--191 mi².

PERIOD OF RECORD.--October 1937 to current year. Monthly discharge only for some periods published in WSP 1305.

REVISED RECORDS.--WSP 1385: 1938, 1945.

GAGE.--Water-stage recorder and concrete weir control. Datum of gage is 961.04 ft above sea level (Baltimore and Ohio Railroad bench mark).

REMARKS.--Records good except for estimated daily discharges, which are fair. Flow regulated to some extent since March 1968 by Keystone Lake 7 mi upstream, usable capacity, 22,010 acre-ft. Evaporation from operation of steam-electric plant 0.4 mi upstream, which began during July 1967, can amount to as much as 30 ft³/s. Several measurements of water temperature were made during the year. U.S. Army Corps of Engineers satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of March 1936 reached a stage of 18.6 ft, from floodmark, discharge, 19,400 ft³/s.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than a base discharge of 2,500 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 8	2000	3,260	7.40	Feb. 5	0900	2,650	6.60
Dec. 1	2400	3,160	7.27	May 26	0100	*6,570	*11.34

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	392	177	1820	358	e125	225	355	127	413	56	32	33
2	275	162	2490	352	e170	566	280	115	750	90	33	30
3	219	141	1180	324	e250	581	247	146	660	52	32	36
4	164	121	780	294	e400	710	227	216	488	44	37	32
5	129	108	564	355	2290	863	201	152	363	39	49	30
6	108	101	503	393	1310	1670	185	157	270	39	35	36
7	94	104	435	330	818	1120	172	132	218	38	43	35
8	86	1890	407	280	602	799	147	111	176	37	36	30
9	81	2800	364	265	472	594	148	116	139	42	33	31
10	82	1850	318	e220	383	629	131	124	117	42	35	35
11	68	1060	488	e200	e300	523	117	113	99	37	34	39
12	66	680	2130	e180	e250	432	128	92	121	35	30	41
13	56	491	1890	e170	e200	365	201	82	806	37	121	35
14	51	392	1340	e160	e180	753	162	77	421	36	130	35
15	55	301	856	e150	e170	856	134	73	232	37	39	34
16	48	255	628	e140	e150	633	115	67	162	45	48	30
17	47	223	501	e135	e140	516	122	57	271	44	189	33
18	70	217	401	e130	e190	436	121	70	396	38	177	36
19	1150	215	332	e125	e500	365	99	334	721	38	95	34
20	1670	184	261	e125	e900	316	89	237	364	40	77	40
21	927	162	209	e120	708	273	82	169	238	35	150	49
22	747	145	206	e130	617	246	81	138	171	37	84	33
23	560	128	194	e200	467	203	80	113	129	43	70	32
24	440	121	291	e350	386	174	88	98	95	41	47	34
25	337	128	313	e900	306	165	72	2920	78	36	40	33
26	264	466	231	655	274	1430	61	4540	83	37	36	33
27	221	470	221	492	274	879	56	1340	75	32	37	31
28	290	389	277	e400	224	616	174	680	57	36	34	35
29	313	343	428	e300	---	527	168	446	47	37	39	200
30	250	344	529	e200	---	456	136	341	40	34	36	78
31	209	---	430	e150	---	434	---	307	---	36	32	---
TOTAL	9469	14168	21017	8583	13056	18355	4379	13690	8200	1270	1910	1243
MEAN	305	472	678	277	466	592	146	442	273	41.0	61.6	41.4
MAX	1670	2800	2490	900	2290	1670	355	4540	806	90	189	200
MIN	47	101	194	120	125	165	56	57	40	32	30	30
CFSM	1.60	2.47	3.55	1.45	2.44	3.10	.76	2.31	1.43	.21	.32	.22
IN.	1.84	2.76	4.09	1.67	2.54	3.57	.85	2.67	1.60	.25	.37	.24

e Estimated.

CROOKED CREEK BASIN

03038000 CROOKED CREEK AT IDAHO, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1938 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	127	223	367	380	501	603	465	310	202	137	99.0	91.9
MAX	839	820	827	1000	1260	1340	1052	746	1072	987	549	497
(WY)	1955	1986	1991	1952	1956	1994	1940	1989	1972	1956	1984	1945
MIN	7.15	23.8	33.5	59.7	120	83.9	85.1	38.0	25.3	13.9	11.3	6.07
(WY)	1953	1954	1961	1977	1980	1969	1946	1941	1949	1962	1942	1952

SUMMARY STATISTICS

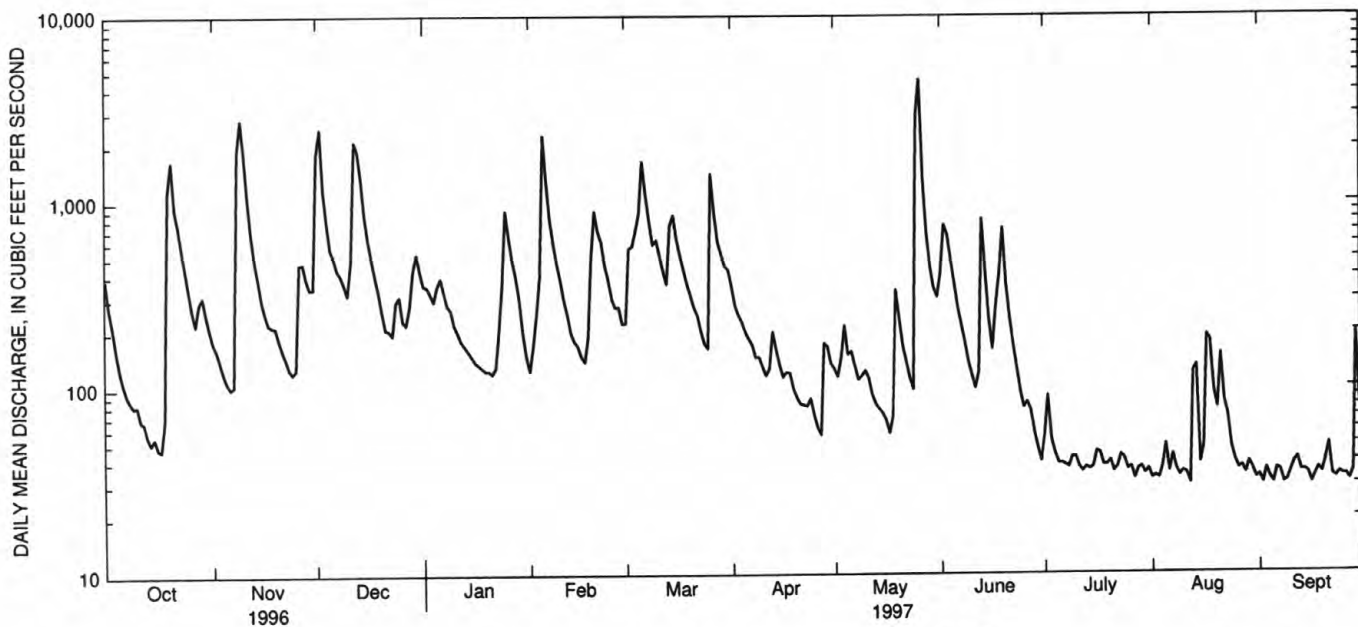
FOR 1996 CALENDAR YEAR

FOR 1997 WATER YEAR

WATER YEARS 1938 - 1997

ANNUAL TOTAL	155191	115340	
ANNUAL MEAN	424	316	291
HIGHEST ANNUAL MEAN			511
LOWEST ANNUAL MEAN			148
HIGHEST DAILY MEAN	7200	Jan 19	4540 May 26
LOWEST DAILY MEAN	30	Aug 20	30 Aug 12 ^a
ANNUAL SEVEN-DAY MINIMUM	36	Jul 31	33 Aug 30
INSTANTANEOUS PEAK FLOW			6550 May 26
INSTANTANEOUS PEAK STAGE			11.32 May 26
INSTANTANEOUS LOW FLOW			22 Aug 31 ^c
ANNUAL RUNOFF (CFSM)	2.22		1.65
ANNUAL RUNOFF (INCHES)	30.23		22.46
10 PERCENT EXCEEDS	1020		709
50 PERCENT EXCEEDS	236		168
90 PERCENT EXCEEDS	46		36

- ^a Also Sept. 2, 5, 8, 16.
^b Result of upstream pumping.
^c Also Sept. 5.
^e Estimated.



October 1, 1996 to September 30, 1997

KISKIMINETAS RIVER BASIN

03039925 NORTH FORK BENS CREEK AT NORTH FORK RESERVOIR, PA

LOCATION.--Lat 40°15'58", long 79°01'01", Somerset County, Hydrologic Unit 05010007, just off of T534 on left bank at upstream side of concrete bridge, 1,800 ft upstream from North Fork Reservoir, and 3.2 mi north of Forwardstown.

DRAINAGE AREA.--3.45 mi².

PERIOD OF RECORD.--October 1984 to September 1985, October 1987 to current year.

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 1,600 ft above sea level, from topographic map.

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

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than a base discharge of 80 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
May 25	1800	*129	*4.53	June 2	0500	85	3.90

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	8.2	23	e6.8	e4.5	11	11	6.5	12	2.9	e.50	e1.8
2	10	7.3	35	e6.0	e4.4	21	11	6.1	57	2.1	e.46	e1.6
3	8.7	6.3	24	e5.8	e4.3	22	10	5.8	40	1.6	e.43	e1.4
4	7.1	5.6	18	e5.6	e4.4	21	9.4	5.7	30	1.4	e.40	e1.3
5	5.7	5.0	13	e6.0	e10	20	8.5	5.1	23	1.3	e.45	e1.2
6	5.1	4.6	12	e6.2	11	26	7.8	5.4	17	1.2	e.47	e1.2
7	4.5	4.3	10	e5.2	9.1	24	6.9	5.0	14	1.1	e.50	e1.2
8	4.2	23	9.1	e4.5	8.0	21	6.2	4.8	11	1.1	.46	e1.2
9	3.9	34	7.9	e4.0	6.9	16	5.7	4.9	9.7	1.0	.40	e1.1
10	4.0	25	7.0	e4.2	6.0	17	5.1	6.5	8.0	1.0	e.37	1.4
11	3.3	18	11	e5.0	e5.2	15	4.8	7.9	6.5	1.0	e.36	1.4
12	2.8	14	38	e6.2	e4.4	14	4.9	8.2	5.9	.95	e.35	1.2
13	2.7	12	46	8.3	e4.0	12	5.0	8.3	7.0	.88	1.7	1.1
14	2.4	10	33	7.0	e3.7	15	4.3	8.0	5.3	.87	.84	1.1
15	2.3	8.5	24	7.8	e3.3	15	4.0	8.4	4.4	.79	1.5	1.1
16	2.2	7.5	18	5.6	e3.1	13	3.8	7.4	4.0	.79	1.2	1.0
17	2.1	6.8	14	3.3	e2.9	12	4.2	7.4	4.1	.71	2.0	1.0
18	4.1	6.7	12	e2.6	e3.3	11	4.0	8.6	3.5	.71	3.5	1.2
19	41	6.3	9.8	e2.4	11	10	4.0	34	3.2	.84	1.4	1.0
20	58	5.9	8.0	e2.2	22	9.4	3.8	40	2.9	.70	8.7	1.6
21	34	5.6	6.9	e2.1	28	8.6	3.6	29	2.7	.63	6.6	1.2
22	29	5.5	6.1	e1.9	43	8.1	3.6	22	2.4	.63	4.7	1.0
23	24	5.0	5.8	e2.1	30	7.3	3.6	16	2.2	1.0	3.8	1.0
24	18	4.7	7.0	e2.7	23	6.4	3.6	13	2.0	6.6	3.9	1.0
25	14	4.5	7.2	e3.4	17	6.3	3.3	65	1.8	1.4	4.4	1.0
26	12	5.5	7.0	e3.2	14	39	3.0	84	2.0	.95	3.9	1.0
27	10	4.8	e5.8	e2.8	12	26	2.9	46	2.0	.79	3.5	.80
28	11	4.4	e5.4	e7.0	11	19	6.7	29	1.7	e.84	4.3	5.0
29	10	4.4	e6.4	6.6	---	15	6.3	21	1.5	e.80	2.7	8.3
30	9.7	5.4	e7.8	e5.8	---	13	6.4	16	1.5	e.66	e2.3	5.0
31	9.0	---	e8.6	e5.0	---	14	---	14	---	e.56	e2.1	---
TOTAL	365.8	268.8	446.8	147.3	309.5	488.1	167.4	549.0	288.3	37.80	68.19	50.40
MEAN	11.8	8.96	14.4	4.75	11.1	15.7	5.58	17.7	9.61	1.22	2.20	1.68
MAX	58	34	46	8.3	43	39	11	84	57	6.6	8.7	8.3
MIN	2.1	4.3	5.4	1.9	2.9	6.3	2.9	4.8	1.5	.56	.35	.80
CFSM	3.42	2.60	4.18	1.38	3.20	4.56	1.62	5.13	2.79	.35	.64	.49
IN.	3.94	2.90	4.82	1.59	3.34	5.26	1.81	5.92	3.11	.41	.74	.54

e Estimated.

KISKIMINETAS RIVER BASIN

03039925 NORTH FORK BENS CREEK AT NORTH FORK RESERVOIR, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1984 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	3.71	6.52	9.20	8.56	11.2	14.9	11.9	10.1	4.79	3.73	2.49	3.99
MAX	11.8	11.9	14.4	17.8	18.0	23.0	23.7	17.7	10.0	10.5	5.86	16.0
(WY)	1997	1994	1997	1996	1991	1994	1993	1997	1989	1990	1994	1996
MIN	.42	1.26	2.96	4.75	2.20	5.01	5.47	3.45	1.02	.67	.33	.35
(WY)	1992	1992	1990	1997	1993	1990	1995	1991	1991	1991	1991	1991

SUMMARY STATISTICS

FOR 1996 CALENDAR YEAR

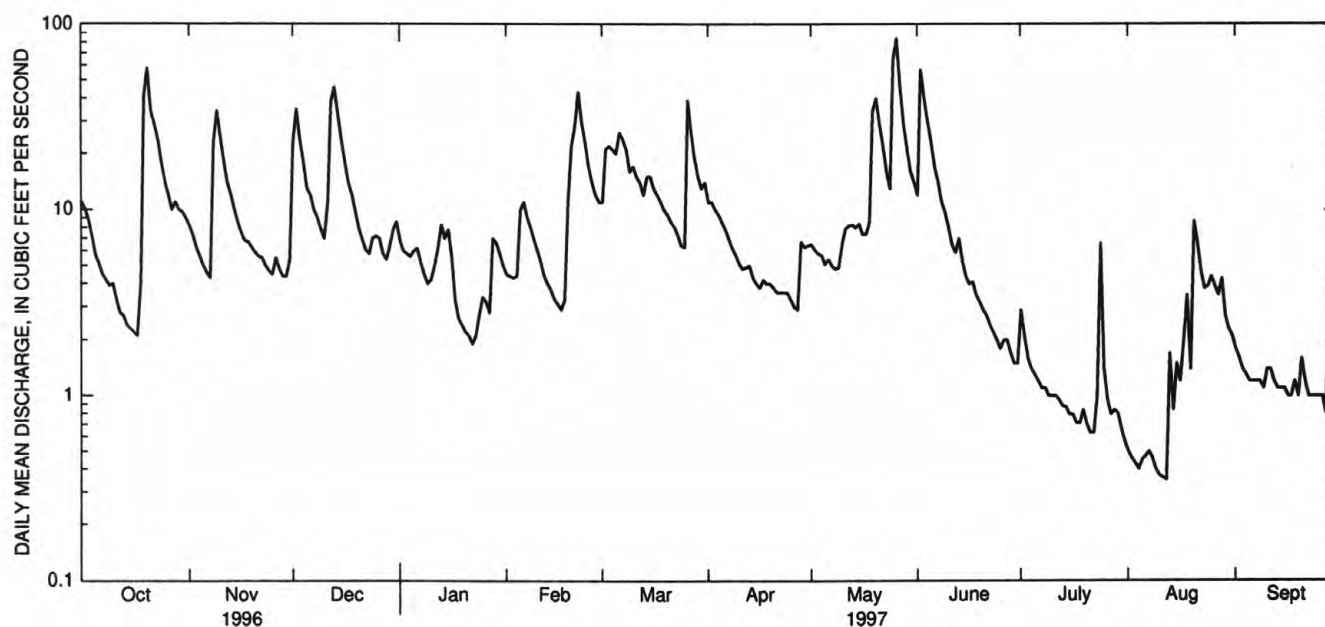
FOR 1997 WATER YEAR

WATER YEARS 1984 - 1997

ANNUAL TOTAL	4709.3	3187.39	7.57
ANNUAL MEAN	12.9	8.73	11.1
HIGHEST ANNUAL MEAN			5.22
LOWEST ANNUAL MEAN			93
HIGHEST DAILY MEAN	890 Jan 19	84 May 26	93 Apr 2 1993
LOWEST DAILY MEAN	1.2 Sep 2	0.35 Aug 12	.18 Aug 16 1991
ANNUAL SEVEN-DAY MINIMUM	1.4 Aug 28	0.42 Aug 6	.22 Aug 12 1991
INSTANTANEOUS PEAK FLOW		129 May 25	204 Jan 19 1996
INSTANTANEOUS PEAK STAGE		4.53 May 25	5.36 Jan 19 1996
INSTANTANEOUS LOW FLOW		.40 Aug 8-13	.06 Sep 18 1985
ANNUAL RUNOFF (CFSM)	3.73	2.53	2.20
ANNUAL RUNOFF (INCHES)	50.78	34.37	29.82
10 PERCENT EXCEEDS	27	22	17
50 PERCENT EXCEEDS	8.6	5.5	4.8
90 PERCENT EXCEEDS	2.3	1.0	1.0

a Computed using estimated discharges.

e Estimated.



October 1, 1996 to September 30, 1997

KISKIMINETAS RIVER BASIN

03040000 STONYCREEK RIVER AT FERNDAL, PA
(National water-quality assessment station)

LOCATION.--Lat 40°17'08", long 78°55'15", Cambria County, Hydrologic unit 05010007, on right bank 50 ft upstream from highway bridge at Ferndale, 0.4 mi downstream from Bens Creek, 1.2 mi upstream from Johnstown city limits, and 5.2 mi upstream from confluence with Little Conemaugh River.

DRAINAGE AREA.--451 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1913 to March 1936, October 1938 to current year. Monthly discharge only for some periods, published in WSP 1305. Monthly figures adjusted for storage and diversion for October 1918 to September 1921, published in WSP 503, 523, have been found in error and should not be used. Published as "at Johnstown" 1914-36, and as "Stony Creek at Ferndale" 1938-79. Gage-height records collected in this vicinity since 1885 are contained in reports of U.S. Weather Bureau.

REVISED RECORDS.--WSP 743: Drainage area. WSP 1305: 1915, 1918, 1923-26. WSP 1435: 1920-21, 1932, 1941 (M), 1943 (M), 1945-46 (M). WDR PA-78-3: 1977 (M). See also PERIOD OF RECORD.

GAGE.--Water-stage recorder. Datum of gage is 1,184.06 ft above sea level. Prior to Mar. 19, 1936, nonrecording gage at site 3.5 mi downstream at different datum. Dec. 8, 1938 to Jan. 30, 1940, nonrecording gage at site 50 ft downstream at present datum.

REMARKS.--Records good except for estimated daily discharges, which are fair. Regulation by mine pumpage and reservoirs and diversion above station; the four largest reservoirs have a combined capacity of 42,360 acre-ft. Figures of daily discharge do not include diversion from Stonycreek River and Quemahoning Creek Reservoir to plants of Bethlehem Steel Co., and from Mill Creek, Dalton Run, and North Fork Bens Creek Reservoirs for water supply of city of Johnstown. Several measurements of water temperature were made during the year. U.S. Army Corps of Engineers satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	837	516	2220	770	637	1170	1090	337	1640	250	93	236
2	737	470	4500	737	658	2500	934	290	4070	291	91	232
3	e700	426	2670	731	724	2550	830	307	e3300	245	87	227
4	e660	393	1930	748	837	e1900	771	346	e2900	211	88	222
5	e620	369	1540	749	2050	e2400	729	331	e2300	190	104	220
6	e580	349	e1400	705	1760	3540	684	322	e1800	176	109	217
7	e560	345	e1200	597	1200	2630	626	335	e1400	171	102	216
8	e540	2220	e1050	510	1000	2060	542	318	e1050	160	90	216
9	e520	3950	e960	512	838	1760	508	385	e900	163	93	217
10	e570	2550	e840	542	721	1870	480	555	e800	303	86	222
11	489	1770	e1100	453	e600	1680	459	619	674	290	85	271
12	437	1330	2860	401	e520	1410	461	558	611	280	182	263
13	409	1080	3700	359	e470	1190	573	497	1110	275	326	234
14	397	933	2880	357	e440	1630	503	479	1110	276	180	221
15	384	805	2050	337	e420	1990	412	472	746	275	152	216
16	369	706	1610	e310	e400	1460	368	404	597	277	141	183
17	326	641	1380	e290	e370	1220	365	370	550	272	182	86
18	257	623	1190	e270	e400	1130	401	360	503	260	434	96
19	1720	630	1050	e250	e1100	1300	384	1400	558	276	291	80
20	3090	577	890	e250	e3000	1180	363	1510	493	270	411	221
21	2070	515	749	e240	3010	1030	332	1120	e370	239	578	250
22	1900	469	713	e230	3470	927	314	835	e330	119	418	242
23	1770	434	721	e300	2550	824	306	677	e300	144	339	237
24	1420	407	876	e430	1890	748	302	583	291	186	298	264
25	1140	394	972	e400	1490	703	285	5230	268	174	281	267
26	950	642	758	e380	1270	2750	262	9490	265	137	279	265
27	837	745	703	e350	1240	2310	248	3550	264	121	265	262
28	842	546	738	e800	1220	1580	381	2160	237	127	304	304
29	836	477	868	1010	---	1350	410	1660	221	121	265	1270
30	721	501	1100	773	---	1220	352	1490	213	105	250	599
31	598	---	896	636	---	1180	---	1340	---	98	244	---
TOTAL	27286	25813	46114	15427	34285	51192	14675	38330	29871	6482	6848	8056
MEAN	880	860	1488	498	1224	1651	489	1236	996	209	221	269
MAX	3090	3950	4500	1010	3470	3540	1090	9490	4070	303	578	1270
MIN	257	345	703	230	370	703	248	290	213	98	85	80
CFSM	1.95	1.91	3.30	1.10	2.71	3.66	1.08	2.74	2.21	.46	.49	.60
IN.	2.25	2.13	3.80	1.27	2.83	4.22	1.21	3.16	2.46	.53	.56	.66

e Estimated.

03040000 STONYCREEK RIVER AT FERNDALE, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	246	405	687	769	1034	1621	1345	832	499	265	180	191
MAX	1514	2099	2162	1929	2575	3581	3426	1792	1773	874	1098	1449
(WY)	1977	1986	1973	1952	1986	1994	1993	1978	1972	1977	1979	1996
MIN	13.6	20.4	48.4	137	262	367	336	186	77.4	28.4	26.3	18.9
(WY)	1964	1954	1954	1977	1963	1990	1946	1941	1965	1965	1957	1943

SUMMARY STATISTICS

FOR 1996 CALENDAR YEAR

FOR 1997 WATER YEAR

WATER YEARS 1939 - 1997

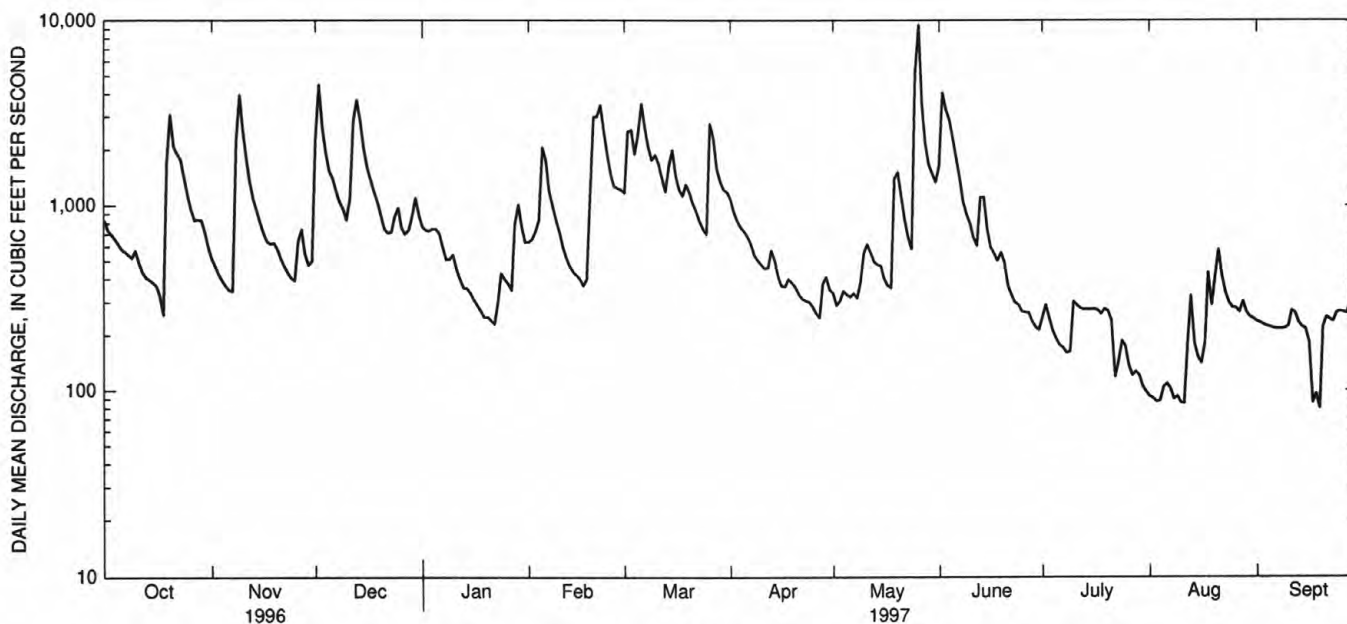
ANNUAL TOTAL	442298	304379	
ANNUAL MEAN	1208	834	
HIGHEST ANNUAL MEAN			673
LOWEST ANNUAL MEAN			1044
HIGHEST DAILY MEAN	e15200	Jan 19	1996
LOWEST DAILY MEAN	120	Sep 3	1954
ANNUAL SEVEN-DAY MINIMUM	142	Aug 30	1972
INSTANTANEOUS PEAK FLOW			15900
INSTANTANEOUS PEAK STAGE			11
INSTANTANEOUS LOW FLOW			12
ANNUAL RUNOFF (CFSM)	2.68		a59000
ANNUAL RUNOFF (INCHES)	36.48		b30.26
10 PERCENT EXCEEDS	2590		c5.0
50 PERCENT EXCEEDS	796		1.49
90 PERCENT EXCEEDS	280		20.28

a From rating curve extended above 13,000 ft³/s on the basis of slope-area and contracted-opening measurement of peak flow.

b From highwater mark, site and datum then in use.

c Minimum observed.

e Estimated.



October 1, 1996 to September 30, 1997

KISKIMINETAS RIVER BASIN

03040000 STONYPOLY RIVER AT FERNDAL, PA--Continued
(National Water-Quality Assessment station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1975 to September 1981, September 1992 to May 1994, April 1996 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: July 1997 to September 1997.

pH: July 1997 to September 1997.

WATER TEMPERATURE: January 1978 to September 1979, November 1996 to current year.

SUSPENDED SEDIMENT DISCHARGE: February 1977 to September 1979.

INSTRUMENTATION.--From January 1978 to September 1979, water temperatures were once daily readings by an observer and suspended sediment samples were collected daily and more often during storm events by an observer. From November 1996 to current year, daily records of water temperature, specific conductance and pH were measured and collected at hourly intervals with in-situ probes and electronic data loggers.

REMARKS.--All water-quality samples were collected and analyzed by the U.S. Geological Survey except those furnished by the Pennsylvania Department of Environmental Resources as noted. Interruptions in the daily record were due to frozen river conditions or malfunctions of the equipment. Additional sites in the (NAWQA) fixed-station network are shown in figure 6 on page 28. An explanation of selected abbreviations used in the water-quality tables are given on pages 29-31.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 27.5°C, July 3, 1997; minimum, 0.0°C, many days during winter period.

SEDIMENT CONCENTRATIONS: Maximum daily, 2,800 mg/L, June 17, 1978; minimum daily, 2 mg/L, September 9, 10, 11, 1978.

SEDIMENT DISCHARGES: Maximum daily, 20,900 tons, March 5, 1979; minimum daily, 0.44 ton, September 10, 11, 1978.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 27.5°C, June 25, July 3 and 29, 1997; minimum, 0.0°C, on many days during winter periods.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE	TIME	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 (MG/L) (00300)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	ACIDITY TOTAL HEATED (MG/L AS CACO3) (70508)	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)
OCT												
22...	1030	2000	277	6.9	9.5	725	10.6	94	4.0	23	8.8	7.1
NOV												
18...	1000	631	393	6.3	5.0	729	11.6	150	13	38	13	10
DEC												
11...	1100	822	387	6.4	4.0	722	12.8	140	8.4	33	13	13
JAN												
16...	1015	420	485	6.0	0.5	716	14.3	170	16	42	17	9.3
FEB												
19...	1045	940	450	6.6	3.5	729	12.6	150	9.6	38	14	22
MAR												
24...	1200	743	378	6.3	5.0	742	12.8	150	12	36	14	11
APR												
14...	1100	501	443	6.4	7.0	730	11.6	170	11	41	17	13
MAY												
15...	1015	496	441	6.8	11.0	719	10.4	170	6.0	43	16	14
26...	0930	9980	187	7.1	13.0	727	10.5	64	3.2	17	5.4	5.6
JUN												
10...	1030	774	355	6.8	14.5	733	9.3	140	4.0	34	13	7.9
JUL												
01...	1145	191	657	6.1	21.0	727	8.7	290	10	72	26	12
AUG												
06...	1045	100	988	5.9	20.0	730	9.7	450	7.6	120	40	26
SEP												
03...	1225	208	612	7.1	20.0	729	10.6	240	3.8	64	21	18
17...	1315	66	598	6.5	20.0	730	9.5	260	6.8	66	24	12

KISKIMINETAS RIVER BASIN

03040000 STONycREEK RIVER AT FERNDALe, PA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LINITy 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)	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)	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)
OCT 22...	1.9	8	98	7.6	<0.10	5.6	174	0.020	0.610	0.070	0.30
NOV 18...	1.5	6	150	7.3	0.10	6.8	239	<0.010	0.680	0.150	0.30
DEC 11...	1.5	7	130	21	0.10	6.4	236	0.020	0.820	0.210	0.30
JAN 16...	1.5	4	190	12	<0.10	6.6	298	<0.010	0.610	0.110	0.30
FEB 19...	1.8	14	140	34	0.10	5.8	277	0.010	0.920	0.150	0.40
MAR 24...	1.4	17	140	12	<0.10	5.9	261	<0.010	0.810	0.130	0.20
APR 14...	1.7	6	180	13	0.12	6.0	297	<0.010	0.460	0.180	0.20
MAY 15...	1.7	8	170	12	0.10	5.4	289	<0.010	0.579	0.244	0.29
26...	1.5	9	50	8.5	<0.10	4.7	96	<0.010	1.00	0.087	0.49
JUN 10...	1.5	6	140	7.9	<0.10	6.0	225	<0.010	0.592	0.102	0.24
JUL 01...	2.0	4	290	9.6	0.17	8.0	480	<0.010	0.377	0.218	0.29
AUG 06...	2.7	2	480	13	0.17	8.2	797	0.021	0.574	0.421	0.64
SEP 03...	2.3	10	240	13	0.13	5.2	405	0.019	0.893	0.137	0.24
17...	2.4	5	260	13	0.18	7.1	419	<0.010	0.730	0.389	0.54
DATE	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)	ALUM- INUM, DIS- SOLVED (MG/L AS AL) (01106)	IRON, DIS- SOLVED (MG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (MG/L AS MN) (01056)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681)	CARBON, ORGANIC SUS- PENDEd TOTAL (MG/L AS C) (00689)	SEDI- MENT, SUS- PENDEd (MG/L) (80154)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
OCT 22...	<0.20	0.040	0.010	<0.010	19	230	650	1.8	2.0	12	72
NOV 18...	0.20	0.010	<0.010	<0.010	40	990	1100	1.2	0.70	12	98
DEC 11...	0.20	0.020	<0.010	<0.010	27	740	1100	1.1	0.90	6	90
JAN 16...	<0.20	0.020	<0.010	<0.010	164	1000	1400	0.80	1.4	29	42
FEB 19...	<0.20	0.050	<0.010	<0.010	16	440	960	1.1	0.70	22	77
MAR 24...	<0.20	0.030	<0.010	<0.010	29	600	900	0.90	0.30	11	46
APR 14...	<0.20	<0.010	<0.010	<0.010	27	480	1070	1.1	0.70	10	51
MAY 15...	0.31	<0.010	<0.010	<0.010	21	310	928	1.0	0.90	8	66
26...	0.23	0.073	<0.010	<0.010	58	59	310	2.9	--	63	73
JUN 10...	<0.20	<0.010	<0.010	<0.010	19	290	713	1.1	0.80	5	87
JUL 01...	0.29	<0.010	<0.010	<0.010	54	290	1470	1.1	0.30	4	71
AUG 06...	0.48	0.011	<0.010	<0.010	168	210	1830	1.1	0.40	4	29
SEP 03...	0.34	<0.010	0.018	<0.010	42	83	948	1.2	0.30	4	61
17...	0.38	0.017	<0.010	<0.010	23	570	886	--	--	3	83

KISKIMINETAS BASIN

03040000 STONYCREEK RIVER AT FERNDAL, PA--Continued

REMARKS.--The following data are for dissolved trace elements in surface water filtered through a 0.45 μ m filter.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	ARSENIC DIS- SOLVED (μ G/L AS AS) (01000)	BARIUM, DIS- SOLVED (μ G/L AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (μ G/L AS BE) (01010)	CADMIUM DIS- SOLVED (μ G/L AS CD) (01025)	CHRO- MIUM, DIS- SOLVED (μ G/L AS CR) (01030)	COBALT, DIS- SOLVED (μ G/L AS CO) (01035)	COPPER, DIS- SOLVED (μ G/L AS CU) (01040)
MAY 15...	1015	496	<1	35	<1.0	<1.0	<1.0	25	<1.0
SEP 17...	1315	66	<1	36	<1.0	<1.0	<1.0	53	4.2

DATE	LEAD, DIS- SOLVED (μ G/L AS PB) (01049)	MOLYB- DENUM, DIS- SOLVED (μ G/L AS MO) (01060)	NICKEL, DIS- SOLVED (μ G/L AS NI) (01065)	SILVER, DIS- SOLVED (μ G/L AS AG) (01075)	ZINC, DIS- SOLVED (μ G/L AS ZN) (01090)	ANTI- MONY, DIS- SOLVED (μ G/L AS SB) (01095)	SELE- NIUM, DIS- SOLVED (μ G/L AS SE) (01145)	URANIUM NATURAL DIS- SOLVED (μ G/L AS U) (22703)
MAY 15...	<1.0	<1.0	41	<1.0	76	<1.0	<1	<1.0
SEP 17...	<1.0	<1.0	79	<1.0	184	<1.0	<1	<1.0

KISKIMINETAS RIVER BASIN

03040000 STONYCREEK RIVER AT FERNDAL, PA--Continued

REMARKS.--The following data are for trace elements and other constituents that were part of the suspended-sediment fraction of the water sample. Suspended sediments were dewatered using a continuous flow centrifuge, dried, and analyzed directly for total metals using a nitric, hydrofluoric, perchloric acid digestion. Whole water contributions by the suspended sediment were then calculated using the suspended-sediment concentration in kilograms per liter (kg/L) and the analyte concentration in milligrams per kilogram (mg/kg) from the direct analysis of the suspended sediments, resulting in micrograms per gram ($\mu\text{g/g}$) concentrations. Values reported in percent are the percent of that constituent in the suspended sediment. When no trace element was detected in the sample, the default reporting value is the method detection limit preceded by a less-than sign (<).

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SEDI- MENT SUSP., FLOW- THROUGH CENTRIF (MG/L) (50279)	ALUM- INUM SED,SUS PERCENT (30221)	AN- TIMONY SED. SUSP. ($\mu\text{G/G}$) (29816)	ARSENIC SED. SUSP. ($\mu\text{G/G}$) (29818)	BARIUM SED. SUSP. ($\mu\text{G/G}$) (29820)	BERYL- LIUM SED. SUSP. ($\mu\text{G/G}$) (29822)	CADMIUM SED. SUSP. ($\mu\text{G/G}$) (29826)	CARBON SED. SUSP. PERCENT (30244)	CARBON, ORGANIC SUS- PENDE PERCENT (50465)
MAY 15...	1015	496	10	8.8	1	6	150	27	1.6	7.0	7.0
SEP 17...	1315	66	10	11	1	6	69	41	0.6	4.9	5.0

DATE	CHRO- MIUM SEDI- SED. SUSP. ($\mu\text{G/G}$) (29829)	COBALT SEDI- MENT SUSP. ($\mu\text{G/G}$) (35031)	COPPER SED. SUSP. ($\mu\text{G/G}$) (29832)	IRON SEDI- MENT SUSP. PERCENT (30269)	LEAD SED. SUSP. ($\mu\text{G/G}$) (29836)	LITHIUM SEDI- MENT SUSP. ($\mu\text{G/G}$) (35050)	MAN- GANESE SED. SUSP. ($\mu\text{G/G}$) (29839)	MERCURY SED. SUSP. ($\mu\text{G/G}$) (29841)	MOLYB- DENUM SED. SUSP. ($\mu\text{G/G}$) (29843)	NICKEL SED. SUSP. ($\mu\text{G/G}$) (29845)
MAY 15...	53	120	130	9.1	31	22	2800	.12	<25	150
SEP 17...	21	47	170	10	25	24	1300	.06	5	84

DATE	PHOS- PHORUS SEDI- MENT SUSP. PERCENT (30292)	SELE- NIUM SED. SUSP. ($\mu\text{G/G}$) (29847)	SILVER SED. SUSP. ($\mu\text{G/G}$) (29850)	STRON- TIUM SEDI- MENT SUSP. ($\mu\text{G/G}$) (35040)	SULFUR SEDI- MENT SUSP. PERCENT (30308)	THAL- LIUM SUS SED ($\mu\text{G/G}$) (49955)	TITA- NIUM SEDI- MENT SUSP. PERCENT (30317)	URANIUM SEDI- MENT SUSP. ($\mu\text{G/G}$) (35046)	VANA- DIUM SED. SUSP. ($\mu\text{G/G}$) (29853)	ZINC SED. SUSP. ($\mu\text{G/G}$) (29855)
MAY 15...	2900	2	<3	120	4.7	<250	.090	<250	28	1100
SEP 17...	2800	2	<1	120	6.1	<50	.040	<50	8	760

KISKIMINETAS RIVER BASIN

03040000 STONYCREEK RIVER AT FERNDAL, PA--Continued

SPECIFIC CONDUCTANCE, $\mu\text{S}/\text{CM}$ @ 25 DEGREES CELSIUS, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	---	---	---	---	---	---	934	858	902	521	504	511
2	---	---	---	690	635	654	953	833	893	521	502	511
3	---	---	---	720	643	684	962	876	909	---	---	---
4	---	---	---	691	658	674	955	876	925	---	---	---
5	---	---	---	714	648	690	945	843	913	---	---	---
6	---	---	---	687	651	672	---	---	---	---	---	---
7	---	---	---	702	648	687	880	790	845	---	---	---
8	---	---	---	723	699	712	881	799	836	---	---	---
9	---	---	---	783	719	750	890	802	846	---	---	---
10	---	---	---	783	512	606	904	795	854	---	---	---
11	---	---	---	529	502	520	922	836	879	---	---	---
12	---	---	---	519	496	510	922	623	849	---	---	---
13	---	---	---	499	467	483	671	543	615	---	---	---
14	---	---	---	484	472	480	602	543	569	---	---	---
15	---	---	---	503	478	488	640	602	623	---	---	---
16	---	---	---	517	500	510	672	623	642	---	---	---
17	---	---	---	521	496	510	690	635	656	---	---	---
18	---	---	---	528	498	513	670	582	609	---	---	---
19	---	---	---	552	502	519	605	574	593	---	---	---
20	---	---	---	561	531	553	579	527	563	---	---	---
21	---	---	---	531	491	509	527	469	492	---	---	---
22	---	---	---	678	491	574	469	424	433	---	---	---
23	---	---	---	838	678	779	433	421	427	---	---	---
24	---	---	---	879	664	789	442	428	435	---	---	---
25	---	---	---	766	713	747	457	441	448	---	---	---
26	---	---	---	791	708	750	464	449	456	---	---	---
27	---	---	---	842	739	789	469	461	464	---	---	---
28	---	---	---	867	776	817	479	463	471	---	---	---
29	---	---	---	854	771	825	492	479	484	---	---	---
30	---	---	---	921	813	870	498	485	491	---	---	---
31	---	---	---	917	798	878	504	493	497	---	---	---
MONTH	---	---	---	921	467	651	962	421	654	521	502	511

KISKIMINETAS RIVER BASIN
03040000 STONYCREEK RIVER AT FERNDAL, PA--Continued

pH VALUES, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAY	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	---	---	---	---	---	---	4.8	4.7	4.7	5.8	5.7	5.7
2	---	---	---	4.8	4.5	4.6	4.9	4.8	4.8	5.9	5.8	5.8
3	---	---	---	4.7	4.6	4.6	4.8	4.6	4.7	---	---	---
4	---	---	---	4.7	4.6	4.7	4.8	4.6	4.7	6.6	6.4	6.5
5	---	---	---	4.7	4.5	4.6	4.9	4.7	4.8	6.4	6.4	6.4
6	---	---	---	4.6	4.5	4.6	---	---	---	6.4	6.3	6.4
7	---	---	---	4.6	4.6	4.6	5.1	5.0	5.1	6.4	6.3	6.3
8	---	---	---	4.6	4.4	4.5	5.4	5.1	5.3	6.4	6.3	6.4
9	---	---	---	4.4	4.4	4.4	5.5	5.3	5.3	6.4	6.3	6.4
10	---	---	---	5.1	4.4	4.9	5.3	4.8	5.0	6.3	6.2	6.3
11	---	---	---	5.3	5.1	5.2	5.0	4.8	4.9	6.2	6.1	6.1
12	---	---	---	5.7	5.3	5.6	5.9	4.5	4.9	6.3	6.1	6.2
13	---	---	---	5.9	5.7	5.8	5.9	4.8	4.9	6.4	6.2	6.3
14	---	---	---	6.2	5.9	6.1	4.9	4.7	4.8	6.5	6.4	6.4
15	---	---	---	6.4	6.2	6.3	4.8	4.7	4.8	6.6	6.4	6.5
16	---	---	---	6.3	6.0	6.1	4.9	4.7	4.8	6.7	6.5	6.6
17	---	---	---	6.8	6.3	6.6	4.8	4.5	4.7	---	---	---
18	---	---	---	6.5	6.3	6.4	4.9	4.5	4.8	5.2	4.8	4.9
19	---	---	---	6.3	6.1	6.2	4.8	4.7	4.8	4.8	4.7	4.7
20	---	---	---	6.2	6.0	6.0	4.9	4.7	4.8	6.1	4.7	5.0
21	---	---	---	6.2	6.0	6.1	5.1	4.9	5.0	6.2	6.0	6.1
22	---	---	---	6.2	5.4	6.1	5.2	5.1	5.1	6.5	6.2	6.3
23	---	---	---	5.4	4.8	4.9	5.3	5.1	5.2	6.5	6.5	6.5
24	---	---	---	5.0	4.7	4.8	5.3	5.0	5.1	6.7	6.5	6.6
25	---	---	---	5.3	4.9	5.0	5.3	5.1	5.1	6.7	6.6	6.7
26	---	---	---	5.0	4.8	4.9	5.3	5.3	5.3	6.7	6.6	6.7
27	---	---	---	4.8	4.6	4.7	5.4	5.3	5.4	6.7	6.6	6.7
28	---	---	---	4.9	4.8	4.8	5.5	5.3	5.4	6.7	6.6	6.7
29	---	---	---	5.0	4.7	4.8	5.6	5.4	5.5	6.7	6.1	6.1
30	---	---	---	4.8	4.6	4.7	5.6	5.4	5.5	6.1	5.9	5.9
31	---	---	---	4.8	4.7	4.7	5.7	5.6	5.6	---	---	---
MAX	---	---	---	6.8	6.3	6.6	5.9	5.6	5.6	6.7	6.6	6.7
MIN	---	---	---	4.4	4.4	4.4	4.8	4.5	4.7	4.8	4.7	4.7

KISKIMINETAS RIVER BASIN
03040000 STONYCREEK RIVER AT FERNDAL, PA--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	---	---	---	---	---	---	7.0	3.5	5.0	5.0	3.5	4.0
2	---	---	---	---	---	---	6.5	4.5	5.5	6.0	3.5	4.5
3	---	---	---	---	---	---	5.0	3.5	4.5	8.5	6.0	7.0
4	---	---	---	---	---	---	5.0	4.5	4.5	9.5	8.0	8.5
5	---	---	---	---	---	---	4.5	3.0	4.0	9.5	8.0	9.0
6	---	---	---	---	---	---	3.5	3.0	3.5	8.0	4.0	6.0
7	---	---	---	---	---	---	4.5	3.0	3.5	4.0	1.0	2.5
8	---	---	---	12.5	10.0	11.5	4.0	3.0	3.5	1.0	.0	.5
9	---	---	---	10.0	8.0	9.0	3.5	2.0	2.5	.5	.0	.0
10	---	---	---	8.0	6.5	7.5	3.5	2.0	2.5	1.5	.0	.5
11	---	---	---	6.5	5.5	6.0	4.5	3.5	4.0	.5	.0	.0
12	---	---	---	5.5	4.0	5.0	6.0	4.5	5.5	.0	.0	.0
13	---	---	---	4.5	3.5	4.0	6.0	5.5	6.0	.0	.0	.0
14	---	---	---	4.5	3.5	4.0	5.5	4.0	5.0	.0	.0	.0
15	---	---	---	3.5	2.0	2.5	4.0	3.5	4.0	.0	.0	.0
16	---	---	---	3.5	1.5	2.5	4.5	3.5	4.0	.0	.0	.0
17	---	---	---	4.5	2.0	3.0	6.0	4.5	5.0	.0	.0	.0
18	---	---	---	6.0	4.5	5.0	5.5	4.5	5.0	.0	.0	.0
19	---	---	---	6.0	5.0	5.5	4.5	1.5	3.5	.0	.0	.0
20	---	---	---	5.0	3.5	4.5	1.5	.0	.0	.0	.0	.0
21	---	---	---	3.5	3.0	3.5	.5	.0	.0	.0	.0	.0
22	---	---	---	3.5	3.0	3.0	1.5	.0	.5	.0	.0	.0
23	---	---	---	4.5	2.5	3.5	4.0	1.5	3.0	.0	.0	.0
24	---	---	---	4.5	3.5	4.0	5.0	3.5	4.5	.0	.0	.0
25	---	---	---	5.5	4.5	5.0	3.5	1.0	2.0	.0	.0	.0
26	---	---	---	6.0	4.0	5.5	1.5	.0	1.0	.0	.0	.0
27	---	---	---	4.0	2.0	3.0	3.5	1.5	2.5	.0	.0	.0
28	---	---	---	2.0	1.0	1.5	5.0	3.5	4.0	.0	.0	.0
29	---	---	---	3.0	1.0	2.0	6.5	5.0	5.5	.0	.0	.0
30	---	---	---	3.5	2.0	2.5	6.5	5.5	6.0	.0	.0	.0
31	---	---	---	---	---	---	5.5	5.0	5.0	.0	.0	.0
MONTH	---	---	---	12.5	1.0	4.5	7.0	.0	3.7	9.5	.0	1.4

KISKIMINETAS RIVER BASIN

03040000 STONYCREEK RIVER AT FERNDAL, PA--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	.5	.0	.5	7.5	5.0	6.0	7.5	3.5	5.5	17.5	13.0	14.5
2	2.0	.5	1.5	8.0	6.5	7.5	8.5	4.5	7.0	16.0	11.5	14.0
3	2.5	1.0	1.5	6.5	3.5	4.5	9.5	6.0	8.0	15.5	12.5	14.0
4	1.0	.5	1.0	5.0	3.0	4.0	12.5	8.5	10.5	14.0	11.0	12.5
5	1.5	1.0	1.5	4.5	3.5	4.0	12.0	10.0	11.0	15.5	9.5	12.5
6	2.0	1.5	1.5	4.5	3.0	4.0	13.0	10.5	12.0	15.0	12.0	13.0
7	2.5	1.5	2.0	4.0	2.0	3.0	13.0	10.0	11.5	15.0	10.5	12.5
8	2.0	1.5	1.5	5.0	3.0	4.0	11.0	7.5	9.0	11.5	10.5	11.0
9	2.0	1.0	1.5	5.0	3.5	4.5	8.0	4.5	6.0	13.0	10.5	11.5
10	2.0	1.0	1.5	6.5	4.0	5.0	8.0	3.0	5.5	11.5	9.0	10.0
11	2.0	1.0	1.5	5.0	4.0	4.5	8.0	5.5	6.5	14.0	8.0	11.0
12	2.0	1.0	1.5	5.0	2.5	4.0	7.5	6.0	6.5	13.0	11.5	12.5
13	1.5	.0	.5	4.5	3.0	4.0	8.0	6.5	7.5	13.5	10.5	12.0
14	.5	.0	.5	4.5	3.5	4.0	12.5	5.0	7.5	12.5	11.0	11.5
15	2.5	.5	1.5	4.5	2.5	3.5	11.0	6.0	8.5	14.0	11.0	12.5
16	1.5	.0	1.0	3.0	1.5	2.5	12.5	7.5	9.5	12.5	9.5	11.0
17	3.0	.0	1.0	3.5	1.5	2.5	11.0	7.5	9.5	13.5	10.5	12.0
18	4.5	.0	2.0	5.0	3.5	4.5	9.0	6.0	7.0	17.5	11.5	14.0
19	5.0	2.5	3.5	5.0	4.0	4.5	10.5	4.5	7.5	18.0	14.0	16.5
20	3.5	2.0	3.0	5.0	3.5	4.5	12.0	6.5	9.0	17.0	14.5	15.5
21	6.0	3.0	4.0	8.0	4.0	6.0	10.0	7.0	8.5	14.5	12.0	13.0
22	5.0	3.0	4.5	7.5	4.5	6.5	12.5	6.5	9.0	15.0	10.5	12.5
23	3.5	2.0	3.0	5.5	3.5	4.5	11.5	9.0	10.0	15.5	10.5	13.5
24	4.0	2.5	3.0	6.0	3.0	4.5	12.5	9.0	10.5	18.0	12.5	15.5
25	3.5	1.0	2.5	8.5	4.5	6.5	13.0	9.5	11.0	16.5	13.5	14.5
26	4.0	1.5	2.5	8.5	5.0	6.5	16.5	9.0	12.5	15.0	12.5	13.5
27	8.0	4.0	6.0	8.5	4.5	6.5	13.0	10.5	11.5	15.5	12.5	14.0
28	7.0	5.0	6.0	10.0	6.0	8.0	12.0	9.0	10.5	16.0	12.0	14.0
29	---	---	---	9.5	8.0	9.0	14.5	8.0	11.0	14.0	12.5	13.5
30	---	---	---	9.0	8.0	8.5	17.0	11.0	13.5	16.5	13.0	14.5
31	---	---	---	8.0	4.5	6.5	---	---	---	16.0	14.5	15.0
MONTH	8.0	.0	2.2	10.0	1.5	5.1	17.0	3.0	9.1	18.0	8.0	13.1

KISKIMINETAS RIVER BASIN

03040000 STONYCREEK RIVER AT FERNDAL, PA--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	16.0	14.5	15.0	22.0	20.0	21.0	26.5	18.0	22.5	24.0	18.5	21.0
2	15.5	14.0	14.5	25.5	20.0	22.0	25.5	20.5	22.5	24.0	19.5	21.0
3	14.0	12.0	13.0	27.5	21.0	24.0	27.0	20.5	23.5	21.5	16.5	19.5
4	15.5	11.5	13.5	24.5	20.0	22.5	25.5	21.0	22.5	19.0	15.0	16.5
5	16.0	12.5	14.5	24.0	18.5	21.0	24.0	19.5	21.5	20.5	14.0	17.0
6	15.5	13.5	14.5	24.5	17.5	21.0	24.5	17.5	21.0	21.5	16.0	18.0
7	14.5	13.0	14.0	25.5	18.5	22.0	26.0	16.5	20.5	21.0	16.5	18.0
8	17.0	12.0	14.5	26.5	19.0	23.0	26.0	16.5	21.0	19.5	17.5	18.5
9	17.5	13.0	15.5	23.0	19.5	21.5	26.5	17.5	22.0	18.0	17.0	17.5
10	19.0	14.5	17.0	24.0	18.5	21.0	27.0	19.0	23.0	18.5	17.0	18.0
11	18.5	16.0	17.5	24.0	18.0	20.5	26.5	20.5	23.0	18.5	17.0	18.0
12	19.0	16.5	18.0	24.5	18.0	21.0	25.5	21.0	23.0	19.5	16.0	17.5
13	18.0	17.0	17.5	25.5	19.0	22.0	22.5	20.5	21.5	17.0	16.0	16.5
14	19.0	16.5	17.5	25.5	19.5	22.5	26.0	19.5	22.5	20.0	16.0	17.5
15	20.5	16.0	18.5	26.0	20.5	23.0	23.5	19.0	21.5	20.5	16.0	18.0
16	21.5	17.5	19.5	26.0	21.5	23.0	26.5	21.0	23.0	21.5	16.5	18.5
17	22.0	19.0	20.5	26.0	20.5	23.0	24.0	21.5	22.5	22.5	16.5	19.5
18	23.0	19.0	21.0	26.0	20.5	23.0	23.0	20.5	21.5	24.0	18.5	20.5
19	23.5	19.5	21.5	26.0	20.5	22.5	23.5	20.0	21.0	23.0	16.5	19.5
20	24.5	19.5	22.0	24.0	18.5	21.0	20.0	18.0	19.0	20.5	16.5	19.0
21	25.5	20.5	23.0	24.5	18.5	21.5	19.5	17.5	18.5	18.0	14.5	16.0
22	25.0	21.0	22.5	22.5	20.5	21.0	18.5	17.0	17.5	19.0	14.0	16.0
23	24.5	19.5	22.0	21.0	19.5	20.0	19.0	16.5	17.5	16.0	14.5	15.5
24	26.5	20.0	23.0	20.5	18.5	19.0	19.5	16.0	17.5	17.0	13.5	15.0
25	27.5	21.0	23.5	22.0	18.0	19.5	21.5	17.5	19.0	18.5	13.0	15.0
26	24.5	21.0	23.0	25.5	18.5	21.5	22.0	18.0	19.5	18.0	15.0	16.0
27	26.0	20.0	22.5	27.0	20.5	23.5	23.0	18.5	20.5	18.5	14.0	15.5
28	26.5	19.0	22.5	26.5	21.0	23.5	23.0	19.5	21.0	16.0	15.0	15.0
29	26.5	19.5	23.0	27.5	20.5	23.5	21.5	18.5	20.0	16.0	14.0	15.0
30	24.0	20.0	22.0	27.0	18.5	22.5	22.0	17.5	19.5	15.5	14.0	14.5
31	---	---	---	26.5	17.5	22.0	23.0	18.0	20.0	---	---	---
MONTH	27.5	11.5	18.9	27.5	17.5	21.9	27.0	16.0	20.9	24.0	13.0	17.5

KISKIMINETAS RIVER BASIN

03041500 CONEMAUGH RIVER AT SEWARD, PA

LOCATION.--Lat 40°25'09", long 79°01'35", Westmoreland County, Hydrologic Unit 05010007, on left bank at upstream side of bridge on State Highway 56 at Seward, 2.0 mi downstream from Findley Run, and 9 mi northwest of Johnstown.

DRAINAGE AREA.--715 mi².

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

REVISED RECORDS.--WDR PA-78-3: 1936 (M), 1977 (M).

GAGE.--Water-stage recorder. Datum of gage is 1,076.01 ft above sea level.

REMARKS.--Records good except for estimated daily discharges, which are fair. Flow regulated by steel mills and reservoirs above station; the eight most effective reservoirs have a combined capacity of 51,850 acre-ft. Several measurements of water temperature were made during the year. U.S. Army Corps of Engineers satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 18, 1936 reached a stage of 26.4 ft, from floodmarks, discharge, 75,000 ft³/s, by contracted-opening measurement at site 6.7 mi downstream, adjusted for inflow.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1390	1050	3460	1400	1110	1880	1870	667	2260	506	247	390
2	1220	969	7770	1350	1120	3900	1600	625	5990	574	235	380
3	1170	885	4500	1340	1210	4000	1420	609	4790	479	222	381
4	1080	811	3230	1330	1380	3400	1310	684	4460	411	221	374
5	990	775	2570	1330	3320	3800	1230	637	3290	369	250	368
6	924	742	2280	1300	2970	5410	1160	645	2520	347	250	368
7	888	731	1970	1160	2090	4240	1110	642	2060	339	242	362
8	857	4770	1790	1040	1680	3350	976	613	1720	372	229	358
9	860	7750	1630	1020	1400	2950	932	677	1420	326	220	354
10	935	4670	1450	1060	1220	3260	864	924	1240	426	215	372
11	862	3250	1810	920	e1000	2990	830	1010	1110	459	212	467
12	774	2500	5530	776	e900	2550	863	928	1020	439	223	450
13	734	2020	6450	e700	e820	2140	1020	850	1550	431	611	394
14	710	1720	5150	e640	e760	2830	915	813	1760	433	463	367
15	690	1460	3640	e580	e720	3620	802	887	1190	444	394	355
16	667	1290	2890	e540	e660	2690	738	783	960	436	410	348
17	651	1200	2470	e500	e640	2220	740	719	943	439	518	232
18	515	1170	2130	e480	e600	2020	768	704	887	419	1100	248
19	2810	1180	1850	e450	e1500	2180	735	2860	885	434	748	210
20	5770	1100	1570	e430	6130	1990	699	3280	823	413	820	319
21	3960	1010	1290	e420	5160	1740	689	2390	697	395	1400	393
22	3300	927	1230	e400	6460	1540	677	1730	623	333	912	372
23	2980	861	1210	e500	4420	1370	631	1360	591	426	696	360
24	2430	814	1400	e760	3160	1260	620	1170	590	454	591	388
25	1970	794	1590	e660	2460	1210	588	10400	548	398	532	391
26	1620	1090	1250	e580	2070	4410	548	16700	505	334	505	388
27	1400	1250	1180	e500	2030	3780	515	6140	497	289	478	379
28	1510	1020	1230	e1100	2110	2710	776	3710	438	298	496	405
29	1560	914	1490	1570	---	2340	837	2730	412	339	454	2670
30	1320	932	2000	1240	---	2160	716	2220	401	277	424	1090
31	1160	---	1640	1100	---	2090	---	1890	---	255	404	---
TOTAL	47707	49655	79650	27176	59100	86030	27179	69997	46180	12294	14722	13933
MEAN	1539	1655	2569	877	2111	2775	906	2258	1539	397	475	464
MAX	5770	7750	7770	1570	6460	5410	1870	16700	5990	574	1400	2670
MIN	515	731	1180	400	600	1210	515	609	401	255	212	210
CFSM	2.15	2.31	3.59	1.23	2.95	3.88	1.27	3.16	2.15	.55	.66	.65
IN.	2.48	2.58	4.14	1.41	3.07	4.48	1.41	3.64	2.40	.64	.77	.72

e Estimated.

KISKIMINETAS RIVER BASIN

03041500 CONEMAUGH RIVER AT SEWARD, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	578	853	1334	1456	1867	2820	2374	1559	1037	682	492	499
MAX	2746	3076	3620	3625	3816	5524	5288	2871	3594	2527	1690	2475
(WY)	1977	1986	1973	1952	1971	1994	1993	1960	1972	1977	1979	1996
MIN	169	189	245	391	493	779	739	512	338	242	217	169
(WY)	1964	1939	1954	1977	1993	1990	1946	1941	1965	1965	1939	1959

SUMMARY STATISTICS

FOR 1996 CALENDAR YEAR

FOR 1997 WATER YEAR

WATER YEARS 1939 - 1997

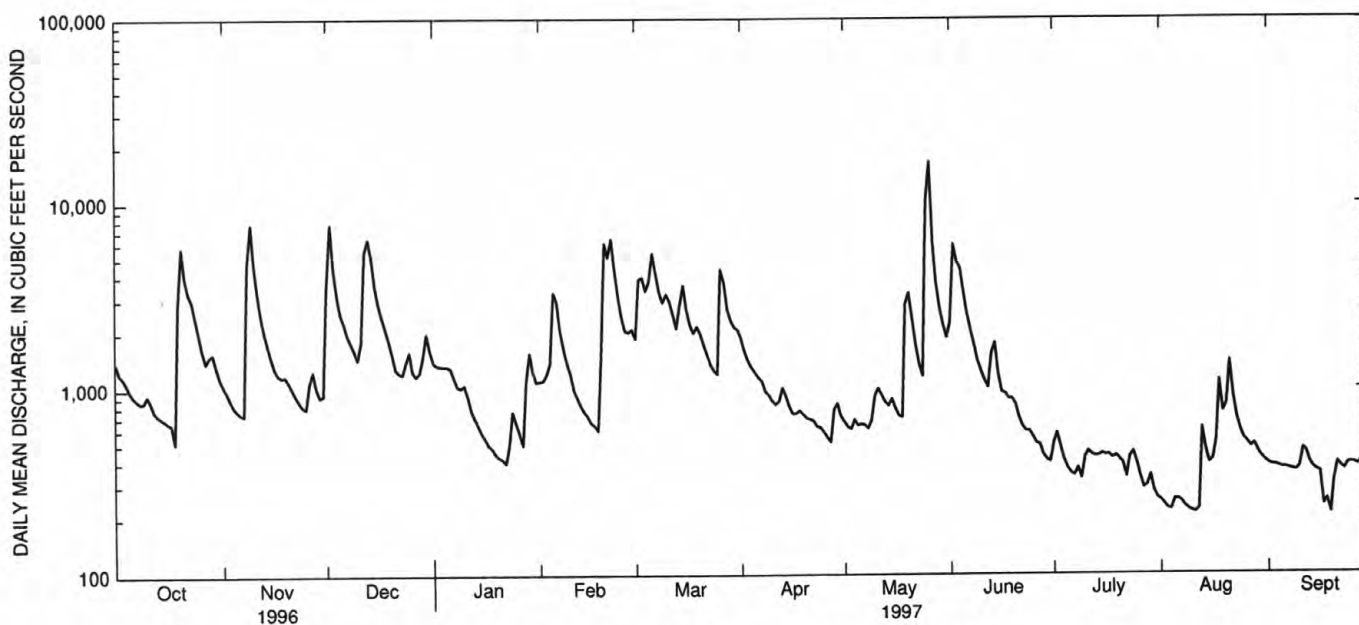
ANNUAL TOTAL	768243	533623	1293
ANNUAL MEAN	2099	1462	1814
HIGHEST ANNUAL MEAN			687
LOWEST ANNUAL MEAN			1996
HIGHEST DAILY MEAN	a26000	16700	40900
LOWEST DAILY MEAN	277	210	105
ANNUAL SEVEN-DAY MINIMUM	317	227	111
INSTANTANEOUS PEAK FLOW		29500	b115000
INSTANTANEOUS PEAK STAGE		14.63	c27.06
INSTANTANEOUS LOW FLOW		200	105
ANNUAL RUNOFF (CFSM)	2.94	2.04	1.81
ANNUAL RUNOFF (INCHES)	39.97	27.76	24.57
10 PERCENT EXCEEDS	4430	3280	2860
50 PERCENT EXCEEDS	1400	927	739
90 PERCENT EXCEEDS	536	371	261

a Also Dec. 29, 31, 1938.

b From slope-area measurement of peak flow.

c From highwater mark.

e Estimated.



October 1, 1996 to September 30, 1997

KISKIMINETAS RIVER BASIN

03042000 BLACKLICK CREEK AT JOSEPHINE, PA

LOCATION.--Lat 40°28'24", long 79°11'01", Indiana County, Hydrologic Unit 05010007, on right bank on upstream side of old concrete dam at Josephine, 0.9 mi upstream from Two Lick Creek, and 5 mi northeast of Blairsville.

DRAINAGE AREA.--192 mi².

PERIOD OF RECORD.--January 1952 to current year.

REVISED RECORDS.--WSP 1385: 1952-54 (M). WDR PA-78-3: 1977 (M).

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 975.82 ft above sea level. Prior to Aug. 25, 1953, nonrecording gage at same site and datum.

REMARKS.--Records good except for estimated daily discharges, which are fair. Some regulation at low flow by mine pumpage above station. Several measurements of water temperature were made during the year. U.S. Army Corps of Engineers satellite telemeter at station.

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Oct. 20	1000	3,000	5.84	May 25	2200	*11,600	*9.65
Nov. 8	1900	5,020	6.97				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	437	338	1390	404	e220	445	528	160	543	e90	e60	e150
2	379	311	2110	390	e200	1220	443	153	737	e110	e56	e140
3	363	284	1120	408	e220	1120	402	156	624	142	e54	e130
4	295	257	848	408	e400	830	371	167	506	e115	e52	e120
5	254	238	663	411	1610	881	347	147	438	e94	e58	e115
6	220	225	592	422	1070	e1500	324	143	e350	e80	e58	e105
7	207	223	520	366	669	e1050	293	145	e300	e70	e58	e100
8	187	2430	486	e300	546	813	260	131	e260	e78	e56	e100
9	176	3140	446	e270	469	714	250	140	e230	e72	e56	e98
10	204	1840	412	e240	e380	994	225	189	e200	e92	e54	e94
11	179	1150	529	e210	e340	848	218	232	e180	117	e52	114
12	150	780	2160	e200	e300	705	219	192	e160	115	e50	117
13	e140	607	2060	e180	e270	584	281	179	485	114	92	e110
14	e125	521	1480	e170	e250	928	250	166	521	113	285	e100
15	e110	452	952	e160	e230	1350	208	176	353	111	195	e96
16	e105	409	710	e150	e210	739	186	176	259	112	167	e88
17	e94	381	593	e150	e200	603	185	164	326	114	389	e90
18	160	386	508	e140	e190	542	181	167	338	112	812	e96
19	1340	403	451	e135	e400	503	174	1260	361	109	410	e100
20	2530	367	400	e130	1850	457	164	1950	304	e105	396	102
21	1320	334	353	e125	1570	415	146	942	231	e96	685	104
22	986	308	354	e120	2190	379	143	606	193	e80	438	e100
23	739	283	331	e260	1260	344	145	480	e160	e90	347	e96
24	596	266	390	e240	759	292	147	400	e140	e110	300	102
25	494	260	455	e350	569	275	135	4760	e115	e92	270	102
26	431	465	355	e300	496	1820	124	5540	e105	e80	247	100
27	385	482	349	e240	476	1050	120	1870	e96	e68	221	98
28	427	393	359	e400	491	664	205	1080	e90	e70	199	96
29	517	370	430	e350	---	615	240	724	e84	e80	186	630
30	419	379	540	e300	---	600	178	598	e80	e66	175	353
31	369	---	446	e260	---	601	---	515	---	e64	165	---
TOTAL	14338	18282	22792	8189	17835	23881	7092	23708	8769	2961	6643	3946
MEAN	463	609	735	264	637	770	236	765	292	95.5	214	132
MAX	2530	3140	2160	422	2190	1820	528	5540	737	142	812	630
MIN	94	223	331	120	190	275	120	131	80	64	50	88
CFSM	2.41	3.17	3.83	1.38	3.32	4.01	1.23	3.98	1.52	.50	1.12	.69
IN.	2.78	3.54	4.42	1.59	3.46	4.63	1.37	4.59	1.70	.57	1.29	.76

e Estimated.

KISKIMINETAS RIVER BASIN

03042000 BLACKLICK CREEK AT JOSEPHINE, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1953 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	178	293	436	421	558	775	597	425	258	209	154	147
MAX	812	964	1025	905	1202	1615	1086	1009	1376	1114	581	595
(WY)	1977	1986	1973	1975	1956	1967	1993	1978	1972	1977	1958	1996
MIN	30.8	33.5	68.4	135	124	219	236	84.8	65.6	43.5	37.1	35.2
(WY)	1953	1954	1961	1956	1987	1969	1997	1986	1965	1965	1962	1969

SUMMARY STATISTICS

FOR 1996 CALENDAR YEAR

FOR 1997 WATER YEAR

WATER YEARS 1953 - 1997

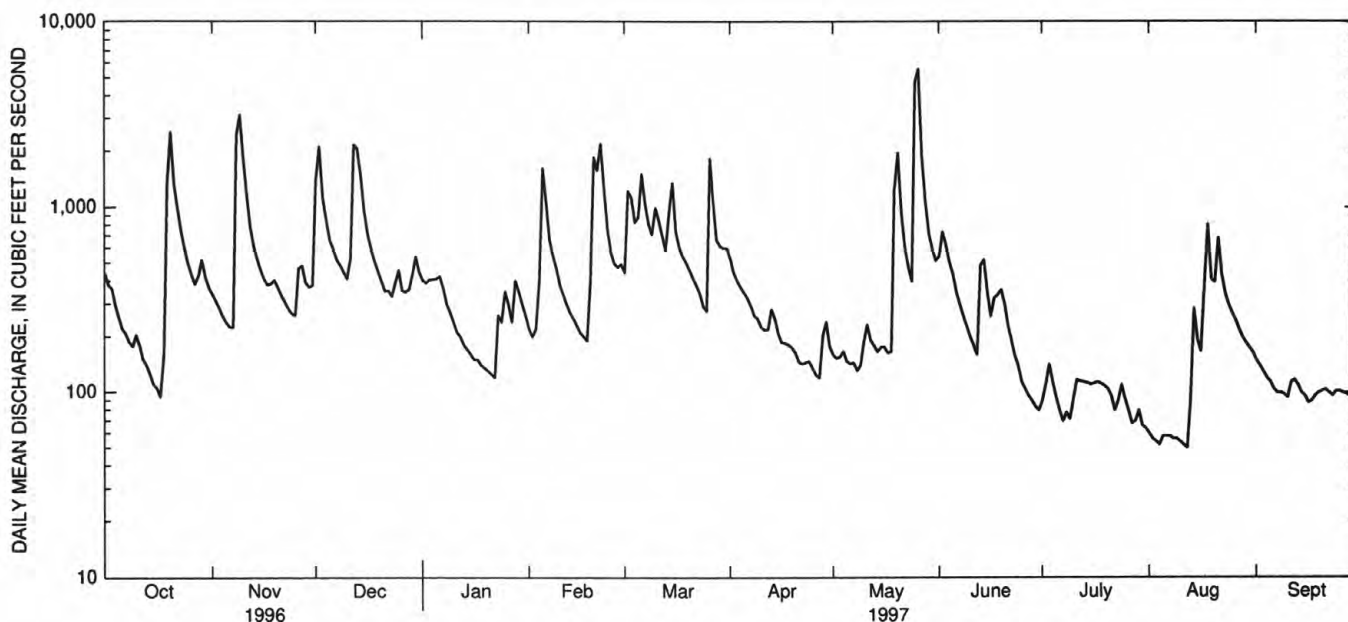
ANNUAL TOTAL	202639	158436	
ANNUAL MEAN	554	434	370
HIGHEST ANNUAL MEAN			523
LOWEST ANNUAL MEAN			242
HIGHEST DAILY MEAN	e10000	Jan 19	5540
LOWEST DAILY MEAN	48	Aug 20	50
ANNUAL SEVEN-DAY MINIMUM	87	Aug 30	55
INSTANTANEOUS PEAK FLOW			11600
INSTANTANEOUS PEAK STAGE			9.65
INSTANTANEOUS LOW FLOW			84
ANNUAL RUNOFF (CFSM)	2.88		2.26
ANNUAL RUNOFF (INCHES)	39.26		30.70
10 PERCENT EXCEEDS	1300		934
50 PERCENT EXCEEDS	368		270
90 PERCENT EXCEEDS	104		95

a From rating curve extended above 16,000 ft³/s on basis of contracted-opening measurement at gage height 11.35 ft in gage well, 12.67 ft from outside floodmark and slope-area measurement at gage height 10.93 ft.

b From floodmark in gage well.

c Also Nov. 4, 1953.

e Estimated.



October 1, 1996 to September 30, 1997

KISKIMINETAS RIVER BASIN

LAKE IN KISKIMINETAS RIVER BASIN

03042260 YELLOW CREEK LAKE.--Lat 40°35'27", long 79°03'11", Indiana County, Hydrologic Unit 05010007, in gate-house at right end of dam on Yellow Creek, at Yellow Creek State Park, and 3 mi southwest of Penn Run. DRAINAGE AREA, 52.5 mi². PERIOD OF RECORD, July 1971 to current year. GAGE, Water-stage recorder. Datum of gage is sea level (Pennsylvania Department of Environmental Protection bench mark).

Lake is formed by an earthfill dam with concrete spillway. Storage began July 11, 1971. Usable capacity, 13,800 acre-ft between elevation 1,245.5 ft, sill of 4-foot and 1.5 foot outlet gates, and 1,280.00 ft (spillway crest). No dead storage. Figures given herein represent usable contents. Lake is used for recreation. Dam built by Pennsylvania Department of Forests and Waters and now maintained by Pennsylvania Department of Environmental Protection.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 24,100 acre-ft, July 20, 1977, elevation, 1,290.29 ft; minimum (after first filling), 2,810 acre-ft, Apr. 14, 1975, elevation, 1,261.47 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 16,450 acre-ft, May 26, elevation, 1,282.94 ft; minimum, 12,820 acre-ft, Aug. 12, 13 elevation, 1,278.90 ft.

MONTHEND ELEVATION IN FEET ABOVE SEA LEVEL, AND CONTENTS AT 2400 HRS, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

Date	Elevation (feet)	Contents (acre- feet)	Change in contents (equivalent in ft ³ /s)
Sept. 30	1,280.35	14,120	-
Oct. 31	1,280.02	13,820	- 4.9
Nov. 30	1,280.11	13,900	+ 1.3
Dec. 31	1,280.00	13,800	- 1.6
CAL YR 1996	-	-	+ .62
Jan. 31	1,280.21	14,000	+ 3.3
Feb. 28	1,280.05	13,850	- 2.7
Mar. 31	1,280.38	14,140	+ 4.7
Apr. 30	1,279.55	13,400	-12
May 31	1,280.08	13,870	+ 7.6
June 30	1,279.36	13,220	-11
July 31	1,279.07	12,960	- 4.2
Aug. 31	1,279.46	13,310	+ 5.7
Sept. 30	1,279.70	13,530	+ 3.7
WTR YR 1997	-	-	- .81

KISKIMINETAS RIVER BASIN

03042280 YELLOW CREEK NEAR HOMER CITY, PA

LOCATION.--Lat 40°34'18", long 79°06'13", Indiana County, Hydrologic Unit 05010007, on left bank 0.3 mi upstream from Central Indiana County Water Authority dam, 0.4 mi upstream from Ferrier Run, which has been diverted, and 3.5 mi northeast of Homer City.

DRAINAGE AREA.--57.4 mi², excludes that of Ferrier Run.

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

REVISED RECORDS.--WDR PA-76-3: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 1,140 ft above sea level, from topographic map.

REMARKS.--Records good except for estimated daily discharges, which are fair. Flow regulated since 1971 by Yellow Creek Lake (station 03042260) 4.2 mi upstream. Several measurements of water temperature were made during the year. Satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	184	115	238	117	e150	120	182	45	136	24	12	33
2	155	103	429	113	e145	159	157	43	141	23	12	28
3	135	92	383	113	e130	218	137	43	154	22	12	26
4	115	83	314	113	e140	227	121	44	143	22	13	26
5	96	75	255	114	e380	246	109	45	126	20	13	23
6	82	69	217	116	474	321	98	43	110	19	12	21
7	71	66	192	115	355	319	e89	42	95	18	12	19
8	65	321	177	105	273	273	e78	40	83	17	11	17
9	59	1010	160	99	217	234	e68	42	71	15	11	17
10	54	738	145	93	183	228	62	50	62	14	11	15
11	47	454	147	87	157	236	56	56	56	14	11	14
12	41	330	330	e72	137	217	55	57	50	13	9.8	14
13	37	249	463	e66	117	194	63	58	77	12	16	20
14	33	204	462	e64	e100	203	65	58	103	12	17	15
15	30	175	364	e60	e86	264	61	60	98	12	26	14
16	27	149	284	e62	e78	246	57	59	e68	12	50	13
17	22	129	228	e54	e72	214	54	55	e86	12	73	12
18	30	118	193	e60	e68	190	53	54	e74	12	135	12
19	144	116	168	e90	e90	170	50	161	e130	12	138	11
20	438	109	143	e115	208	147	47	291	e110	12	123	12
21	441	99	119	e80	283	129	45	313	e90	12	152	12
22	359	91	104	e58	361	114	43	254	e70	11	150	12
23	293	84	95	e60	326	100	40	210	e62	11	129	12
24	232	79	95	e64	256	89	40	175	e52	11	104	11
25	193	75	108	e80	202	81	37	796	e42	11	87	10
26	163	98	108	e100	174	227	34	1990	41	11	71	9.8
27	138	122	103	e130	153	307	32	796	39	11	60	9.4
28	131	123	100	170	136	262	41	401	34	14	57	10
29	142	123	104	195	---	220	45	285	30	14	51	48
30	139	123	117	188	---	210	46	223	26	13	42	53
31	128	---	118	e155	---	198	---	141	---	12	38	---
TOTAL	4224	5722	6463	3108	5451	6363	2065	6930	2459	448	1658.8	549.2
MEAN	136	191	208	100	195	205	68.8	224	82.0	14.5	53.5	18.3
MAX	441	1010	463	195	474	321	182	1990	154	24	152	53
MIN	22	66	95	54	68	81	32	40	26	11	9.8	9.4
CFSM	2.37	3.32	3.63	1.75	3.39	3.58	1.20	3.89	1.43	.25	.93	.32
IN.	2.74	3.71	4.19	2.01	3.53	4.12	1.34	4.49	1.59	.29	1.08	.36

e Estimated.

KISKIMINETAS RIVER BASIN

03042280 YELLOW CREEK NEAR HOMER CITY, PA.--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1971 - 1997, BY WATER YEAR (WY) (SINCE REGULATIONS)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	56.2	97.1	142	125	168	209	153	121	78.2	66.8	31.4	40.7
MAX	186	280	254	314	374	447	246	358	324	443	90.3	163
(WY)	1978	1986	1973	1996	1981	1994	1987	1978	1972	1977	1980	1996
MIN	6.10	8.57	32.3	33.9	44.4	70.8	68.8	32.1	12.4	5.95	5.46	8.16
(WY)	1992	1992	1990	1981	1993	1990	1997	1975	1991	1971	1971	1991

SUMMARY STATISTICS

FOR 1996 CALENDAR YEAR

FOR 1997 WATER YEAR

WATER YEARS 1971 - 1997

ANNUAL TOTAL	57923	45441.0	
ANNUAL MEAN	158	124	107
HIGHEST ANNUAL MEAN			145
LOWEST ANNUAL MEAN			70.1
HIGHEST DAILY MEAN	a3050	1990	May 26
LOWEST DAILY MEAN	11	9.4	Sep 27
ANNUAL SEVEN-DAY MINIMUM	13	11	Sep 22
INSTANTANEOUS PEAK FLOW		2550	May 26
INSTANTANEOUS PEAK STAGE		6.36	May 26
ANNUAL RUNOFF (CFSM)	2.76	2.17	
ANNUAL RUNOFF (INCHES)	37.54	29.45	
10 PERCENT EXCEEDS	330	263	
50 PERCENT EXCEEDS	110	89	
90 PERCENT EXCEEDS	26	12	

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1968 - 1970, BY WATER YEAR (WY) (PRIOR TO REGULATION)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	24.6	72.0	119	113	146	136	160	148	51.0	39.6	39.9	26.9
MAX	51.8	105	142	148	210	199	243	212	74.7	75.4	63.0	66.6
(WY)	1968	1968	1969	1969	1970	1970	1970	1968	1970	1969	1969	1970
MIN	7.87	43.9	102	90.8	112	46.4	62.7	103	25.5	7.11	13.0	5.34
(WY)	1969	1970	1968	1970	1969	1969	1968	1969	1969	1968	1968	1969

SUMMARY STATISTICS

WATER YEARS 1968 - 1970

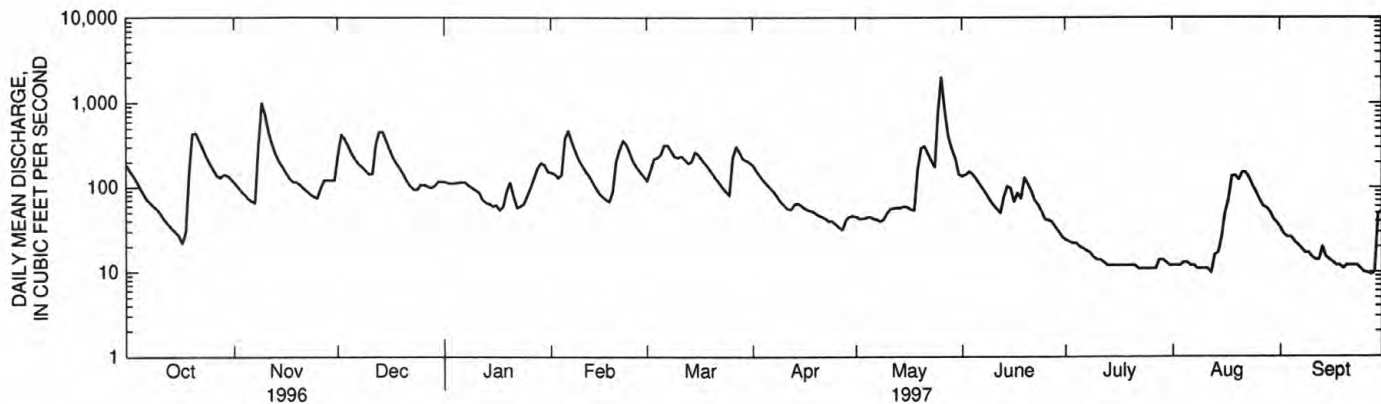
ANNUAL MEAN	89.4	
HIGHEST ANNUAL MEAN	104	1970
LOWEST ANNUAL MEAN	80.7	1969
HIGHEST DAILY MEAN	1100	Jan 31 1968
LOWEST DAILY MEAN	3.0	Jul 31 1968
ANNUAL SEVEN-DAY MINIMUM	3.3	Sep 18 1969
INSTANTANEOUS PEAK FLOW	b1300	Jan 30 1968
INSTANTANEOUS PEAK STAGE	c7.83	Jan 29 1970
INSTANTANEOUS LOW FLOW	1.4	Jul 19 1969
ANNUAL RUNOFF (CFSM)	1.56	
ANNUAL RUNOFF (INCHES)	21.16	
10 PERCENT EXCEEDS	213	
50 PERCENT EXCEEDS	50	
90 PERCENT EXCEEDS	8.0	

a From rating curve extended above 810 ft³/s on basis of computation of peak flow over dam; gage height 7.46 ft.

b About.

c Backwater from ice.

e Estimated.



October 1, 1996 to September 30, 1997

KISKIMINETAS RIVER BASIN

03042500 TWO LICK CREEK AT GRACETON, PA

LOCATION.--Lat 40°31'02", long 79°10'19", Indiana County, Hydrologic Unit 05010007, on right bank 0.8 mi upstream from highway bridge on road leading west from Graceton, 1.1 mi downstream from Tearing Run, 1.5 mi upstream from Cherry Run, and 8 mi northeast of Blairsville.

DRAINAGE AREA.--171 mi².

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

GAGE.--Water-stage recorder. Datum of gage is 981.63 ft above sea level.

REVISED RECORDS.--WDR PA-78-3: 1977 (M).

REMARKS.--Records good except for estimated daily discharges, which are fair. Diurnal fluctuation caused by mine pumpage and by sewage-disposal plant above station. Flow regulated since December 1968 by Two Lick Creek Reservoir 10 mi upstream, capacity, 16,240 acre-ft and since July 1971 by Yellow Creek Lake 11 mi upstream. Several measurements of water temperature were made during the year. U.S. Army Corps of Engineers satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	354	234	894	299	e320	264	365	174	312	71	56	63
2	320	215	1370	297	e300	425	282	110	525	76	56	59
3	261	191	1080	296	e270	511	249	157	468	75	56	63
4	241	177	795	297	e320	575	232	158	389	56	69	55
5	194	170	586	332	e1280	611	283	106	305	56	73	64
6	159	168	458	327	1090	915	240	183	263	51	61	67
7	135	221	421	311	816	789	180	107	283	50	50	59
8	135	1860	380	299	644	742	159	99	205	48	49	57
9	142	2660	347	298	565	531	152	112	171	50	84	54
10	133	1760	291	263	e440	561	146	125	131	52	67	56
11	112	1030	513	194	e350	537	142	212	118	50	65	64
12	99	699	1340	e170	e280	500	199	139	117	56	64	64
13	87	494	1730	e150	e230	468	284	136	426	57	141	55
14	83	437	1410	e135	e200	563	262	133	341	58	72	54
15	79	396	819	e120	e190	667	181	127	277	57	138	52
16	77	341	584	e110	e180	531	173	119	184	75	146	47
17	75	342	523	e105	e200	493	144	115	249	55	227	54
18	221	340	457	e590	e230	465	124	168	214	64	325	65
19	882	316	365	889	e300	408	114	602	308	60	208	63
20	1650	299	301	782	529	338	109	602	224	56	255	80
21	1000	285	231	696	708	256	114	518	174	54	264	69
22	737	271	199	336	724	239	125	412	147	55	220	64
23	618	261	183	e190	696	218	168	342	148	62	183	63
24	495	249	226	e220	515	202	169	290	123	66	149	62
25	387	200	260	e250	431	198	112	3660	100	56	133	61
26	307	369	244	e330	368	735	101	4120	109	54	112	59
27	279	356	268	e400	355	693	92	1410	132	48	97	59
28	358	345	315	540	327	568	182	784	86	70	97	71
29	383	338	340	582	---	517	139	625	80	65	84	256
30	368	359	328	460	---	488	134	517	75	51	76	137
31	296	---	308	e370	---	440	---	350	---	55	70	---
TOTAL	10667	15383	17566	10638	12858	15448	5356	16712	6684	1809	3747	2096
MEAN	344	513	567	343	459	498	179	539	223	58.4	121	69.9
MAX	1650	2660	1730	889	1280	915	365	4120	525	76	325	256
MIN	75	168	183	105	180	198	92	99	75	48	49	47
†	-3.3	-14.7	-2.4	+1.7	-6.3	+24.7	-7.0	+5.2	-8.5	-13.1	+4.9	-15.3

† Change in contents, equivalent in cubic feet per second, in Yellow Creek Lake and Two Lick Creek Reservoir.
Records of contents in Two Lick Creek Reservoir furnished by Pennsylvania Electric Co.
e Estimated.

KISKIMINETAS RIVER BASIN

03042500 TWO LICK CREEK AT GRACETON, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1968 - 1997, BY WATER YEAR (WY) (SINCE REGULATION)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	156	263	381	350	444	540	411	323	229	191	113	139
MAX	466	606	722	745	925	1230	832	658	1091	1161	310	475
(WY)	1977	1986	1973	1996	1986	1994	1984	1978	1972	1977	1977	1996
MIN	21.0	53.2	99.7	106	116	93.9	167	86.2	53.6	30.2	40.0	29.8
(WY)	1969	1992	1990	1983	1993	1969	1968	1986	1992	1968	1968	1968

SUMMARY STATISTICS

FOR 1996 CALENDAR YEAR

FOR 1997 WATER YEAR

WATER YEARS 1968 - 1997

ANNUAL TOTAL	153580		118964									
ANNUAL MEAN	420	†+ .90	326	†- 2.8								
HIGHEST ANNUAL MEAN										294		
LOWEST ANNUAL MEAN										375		1994
HIGHEST DAILY MEAN	e7400	Jan 19	4120	May 26						178		1969
LOWEST DAILY MEAN	52	Aug 15	47	Sep 16						21900	Jul 20	1977
ANNUAL SEVEN-DAY MINIMUM	62	Aug 30	51	Jul 5						11	Sep 30	1968
INSTANTANEOUS PEAK FLOW			9160	May 25						14	Sep 26	1968
INSTANTANEOUS PEAK STAGE			11.34	May 25						a32000	Jul 20	1977
10 PERCENT EXCEEDS	890		653							b18.65	Jul 20	1977
50 PERCENT EXCEEDS	272		221							614		
90 PERCENT EXCEEDS	84		59							181		
										58		

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1952 - 1967, BY WATER YEAR (WY) (PRIOR TO REGULATION)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	94.7	129	252	373	452	615	491	333	130	105	93.8	63.1
MAX	628	305	635	811	1093	1097	786	634	271	644	377	199
(WY)	1955	1960	1955	1952	1956	1963	1957	1966	1960	1956	1956	1962
MIN	14.2	23.6	50.1	118	176	234	236	99.7	42.3	25.2	16.9	15.9
(WY)	1964	1954	1961	1956	1963	1957	1963	1955	1965	1962	1957	1952

SUMMARY STATISTICS

WATER YEARS 1952 - 1967

ANNUAL MEAN	260											
HIGHEST ANNUAL MEAN	415											1956
LOWEST ANNUAL MEAN	185											1954
HIGHEST DAILY MEAN	6800											Oct 16 1954
LOWEST DAILY MEAN	8.7											Sep 14 1952
ANNUAL SEVEN-DAY MINIMUM	12											Sep 6 1957
INSTANTANEOUS PEAK FLOW	c12900											Oct 16 1954
INSTANTANEOUS PEAK STAGE	12.71											Oct 16 1954
INSTANTANEOUS LOW FLOW	2.0											Sep 14, 15 1952
ANNUAL RUNOFF (CFSM)	1.52											
ANNUAL RUNOFF (INCHES)	20.67											
10 PERCENT EXCEEDS	644											
50 PERCENT EXCEEDS	120											
90 PERCENT EXCEEDS	21											

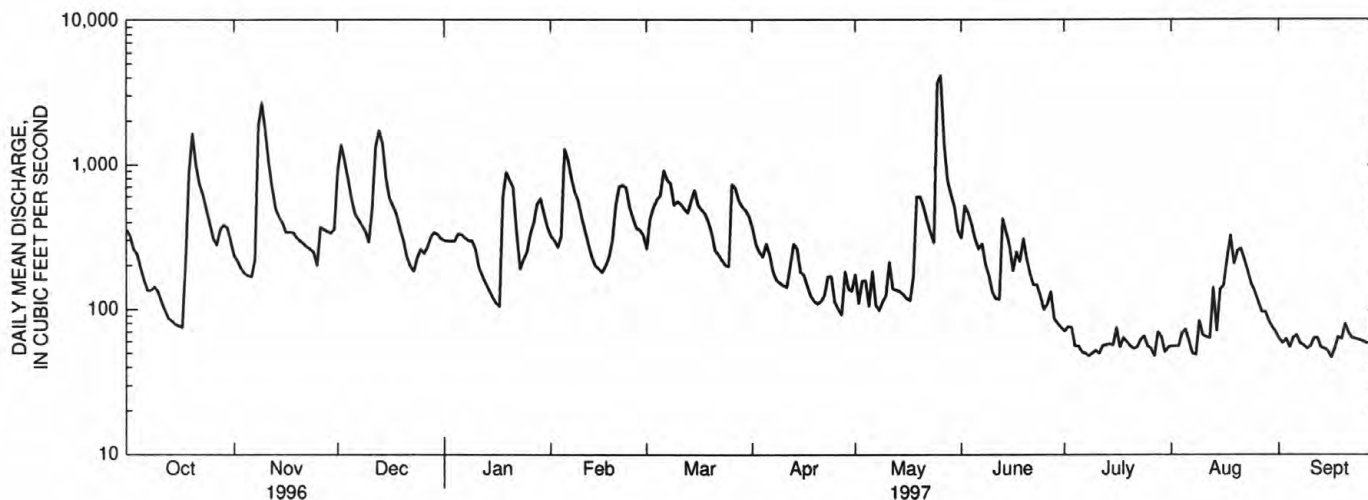
† Change in contents, equivalent in cubic feet per second, in Yellow Creek Lake and Two Lick Creek Reservoir.
Records of contents in Two Lick Creek Reservoir furnished by Pennsylvania Electric Co.

a From rating curve extended above 4,500 ft³/s on basis of slope-area measurement of peak flow and contracted-opening measurement at gage height 12.71 ft at site 1.6 mi upstream from gage, adjusted to gage site.

b Backwater, from highwater mark.

c From rating curve extended above 4,500 ft³/s on basis of contracted-opening measurement of peak flow at site 1.6 mi upstream from gage, adjusted to gage site.

e Estimated.



October 1, 1996 to September 30, 1997

KISKIMINETAS RIVER BASIN

03045000 LOYALHANNA CREEK AT KINGSTON, PA

LOCATION.--Lat 40°17'33", long 79°20'27", Westmoreland County, Hydrologic Unit 05010008, on right bank 60 ft downstream from bridge on State Highway 217 at Kingston, 100 ft downstream from Miller Run, 1.9 mi upstream from Ninemile Run, and 3 mi southeast of Latrobe.

DRAINAGE AREA.--172 mi².

PERIOD OF RECORD.--October 1939 to current year. Monthly discharge only October to December 1939, published in WSP 1305.

REVISED RECORDS.--WSP 1335: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 1,013.16 ft above sea level (U.S. Army Corps of Engineers bench mark). Prior to Oct. 1, 1969, at datum 1.00 ft higher.

REMARKS.--Records good except for estimated daily discharges, which are fair. Flow regulated by Latrobe Reservoir, capacity, 3,670 acre-ft, and diversion works at Kingston. Figures of daily discharge do not include diversion from reservoir and at Kingston intake to borough of Latrobe. Several measurements of water temperature were made during the year. U.S. Army Corps of Engineers satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1918, 15.8 ft, present datum, Oct. 15, 1954. Flood of Mar. 17 or 18, 1936 reached a stage of about 15.5 ft, present datum, from information by local residents, discharge, 21,000 ft³/s, from rating curve extended above 8,700 ft³/s.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than a base discharge of 3,500 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 8	1700	3,750	7.41	May 25	2300	*14,700	*12.22
Mar. 26	0700	3,960	7.56				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	306	256	1060	345	e170	281	432	135	354	53	13	27
2	250	228	1380	331	e150	1140	370	125	455	93	12	25
3	231	194	872	321	e140	1120	336	133	656	65	12	23
4	164	166	669	356	e200	1080	312	139	612	48	13	22
5	136	152	531	370	994	898	277	117	471	41	23	21
6	116	145	487	355	647	1020	258	131	371	36	24	20
7	105	142	428	311	501	781	230	138	304	33	21	19
8	96	2070	425	275	425	632	194	118	261	30	16	19
9	100	2310	379	e240	365	515	188	177	225	30	14	19
10	155	1330	337	e220	321	555	169	269	189	31	13	20
11	125	850	476	e200	283	464	157	375	155	27	12	22
12	97	598	982	e180	e240	389	159	316	140	24	12	26
13	89	469	1670	e170	e210	343	179	289	228	22	52	22
14	81	393	1190	e160	e190	421	150	260	230	21	62	20
15	75	330	835	e150	e180	398	129	312	145	20	41	19
16	70	289	634	e140	e170	335	119	253	120	29	69	18
17	67	262	522	e130	e160	311	137	226	136	28	156	17
18	94	264	428	e125	e150	304	134	205	111	22	407	23
19	1290	275	370	e120	e350	335	121	796	149	29	138	21
20	2990	240	312	e115	832	301	113	1100	111	26	267	22
21	1380	216	241	e110	689	277	106	624	93	20	364	39
22	1250	200	252	e105	766	262	106	476	84	18	167	25
23	877	179	270	e170	580	231	103	383	78	30	114	20
24	635	166	343	e140	467	214	107	326	69	26	79	19
25	476	158	382	e250	383	207	98	5340	64	23	63	18
26	375	331	306	e200	342	2150	89	5160	69	21	52	16
27	320	314	297	e150	329	1070	82	1360	85	19	43	15
28	404	267	317	e420	279	718	177	787	62	18	52	21
29	394	246	409	e300	---	601	168	545	54	17	45	739
30	336	279	437	e230	---	501	138	430	48	16	35	175
31	291	---	380	e190	---	517	---	353	---	14	30	---
TOTAL	13375	13319	17621	6879	10513	18371	5338	21398	6129	930	2421	1512
MEAN	431	444	568	222	375	593	178	690	204	30.0	78.1	50.4
MAX	2990	2310	1670	420	994	2150	432	5340	656	93	407	739
MIN	67	142	241	105	140	207	82	117	48	14	12	15
†	+13	+17	+6.0	+6.7	+6.8	+6.3	-2.1	+15	-2.7	+2.5	-.52	+3.8

† Diversion from and change in contents in Latrobe Reservoir and diversion from Kingston intake, equivalent in cubic feet per second, furnished by Latrobe Municipal Authority.
e Estimated.

KISKIMINETAS RIVER BASIN

03045000 LOYALHANNA CREEK AT KINGSTON, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	110	207	359	381	473	619	523	380	229	121	100	90.8
MAX	689	785	834	850	1210	1305	1007	779	997	344	667	635
(WY)	1955	1986	1973	1952	1986	1963	1940	1952	1972	1990	1979	1971
MIN	2.76	5.09	48.1	79.0	137	175	178	115	40.5	7.76	7.04	4.20
(WY)	1954	1954	1961	1940	1978	1969	1997	1963	1991	1966	1957	1957

SUMMARY STATISTICS

FOR 1996 CALENDAR YEAR

FOR 1997 WATER YEAR

WATER YEARS 1940 - 1997

ANNUAL TOTAL	162717		117806									
ANNUAL MEAN	445	†+11	323	†+5.9								
HIGHEST ANNUAL MEAN										298		
LOWEST ANNUAL MEAN										447		1971
HIGHEST DAILY MEAN	e8500	Jan 19	5340	May 25						14200		1972
LOWEST DAILY MEAN	e13	Sep 5	12	Aug 2,3,11,12						.20	Oct 23,24	1953a
ANNUAL SEVEN-DAY MINIMUM	e15	Aug 30	14	Jul 29						.63	Oct 19	1953
INSTANTANEOUS PEAK FLOW			14700	May 25						b29700	Oct 15	1954
INSTANTANEOUS PEAK STAGE			12.22	May 25						c15.80	Oct 15	1954
INSTANTANEOUS LOW FLOW			12	Aug 3						.10	Sep 4	1953
10 PERCENT EXCEEDS	953		677							702		
50 PERCENT EXCEEDS	292		190							160		
90 PERCENT EXCEEDS	53		21							21		

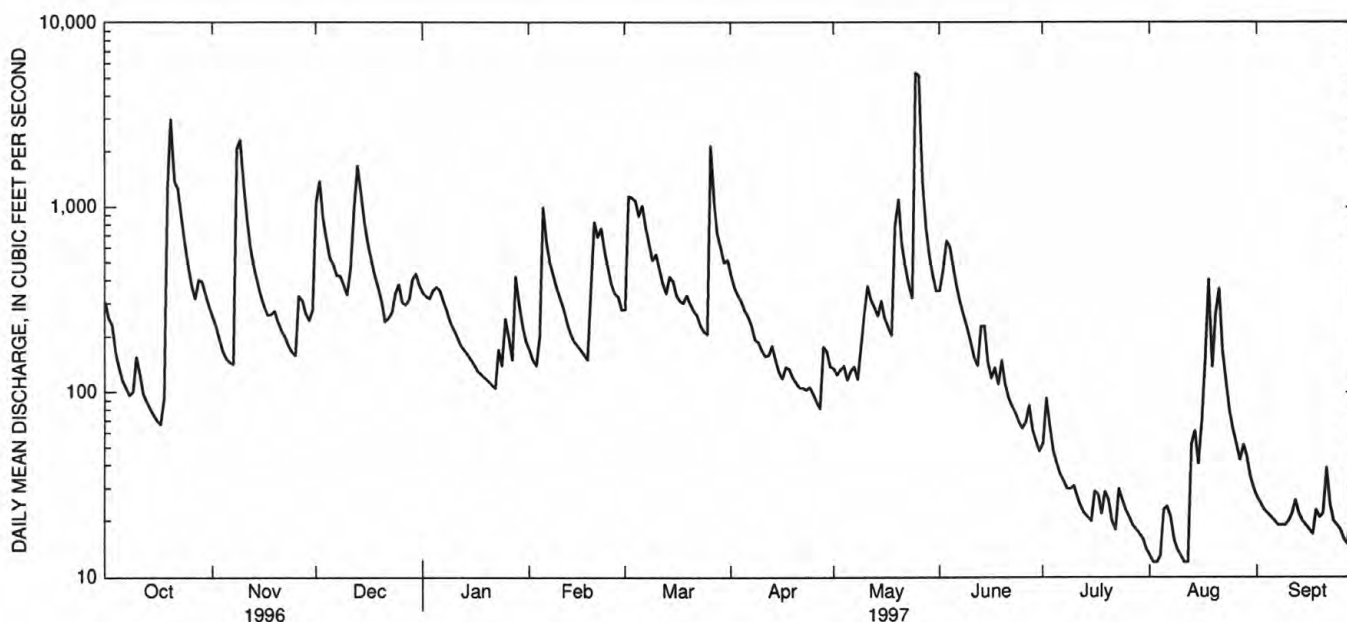
† Diversion from and change in contents in Latrobe Reservoir and diversion from Kingston intake, equivalent in cubic feet per second, furnished by Latrobe Municipal Authority.

a Computed using estimated discharges.

b From rating curve extended above 8,700 ft³/s on basis of slope-area measurement at gage height 13.37 ft.

c Present datum, from floodmarks.

e Estimated.



October 1, 1996 to September 30, 1997

KISKIMINETAS RIVER BASIN

03048500 KISKIMINETAS RIVER AT VANDERGRIFF, PA

LOCATION.--Lat 40°36'16", long 79°33'08", Westmoreland County, Hydrologic Unit 05010008, on left bank 0.5 mi upstream from bridge on State Highway Alternate 66 at Vandergriff, and 2.2 mi upstream from Pine Run.

DRAINAGE AREA.--1,825 mi².

PERIOD OF RECORD.--August 1937 to current year. Monthly discharge only for some periods, published in WSP 1305. October 1920 to September 1932 (gage heights and discharge measurements only) in reports of Pennsylvania Department of Forests and Waters.

GAGE.--Water-stage recorder. Datum of gage is 769.40 ft above sea level (U.S. Army Corps of Engineers bench mark). Oct. 1, 1920 to Sept. 30, 1930, nonrecording gage, Oct. 1, 1930 to Sept. 30, 1932, water-stage recorder, at site 0.6 mi downstream at different datum.

REMARKS.--Records good except for estimated daily discharges, which are fair. Flow regulated since 1971 by Yellow Creek Lake (station 03042260), since 1952 by Conemaugh River Lake, 23 mi upstream, since 1942 by Loyalhanna Lake, 20 mi upstream, and by other reservoirs above station; the 11 most effective of which have a combined capacity of 105,700 acre-ft. Figures of daily discharge do not include diversion from Beaver Run Reservoir to plants and communities downstream, nor into the Monongahela River Basin. Evaporation from operation of Homer City and Conemaugh generating stations, which began during 1969 and 1970, respectively, can amount to as much as 45 ft³/s. Several measurements of water temperature were made during the year. U.S. Army Corps of Engineers satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of March 18, 1936 reached a stage of 41.64 ft, from floodmark at present site, discharge, 185,000 ft³/s, by slope-area measurement.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5100	3420	4740	4220	4000	4330	5690	1620	10400	860	489	723
2	4190	2420	4870	3990	2880	3460	4610	1500	9250	1090	479	688
3	3470	1960	5720	2870	2950	3430	3730	1420	8310	1190	364	560
4	3150	2090	10300	3950	3630	3520	3360	1500	9380	931	359	690
5	2940	2360	12200	3780	4410	3530	2960	1420	9000	864	370	662
6	2510	1740	11500	4420	5390	3990	2760	1290	7470	773	498	559
7	2210	1980	7810	3630	8410	5130	2850	1400	5380	591	337	556
8	1470	3590	5210	2370	8760	9320	2060	1350	3360	596	485	552
9	1720	4430	5230	2820	7070	12100	2290	1380	3480	605	474	528
10	1650	5560	5110	2700	4160	11100	1960	1530	2790	596	328	589
11	1690	11800	5360	2560	4030	12500	1900	1960	2410	568	324	562
12	1840	14700	5000	2000	3930	12100	1900	2250	2090	769	477	597
13	1410	15600	6130	1830	2880	11400	2010	2040	3220	665	558	625
14	1340	12600	9290	1390	2880	8440	2230	1690	4400	603	651	815
15	1200	9140	10200	1430	2690	5920	2280	1700	4060	623	1240	549
16	1260	5630	9140	1560	2430	5750	1800	1820	2740	654	769	487
17	1420	4900	10000	1400	1880	5390	1680	1800	2530	714	932	500
18	1430	3890	9830	e1350	1760	5020	1610	1520	2570	689	1860	537
19	1930	3410	9020	e1300	2860	5030	1470	3720	2590	705	1970	457
20	3280	2690	6950	e1300	4430	5060	1400	8300	2380	711	2100	622
21	3500	2470	5010	e1300	5710	5040	1340	9570	2060	689	3000	644
22	8460	1990	4650	e1300	5950	4930	1340	6120	1540	609	4170	511
23	12000	1960	3680	e1300	8760	4380	1330	4760	1310	650	3320	509
24	11800	1940	3510	e1700	10200	3180	1480	4480	1220	668	1850	484
25	11200	1950	3480	e2900	9800	2560	1410	8320	1260	771	1560	485
26	8340	2210	3460	3430	8830	4330	1420	10300	1110	871	813	490
27	6270	2760	3260	3900	6260	7180	1380	12800	1120	343	1460	646
28	4720	3830	2940	4150	5010	10300	1230	21400	1060	404	2480	545
29	4140	3780	2940	4330	---	9200	1770	24800	946	523	1820	1250
30	4400	3760	3490	4740	---	6980	1800	20000	820	512	840	3290
31	3950	---	3740	4610	---	6120	---	14300	---	492	734	---
TOTAL	123990	140560	193770	84530	141950	200720	65050	178060	110256	21329	37111	20712
MEAN	4000	4685	6251	2727	5070	6475	2168	5744	3675	688	1197	690
MAX	12000	15600	12200	4740	10200	12500	5690	24800	10400	1190	4170	3290
MIN	1200	1740	2940	1300	1760	2560	1230	1290	820	343	324	457
CFSM	2.19	2.57	3.43	1.49	2.78	3.55	1.19	3.15	2.01	.38	.66	.38
IN.	2.53	2.87	3.95	1.72	2.89	4.09	1.33	3.63	2.25	.43	.76	.42

e Estimated.

KISKIMINETAS RIVER BASIN

03048500 KISKIMINETAS RIVER AT VANDERGRIFT, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1938 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1332	1936	3433	3752	4710	6540	5629	3757	2483	1553	1162	1048
MAX	6429	5697	9057	8454	10140	12400	12550	7245	8262	5469	4138	4629
(WY)	1955	1986	1973	1991	1956	1945	1993	1978	1972	1977	1958	1996
MIN	255	307	587	847	1724	1802	1727	1127	666	378	363	297
(WY)	1964	1954	1961	1956	1958	1969	1946	1941	1965	1965	1939	1939

SUMMARY STATISTICS

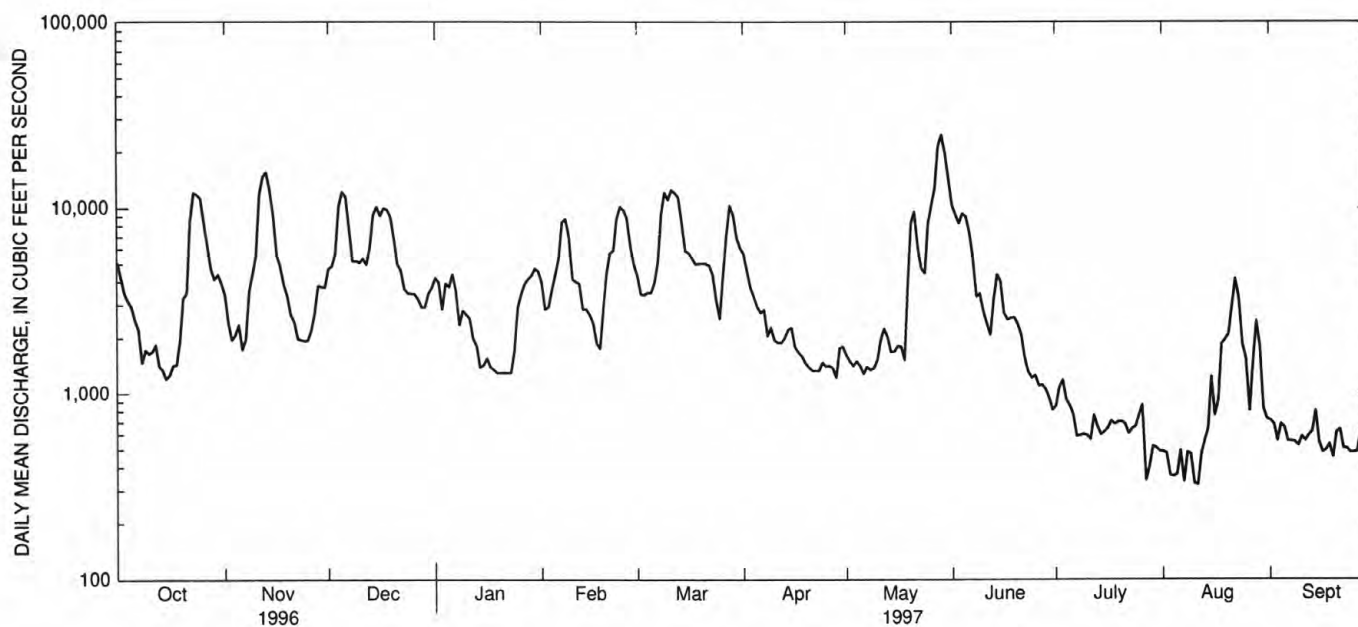
FOR 1996 CALENDER YEAR

FOR 1997 WATER YEAR

WATER YEARS 1938 - 1997

ANNUAL TOTAL	1826653		1318038									
ANNUAL MEAN	4991		3611									
HIGHEST ANNUAL MEAN										3103		
LOWEST ANNUAL MEAN										4518		1951
HIGHEST DAILY MEAN										1777		1954
LOWEST DAILY MEAN										60400		Mar 31 1940
ANNUAL SEVEN-DAY MINIMUM										60		Oct 15 1952
INSTANTANEOUS PEAK FLOW										145		Nov 1 1952
INSTANTANEOUS PEAK STAGE										71900		Mar 31 1940
INSTANTANEOUS LOW FLOW										25.70		Mar 31 1940
ANNUAL RUNOFF (CFSM)										60		Oct 15 1952
ANNUAL RUNOFF (INCHES)										1.70		
10 PERCENT EXCEEDS										23.10		
50 PERCENT EXCEEDS										7130		
90 PERCENT EXCEEDS										1840		
										493		

a Also Aug. 7, 10, 11.



BUFFALO CREEK BASIN

03049000 BUFFALO CREEK NEAR FREEPORT, PA

LOCATION.--Lat 40°42'57", long 79°41'59", Butler County, Hydrologic Unit 05010009, on right bank 0.6 mi upstream from Little Buffalo Creek and 3 mi north of Freeport.

DRAINAGE AREA.--137 mi².

PERIOD OF RECORD.--October 1940 to current year. Monthly discharge only for October 1940, published in WSP 1305.

GAGE.--Water-stage recorder. Elevation of gage is 792 ft above sea level, by barometer. Prior to July 19, 1962, nonrecording gage at same site and datum.

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

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than a base discharge of 2,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
May 25	1830	*4,060	*a7.00	No other peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	266	142	e450	e160	e150	218	190	e160	214	81	8.0	22
2	198	131	e1150	e160	e130	549	168	e120	550	144	e6.6	21
3	163	116	e740	e165	e135	522	157	e130	467	58	e6.4	20
4	131	103	e520	e170	e360	514	152	188	340	45	e6.4	18
5	112	95	e360	e200	1100	575	142	143	264	36	e8.4	17
6	96	92	e330	e250	669	1500	137	151	208	32	e12	16
7	87	99	e290	e220	479	926	127	140	171	29	7.2	15
8	80	1090	e270	e190	373	637	113	128	146	29	6.2	14
9	78	1190	e250	e170	303	463	111	145	125	35	4.5	14
10	94	906	e240	e150	250	594	100	136	109	40	4.3	16
11	78	614	e600	e140	217	464	94	126	97	27	4.6	26
12	69	430	e1300	e125	e180	376	151	115	90	e21	5.2	37
13	64	321	e800	e110	e160	312	262	112	256	e18	135	26
14	60	264	e580	e100	e145	911	181	103	191	e16	54	20
15	57	214	e400	e90	e130	873	155	101	121	e14	20	17
16	54	185	e350	e105	e120	592	147	90	101	e17	32	16
17	52	170	e300	e94	e110	448	150	83	283	e15	371	15
18	68	191	e250	e86	e130	362	141	99	202	e14	554	14
19	336	186	e210	e80	e300	294	129	244	196	e12	148	14
20	628	159	e170	e76	525	251	119	194	151	e11	112	57
21	423	145	e160	e70	453	218	110	152	124	e11	135	71
22	368	e130	e170	e74	431	206	105	134	102	e10	83	29
23	294	e120	e180	e160	324	173	103	119	84	14	60	23
24	246	e105	e200	e115	268	151	118	106	70	16	44	20
25	200	e94	e230	e280	220	141	96	1740	62	15	53	18
26	166	e300	e210	e230	205	384	85	1480	65	e13	53	17
27	146	e260	e180	e180	291	272	79	677	60	e12	38	15
28	189	e220	e190	e360	247	238	301	412	46	e11	34	15
29	212	e200	e210	e300	---	241	236	298	40	18	31	268
30	178	e190	e220	e240	---	226	192	242	36	13	28	130
31	161	---	e180	e190	---	227	---	205	---	10	25	---
TOTAL	5354	8462	11690	5040	8405	13858	4351	8273	4971	837	2089.8	1021
MEAN	173	282	377	163	300	447	145	267	166	27.0	67.4	34.0
MAX	628	1190	1300	360	1100	1500	301	1740	550	144	554	268
MIN	52	92	160	70	110	141	79	83	36	10	4.3	14
CFSM	1.26	2.06	2.75	1.19	2.19	3.26	1.06	1.95	1.21	.20	.49	.25
IN.	1.45	2.30	3.17	1.37	2.28	3.76	1.18	2.25	1.35	.23	.57	.28

a From peak-stage indicator.
e Estimated.

BUFFALO CREEK BASIN

03049000 BUFFALO CREEK NEAR FREEPORT, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	72.5	138	247	258	320	407	315	223	137	84.1	66.2	56.7
MAX	571	720	625	821	861	964	704	525	732	522	511	287
(WY)	1955	1986	1991	1952	1956	1945	1957	1952	1972	1990	1984	1975
MIN	3.63	5.61	7.15	29.3	70.7	49.2	84.9	44.7	20.8	7.75	4.92	5.82
(WY)	1961	1961	1961	1977	1993	1969	1946	1941	1991	1966	1957	1946

SUMMARY STATISTICS

FOR 1996 CALENDAR YEAR

FOR 1997 WATER YEAR

WATER YEARS 1941 - 1997

ANNUAL TOTAL	90624		74351.8									
ANNUAL MEAN	248		204							193		
HIGHEST ANNUAL MEAN										312		1956
LOWEST ANNUAL MEAN										125		1954
HIGHEST DAILY MEAN	e4300	Jan 19	1740	May 25						7710	Jun 23	1972
LOWEST DAILY MEAN	e12	Aug 20	4.3	Aug 10						1.3	Oct 16	1960
ANNUAL SEVEN-DAY MINIMUM	a16	Aug 14	e6.3	Aug 6						1.7	Oct 13	1960
INSTANTANEOUS PEAK FLOW			4060	May 25						b14000	Oct 15	1954
INSTANTANEOUS PEAK STAGE			c7.00	May 25						d13.60	Oct 15	1954
INSTANTANEOUS LOW FLOW			49	Oct 18						f1.3	Oct 16	1960
ANNUAL RUNOFF (CFSM)	1.81		1.49							1.41		
ANNUAL RUNOFF (INCHES)	24.61		20.19							19.15		
10 PERCENT EXCEEDS	543		451							465		
50 PERCENT EXCEEDS	160		143							95		
90 PERCENT EXCEEDS	33		16							12		

a Computed using estimated discharges.

b From rating curve extended above 4,300 ft³/s on basis of slope-area measurement of peak flow.

c From peak-stage indicator.

d From floodmarks.

e Estimated.

f Minimum observed.

OHIO RIVER MAIN STEM

03049500 ALLEGHENY RIVER AT NATRONA, PA
(National water-quality assessment station)

LOCATION.--Lat 40°36'55", long 79°43'07", Allegheny County, Hydrologic Unit 05010009, on right bank 520 ft upstream from dam at lock 4 at Natrona, 5.8 mi downstream from Kiskiminetas River, at mile 24.3.

DRAINAGE AREA.--11,410 mi², approximately.

WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WSP 1435: 1939.

GAGE.--Water-stage recorder and concrete dam control. Datum of gage is 736.36 ft above sea level (U.S. Army Corps of Engineers bench mark). Prior to Apr. 14, 1940, nonrecording gage and Apr. 15, 1940 to Oct. 22, 1990, water-stage recorder at same site at datum 0.75 ft higher.

REMARKS.--No estimated daily discharges. Records good. Flow regulated by Allegheny Reservoir, Chautauqua and Tionesta Lakes, Union City Reservoir, Woodcock Creek, East Branch Clarion River, Mahoning Creek, Crooked Creek, Yellow Creek, Conemaugh River, Loyalhanna Lake, and by 15 smaller reservoirs, combined capacity, excluding that of Chautauqua Lake, 2,069,000 acre-ft. Slight diversion since 1952 from Beaver Run Reservoir into the Monongahela River Basin. Several measurements of water temperature were made during the year. U.S. Army Corps of Engineers satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 18, 1936 reached a stage of 32.06 ft, discharge, 365,000 ft³/s, determined by U.S. Army Corps of Engineers.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	39200	30800	39400	26600	25600	58100	33600	20000	25300	10800	4580	4990
2	34400	27800	57800	23600	23200	52900	31100	17600	27000	11800	4450	4990
3	31200	25500	54100	21300	21700	55700	27700	16700	35000	15000	4010	3240
4	28000	23100	53200	22300	23100	51600	25600	17400	41600	10200	3730	4240
5	23900	20700	54200	22400	34600	46800	23900	19300	39100	8480	4310	4240
6	20100	19600	50800	25700	46700	63800	21800	18200	35400	7640	4040	4000
7	17900	21800	45400	29600	46400	66600	18900	20300	32500	7000	3660	4930
8	13300	30100	38300	26200	43000	61400	16500	20200	27500	5800	4220	4070
9	12200	62000	34200	24400	37700	61600	16500	20900	25200	6340	3240	3720
10	11300	64900	33100	22500	28700	59500	15300	20600	23800	5700	3800	4770
11	10600	62400	30800	20900	26400	62200	12500	20600	21000	6980	3800	4770
12	11700	63000	41900	16700	21900	59100	12000	20600	18100	9500	3240	6540
13	11000	64000	45200	11100	18500	53400	18700	20400	19400	11300	4400	5300
14	10400	58700	48600	11200	16100	51600	25800	19300	19200	10900	5600	5380
15	10100	55900	47200	9320	17000	62600	24000	18200	17400	8540	6190	5160
16	9140	48600	41900	10800	14800	56300	21900	17100	12900	6650	6190	4780
17	7870	41400	40800	10200	12900	49600	19500	16400	14300	6010	7440	4630
18	7610	36600	39600	8370	13200	45000	19200	16200	13200	6230	13000	3680
19	16100	34600	36900	7140	16300	41600	17600	19400	16500	5620	11300	4480
20	41600	33300	32800	7640	24800	38400	15800	29300	17800	4510	10500	4850
21	45300	31600	27200	8970	37500	35400	14500	38500	17800	3860	11300	5690
22	46200	28200	25600	9820	50100	33700	13600	36200	16000	5140	e9000	4430
23	53300	26400	21800	14100	63200	33700	14100	33000	13700	4820	e7000	5000
24	52900	23100	21800	19900	56500	29500	13800	31000	12000	4480	e5800	4790
25	50400	20500	27500	24500	53000	27900	15200	39400	11000	4520	e5200	4210
26	47300	24400	31600	30200	48400	30400	16100	43400	11100	4860	e6600	3900
27	41700	36900	30300	31300	46000	39100	14900	36200	16800	3530	e6200	4120
28	37200	35700	29000	31700	66800	40600	14700	41800	16600	3950	e5600	4050
29	33500	37300	27100	29700	---	37000	20400	43100	14800	4500	6810	6090
30	32300	33500	28600	28000	---	33700	20100	36900	12300	4640	4990	11800
31	31900	---	28100	27100	---	33300	---	30100	---	3870	3800	---
TOTAL	839620	1122400	1164800	613260	934100	1472100	575300	798300	624300	213170	184000	146840
MEAN	27080	37410	37570	19780	33360	47490	19180	25750	20810	6876	5935	4895
MAX	53300	64900	57800	31700	66800	66600	33600	43400	41600	15000	13000	11800
MIN	7610	19600	21800	7140	12900	27900	12000	16200	11000	3530	3240	3240
CFSM	2.37	3.28	3.29	1.73	2.92	4.16	1.68	2.26	1.82	.60	.52	.43
IN.	2.74	3.66	3.80	2.00	3.05	4.80	1.88	2.60	2.04	.69	.60	.48

OHIO RIVER MAIN STEM

03049500 ALLEGHENY RIVER AT NATRONA, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	9912	16700	24210	24600	27450	39180	35560	23010	14890	9230	6702	7005
MAX	34470	45230	48690	68600	53390	87030	83780	48400	45820	34630	23020	22690
(WY)	1991	1986	1978	1952	1976	1945	1940	1943	1989	1972	1956	1990
MIN	1227	2686	2316	4520	7167	10410	9000	6129	3759	1944	1786	1444
(WY)	1964	1954	1961	1961	1963	1969	1946	1941	1991	1966	1962	1939

SUMMARY STATISTICS

FOR 1996 CALENDAR YEAR

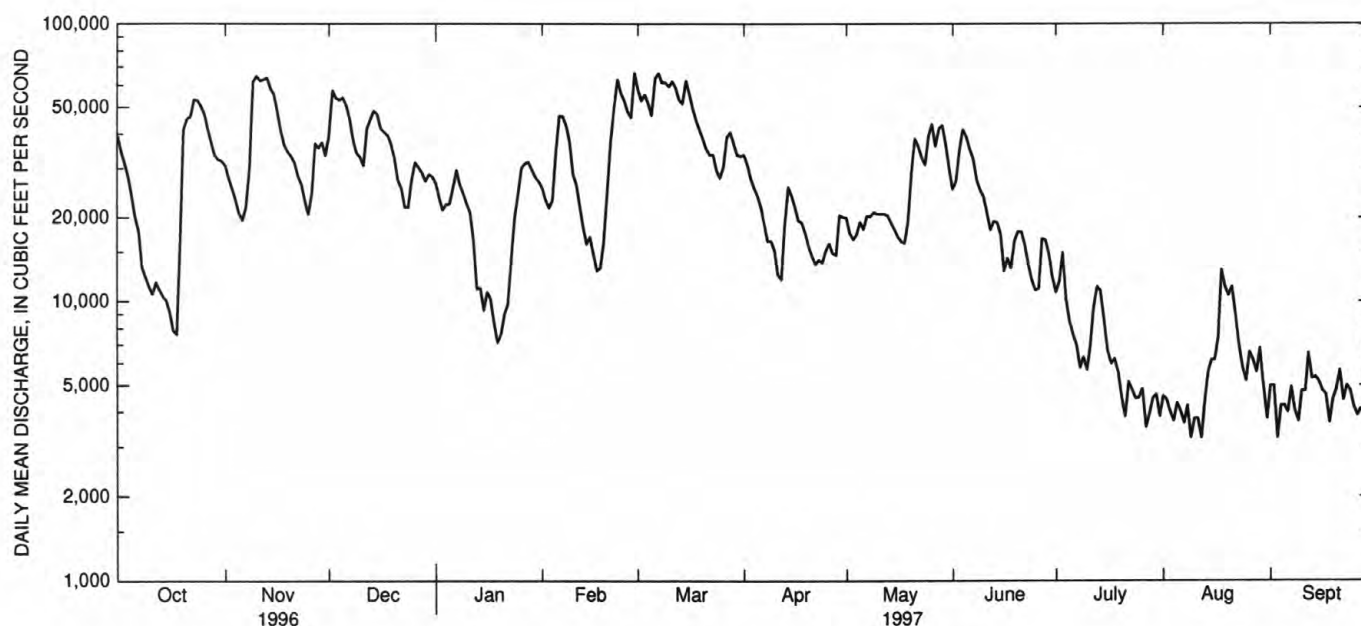
FOR 1997 WATER YEAR

WATER YEARS 1939 - 1997

ANNUAL TOTAL	10536350	8688190	19830
ANNUAL MEAN	28790	23800	27810
HIGHEST ANNUAL MEAN			1956
LOWEST ANNUAL MEAN			13540
HIGHEST DAILY MEAN	166000	Jan 20	206000
LOWEST DAILY MEAN	3640	Sep 3	949
ANNUAL SEVEN-DAY MINIMUM	4050	Aug 29	1030
INSTANTANEOUS PEAK FLOW			238000
INSTANTANEOUS PEAK STAGE			16.49
INSTANTANEOUS LOW FLOW			Feb 28
ANNUAL RUNOFF (CFSM)	2.52	2.09	1.74
ANNUAL RUNOFF (INCHES)	34.35	28.33	23.61
10 PERCENT EXCEEDS	56500	49000	45300
50 PERCENT EXCEEDS	27000	20500	13200
90 PERCENT EXCEEDS	7220	4640	3130

a Also Sept. 3.

b Datum then in use.



OHIO RIVER MAIN STEM

03049625 ALLEGHENY RIVER AT NEW KENSINGTON, PA
(National Water-Quality Assessment station)

WATER-QUALITY RECORDS

LOCATION.--Lat 40°33'52", long 79°46'22", Allegheny County, Hydrologic Unit 05010009, at New Kensington highway bridge, 5.1 mi downstream from dam at Lock 4 at Natrona, 5.3 mi downstream from gaging station at Natrona, and at mile 19.0 upstream from mouth.

DRAINAGE AREA.--11,500 mi².

PERIOD OF RECORD.--July 1972 to December 1973, October 1974 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1974 to September 1981.

WATER TEMPERATURE: October 1974 to September 1981 and October 1996 to current year.

SUSPENDED SEDIMENT DISCHARGES: October 1976 to September 1979.

INSTRUMENTATION.--From October 1974 to September 1981, specific conductance and water temperature were once daily readings by an observer. From October 1976 to September 1979, suspended-sediment samples were collected daily and more often during storm events by an observer. From October 1996 to current year, daily records of water temperature were measured and collected at hourly intervals with an in-situ probe and electronic data logger.

REMARKS.--Records of discharge are given for 03049500 Allegheny River at Natrona, Pa. All water-quality samples were collected and analyzed by the U.S. Geological Survey. Interruptions in the daily record were due to malfunctions of the equipment. Additional sites in the (NAWQA) fixed-station network are shown in figure 6 on page 28. An explanation of selected abbreviations used in the water-quality tables are given on pages 29-31. Throughout the period of record, samples for this site have been collected at both the New Kensington highway bridge and the Hulton bridge in Oakmont (6.0 mi. downstream of the New Kensington highway bridge) due to factors such as bridge construction, highway detours, ice cover, etc. From April 1996 to the current year, all samples have been collected at the Hulton bridge in Oakmont because this location is downstream of Deer Creek. Deer Creek near Dorseyville, Pa., is an intensive fixed site for the NAWQA study unit.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 440 micromhos, February 20, 1980; minimum 120 micromhos, March 11, 1979.

WATER TEMPERATURE: Maximum, 30.0°C, August 1, 2, 1975; minimum, 0.0°C, on many days during winter period.

SEDIMENT CONCENTRATIONS: Maximum daily, 805 mg/L, January 2, 1979; minimum daily, 1 mg/L, August 4, 5, 1979.

SEDIMENT DISCHARGES: Maximum daily, 192,000 tons, January 2, 1979; minimum daily, 22 tons, August 5, 1979.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum, 28.5°C, July 20, 21; minimum, 0.0°C, on many days during winter period.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE	TIME	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 HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)	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)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)
OCT											
02...	0915	34200	177	7.4	15.5	740	9.4	61	17	4.6	6.8
NOV											
06...	0830	19800	210	7.5	8.0	744	11.3	69	19	5.2	8.6
DEC											
10...	0915	33600	193	7.4	4.0	736	13.4	66	18	5.2	8.0
JAN											
27...	0800	30600	262	7.2	0.5	743	14.8	80	22	6.0	14
FEB											
13...	0930	20100	220	6.9	2.0	750	14.0	70	19	5.5	10
MAR											
04...	0830	51800	187	7.0	6.0	737	12.4	54	15	4.1	7.2
APR											
16...	0900	22600	237	7.5	8.0	740	11.8	81	22	6.5	9.9
MAY											
29...	0845	44800	168	6.9	15.0	743	9.5	57	16	4.3	8.1
JUN											
27...	0915	16100	233	7.9	25.0	741	7.3	77	21	5.9	9.7
JUL											
28...	0845	3920	324	7.6	27.0	740	7.4	110	31	7.8	17
AUG											
26...	0845	6620	392	7.5	22.0	741	9.0	150	40	11	20
SEP											
09...	0840	2650	365	7.7	22.5	736	8.3	110	31	8.6	19

ALLEGHENY RIVER BASIN

03049625 ALLEGHENY RIVER AT NEW KENSINGTON, PA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	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)	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)	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)
OCT 02...	1.6	24	38	8.2	0.10	5.6	103	<0.010	0.560	0.030	0.30
NOV 06...	1.6	39	46	10	--	5.1	122	0.020	0.530	0.080	0.20
DEC 10...	1.2	24	42	10	<0.10	5.3	111	0.020	0.640	0.200	<0.20
JAN 27...	1.5	41	51	20	<0.10	4.9	149	0.010	0.690	0.090	<0.20
FEB 13...	1.2	34	48	15	0.10	5.3	124	0.020	0.810	0.050	<0.20
MAR 04...	1.2	19	31	12	<0.10	4.5	97	<0.010	0.620	0.030	0.30
APR 16...	1.5	28	56	14	0.12	3.3	144	<0.010	0.340	0.030	<0.20
MAY 29...	1.6	18	38	8.7	<0.10	4.4	104	<0.010	0.721	0.037	0.56
JUN 27...	1.8	33	51	12	<0.10	3.0	142	<0.010	0.437	0.025	0.25
JUL 28...	1.8	38	82	17	0.18	3.1	196	0.014	0.592	0.041	<0.20
AUG 26...	2.5	32	110	20	0.11	4.7	250	0.022	0.926	0.043	0.27
SEP 09...	1.9	50	83	19	0.11	2.3	212	0.010	0.586	0.025	0.27

DATE	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)	IRON, DIS- SOLVED (MG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (MG/L AS MN) (01056)	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)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
OCT 02...	<0.20	0.040	<0.010	<0.010	30	77	3.4	1.5	42	49
NOV 06...	<0.20	0.010	<0.010	<0.010	37	240	2.3	0.40	--	--
DEC 10...	<0.20	<0.010	<0.010	<0.010	45	210	1.7	0.40	4	83
JAN 27...	<0.20	0.020	<0.010	<0.010	37	250	2.1	0.60	14	82
FEB 13...	<0.20	0.020	<0.010	<0.010	75	230	1.4	0.20	2	70
MAR 04...	<0.20	0.060	<0.010	<0.010	28	140	1.9	1.1	32	89
APR 16...	<0.20	<0.010	<0.010	<0.010	51	300	2.1	0.60	9	85
MAY 29...	<0.20	0.130	<0.010	<0.010	28	222	3.8	1.7	105	80
JUN 27...	<0.20	<0.010	<0.010	<0.010	16	6.4	2.8	0.70	12	81
JUL 28...	0.27	<0.010	0.011	<0.010	3.5	<1.0	2.3	0.30	8	44
AUG 26...	<0.20	<0.010	<0.010	<0.010	6.6	164	1.9	0.40	10	83
SEP 09...	<0.20	0.021	<0.010	<0.010	6.8	1.2	1.9	<0.20	5	76

ALLEGHENY RIVER BASIN

03049625 ALLEGHENY RIVER AT NEW KENSINGTON, PA--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	---	---	---	11.5	11.0	11.0	3.5	2.5	3.0	4.0	3.5	4.0
2	---	---	---	11.0	9.5	10.0	4.5	3.5	4.0	4.0	4.0	4.0
3	---	---	---	9.5	8.5	9.0	5.0	4.5	4.5	4.5	4.0	4.5
4	---	---	---	8.5	8.0	8.0	4.5	4.5	4.5	4.5	4.0	4.0
5	---	---	---	8.0	7.5	7.5	4.5	4.5	4.5	5.0	4.5	5.0
6	---	---	---	8.0	7.5	7.5	4.5	4.5	4.5	5.5	5.0	5.0
7	---	---	---	8.0	7.5	8.0	4.5	4.0	4.5	5.0	5.0	5.0
8	---	---	---	8.5	8.0	8.5	4.0	3.5	4.0	5.0	4.5	5.0
9	---	---	---	9.5	8.5	9.0	4.0	3.5	3.5	4.5	3.0	3.5
10	---	---	---	9.5	8.0	9.0	3.5	3.5	3.5	3.0	1.5	2.5
11	---	---	---	8.0	7.5	8.0	3.5	3.5	3.5	1.5	.5	1.0
12	---	---	---	7.5	6.5	7.0	4.0	3.5	4.0	.5	.0	.0
13	---	---	---	6.5	6.0	6.5	4.5	4.0	4.5	.5	.0	.5
14	---	---	---	6.0	5.5	5.5	5.0	4.5	5.0	.5	.5	.5
15	---	---	---	5.5	4.5	5.0	5.0	5.0	5.0	1.0	.5	.5
16	---	---	---	5.0	4.5	4.5	5.0	4.5	5.0	1.0	.0	.5
17	---	---	---	4.5	4.5	4.5	5.0	4.5	5.0	.5	.0	.0
18	---	---	---	5.0	4.5	4.5	5.0	4.5	4.5	.5	.0	.5
19	---	---	---	5.0	4.5	5.0	4.5	4.0	4.5	.5	.5	.5
20	---	---	---	5.0	5.0	5.0	4.0	3.0	3.5	1.0	.5	.5
21	---	---	---	5.0	4.5	5.0	3.0	2.5	2.5	1.0	.5	.5
22	---	---	---	5.0	4.5	4.5	2.5	2.0	2.0	1.0	.5	1.0
23	---	---	---	4.5	4.0	4.0	2.0	1.5	1.5	1.0	.0	.5
24	---	---	---	4.0	4.0	4.0	1.5	1.0	1.5	.0	.0	.0
25	---	---	---	4.0	4.0	4.0	1.5	1.0	1.0	.0	.0	.0
26	---	---	---	4.0	4.0	4.0	2.0	1.0	1.5	.0	.0	.0
27	---	---	---	4.0	4.0	4.0	2.0	2.0	2.0	.0	.0	.0
28	---	---	---	4.5	4.0	4.0	2.0	1.5	2.0	.5	.0	.0
29	---	---	---	4.0	3.0	3.5	2.0	1.5	2.0	.5	.0	.0
30	12.5	12.0	12.5	3.0	2.5	3.0	3.0	2.0	2.5	.5	.0	.0
31	12.5	11.5	12.0	---	---	---	3.5	3.0	3.0	.5	.0	.0
MONTH	12.5	11.5	12.3	11.5	2.5	6.1	5.0	1.0	3.4	5.5	.0	1.6

ALLEGHENY RIVER BASIN

03049625 ALLEGHENY RIVER AT NEW KENSINGTON, PA--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	.5	.0	.5	4.5	4.0	4.0	7.5	7.0	7.5	13.0	12.0	12.5
2	1.0	.5	.5	5.5	4.5	5.0	7.5	7.0	7.0	13.0	12.0	12.5
3	1.0	1.0	1.0	5.5	5.0	5.5	7.5	6.5	7.0	13.0	12.5	12.5
4	1.0	1.0	1.0	5.5	5.0	5.5	8.0	7.0	7.5	13.0	12.5	13.0
5	1.0	1.0	1.0	5.0	4.5	5.0	9.0	8.0	8.5	13.5	13.0	13.0
6	1.0	.5	1.0	4.5	4.5	4.5	10.0	9.0	9.5	13.5	13.0	13.0
7	1.0	.5	1.0	4.5	4.0	4.5	10.5	9.5	10.0	13.5	13.0	13.0
8	1.0	1.0	1.0	4.0	4.0	4.0	10.5	10.0	10.5	13.0	12.5	13.0
9	1.0	1.0	1.0	4.0	4.0	4.0	10.0	9.5	10.0	13.0	12.5	13.0
10	1.0	1.0	1.0	4.5	4.0	4.0	10.0	9.5	9.5	13.0	12.0	12.5
11	1.0	1.0	1.0	4.0	4.0	4.0	10.0	9.5	10.0	12.0	12.0	12.0
12	1.0	1.0	1.0	4.5	4.0	4.5	---	---	---	12.0	11.5	12.0
13	1.0	.5	.5	4.5	4.0	4.5	---	---	---	12.0	11.5	12.0
14	.5	.5	.5	4.5	4.0	4.0	---	---	---	12.0	11.5	11.5
15	1.0	.5	.5	4.0	3.0	3.5	---	---	---	12.5	12.0	12.0
16	.5	.5	.5	3.5	3.0	3.0	---	---	---	12.5	12.0	12.0
17	1.0	.5	.5	3.0	2.5	2.5	---	---	---	13.0	12.0	12.5
18	1.5	.5	1.0	2.5	2.5	2.5	---	---	---	13.5	12.5	13.0
19	1.5	1.0	1.5	3.5	2.5	3.0	9.0	8.0	8.5	14.5	13.0	14.0
20	2.5	1.5	2.0	4.0	3.5	3.5	9.5	8.5	9.0	15.0	14.0	14.5
21	3.0	2.0	2.5	4.5	3.5	4.0	10.0	9.0	9.5	15.5	14.5	15.0
22	3.5	2.5	3.0	5.0	4.5	4.5	10.0	9.0	9.5	15.5	15.0	15.0
23	4.0	3.5	3.5	4.5	4.0	4.5	10.0	9.5	9.5	15.0	14.0	14.5
24	3.5	3.5	3.5	5.5	4.5	5.0	10.5	9.5	10.0	14.5	14.0	14.5
25	3.5	3.0	3.0	5.5	4.5	5.0	11.0	10.0	10.5	14.5	14.0	14.5
26	3.0	2.0	2.5	5.5	4.5	5.0	11.5	10.5	11.0	14.5	14.0	14.5
27	3.0	2.0	3.0	5.5	4.5	5.0	11.0	11.0	11.0	15.5	14.5	15.0
28	4.0	3.0	3.0	7.0	5.5	6.5	11.5	11.0	11.0	15.5	14.5	15.0
29	---	---	---	7.0	6.5	7.0	11.5	11.0	11.0	15.0	14.5	15.0
30	---	---	---	7.5	7.0	7.5	12.5	11.0	12.0	15.0	14.5	15.0
31	---	---	---	7.5	7.5	7.5	---	---	---	15.5	15.0	15.0
MONTH	4.0	.0	1.5	7.5	2.5	4.6	12.5	6.5	9.5	15.5	11.5	13.4

ALLEGHENY RIVER BASIN

03049625 ALLEGHENY RIVER AT NEW KENSINGTON, PA--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
JUNE			JULY			AUGUST			SEPTEMBER			
1	16.0	15.5	15.5	25.5	24.5	25.0	27.5	26.5	27.0	24.5	23.0	24.0
2	16.0	16.0	16.0	25.0	24.0	24.5	27.0	26.5	26.5	25.0	23.5	24.0
3	16.0	15.5	16.0	25.0	24.0	24.5	28.0	26.0	27.0	24.0	23.0	23.5
4	16.0	15.5	15.5	25.0	24.5	25.0	27.5	26.5	27.0	23.5	23.0	23.0
5	16.0	15.5	15.5	25.0	24.0	25.0	27.0	26.0	26.5	23.5	22.5	23.0
6	16.5	15.5	16.0	24.5	24.0	24.5	26.5	26.0	26.0	23.0	22.5	23.0
7	16.5	16.0	16.5	25.0	24.0	24.5	27.5	25.5	26.5	23.5	22.5	23.0
8	17.0	16.5	17.0	25.5	25.0	25.0	27.0	25.5	26.5	24.0	22.5	23.0
9	18.0	17.0	17.5	25.0	24.0	25.0	26.5	25.0	25.5	23.5	22.5	23.0
10	18.5	18.0	18.0	25.0	23.5	24.5	26.0	25.0	25.5	23.5	22.5	23.0
11	19.0	18.5	18.5	26.0	24.0	25.0	25.5	25.0	25.0	23.0	22.5	23.0
12	19.5	19.0	19.5	25.5	24.5	25.0	26.5	24.5	25.5	23.0	22.5	22.5
13	20.0	19.5	19.5	26.0	25.0	25.5	26.0	25.5	25.5	23.0	22.5	22.5
14	20.5	19.5	20.0	26.5	25.0	25.5	26.0	25.5	26.0	22.5	22.5	22.5
15	21.0	19.5	20.5	27.0	25.5	26.5	26.0	25.5	26.0	23.0	22.0	22.5
16	21.5	20.5	21.0	27.5	26.5	27.0	26.0	26.0	26.0	24.0	22.5	23.0
17	21.5	21.0	21.0	28.0	27.0	27.0	26.0	25.0	25.5	23.0	22.5	23.0
18	22.0	21.0	21.5	28.0	27.0	27.5	25.5	24.5	25.0	24.5	22.5	23.5
19	22.0	21.0	22.0	28.0	27.0	27.5	25.0	24.5	25.0	23.5	23.0	23.5
20	23.0	22.0	22.5	28.5	27.0	27.5	24.5	24.5	24.5	23.5	22.5	23.0
21	24.0	22.5	23.5	28.5	27.0	27.5	24.5	24.0	24.0	22.5	22.0	22.5
22	24.5	24.0	24.0	27.5	27.0	27.0	24.0	22.5	23.0	22.5	21.0	22.0
23	25.0	24.0	24.5	27.0	26.5	27.0	22.5	22.0	22.5	22.0	21.5	21.5
24	25.5	24.5	25.0	26.5	26.5	26.5	22.0	21.5	22.0	21.5	21.0	21.5
25	26.0	24.5	25.5	27.0	26.0	26.5	22.5	21.5	22.0	21.0	20.5	20.5
26	26.0	25.5	25.5	26.5	26.0	26.5	23.0	22.0	22.5	21.0	20.5	21.0
27	26.5	25.5	25.5	27.5	26.5	27.0	23.0	22.0	22.5	21.0	20.0	21.0
28	26.0	25.5	25.5	28.0	26.5	27.5	23.5	22.5	23.0	21.0	20.0	20.5
29	26.5	25.5	26.0	27.5	26.5	27.0	23.5	22.5	23.0	20.5	20.0	20.0
30	26.0	25.5	25.5	27.0	26.0	27.0	24.0	22.5	23.0	20.0	19.5	19.5
31	---	---	---	28.0	26.0	27.0	24.0	23.0	23.5	---	---	---
MONTH	26.5	15.5	20.7	28.5	23.5	26.1	28.0	21.5	24.8	25.0	19.5	22.4

DEER CREEK BASIN

03049646 DEER CREEK NEAR DORSEYVILLE, PA
(National water-quality assessment station)

LOCATION.--Lat 40°34'57", long 79°51'41", Allegheny County, Hydrologic Unit 050100009, on left bank, 0.5 mi upstream from Blue Run, 0.6 mi downstream from Cunningham Run, and about 1.0 mi north of Indianola, Pa.

DRAINAGE AREA.--27.0 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1996 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 840 ft above sea level, from topographic map.

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

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	14	137	21	e28	28	28	23	34	10	2.9	2.0
2	12	8.6	87	21	e25	70	25	21	61	10	1.9	4.3
3	9.4	6.9	61	23	e22	56	23	26	43	9.3	1.4	7.3
4	7.9	5.9	52	21	e60	68	21	24	36	4.1	1.4	8.1
5	7.2	6.6	44	51	122	86	18	20	30	2.2	2.1	4.1
6	5.9	e7.6	46	41	69	139	16	24	26	2.1	2.4	1.9
7	5.8	e12	40	35	55	83	14	22	21	1.9	2.4	1.4
8	5.7	e380	35	e30	46	64	15	25	19	2.5	2.4	1.3
9	7.1	282	32	e25	39	52	16	30	16	5.1	1.6	2.0
10	11	193	32	e21	34	79	14	24	17	5.7	1.2	5.7
11	6.2	123	103	e18	31	57	13	22	15	3.4	1.1	6.2
12	5.2	87	236	e16	29	45	28	21	16	2.2	4.7	4.2
13	4.9	70	177	e14	e26	40	30	23	56	1.8	26	2.3
14	3.0	58	92	e13	e23	135	21	22	25	3.2	9.4	1.9
15	1.9	42	65	e13	e21	83	21	21	18	5.7	9.7	1.8
16	1.9	24	53	e12	e20	60	19	19	16	6.5	3.8	2.9
17	2.0	20	48	e19	e18	50	18	16	48	6.4	16	3.0
18	35	35	39	e14	e30	47	14	22	28	5.7	19	2.9
19	108	32	34	e9.8	58	41	13	71	21	5.4	11	2.8
20	176	24	29	e11	62	39	11	46	14	5.4	22	19
21	93	21	23	e13	53	35	10	32	9.6	5.4	16	3.9
22	71	17	24	e16	45	31	13	27	7.4	4.0	8.8	4.6
23	52	12	25	e25	37	28	e15	23	8.8	3.7	3.7	8.5
24	39	11	34	25	32	26	e17	20	12	3.2	2.8	8.9
25	26	17	28	49	30	30	e13	736	11	2.8	6.7	8.4
26	16	93	24	30	30	87	e12	220	10	1.5	9.5	5.5
27	12	59	25	35	32	48	e11	88	9.4	1.3	11	2.2
28	28	43	27	90	27	40	33	57	8.1	23	12	3.3
29	20	35	25	49	---	35	22	43	7.6	7.9	6.5	47
30	20	35	23	40	---	31	21	37	7.2	3.7	2.5	12
31	14	---	23	e33	---	31	---	35	---	3.1	2.2	---
TOTAL	824.1	1774.6	1723	833.8	1104	1744	545	1840	651.1	158.2	224.1	189.4
MEAN	26.6	59.2	55.6	26.9	39.4	56.3	18.2	59.4	21.7	5.10	7.23	6.31
MAX	176	380	236	90	122	139	33	736	61	23	26	47
MIN	1.9	5.9	23	9.8	18	26	10	16	7.2	1.3	1.1	1.3
CFSM	.98	2.19	2.06	1.00	1.46	2.08	.67	2.20	.80	.19	.27	.23
IN.	1.14	2.45	2.37	1.15	1.52	2.40	.75	2.54	.90	.22	.31	.26

e Estimated.

DEER CREEK BASIN

03049646 DEER CREEK NEAR DORSEYVILLE, PA.--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1996 - 1997, BY WATER YEAR (WY)

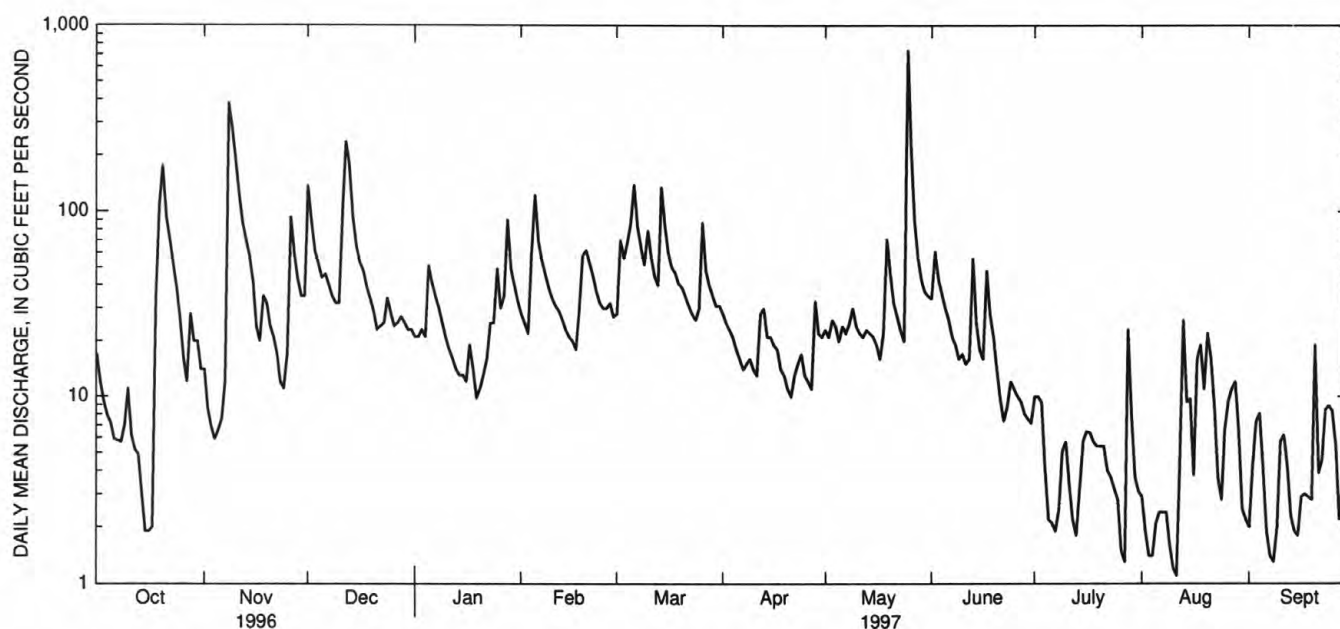
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	26.6	59.2	55.6	26.9	39.4	56.3	18.2	59.4	28.2	11.6	6.32	12.1
MAX	26.6	59.2	55.6	26.9	39.4	56.3	18.2	59.4	34.7	18.2	7.23	17.8
(WY)	1997	1997	1997	1997	1997	1997	1997	1997	1996	1996	1997	1996
MIN	26.6	59.2	55.6	26.9	39.4	56.3	18.2	59.4	21.7	5.10	5.41	6.31
(WY)	1997	1997	1997	1997	1997	1997	1997	1997	1997	1997	1996	1997

SUMMARY STATISTICS

FOR 1997 WATER YEAR

WATER YEARS 1996 - 1997

ANNUAL TOTAL	11611.3		
ANNUAL MEAN	31.8		
HIGHEST ANNUAL MEAN		31.8	1997
LOWEST ANNUAL MEAN		31.8	1997
HIGHEST DAILY MEAN	736	May 25	1997
LOWEST DAILY MEAN	1.1	Aug 11	1997
ANNUAL SEVEN-DAY MINIMUM	1.9	Aug 5	1996
INSTANTANEOUS PEAK FLOW	2370	May 25	1997
INSTANTANEOUS PEAK STAGE	5.08	May 25	1997
INSTANTANEOUS LOW FLOW	1.0	Aug 11,12	1997
ANNUAL RUNOFF (CFSM)	1.18		
ANNUAL RUNOFF (INCHES)	16.00		
10 PERCENT EXCEEDS	61		
50 PERCENT EXCEEDS	21		
90 PERCENT EXCEEDS	2.9		



October 1, 1996 to September 30, 1997

DEER CREEK BASIN

03049646 DEER CREEK NEAR DORSEYVILLE, PA--Continued
(National Water-Quality Assessment station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--April 1996 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: April 1997 to September 1997.

WATER TEMPERATURE: November 1996 to current year.

INSTRUMENTATION.--Daily record measured and collected at hourly intervals with in-situ probes and electronic data loggers.

REMARKS.--All water-quality samples were collected and analyzed by the U.S. Geological Survey. Interruptions in the daily record were due to malfunctions of the equipment. Additional sites in the (NAWQA) fixed-station network are shown in figure 6 on page 28. An explanation of selected abbreviations used in the water-quality tables are given on pages 29-31.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum, 27.5°C, July 14, minimum 0.0°C, November 15, 16, and February 13.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE	TIME	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 (MG/L) (00300)	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)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)
OCT											
02...	1330	11	691	8.0	15.0	739	10.5	180	49	13	74
NOV											
06...	1300	11	729	8.9	9.0	741	14.2	160	43	12	86
DEC											
10...	1345	31	787	8.0	5.0	732	14.9	150	42	12	93
JAN											
27...	1300	27	684	7.5	2.5	740	14.2	150	42	11	74
FEB											
13...	1315	42	857	7.6	2.0	748	15.5	180	49	13	97
MAR											
19...	0930	40	580	7.8	6.0	740	13.7	140	39	11	64
APR											
02...	0930	25	545	8.2	4.0	746	13.9	130	38	9.7	59
MAY											
08...	0930	21	849	7.9	10.0	742	11.4	180	50	14	120
19...	1500	48	530	8.0	19.0	730	9.8	130	38	9.5	52
26...	1745	149	356	7.6	16.0	735	8.9	99	27	7.3	29
JUN											
04...	1430	36	554	8.0	16.0	737	11.1	140	39	10	60
JUL											
09...	1010	3.1	720	8.2	21.0	735	9.0	180	48	14	72
AUG											
12...	0845	1.0	1070	8.2	20.0	742	5.2	160	45	13	166
SEP											
09...	1230	2.3	1020	8.2	17.5	735	11.2	180	48	14	137

DEER CREEK BASIN

03049646 DEER CREEK NEAR DORSEYVILLE, PA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	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)	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)	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)
OCT 02...	3.3	284	77	61	0.30	6.9	391	<0.010	0.520	<0.015	0.20
NOV 06...	2.5	180	130	54	0.30	3.8	421	0.020	0.130	0.020	<0.20
DEC 10...	2.3	162	91	84	0.20	6.8	430	0.010	0.710	0.020	<0.20
JAN 27...	2.1	130	73	85	0.20	6.9	359	0.010	0.910	0.020	<0.20
FEB 13...	2.1	188	75	140	0.20	6.2	478	0.010	0.860	<0.015	<0.20
MAR 19...	2.0	220	75	54	0.20	6.0	337	<0.010	0.850	<0.015	<0.20
APR 02...	1.8	148	69	56	0.22	5.7	300	0.010	0.740	0.020	<0.20
MAY 08...	2.6	228	120	60	0.29	3.9	512	<0.010	0.171	<0.015	<0.20
19...	2.1	112	57	59	0.24	6.9	314	0.027	0.590	<0.015	0.28
26...	2.1	62	46	34	0.19	9.1	212	<0.010	0.872	<0.015	0.35
JUN 04...	2.2	126	74	48	0.22	6.5	335	<0.010	0.431	<0.015	<0.20
JUL 09...	3.1	154	94	66	0.27	4.5	427	<0.010	0.063	<0.015	0.30
AUG 12...	3.5	238	230	42	0.46	3.1	685	<0.010	0.061	<0.015	0.41
SEP 09...	3.4	234	190	66	0.38	2.8	617	<0.010	<0.050	<0.015	0.22

DATE	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)	IRON, DIS- SOLVED (MG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (MG/L AS MN) (01056)	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)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
OCT 02...	<0.20	<0.010	<0.010	<0.010	8.0	27	3.2	0.70	4	70
NOV 06...	<0.20	<0.010	<0.010	<0.010	28	12	1.8	0.20	1	50
DEC 10...	<0.20	0.010	<0.010	<0.010	9.0	36	1.9	0.10	1	75
JAN 27...	<0.20	<0.010	<0.010	<0.010	6.0	47	1.6	0.10	1	71
FEB 13...	<0.20	0.050	<0.010	<0.010	9.0	44	1.4	0.20	5	82
MAR 19...	<0.20	<0.010	<0.010	<0.010	6.0	36	1.4	0.10	1	50
APR 02...	<0.20	<0.010	<0.010	<0.010	23	39	1.5	0.20	2	55
MAY 08...	<0.20	<0.010	<0.010	<0.010	23	35	1.5	0.20	2	75
19...	0.21	<0.010	<0.010	<0.010	20	55	3.3	0.70	33	85
26...	<0.20	0.045	<0.010	<0.010	7.6	71	3.0	0.50	35	95
JUN 04...	<0.20	<0.010	<0.010	<0.010	12	22	1.9	0.20	14	63
JUL 09...	<0.20	0.023	<0.010	<0.010	3.9	13	2.2	<0.20	3	53
AUG 12...	<0.20	0.042	<0.010	0.017	4.7	106	2.4	0.40	52	73
SEP 09...	<0.20	0.040	<0.010	<0.010	<3.0	15	1.9	<0.20	4	75

DEER CREEK BASIN

03049646 DEER CREEK NEAR DORSEYVILLE, PA--Continued

REMARKS.--The following data are for analytes from the National Water Quality Laboratory (NWQL) schedule 2010--pesticides in filtered water. Samples are filtered through a glass-fiber membrane filter with openings that are 0.7 microns in size to remove sediment and microorganisms. The filtered water is field extracted on C-18 Solid Phase Extraction Cartridges and analyzed by a gas chromatography/mass spectrometric detector.

The method detection limit (MDL) provides an index to indicate where measurement uncertainty is increased. When an analyte is detected and all criteria for a positive result are met, the concentration is reported. If the concentration is less than the MDL, an 'E' code will be reported with the value. If the analyte is qualitatively identified as present, but the quantitative determination is substantially more uncertain, the NWQL will identify the result with an 'E' code even though the measured value is greater than the MDL. A value reported with an 'E' code should be used with caution. When no analyte is detected in a sample, the default reporting value is the MDL preceded by a less-than sign (<).

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE	TIME	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)	OXYGEN, DIS- SOLVED (MG/L) (00300)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	2,6-DI- ETHYL ANILINE WAT FLT 0.7 μ GF, REC (μ G/L) (82660)	ACETO- CHLOR, WATER FLTRD REC (μ G/L) (49260)	ALA- CHLOR, WATER, DISS, REC, (μ G/L) (46342)	ATRA- ZINE, WATER, DISS, REC (μ G/L) (39632)
JAN												
27...	1300	27	684	7.5	2.5	740	14.2	130	<0.003	<0.002	<0.002	0.005
FEB												
13...	1315	42	857	7.6	2.0	748	15.5	188	<0.003	<0.002	<0.002	0.008
MAR												
05...	0805	55	521	8.0	4.0	737	12.6	76	<0.003	<0.002	<0.002	0.006
12...	1115	44	544	7.7	3.5	743	14.0	234	<0.003	<0.002	<0.002	<0.001
19...	0930	40	580	7.8	6.0	740	13.7	220	<0.003	<0.002	<0.002	0.004
26...	1000	92	456	7.6	7.0	735	12.6	234	<0.003	<0.002	<0.002	0.005
APR												
02...	0930	25	545	8.2	4.0	746	13.9	148	<0.003	<0.002	<0.002	0.006
10...	0945	14	648	8.4	2.0	746	14.1	156	<0.003	<0.002	<0.002	0.004
16...	1215	19	587	8.6	8.5	737	13.2	120	<0.003	<0.002	<0.002	0.002
28...	0900	44	447	7.8	10.0	727	9.8	70	<0.003	<0.002	<0.002	0.007
MAY												
08...	0930	21	849	7.9	10.0	742	11.4	228	<0.003	<0.002	<0.002	<0.001
14...	1000	22	827	7.6	11.0	730	11.3	208	<0.003	<0.002	<0.002	0.004
19...	1500	48	530	8.0	19.0	730	9.8	112	<0.003	0.013	0.004	0.051
26...	1745	149	356	7.6	16.0	735	8.9	62	<0.003	<0.002	0.005	0.222
JUN												
04...	1430	36	554	8.0	16.0	737	11.1	126	<0.003	<0.002	<0.002	0.029
13...	1045	76	423	7.6	16.0	729	8.5	124	<0.003	<0.002	<0.002	0.203
20...	0915	15	566	8.2	19.0	742	7.5	106	<0.003	<0.002	<0.002	0.057
27...	1230	9.3	950	7.9	18.0	741	9.8	256	<0.003	<0.002	<0.002	0.014
JUL												
09...	1010	3.1	720	8.2	21.0	735	9.0	154	<0.003	<0.002	<0.002	0.024
28...	1200	1.2	818	8.3	23.0	736	10.2	176	<0.003	<0.002	<0.002	0.017
AUG												
12...	0845	1.0	1070	8.2	20.0	742	5.2	238	<0.003	<0.002	<0.002	0.012
26...	1250	9.3	960	7.8	16.0	741	7.2	228	<0.003	<0.002	<0.002	0.007
SEP												
09...	1230	2.3	1020	8.2	17.5	735	11.2	234	<0.003	<0.002	<0.002	0.008

DEER CREEK BASIN

03049646 DEER CREEK NEAR DORSEYVILLE, PA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE	METHYL AZIN- PHOS WAT FLT 0.7 µ GF, REC (µG/L) (82686)	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)	DISUL- FOTON WATER FLTRD 0.7 µ GF, REC (µG/L) (82677)
JAN												
27...	<0.001	<0.002	<0.002	<0.003	<0.003	<0.004	<0.004	<0.002	E0.004	<0.002	<0.001	<0.017
FEB												
13...	<0.001	<0.002	<0.002	<0.003	<0.003	<0.004	<0.004	<0.002	<0.002	<0.002	<0.001	<0.017
MAR												
05...	<0.001	<0.002	<0.002	<0.003	<0.003	<0.004	<0.004	<0.002	E0.003	<0.002	<0.001	<0.017
12...	<0.001	<0.002	<0.002	<0.003	<0.003	<0.004	<0.004	<0.002	<0.002	<0.002	<0.001	<0.017
19...	<0.001	<0.002	<0.002	<0.003	<0.003	<0.004	<0.004	<0.002	E0.002	<0.002	<0.001	<0.017
26...	<0.001	<0.002	<0.002	<0.003	<0.003	<0.004	<0.004	<0.002	<0.002	0.006	<0.001	<0.017
APR												
02...	<0.001	<0.002	<0.002	<0.003	<0.003	<0.004	<0.004	<0.002	<0.002	<0.002	<0.001	<0.017
10...	<0.001	<0.002	<0.002	<0.003	<0.003	<0.004	<0.004	<0.002	E0.002	<0.002	<0.001	<0.017
16...	<0.001	<0.002	<0.002	<0.003	<0.003	<0.004	<0.004	E0.001	E0.002	<0.002	<0.001	<0.017
28...	<0.001	<0.002	<0.002	E0.007	<0.003	<0.004	<0.004	--	<0.002	0.013	<0.001	<0.017
MAY												
08...	<0.001	<0.002	<0.002	<0.003	<0.003	<0.004	<0.004	<0.002	<0.002	<0.002	<0.001	<0.017
14...	<0.001	<0.002	<0.002	<0.003	<0.003	<0.004	<0.004	<0.002	<0.002	<0.002	<0.001	<0.017
19...	<0.001	<0.002	<0.002	E0.004	<0.003	E0.003	0.007	E0.001	E0.007	0.017	<0.001	<0.017
26...	<0.001	<0.002	<0.002	<0.003	<0.003	<0.004	0.014	<0.002	E0.006	0.012	<0.001	<0.017
JUN												
04...	<0.001	<0.002	<0.002	<0.003	<0.003	<0.004	<0.004	<0.002	E0.003	<0.002	<0.001	<0.017
13...	<0.001	<0.002	<0.002	E0.022	<0.003	<0.004	<0.004	<0.002	E0.005	0.096	<0.001	<0.017
20...	<0.001	<0.002	<0.002	<0.003	<0.003	<0.004	<0.004	<0.002	E0.003	E0.003	<0.001	<0.017
27...	<0.001	<0.002	<0.002	<0.003	<0.003	<0.004	<0.004	<0.002	<0.002	<0.002	<0.001	<0.017
JUL												
09...	<0.001	<0.002	<0.002	<0.003	<0.003	<0.004	<0.004	<0.002	E0.003	<0.002	<0.001	<0.017
28...	<0.001	<0.002	<0.002	<0.003	<0.003	<0.004	<0.004	<0.002	<0.002	<0.002	<0.001	<0.017
AUG												
12...	<0.001	<0.002	<0.002	<0.003	<0.003	<0.004	<0.004	<0.002	<0.002	<0.002	<0.001	<0.017
26...	<0.001	<0.002	<0.002	E0.014	<0.003	<0.004	<0.004	<0.002	<0.002	0.013	<0.001	<0.017
SEP												
09...	<0.001	<0.002	<0.002	<0.003	<0.003	<0.004	<0.004	<0.002	E0.002	<0.002	<0.001	<0.017

DEER CREEK BASIN

03049646 DEER CREEK NEAR DORSEYVILLE, PA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE	EPTC WATER FLTRD 0.7 μ GF, REC (μ G/L) (82668)	ETHAL- FLUR- ALIN WAT FLT 0.7 μ GF, REC (μ G/L) (82663)	ETHO- PROP WATER FLTRD 0.7 μ GF, REC (μ G/L) (82672)	FONOFOS WATER DISS REC (μ G/L) (04095)	LINDANE DIS- SOLVED (μ G/L) (39341)	LIN- URON WATER FLTRD 0.7 μ GF, REC (μ G/L) (82666)	MALA- THION, DIS- SOLVED (μ G/L) (39532)	METO- LACHLOR WATER DISSOLV (μ G/L) (39415)	METRI- BUZIN WATER DISSOLV (μ G/L) (82630)	MOL- INATE WATER FLTRD 0.7 μ GF, REC (μ G/L) (82671)	NAPROP- AMIDE WATER FLTRD 0.7 μ GF, REC (μ G/L) (82684)	PARA- THION, DIS- SOLVED (μ G/L) (39542)
JAN												
27...	<0.002	<0.004	<0.003	<0.003	<0.004	<0.002	<0.005	0.008	<0.004	<0.004	<0.003	<0.004
FEB												
13...	<0.002	<0.004	<0.003	<0.003	<0.004	<0.150	<0.005	0.008	<0.004	<0.004	<0.003	<0.004
MAR												
05...	<0.002	<0.004	<0.003	<0.003	<0.004	<0.002	<0.005	0.008	<0.004	<0.004	<0.003	<0.004
12...	<0.002	<0.004	<0.003	<0.003	<0.004	<0.002	<0.005	0.010	<0.004	<0.004	<0.003	<0.004
19...	<0.002	<0.004	<0.003	<0.003	<0.004	<0.002	<0.005	0.010	<0.004	<0.004	<0.003	<0.004
26...	<0.002	<0.004	<0.003	<0.003	<0.004	<0.002	<0.005	0.008	<0.004	<0.004	<0.003	<0.004
APR												
02...	<0.002	<0.004	<0.003	<0.003	<0.004	<0.002	<0.005	0.007	<0.004	<0.004	<0.003	<0.004
10...	<0.002	<0.004	<0.003	<0.003	<0.004	<0.002	<0.005	0.005	<0.004	<0.004	<0.003	<0.004
16...	<0.002	<0.004	<0.003	<0.003	<0.004	<0.002	<0.005	0.006	<0.004	<0.004	<0.003	<0.004
28...	<0.002	<0.004	<0.003	<0.003	<0.004	<0.002	<0.005	0.005	<0.004	<0.004	<0.003	<0.004
MAY												
08...	<0.002	<0.004	<0.003	<0.003	<0.004	<0.002	<0.005	<0.002	<0.004	<0.004	<0.003	<0.004
14...	<0.002	<0.004	<0.003	<0.003	<0.004	<0.002	<0.005	EO.002	<0.004	<0.004	<0.003	<0.004
19...	<0.002	<0.004	<0.003	<0.003	<0.004	<0.002	<0.005	0.019	<0.004	<0.004	<0.003	<0.004
26...	<0.002	<0.004	<0.003	<0.003	<0.004	<0.002	<0.005	0.099	<0.004	<0.004	<0.003	<0.004
JUN												
04...	<0.002	<0.004	<0.003	<0.003	<0.004	<0.002	<0.005	0.011	<0.004	<0.004	<0.003	<0.004
13...	<0.002	<0.004	<0.003	<0.003	<0.004	<0.002	<0.005	0.033	<0.020	<0.004	<0.003	<0.004
20...	<0.002	<0.004	<0.003	<0.003	<0.004	<0.002	<0.005	0.011	<0.004	<0.004	<0.003	<0.004
27...	<0.002	<0.004	<0.003	<0.003	<0.004	<0.002	<0.005	0.005	<0.004	<0.004	<0.003	<0.004
JUL												
09...	<0.002	<0.004	<0.003	<0.003	<0.004	<0.002	<0.005	0.008	<0.004	<0.004	<0.003	<0.004
28...	<0.002	<0.004	<0.003	<0.003	<0.004	<0.002	<0.005	0.005	<0.004	<0.004	<0.003	<0.004
AUG												
12...	<0.002	<0.004	<0.003	<0.003	<0.004	<0.002	<0.005	0.005	<0.004	<0.004	<0.003	<0.004
26...	<0.002	<0.004	<0.003	<0.003	<0.004	<0.002	<0.005	0.007	<0.030	<0.004	<0.003	<0.004
SEP												
09...	<0.002	<0.004	<0.003	<0.003	<0.004	<0.002	<0.005	EO.004	<0.004	<0.004	<0.003	<0.004

DEER CREEK BASIN

03049646 DEER CREEK NEAR DORSEYVILLE, PA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE	METHYL- PARA- THION WAT FLT 0.7 µ (µG/L) (82667)	PEB- ULATE WATER FILTRD 0.7 µ (µG/L) (82669)	PENDI- METH- ALIN WAT FLT 0.7 µ (µG/L) (82683)	PHORATE WATER FLTRD 0.7 µ (µG/L) (82664)	PRO- METON, WATER, DISS, REC (µG/L) (04037)	PROP- CHLOR, WATER, DISS, REC (µG/L) (04024)	PRO- PANIL WATER FLTRD 0.7 µ (µG/L) (82679)	PRO- PARGITE WATER FLTRD 0.7 µ (µG/L) (82685)	PRON- AMIDE WATER FLTRD 0.7 µ (µG/L) (82676)	SI- MAZINE, WATER, DISS, REC (µG/L) (04035)	TEBU- THIURON WATER FLTRD 0.7 µ (µG/L) (82670)	TER- BACIL WATER FLTRD 0.7 µ (µG/L) (82665)
JAN												
27...	<0.006	<0.004	<0.004	<0.002	E0.006	<0.007	<0.004	<0.013	<0.003	E0.003	E0.004	<0.007
FEB												
13...	<0.006	<0.004	<0.004	<0.002	<0.018	<0.007	<0.004	<0.013	<0.003	<0.005	<0.010	<0.007
MAR												
05...	<0.006	<0.004	<0.004	<0.002	E0.009	<0.007	<0.004	<0.013	<0.003	<0.005	<0.010	<0.007
12...	<0.006	<0.004	<0.004	<0.002	E0.008	<0.007	<0.004	<0.013	<0.003	<0.005	<0.010	<0.007
19...	<0.006	<0.004	<0.004	<0.002	E0.005	<0.007	<0.004	<0.013	<0.003	<0.005	<0.010	<0.007
26...	<0.006	<0.004	<0.004	<0.002	E0.011	<0.007	<0.004	<0.013	<0.003	<0.005	<0.010	<0.007
APR												
02...	<0.006	<0.004	<0.004	<0.002	E0.006	<0.007	<0.004	<0.013	<0.003	<0.005	<0.010	<0.007
10...	<0.006	<0.004	<0.004	<0.002	E0.006	<0.007	<0.004	<0.013	<0.003	<0.005	<0.010	<0.007
16...	<0.006	<0.004	<0.004	<0.002	E0.005	<0.007	<0.004	<0.013	<0.003	E0.002	<0.010	<0.007
28...	<0.006	<0.004	<0.004	<0.002	0.030	<0.007	<0.004	<0.013	<0.003	0.008	<0.010	<0.007
MAY												
08...	<0.006	<0.004	<0.004	<0.002	<0.018	<0.007	<0.004	<0.013	<0.003	<0.005	<0.010	<0.007
14...	<0.006	<0.004	<0.004	<0.002	E0.003	<0.007	<0.004	<0.013	<0.003	<0.005	<0.010	<0.007
19...	<0.006	<0.004	<0.004	<0.002	E0.012	<0.007	<0.004	<0.013	<0.003	0.011	<0.010	<0.007
26...	<0.006	<0.004	0.020	<0.002	E0.008	<0.007	<0.004	<0.013	<0.003	0.092	<0.010	<0.007
JUN												
04...	<0.006	<0.004	<0.004	<0.002	E0.006	<0.007	<0.004	<0.013	<0.003	0.009	<0.010	<0.007
13...	<0.006	<0.004	<0.004	<0.002	0.025	<0.007	<0.004	<0.013	<0.003	0.010	<0.010	<0.007
20...	<0.006	<0.004	<0.004	<0.002	E0.008	<0.007	<0.004	<0.013	<0.003	0.008	<0.010	<0.007
27...	<0.006	<0.004	<0.004	<0.002	<0.018	<0.007	<0.004	<0.013	<0.003	<0.005	<0.010	<0.007
JUL												
09...	<0.006	<0.004	<0.004	<0.002	E0.010	<0.007	<0.004	<0.013	<0.003	0.013	<0.010	<0.007
28...	<0.006	<0.004	<0.004	<0.002	E0.013	<0.007	<0.004	<0.013	<0.003	<0.005	<0.010	<0.007
AUG												
12...	<0.006	<0.004	<0.004	<0.002	E0.013	<0.007	<0.004	<0.013	<0.003	E0.005	<0.010	<0.007
26...	<0.006	<0.004	<0.004	<0.002	E0.012	<0.007	<0.004	<0.013	<0.003	<0.005	<0.010	<0.007
SEP												
09...	<0.006	<0.004	<0.004	<0.002	E0.015	<0.007	<0.004	<0.013	<0.003	E0.005	<0.010	E0.009

DEER CREEK BASIN

03049646 DEER CREEK NEAR DORSEYVILLE, PA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE	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)	ALPHA BHC DIS- SOLVED (μ G/L) (34253)	PER- METHRIN CIS WAT FLT 0.7 U GF, REC (μ G/L) (82687)	P,P' DDE DISSOLV (μ G/L) (34653)	DIAZ- INON D10 SRG WAT FLT 0.7 μ GF, REC PERCENT (91063)	TERBUTH YLAZINE SURROGT WAT FLT 0.7 μ GF, REC PERCENT (91064)	HCH ALPHA D6 SRG WAT FLT 0.7 μ GF, REC PERCENT (91065)	SAMPLE VOLUME SCHED- ULE 2010 (ML) (99857)
JAN 1997											
27...	<0.013	<0.002	<0.001	<0.002	<0.002	<0.005	<0.006	88.8	104	86.2	--
FEB											
13...	<0.013	<0.002	<0.001	<0.002	<0.002	<0.005	<0.006	96.9	106	92.5	961
MAR											
05...	<0.013	<0.002	<0.001	<0.002	<0.002	<0.005	<0.006	89.9	87.1	96.7	961
12...	<0.013	<0.002	<0.001	<0.002	<0.002	<0.005	<0.006	90.3	103	93.3	980
19...	<0.013	<0.002	<0.001	<0.002	<0.002	<0.005	<0.006	93.3	99.2	90.9	917
26...	<0.013	<0.002	<0.001	<0.002	<0.002	<0.005	<0.006	83.2	84.2	87.7	925
APR											
02...	<0.013	<0.002	<0.001	<0.002	<0.002	<0.005	<0.006	94.0	103	106	943
10...	<0.013	<0.002	<0.001	<0.002	<0.002	<0.005	<0.006	94.9	97.8	116	925
16...	<0.013	<0.002	<0.001	<0.002	<0.002	<0.005	<0.006	90.2	89.1	72.3	943
28...	<0.013	<0.002	<0.001	<0.002	<0.002	<0.005	<0.006	103	125	101	917
MAY											
08...	<0.013	<0.002	<0.001	<0.002	<0.002	<0.005	--	83.6	107	85.9	917
14...	<0.013	<0.002	<0.001	<0.002	<0.002	<0.005	<0.006	106	110	97.2	943
19...	<0.013	<0.002	<0.001	<0.002	<0.002	<0.005	<0.006	98.2	116	91.0	900
26...	<0.013	<0.002	<0.001	<0.002	<0.002	<0.005	<0.006	98.1	100	80.8	970
JUN											
04...	<0.013	<0.002	<0.001	<0.002	<0.002	<0.005	<0.006	101	103	79.9	952
13...	<0.013	<0.002	<0.001	<0.002	<0.002	<0.005	<0.006	95.1	107	107	961
20...	<0.013	<0.002	<0.001	<0.002	<0.002	<0.005	<0.006	88.0	103	101	980
27...	<0.013	<0.002	<0.001	<0.002	<0.002	<0.005	<0.006	103	115	104	952
JUL											
09...	<0.013	<0.002	<0.001	<0.002	<0.002	<0.005	<0.006	103	110	121	847
28...	<0.013	<0.002	<0.001	<0.002	<0.002	<0.005	<0.006	99.0	109	106	961
AUG											
12...	<0.013	<0.002	<0.001	<0.002	<0.002	<0.005	<0.006	115	122	112	943
26...	<0.013	<0.002	<0.001	<0.002	<0.002	<0.005	<0.006	96.3	112	97.2	925
SEP											
09...	<0.013	<0.002	<0.001	<0.002	<0.002	<0.005	<0.006	93.5	112	110	934

DEER CREEK BASIN

03049646 DEER CREEK NEAR DORSEYVILLE, PA--Continued

REMARKS.--The following data are for analytes from the National Water Quality Laboratory (NWQL) schedule 2051--pesticides in filtered water. Samples are filtered through a glass-fiber membrane filter with openings that are 0.7 microns in size to remove sediment and microorganisms. The filtered water is field extracted on Caropak B solid phase extraction cartridge and analyzed by high performance liquid chromatography.

The method detection limit (MDL) provides an index to indicate where measurement uncertainty is increased. When an analyte is detected and all criteria for a positive result are met, the concentration is reported. If the concentration is less than the MDL, an 'E' code will be reported with the value. If the analyte is qualitatively identified as present, but the quantitative determination is substantially more uncertain, the NWQL will identify the result with an 'E' code even though the measured value is greater than the MDL. A value reported with an 'E' code should be used with caution. When no analyte is detected in a sample, the default reporting value is the MDL preceded by a less-than sign (<).

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE	TIME	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)	OXYGEN, DIS- SOLVED (MG/L) (00300)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	2,4,5-T DIS- SOLVED (μ G/L) (39742)	2,4-D, DIS- SOLVED (μ G/L) (39732)
JAN										
27...	1300	27	684	7.5	2.5	740	14.2	130	<0.035	<0.035
FEB										
13...	1315	42	857	7.6	2.0	748	15.5	188	<0.035	<0.035
MAR										
05...	0805	55	521	8.0	4.0	737	12.6	76	<0.035	<0.035
12...	1115	44	544	7.7	3.5	743	14.0	234	<0.035	<0.035
19...	0930	40	580	7.8	6.0	740	13.7	220	<0.035	<0.035
26...	1000	92	456	7.6	7.0	735	12.6	234	<0.035	<0.035
APR										
02...	0930	25	545	8.2	4.0	746	13.9	148	<0.035	<0.035
10...	0945	14	648	8.4	2.0	746	14.1	156	<0.035	<0.035
16...	1215	19	587	8.6	8.5	737	13.2	120	<0.035	<0.035
28...	0900	44	447	7.8	10.0	727	9.8	70	<0.035	0.170
MAY										
08...	0930	21	849	7.9	10.0	742	11.4	228	<0.035	<0.035
14...	1000	22	827	7.6	11.0	730	11.3	208	<0.035	<0.035
19...	1500	48	530	8.0	19.0	730	9.8	112	<0.035	0.610
26...	1745	149	356	7.6	16.0	735	8.9	62	<0.035	0.250
JUN										
04...	1430	36	554	8.0	16.0	737	11.1	126	<0.035	0.060
13...	1045	76	423	7.6	16.0	729	8.5	124	<0.035	1.16
20...	0915	15	566	8.2	19.0	742	7.5	106	<0.035	<0.035
27...	1230	9.3	950	7.9	18.0	741	9.8	256	<0.035	<0.035
JUL										
09...	1010	3.1	720	8.2	21.0	735	9.0	154	<0.035	<0.035
28...	1200	1.2	818	8.3	23.0	736	10.2	176	<0.035	<0.035
AUG										
12...	0845	1.0	1070	8.2	20.0	742	5.2	238	<0.035	<0.035
26...	1250	9.3	960	7.8	16.0	741	7.2	228	<0.035	<0.035
SEP										
09...	1230	2.3	1020	8.2	17.5	735	11.2	234	<0.035	<0.035

DEER CREEK BASIN

03049646 DEER CREEK NEAR DORSEYVILLE, PA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE	2,4-DB WATER, FLTRD, GF 0.7μ REC (μG/L) (38746)	SILVEX, DIS- SOLVED (μG/L) (39762)	3HYDRXY CARBO- FURAN WAT,FLT GF 0.7μ REC (μG/L) (49308)	DNOC WAT,FLT GF 0.7μ REC (μG/L) (49299)	ACIFL- UORFEN WATER, FLTRD, GF 0.7μ REC (μG/L) (49315)	ALDI- CARB, WATER, FLTRD, GF 0.7μ REC (μG/L) (49312)	ALDI- CARB SULFONE WAT,FLT GF 0.7μ REC (μG/L) (49313)	ALDICA- RB SUL- FOXIDE, WAT,FLT GF 0.7μ REC (μG/L) (49314)	BENTA- ZON, WATER, FLTRD, GF 0.7μ REC (μG/L) (38711)	BRO- MACIL, WATER, DISS, REC (μG/L) (04029)
JAN										
27...	<0.035	<0.021	<0.014	<0.035	<0.035	<0.016	<0.016	<0.021	<0.014	<0.035
FEB										
13...	<0.035	<0.021	<0.014	<0.035	<0.035	<0.016	<0.016	<0.021	<0.014	<0.035
MAR										
05...	<0.035	<0.021	<0.014	<0.035	<0.035	<0.016	<0.016	<0.021	<0.014	<0.035
12...	<0.035	<0.021	<0.014	<0.035	<0.035	<0.016	<0.016	<0.021	<0.014	<0.035
19...	<0.035	<0.021	<0.014	<0.035	<0.035	<0.016	<0.016	<0.021	<0.014	<0.035
26...	<0.035	<0.021	<0.014	<0.035	<0.035	<0.016	<0.016	<0.021	<0.014	<0.035
APR										
02...	<0.035	<0.021	<0.014	<0.035	<0.035	<0.016	<0.016	<0.021	<0.014	<0.035
10...	<0.035	<0.021	<0.014	<0.035	<0.035	<0.016	<0.016	<0.021	<0.014	<0.035
16...	<0.035	<0.021	<0.014	<0.035	<0.035	<0.016	<0.016	<0.021	<0.014	<0.035
28...	<0.035	<0.021	<0.014	<0.035	<0.035	<0.016	<0.016	<0.021	<0.014	<0.035
MAY										
08...	<0.035	<0.021	<0.014	<0.035	<0.035	<0.016	<0.016	<0.021	<0.014	<0.035
14...	<0.035	<0.021	<0.014	<0.035	<0.035	<0.016	<0.016	<0.021	<0.014	<0.035
19...	<0.035	<0.021	<0.014	<0.035	<0.035	<0.016	<0.016	<0.021	<0.014	<0.035
26...	<0.035	<0.021	<0.014	<0.035	<0.035	<0.016	<0.016	<0.021	<0.014	<0.035
JUN										
04...	<0.035	<0.021	<0.014	<0.035	<0.035	<0.016	<0.016	<0.021	<0.014	<0.035
13...	<0.035	<0.021	<0.014	<0.035	0.040	<0.016	<0.016	<0.021	E0.050	<0.035
20...	<0.035	<0.021	<0.014	<0.035	<0.035	<0.016	<0.016	<0.021	<0.014	<0.035
27...	<0.035	<0.021	<0.014	<0.035	<0.035	<0.016	<0.016	<0.021	<0.014	<0.035
JUL										
09...	<0.035	<0.021	<0.014	<0.035	<0.035	<0.016	<0.016	<0.021	<0.014	<0.035
28...	<0.035	<0.021	<0.014	<0.035	<0.035	<0.016	<0.016	<0.021	<0.014	<0.035
AUG										
12...	<0.035	<0.021	<0.014	<0.035	<0.035	<0.016	<0.016	<0.021	<0.014	<0.035
26...	<0.035	<0.021	<0.014	<0.035	<0.035	<0.016	<0.016	<0.021	<0.014	<0.035
SEP										
09...	<0.035	<0.021	<0.014	<0.035	<0.035	<0.016	<0.016	<0.021	<0.014	<0.035

DEER CREEK BASIN

03049646 DEER CREEK NEAR DORSEYVILLE, PA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE	BRO- MOXYNIL WATER, FLTRD, GF 0.7μ REC (μG/L) (49311)	CAR- BARYL, WATER, FLTRD, GF 0.7μ REC (μG/L) (49310)	CARBO- FURAN, WATER, FLTRD, GF 0.7μ REC (μG/L) (49309)	CHLOR- AMBEN, WATER, FLTRD, GF 0.7μ REC (μG/L) (49307)	CHLORO- THALO- NIL, WAT,FLT GF 0.7μ REC (μG/L) (49306)	CLOPYR- ALID, WATER, FLTRD, GF 0.7μ REC (μG/L) (49305)	DACTHAL MONO- ACID, WAT,FLT GF 0.7μ REC (μG/L) (49304)	DICAMBA WATER, FLTRD, GF 0.7μ REC (μG/L) (38442)	DICHLO- BENIL, WATER, FLTRD, GF 0.7μ REC (μG/L) (49303)	DICHLOR PROP, WATER, FLTRD, GF 0.7μ REC (μG/L) (49302)
JAN										
27...	<0.035	<0.008	<0.028	<0.011	<0.035	<0.050	<0.017	<0.035	<0.020	<0.032
FEB										
13...	<0.035	<0.008	<0.028	<0.011	<0.035	<0.050	<0.017	<0.035	<0.020	<0.032
MAR										
05...	<0.035	<0.008	<0.028	<0.011	<0.035	<0.050	<0.017	<0.035	<0.020	<0.032
12...	<0.035	<0.008	<0.028	<0.011	<0.035	<0.050	<0.017	<0.035	<0.020	<0.032
19...	<0.035	<0.008	<0.028	<0.011	<0.035	<0.050	<0.017	<0.035	<0.020	<0.032
26...	<0.035	<0.008	<0.028	<0.011	<0.035	<0.050	<0.017	<0.035	<0.020	<0.032
APR										
02...	<0.035	<0.008	<0.028	<0.011	<0.035	<0.050	<0.017	<0.035	<0.020	<0.032
10...	<0.035	<0.008	<0.028	<0.011	<0.035	<0.050	<0.017	<0.035	<0.020	<0.032
16...	<0.035	<0.008	<0.028	<0.011	<0.035	<0.050	<0.017	<0.035	<0.020	<0.032
28...	<0.035	<0.008	<0.028	<0.011	<0.035	<0.050	<0.017	<0.035	<0.020	<0.032
MAY										
08...	<0.035	<0.008	<0.028	<0.011	<0.035	<0.050	<0.017	<0.035	<0.020	<0.032
14...	<0.035	<0.008	<0.028	<0.011	<0.035	<0.050	<0.017	<0.035	<0.020	<0.032
19...	<0.035	<0.008	<0.028	<0.011	<0.035	<0.050	<0.017	<0.035	<0.020	<0.032
26...	<0.035	<0.008	<0.028	<0.011	<0.035	<0.050	<0.017	<0.035	<0.020	<0.032
JUN										
04...	<0.035	<0.008	<0.028	<0.011	<0.035	<0.050	<0.017	<0.035	<0.020	<0.032
13...	E0.070	0.090	<0.028	<0.011	<0.035	<0.050	<0.017	E0.120	<0.020	0.040
20...	<0.035	<0.008	<0.028	<0.011	<0.035	<0.050	<0.017	<0.035	<0.020	<0.032
27...	<0.035	<0.008	<0.028	<0.011	<0.035	<0.050	<0.017	<0.035	<0.020	<0.032
JUL										
09...	<0.035	<0.008	<0.028	<0.011	<0.035	<0.050	<0.017	<0.035	<0.020	<0.032
28...	<0.035	<0.008	<0.028	<0.011	<0.035	<0.050	<0.017	<0.035	<0.020	<0.032
AUG										
12...	<0.035	<0.008	<0.028	<0.011	<0.035	<0.050	<0.017	<0.035	<0.020	<0.032
26...	<0.035	<0.008	<0.028	<0.011	<0.035	<0.050	<0.017	<0.035	<0.020	<0.032
SEP										
09...	<0.035	<0.008	<0.028	<0.011	<0.035	<0.050	<0.017	<0.035	<0.020	<0.032

DEER CREEK BASIN

03049646 DEER CREEK NEAR DORSEYVILLE, PA.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE	DINOSEB WATER, FLTRD, GF 0.7μ REC (μG/L) (49301)	DIURON, WATER, FLTRD, GF 0.7μ REC (μG/L) (49300)	FEN- URON, WATER, FLTRD, GF 0.7μ REC (μG/L) (49297)	FLUO- METURON, WATER, FLTRD, GF 0.7μ REC (μG/L) (38811)	LINURON WATER, FLTRD, GF 0.7μ REC (μG/L) (38478)	MCPA, WATER, FLTRD, GF 0.7μ REC (μG/L) (38482)	MCPB, WATER, FLTRD, GF 0.7μ REC (μG/L) (38487)	METHIO- CARB, WATER, FLTRD, GF 0.7μ REC (μG/L) (38501)	METH- OMYL, WATER, FLTRD, GF 0.7μ REC (μG/L) (49296)	NEB- URON, WATER, FLTRD, GF 0.7μ REC (μG/L) (49294)
JAN										
27...	<0.035	<0.020	<0.013	<0.035	<0.018	<0.050	<0.035	<0.026	<0.017	<0.015
FEB										
13...	<0.035	<0.020	<0.013	<0.035	<0.018	<0.050	<0.035	<0.026	<0.017	<0.015
MAR										
05...	<0.035	<0.020	<0.013	<0.035	<0.018	<0.050	<0.035	<0.026	<0.017	<0.015
12...	<0.035	<0.020	<0.013	<0.035	<0.018	<0.050	<0.035	<0.026	<0.017	<0.015
19...	<0.035	<0.020	<0.013	<0.035	<0.018	<0.050	<0.035	<0.026	<0.017	<0.015
26...	<0.035	<0.020	<0.013	<0.035	<0.018	<0.050	<0.035	<0.026	<0.017	<0.015
APR										
02...	<0.035	<0.020	<0.013	<0.035	<0.018	<0.050	<0.035	<0.026	<0.017	<0.015
10...	<0.035	<0.020	<0.013	<0.035	<0.018	<0.050	<0.035	<0.026	<0.017	<0.015
16...	<0.035	<0.020	<0.013	<0.035	<0.018	<0.050	<0.035	<0.026	<0.017	<0.015
28...	<0.035	<0.020	<0.013	<0.035	<0.018	<0.050	<0.035	<0.026	<0.017	<0.015
MAY										
08...	<0.035	<0.020	<0.013	<0.035	<0.018	<0.050	<0.035	<0.026	<0.017	<0.015
14...	<0.035	<0.020	<0.013	<0.035	<0.018	<0.050	<0.035	<0.026	<0.017	<0.015
19...	<0.035	0.400	<0.013	<0.035	<0.018	<0.050	<0.035	<0.026	<0.017	<0.015
26...	<0.035	E0.020	<0.013	<0.035	<0.018	<0.050	<0.035	<0.026	<0.017	<0.015
JUN										
04...	<0.035	E0.002	<0.013	<0.035	<0.018	<0.050	<0.035	<0.026	<0.017	<0.015
13...	<0.035	0.180	0.050	<0.035	E0.020	0.100	<0.035	<0.026	<0.017	0.040
20...	<0.035	E0.010	<0.013	<0.035	<0.018	<0.050	<0.035	<0.026	<0.017	<0.015
27...	<0.035	<0.020	<0.013	<0.035	<0.018	<0.050	<0.035	<0.026	<0.017	<0.015
JUL										
09...	<0.035	<0.020	<0.013	<0.035	<0.018	<0.050	<0.035	<0.026	<0.017	<0.015
28...	<0.035	<0.020	<0.013	<0.035	<0.018	<0.050	<0.035	<0.026	<0.017	<0.015
AUG										
12...	<0.035	<0.020	<0.013	<0.035	<0.018	<0.050	<0.035	<0.026	<0.017	<0.015
26...	<0.035	<0.020	<0.013	<0.035	<0.018	<0.050	<0.035	<0.026	<0.017	<0.015
SEP										
09...	<0.035	<0.020	<0.013	<0.035	<0.018	<0.050	<0.035	<0.026	<0.017	<0.015

DEER CREEK BASIN

03049646 DEER CREEK NEAR DORSEYVILLE, PA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE	NORFLUR AZON, WATER, FLTRD, GF 0.7µ REC (µG/L) (49293)	ORY- ZALIN, WATER, FLTRD, GF 0.7µ REC (µG/L) (49292)	OXAMYL, WATER, FLTRD, GF 0.7µ REC (µG/L) (38866)	PIC- LORAM, WATER, FLTRD, GF 0.7µ REC (µG/L) (49291)	PRO- PHAM, WATER, FLTRD, GF 0.7µ REC (µG/L) (49236)	PRO- POKUR, WATER, FLTRD, GF 0.7µ REC (µG/L) (38538)	TRI- CLOPYR, WATER, FLTRD, GF 0.7µ REC (µG/L) (49235)	BDMC, SURROG, WATER, UNFLTRD REC PERCENT (99835)	SAMPLE VOLUME, SCHED- ULE 2051 (ML) (99847)
JAN 27...	<0.024	<0.019	<0.018	<0.050	<0.035	<0.035	<0.050	66.0	--
FEB 13...	<0.024	<0.019	<0.018	<0.050	<0.035	<0.035	<0.050	104	950
MAR 05...	<0.024	<0.019	<0.018	<0.050	<0.035	<0.035	<0.050	96.0	966
12...	<0.024	<0.019	<0.018	<0.050	<0.035	<0.035	<0.050	107	990
19...	<0.024	<0.019	<0.018	<0.050	<0.035	<0.035	<0.050	99.0	930
26...	<0.024	<0.019	<0.018	<0.050	<0.035	<0.035	<0.050	110	915
APR 02...	<0.024	<0.019	<0.018	<0.050	<0.035	<0.035	<0.050	105	943
10...	<0.024	<0.019	<0.018	<0.050	<0.035	<0.035	<0.050	90.0	928
16...	<0.024	<0.019	<0.018	<0.050	<0.035	<0.035	<0.050	92.0	951
28...	<0.024	<0.019	<0.018	<0.050	<0.035	<0.035	<0.050	93.0	941
MAY 08...	<0.024	<0.019	<0.018	<0.050	<0.035	<0.035	<0.050	79.0	980
14...	<0.024	<0.019	<0.018	<0.050	<0.035	<0.035	<0.050	90.0	934
19...	<0.024	<0.019	<0.018	<0.050	<0.035	<0.035	<0.050	112	950
26...	<0.024	<0.019	<0.018	<0.050	<0.035	<0.035	<0.050	90.0	953
JUN 04...	<0.024	<0.019	<0.018	<0.050	<0.035	<0.035	<0.050	100	949
13...	<0.024	<0.019	<0.018	<0.050	<0.035	<0.035	<0.050	114	963
20...	<0.024	<0.019	<0.018	<0.050	<0.035	<0.035	<0.050	110	990
27...	<0.024	<0.019	<0.018	<0.050	<0.035	<0.035	<0.050	88.0	980
JUL 09...	<0.024	<0.019	<0.018	<0.050	<0.035	<0.035	<0.050	104	924
28...	<0.024	<0.019	<0.018	<0.050	<0.035	<0.035	<0.050	108	845
AUG 12...	<0.024	<0.019	<0.018	<0.050	<0.035	<0.035	<0.050	114	948
26...	<0.024	<0.019	<0.018	<0.050	<0.035	<0.035	<0.050	91.0	932
SEP 09...	<0.024	<0.019	<0.018	<0.050	<0.035	<0.035	<0.050	94.0	915

DEER CREEK BASIN

03049646 DEER CREEK NEAR DORSEYVILLE, PA--Continued

REMARKS.--The following data are for analytes from the National Water Quality laboratory (NWQL) schedule 79--organochlorine herbicides recoverable from whole water samples by gas chromatography/electron capture detector. Samples are filtered through a glass-fiber membrane filter with openings that are 0.7 microns in size to remove sediment and microorganisms.

The method detection limit (MDL) provides an index to indicate where measurement uncertainty is increased. When an analyte is detected and all criteria for a positive result are met, the concentration is reported. If the concentration is less than the MDL, an 'E' code will be reported with the value. If the analyte is qualitatively identified as present, but the quantitative determination is substantially more uncertain, the NWQL will identify the result with an 'E' code even though the measured value is greater than the MDL. A value reported with an 'E' code should be used with caution. When no analyte is detected in a sample, the default reporting value is the MDL preceded by a less-than sign (<).

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE	TIME	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)	OXYGEN, DIS- SOLVED (MG/L) (00300)
MAR							
12...	1115	44	544	7.7	3.5	743	14.0
26...	1000	92	456	7.6	7.0	735	12.6
APR							
10...	0945	14	648	8.4	2.0	746	14.1
28...	0900	44	447	7.8	10.0	727	9.8
MAY							
14...	1000	22	827	7.6	11.0	730	11.3
26...	1745	149	356	7.6	16.0	735	8.9
JUN							
20...	0915	15	566	8.2	19.0	742	7.5
JUL							
28...	1200	1.2	818	8.3	23.0	736	10.2
AUG							
12...	0845	1.0	1070	8.2	20.0	742	5.2
SEP							
09...	1230	2.3	1020	8.2	17.5	735	11.2

DATE	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	2,4,5-T TOTAL (μ G/L) (39740)	2,4-D, TOTAL (μ G/L) (39730)	SILVEX, TOTAL (μ G/L) (39760)	DICAMBA TOTAL (μ G/L) (82052)	2, 4-DP TOTAL (μ G/L) (82183)	PIC- LORAM UNFILT RECOVER (μ G/L) (39720)
MAR							
12...	234	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
26...	234	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
APR							
10...	156	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
28...	70	<0.010	0.430	<0.010	0.110	<0.010	<0.010
MAY							
14...	208	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
26...	62	<0.010	0.210	<0.010	0.025	<0.010	<0.010
JUN							
20...	106	<0.010	0.030	<0.010	<0.010	<0.010	<0.010
JUL							
28...	176	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
AUG							
12...	238	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
SEP							
09...	234	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010

DEER CREEK BASIN

03049646 DEER CREEK NEAR DORSEYVILLE, PA--Continued

REMARKS.--The following data are volatile organic compounds (VOC) detected at .2µg/L by purge and trap gas chromatography/mass spectrometric method.

The method detection limit (MDL) provides an index to indicate where measurement uncertainty is increased. When an analyte is detected and all criteria for a positive result are met, the concentration is reported. If the concentration is less than the MDL, an 'E' code will be reported with the value. If the analyte is qualitatively identified as present, but the quantitative determination is substantially more uncertain, the NWQL will identify the result with an 'E' code even though the measured value is greater than the MDL. A value reported with an 'E' code should be used with caution. When no analyte is detected in a sample, the default reporting value is the MDL preceded by a less-than sign (<).

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE	TIME	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 HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	ACETATE VINYL WATER UNFLTRD RECOVER (µG/L) (77057)	ACETONE WATER WHOLE TOTAL (µG/L) (81552)	ACRO-LEIN TOTAL (µG/L) (34210)	ACRYLO-NITRILE TOTAL (µG/L) (34215)
JAN 27...	1215	27	684	7.5	2.5	740	14.2	130	<5.00	<5.00	<2.00	<2.00
FEB 07...	1300	54	522	7.6	4.0	742	13.3	252	<5.00	E0.900	<2.00	<2.00
26...	1400	30	658	7.8	4.5	734	15.4	140	<5.00	E1.00	<2.00	<2.00
MAR 12...	1145	44	544	7.7	3.5	743	14.0	234	<5.00	<5.00	<2.00	<2.00
26...	0959	92	456	7.6	7.0	735	12.6	234	<5.00	1.61	<2.00	<2.00
APR 10...	0944	14	648	8.4	2.0	746	14.1	156	<5.00	<5.00	<2.00	<2.00
MAY 29...	1200	42	536	7.6	12.5	742	10.4	152	<5.00	E1.00	<2.00	<2.00
JUN 05...	1000	31	597	7.7	13.0	738	11.6	145	--	<4.90	<1.43	<1.23
JUL 28...	1159	1.2	818	8.3	23.0	736	10.2	176	--	<4.90	<1.43	<1.23
28...	1500	5.4	555	8.2	23.0	735	8.6	110	--	6.49	<1.43	<1.23
AUG 28...	0925	12	1020	7.6	16.0	734	9.6	270	--	E1.00	<1.43	<1.23
SEP 11...	0945	4.6	807	8.1	19.0	734	8.4	152	--	<9.81	<2.86	<2.45
DATE	BENZENE TOTAL (µG/L) (34030)	BROMO-BENZENE WHOLE, TOTAL (µG/L) (81555)	CHLORO-BENZENE TOTAL (µG/L) (34301)	BENZENE O-DI-CHLORO-WATER UNFLTRD REC (µG/L) (34536)	BENZENE 1,3-DI-CHLORO-WATER UNFLTRD REC (µG/L) (34566)	BENZENE 1,4-DI-CHLORO-WATER UNFLTRD REC (µG/L) (34571)	1,2,3-TRI-CHLORO-BENZENE WAT, WH REC (µG/L) (77613)	BENZENE 1,2,4-TRI-CHLORO-WATER UNFLTRD REC (µG/L) (34551)	BENZENE 123-TRI-METHYL-WATER UNFLTRD RECOVER (µG/L) (77221)	BENZENE 124-TRI-METHYL-WATER UNFLTRD RECOVER (µG/L) (77222)	BENZENE 135-TRI-METHYL-WATER UNFLTRD REC (µG/L) (77226)	ETHYL-BENZENE TOTAL (µG/L) (34371)
JAN 27...	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.200	<0.200	<0.050	<0.050	<0.050	<0.050
FEB 07...	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.200	<0.200	<0.050	<0.050	<0.050	<0.050
26...	E0.030	<0.050	<0.050	<0.050	<0.050	<0.050	<0.200	<0.200	<0.050	E0.009	<0.050	E0.005
MAR 12...	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.200	<0.200	<0.050	<0.050	<0.050	<0.050
26...	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.200	<0.200	<0.050	<0.050	<0.050	<0.050
APR 10...	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.200	<0.200	<0.050	<0.050	<0.050	<0.050
MAY 29...	E0.010	<0.050	<0.050	<0.050	<0.050	<0.050	<0.200	<0.200	<0.050	<0.050	<0.050	<0.050
JUN 05...	<0.032	<0.036	<0.028	<0.048	<0.054	<0.050	<0.266	<0.188	<0.124	<0.056	<0.044	E0.005
JUL 28...	<0.032	<0.036	<0.028	<0.048	<0.054	<0.050	<0.266	<0.188	<0.124	<0.056	<0.044	<0.030
28...	<0.032	<0.036	<0.028	<0.048	<0.054	<0.050	<0.266	<0.188	<0.124	<0.056	<0.044	<0.030
AUG 28...	<0.032	<0.036	<0.028	<0.048	<0.054	<0.050	<0.266	<0.188	<0.124	<0.056	<0.044	<0.030
SEP 11...	<0.064	<0.072	<0.056	<0.096	<0.108	<0.100	<0.532	<0.376	<0.248	<0.112	<0.088	<0.060

DEER CREEK BASIN

03049646 DEER CREEK NEAR DORSEYVILLE, PA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE	BENZENE N-PROPYL WATER UNFLTRD REC ($\mu\text{G/L}$) (77224)	ISO- PROPYL- BENZENE WATER WHOLE REC ($\mu\text{G/L}$) (77223)	BENZENE N-BUTYL WATER UNFLTRD REC ($\mu\text{G/L}$) (77342)	BENZENE SEC BUTYL- WATER UNFLTRD REC ($\mu\text{G/L}$) (77350)	BENZENE TERT- BUTYL- WATER UNFLTRD REC ($\mu\text{G/L}$) (77353)	2BUTENE TRANS-1 4-DI- CHLORO UNFLTRD RECOVER ($\mu\text{G/L}$) (73547)	CARBON DI. SULFIDE WATER WHOLE TOTAL ($\mu\text{G/L}$) (77041)	1,2- DIBROMO ETHANE WATER WHOLE TOTAL ($\mu\text{G/L}$) (77651)	CHLORO- ETHANE TOTAL ($\mu\text{G/L}$) (34311)	1,1-DI- CHLORO- ETHANE TOTAL ($\mu\text{G/L}$) (34496)	1,2-DI- CHLORO- ETHANE TOTAL ($\mu\text{G/L}$) (32103)	1,1,1- TRI- CHLORO- ETHANE TOTAL ($\mu\text{G/L}$) (34506)
JAN 27...	<0.050	<0.050	<0.050	<0.050	<0.050	<5.00	E0.007	<0.100	<0.100	<0.050	<0.050	<0.050
FEB 07...	<0.050	<0.050	<0.050	<0.050	<0.050	<5.00	<0.050	<0.100	<0.100	<0.050	<0.050	<0.050
26...	<0.050	<0.050	<0.050	<0.050	<0.050	<5.00	<0.050	<0.100	<0.100	<0.050	<0.050	<0.050
MAR 12...	<0.050	<0.050	<0.050	<0.050	<0.050	<5.00	<0.050	<0.100	<0.100	<0.050	<0.050	<0.050
26...	<0.050	<0.050	<0.050	<0.050	<0.050	<5.00	<0.050	<0.100	<0.100	<0.050	<0.050	<0.050
APR 10...	<0.050	<0.050	<0.050	<0.050	<0.050	<5.00	E0.010	<0.100	<0.100	<0.050	<0.050	<0.050
MAY 29...	<0.050	<0.050	<0.050	<0.050	<0.050	<5.00	<0.050	<0.100	<0.100	<0.050	<0.050	<0.050
JUN 05...	<0.042	<0.032	<0.186	<0.048	<0.096	<0.692	<0.080	<0.036	<0.120	<0.066	<0.134	<0.032
JUL 28...	<0.042	<0.032	<0.186	<0.048	<0.096	<0.692	<0.080	<0.036	<0.120	<0.066	<0.134	<0.032
28...	<0.042	<0.032	<0.186	<0.048	<0.096	<0.692	<0.080	<0.036	<0.120	<0.066	<0.134	<0.032
AUG 28...	<0.042	<0.032	<0.186	<0.048	<0.096	<0.692	E0.040	<0.036	<0.120	<0.066	<0.134	<0.032
SEP 11...	<0.084	<0.064	<0.372	<0.096	<0.192	<1.38	<0.160	<0.072	<0.240	<0.132	<0.268	<0.064
DATE	1,1,2- TRI- CHLORO- ETHANE TOTAL ($\mu\text{G/L}$) (34511)	ETHANE, 1112- TETRA- CHLORO- WAT UNF REC ($\mu\text{G/L}$) (77562)	ETHANE, 1,1,2,2 TETRA- CHLORO- WAT UNF REC ($\mu\text{G/L}$) (34516)	ETHANE HEXA- CHLORO- WATER UNFLTRD RECOVER ($\mu\text{G/L}$) (34396)	BROMO- ETHENE WATER UNFLTRD RECOVER ($\mu\text{G/L}$) (50002)	METHYL- ENE CHLO- RIDE TOTAL ($\mu\text{G/L}$) (34423)	1,1-DI- CHLORO- ETHYL- ENE TOTAL ($\mu\text{G/L}$) (34501)	CIS-1,2 -DI- CHLORO- ETHENE WATER TOTAL ($\mu\text{G/L}$) (77093)	1,2- TRANS DI- CHLORO- ETHENE TOTAL ($\mu\text{G/L}$) (34546)	TRI- CHLORO- ETHYL- ENE TOTAL ($\mu\text{G/L}$) (39180)	TETRA- CHLORO- ETHYL- ENE TOTAL ($\mu\text{G/L}$) (34475)	DI-ISO- PROPYL- ETHER, WATER, UNFLTRD RECOVER ($\mu\text{G/L}$) (81577)
JAN 27...	<0.100	<0.050	<0.100	<0.050	<0.100	<0.100	<0.100	<0.050	<0.050	<0.050	<0.050	<0.100
FEB 07...	<0.100	<0.050	<0.100	<0.050	<0.100	<0.100	<0.100	<0.050	<0.050	<0.050	<0.050	<0.100
26...	<0.100	<0.050	<0.100	<0.050	<0.100	<0.100	<0.100	<0.050	<0.050	<0.050	<0.050	<0.100
MAR 12...	<0.100	<0.050	<0.100	<0.050	<0.100	<0.100	<0.100	<0.050	<0.050	<0.050	<0.050	<0.100
26...	<0.100	<0.050	<0.100	<0.050	<0.100	<0.100	<0.100	<0.050	<0.050	<0.050	<0.050	<0.100
APR 10...	<0.100	<0.050	<0.100	<0.050	<0.100	<0.100	<0.100	<0.050	<0.050	<0.050	<0.050	<0.100
MAY 29...	<0.100	<0.050	<0.100	<0.050	<0.100	<0.100	<0.100	<0.050	<0.050	<0.050	<0.050	<0.100
JUN 05...	<0.064	<0.044	<0.132	<0.362	<0.100	<0.382	<0.044	<0.038	<0.032	<0.038	<0.038	<0.098
JUL 28...	<0.064	<0.044	<0.132	<0.362	<0.100	<0.382	<0.044	<0.038	<0.032	<0.038	<0.038	<0.098
28...	<0.064	<0.044	<0.132	<0.362	<0.100	<0.382	<0.044	<0.038	<0.032	<0.038	<0.038	<0.098
AUG 28...	<0.064	<0.044	<0.132	<0.362	<0.100	<0.382	<0.044	<0.038	<0.032	<0.038	<0.038	<0.098
SEP 11...	<0.128	<0.088	<0.264	<0.724	<0.200	1.24	<0.088	<0.076	<0.064	<0.076	<0.076	<0.196

DEER CREEK BASIN

03049646 DEER CREEK NEAR DORSEYVILLE, PA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE	ETHER ETHYL- WATER UNFLTRD RECOVER (μ G/L) (81576)	METHYL TERT- BUTYL ETHER WAT UNF REC (μ G/L) (78032)	ETHER TERT- BUTYL ETHER UNFLTRD RECOVER (μ G/L) (50004)	ETHER TERT- PENTYL METHYL- UNFLTRD RECOVER (μ G/L) (50005)	FREON- 113 WATER UNFLTRD REC (μ G/L) (77652)	FURAN TETRA- HYDRO- WATER UNFLTRD RECOVER (μ G/L) (81607)	HEXA- CHLORO- BUT- ADIENE TOTAL (μ G/L) (39702)	2-HEXA- NONE WATER WHOLE TOTAL (μ G/L) (77103)	ISO- DURENE WATER UNFLTRD RECOVER (μ G/L) (50000)	METHAC- RYLATE METHYL WATER UNFLTRD RECOVER (μ G/L) (81597)	METHAC- RYLATE ETHYL- WATER UNFLTRD RECOVER (μ G/L) (73570)	METHYL- BROMIDE TOTAL (μ G/L) (34413)
JAN 27...	<0.100	0.120	<0.100	<0.100	<0.050	<5.00	<0.200	<5.00	<0.050	<1.00	<1.00	<0.100
FEB 07...	<0.100	E0.020	<0.100	<0.100	<0.050	<5.00	<0.200	<5.00	<0.050	<1.00	<1.00	<0.100
FEB 26...	<0.100	0.170	<0.100	<0.100	<0.050	<5.00	<0.200	<5.00	<0.050	<1.00	<1.00	<0.100
MAR 12...	<0.100	E0.030	<0.100	<0.100	<0.050	<5.00	<0.200	<5.00	<0.050	<1.00	<1.00	<0.100
MAR 26...	<0.100	<0.100	<0.100	<0.100	<0.050	<5.00	<0.200	<5.00	<0.050	<1.00	<1.00	<0.100
APR 10...	<0.100	<0.100	<0.100	<0.100	<0.050	<5.00	<0.200	<5.00	<0.050	<1.00	<1.00	<0.100
MAY 29...	<0.100	<0.100	<0.100	<0.100	<0.050	<5.00	<0.200	<5.00	<0.050	<1.00	<1.00	<0.100
JUN 05...	<0.170	<0.112	<0.054	<0.112	<0.032	<1.15	<0.142	<0.746	<0.240	<0.350	<0.278	<0.148
JUL 28...	<0.170	<0.112	<0.054	<0.112	<0.032	<1.15	<0.142	<0.746	<0.240	<0.350	<0.278	<0.148
JUL 28...	<0.170	<0.112	<0.054	<0.112	<0.032	<1.15	<0.142	<0.746	<0.240	<0.350	<0.278	<0.148
AUG 28...	<0.170	<0.112	<0.054	<0.112	<0.032	<1.15	<0.142	<0.746	<0.240	<0.350	<0.278	<0.148
SEP 11...	<0.340	<0.171	<0.108	<0.224	<0.064	<2.30	<0.284	<1.49	<0.480	<0.700	<0.556	<0.296
DATE	METHYL- CHLO- RIDE TOTAL (μ G/L) (34418)	METHANE BROMO- CHLORO- WAT UNFLTRD REC (μ G/L) (77297)	CHLORO- DI- BROMO- METHANE TOTAL (μ G/L) (32105)	DI- BROMO- METHANE WHOLE RECOVER (μ G/L) (30217)	DI- CHLORO- BROMO- METHANE TOTAL (μ G/L) (32101)	DI- CHLORO- DI- FLUORO- METHANE TOTAL (μ G/L) (34668)	METHYL IODIDE WATER UNFLTRD RECOVER (μ G/L) (77424)	CARBON- TETRA- CHLO- RIDE TOTAL (μ G/L) (32102)	BROMO- FORM TOTAL (μ G/L) (32104)	CHLORO- FORM TOTAL (μ G/L) (32106)	TRI- CHLORO- FLUORO- METHANE TOTAL (μ G/L) (34488)	METHYL ACRY- LATE WATER UNFLTRD RECOVER (μ G/L) (49991)
JAN 27...	<0.200	<0.100	<0.100	<0.100	<0.100	<0.200	<0.050	<0.050	<0.200	<0.050	<0.100	<2.00
FEB 07...	<0.200	<0.100	<0.100	<0.100	<0.100	<0.200	<0.050	<0.050	<0.200	<0.050	<0.100	<2.00
FEB 26...	<0.200	<0.100	<0.100	<0.100	<0.100	<0.200	<0.050	<0.050	<0.200	<0.050	<0.100	<2.00
MAR 12...	E0.030	<0.100	<0.100	<0.100	<0.100	<0.200	<0.050	<0.050	<0.200	<0.050	<0.100	<2.00
MAR 26...	E0.040	<0.100	<0.100	<0.100	<0.100	<0.200	<0.050	<0.050	<0.200	<0.050	<0.100	<2.00
APR 10...	<0.200	<0.100	<0.100	<0.100	<0.100	<0.200	<0.050	<0.050	<0.200	<0.050	<0.100	<2.00
MAY 29...	<0.200	<0.100	<0.100	<0.100	<0.100	<0.200	<0.050	<0.050	<0.200	<0.050	<0.100	<2.00
JUN 05...	E0.010	<0.044	<0.182	<0.050	<0.048	<0.096	<0.076	<0.088	<0.104	<0.052	<0.092	<0.612
JUL 28...	<0.254	<0.044	<0.182	<0.050	<0.048	<0.096	<0.076	<0.088	<0.104	E0.010	<0.092	<0.612
JUL 28...	<0.254	<0.044	<0.182	<0.050	<0.048	<0.096	<0.076	<0.088	<0.104	<0.052	<0.092	<0.612
AUG 28...	<0.254	<0.044	<0.182	<0.050	<0.048	<0.096	<0.076	<0.088	<0.104	<0.052	<0.092	<0.612
SEP 11...	<0.508	<0.088	<0.364	<0.100	<0.096	<0.192	<0.152	<0.176	<0.208	<0.104	<0.184	<1.22

DEER CREEK BASIN

03049646 DEER CREEK NEAR DORSEYVILLE, PA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE	METH- ACRYLO- NITRITE WATER UNFLTRD RECOVER (μG/L) (81593)	METHYL- ETHYL- KETONE WATER WHOLE TOTAL (μG/L) (81595)	METHYL- ISO- BUTYL- KETONE WAT. WH. TOTAL (μG/L) (78133)	NAPHTH- ALENE TOTAL (μG/L) (34696)	PREH- NITENE WATER UNFLTRD RECOVER (μG/L) (49999)	1,2-DI- CHLORO- PROPANE TOTAL (μG/L) (34541)	2,2-DI CHLORO- PRO- PANE WAT. WH TOTAL (μG/L) (77170)	1,3-DI- CHLORO- PROPANE WAT. WH TOTAL (μG/L) (77173)	123-TRI CHLORO- PROPANE WATER WHOLE TOTAL (μG/L) (77443)	DIBROMO CHLORO- PROPANE WATER WHOLE TOT. REC (μG/L) (82625)	PROPENE 3- CHLORO- WATER UNFLTRD RECOVER (μG/L) (78109)	1,1-DI CHLORO- PRO- PENE, WAT. WH TOTAL (μG/L) (77168)	
JAN 27...	<2.00	E0.300	<5.00	<0.200	<0.050	<0.050	<0.050	<0.050	<0.200	<0.500	<0.100	<0.050	
FEB 07...	<2.00	<5.00	<5.00	<0.200	<0.050	<0.050	<0.050	<0.050	<0.200	<0.500	<0.100	<0.050	
26...	<2.00	<5.00	<5.00	E0.020	<0.050	<0.050	<0.050	<0.050	<0.200	<0.500	<0.100	<0.050	
MAR 12...	<2.00	<5.00	<5.00	<0.200	<0.050	<0.050	<0.050	<0.050	<0.200	<0.500	<0.100	<0.050	
26...	<2.00	E0.200	<5.00	<0.200	<0.050	<0.050	<0.050	<0.050	<0.200	<0.500	<0.100	<0.050	
APR 10...	<2.00	<5.00	<5.00	<0.200	<0.050	<0.050	<0.050	<0.050	<0.200	<0.500	<0.100	<0.050	
MAY 29...	<2.00	<5.00	<5.00	<0.200	<0.050	<0.050	<0.050	<0.050	<0.200	<0.500	<0.100	<0.050	
JUN 05...	<0.570	<1.65	<0.374	<0.250	<0.230	<0.068	<0.078	<0.116	<0.070	<0.214	<0.196	<0.026	
JUL 28...	<0.570	<1.65	<0.374	<0.250	<0.230	<0.068	<0.078	<0.116	<0.070	<0.214	<0.196	<0.026	
28...	<0.570	E0.700	<0.374	<0.250	<0.230	<0.068	<0.078	<0.116	<0.070	<0.214	<0.196	<0.026	
AUG 28...	<0.570	<1.65	<0.374	<0.250	<0.230	<0.068	<0.078	<0.116	<0.070	<0.214	<0.196	<0.026	
SEP 11...	<1.14	<3.30	<0.748	<0.500	<0.460	<0.136	<0.156	<0.232	<0.140	<0.428	<0.392	<0.052	
DATE	CIS 1,3-DI- CHLORO- PROPENE TOTAL (μG/L) (34704)	TRANS- 1,3-DI- CHLORO- PROPENE TOTAL (μG/L) (34699)	STYRENE TOTAL (μG/L) (77128)	TOLUENE TOTAL (μG/L) (34010)	O- CHLORO- TOLUENE WATER WHOLE TOTAL (μG/L) (77275)	TOLUENE P-CHLOR WATER UNFLTRD REC (μG/L) (77277)	TOLUENE O-ETHYL WATER UNFLTRD RECOVER (μG/L) (77220)	P-ISO- PROPYL- TOLUENE WATER WHOLE REC (μG/L) (77356)	VINYL CHLO- RIDE TOTAL (μG/L) (39175)	O- XYLENE WATER WHOLE TOTAL (μG/L) (77135)	META/ PARA- XYLENE WATER UNFLTRD REC (μG/L) (85795)		
JAN 27...	<0.100	<0.100	<0.050	E0.030	<0.050	<0.050	<0.050	<0.050	<0.100	<0.050	<0.050		
FEB 07...	<0.100	<0.100	<0.050	E0.020	<0.050	<0.050	<0.050	<0.050	<0.100	<0.050	<0.050		
26...	<0.100	<0.100	<0.050	E0.040	<0.050	<0.050	<0.050	<0.050	<0.100	E0.010	E0.020		
MAR 12...	<0.100	<0.100	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.100	<0.050	<0.050		
26...	<0.100	<0.100	<0.050	E0.010	<0.050	<0.050	<0.050	<0.050	<0.100	<0.050	<0.050		
APR 10...	<0.100	<0.100	<0.050	E0.020	<0.050	<0.050	<0.050	<0.050	<0.100	<0.050	<0.050		
MAY 29...	<0.100	<0.100	<0.050	E0.020	<0.050	<0.050	<0.050	<0.050	<0.100	<0.050	<0.050		
JUN 05...	<0.092	<0.134	<0.042	E0.030	<0.042	<0.056	<0.100	<0.110	<0.112	E0.010	E0.020		
JUL 28...	<0.092	<0.134	<0.042	<0.038	<0.042	<0.056	<0.100	E0.007	<0.112	<0.064	<0.064		
28...	<0.092	<0.134	<0.042	<0.038	<0.042	<0.056	<0.100	E0.010	<0.112	<0.064	<0.064		
AUG 28...	<0.092	<0.134	<0.042	<0.038	<0.042	<0.056	<0.100	<0.110	<0.112	<0.064	<0.064		
SEP 11...	<0.184	<0.268	<0.084	<0.076	<0.084	<0.112	<0.200	<0.220	<0.224	<0.128	<0.128		

DEER CREEK BASIN

03049646 DEER CREEK NEAR DORSEYVILLE, PA--Continued

SPECIFIC CONDUCTANCE, $\mu\text{S}/\text{CM}$ @ 25 DEGREES CELSIUS, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	---	---	---	---	---	---	---	---	---	796	780	787
2	---	---	---	---	---	---	---	---	---	838	792	806
3	---	---	---	---	---	---	---	---	---	838	593	736
4	---	---	---	---	---	---	---	---	---	729	599	678
5	---	---	---	---	---	---	---	---	---	755	729	745
6	---	---	---	---	---	---	---	---	---	787	679	738
7	---	---	---	---	---	---	---	---	---	834	787	807
8	---	---	---	---	---	---	---	---	---	838	723	799
9	---	---	---	---	---	---	---	---	---	763	648	701
10	---	---	---	---	---	---	---	---	---	763	711	737
11	---	---	---	---	---	---	---	---	---	743	711	728
12	---	---	---	---	---	---	---	---	---	751	738	745
13	---	---	---	---	---	---	---	---	---	812	710	755
14	---	---	---	---	---	---	---	---	---	820	735	769
15	---	---	---	---	---	---	---	---	---	839	808	821
16	---	---	---	---	---	---	---	---	---	885	839	858
17	---	---	---	---	---	---	---	---	---	901	855	879
18	---	---	---	---	---	---	586	567	582	869	443	815
19	---	---	---	---	---	---	567	490	511	537	387	467
20	---	---	---	---	---	---	494	488	491	575	465	531
21	---	---	---	---	---	---	494	484	488	---	---	---
22	---	---	---	---	---	---	490	476	483	615	467	580
23	---	---	---	---	---	---	644	474	536	---	---	---
24	---	---	---	---	---	---	659	644	647	---	---	---
25	---	---	---	---	---	---	660	647	652	---	---	---
26	---	---	---	---	---	---	686	656	670	---	---	---
27	---	---	---	---	---	---	686	593	643	---	---	---
28	---	---	---	---	---	---	593	553	572	---	---	---
29	---	---	---	---	---	---	572	442	480	---	---	---
30	---	---	---	---	---	---	599	472	541	---	---	---
31	---	---	---	---	---	---	783	598	679	---	---	---
MONTH	---	---	---	---	---	---	783	442	570	901	387	737

DEER CREEK BASIN
03049646 DEER CREEK NEAR DORSEYVILLE, PA--Continued

SPECIFIC CONDUCTANCE, $\mu\text{S}/\text{CM}$ @ 25 DEGREES CELSIUS, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997												
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	---	---	---	1020	830	937	1010	961	983	928	873	902
2	---	---	---	989	894	959	1020	977	1000	1240	869	1070
3	---	---	---	1060	989	1020	998	962	983	1220	1120	1160
4	---	---	---	1070	817	961	968	940	951	1220	1130	1170
5	---	---	---	817	754	786	963	891	943	1220	1070	1160
6	---	---	---	754	724	733	---	---	---	1090	1060	1070
7	---	---	---	726	705	714	---	---	---	1070	1050	1060
8	---	---	---	746	694	704	---	---	---	1050	1040	1040
9	---	---	---	---	---	---	---	---	---	1040	1000	999
10	---	---	---	961	546	698	---	---	---	1000	886	943
11	---	---	---	752	562	666	---	---	---	964	640	830
12	---	---	---	797	752	774	---	---	---	889	630	786
13	---	---	---	807	785	797	---	---	---	895	879	887
14	674	563	621	1180	785	928	---	---	---	896	882	891
15	735	674	707	1160	1110	1140	---	---	---	1080	893	926
16	759	679	745	1120	1090	1100	---	---	---	1060	825	891
17	679	449	522	1150	1120	1130	---	---	---	932	805	835
18	677	602	653	1210	1150	1180	---	---	---	1040	932	999
19	657	519	544	1210	1200	1210	---	---	---	1080	1040	1070
20	603	560	571	1220	1210	1220	---	---	---	1080	327	663
21	604	553	578	1260	1220	1240	---	---	---	586	472	524
22	556	545	551	1260	1220	1190	---	---	---	1260	586	850
23	851	554	730	---	---	---	---	---	---	1160	1030	1060
24	886	815	835	---	---	---	---	---	---	1160	1040	1100
25	950	886	923	---	---	---	---	---	---	1180	1150	1160
26	982	942	963	---	---	---	---	---	---	1190	1040	1140
27	978	953	961	---	---	---	---	---	---	1060	1030	1050
28	997	963	985	---	---	---	---	---	---	1040	591	989
29	1020	993	1010	625	397	795	---	---	---	775	326	533
30	1030	1010	1020	863	625	749	946	910	930	958	775	881
31	---	---	---	961	863	905	933	902	922	---	---	---
MONTH	1030	449	760	1260	397	939	1020	891	959	1260	326	955

DEER CREEK BASIN

03049646 DEER CREEK NEAR DORSEYVILLE, PA--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	---	---	---	---	---	---	8.0	5.0	7.0	6.0	4.5	5.0
2	---	---	---	---	---	---	7.0	4.5	6.0	8.0	6.0	7.0
3	---	---	---	---	---	---	6.0	3.0	4.5	10.0	8.0	9.0
4	---	---	---	---	---	---	6.0	5.5	5.5	11.5	9.5	10.5
5	---	---	---	---	---	---	5.5	4.5	5.0	11.0	8.0	10.5
6	---	---	---	---	---	---	5.5	4.5	5.0	8.0	4.0	5.5
7	---	---	---	12.5	10.0	11.0	6.5	4.5	5.0	4.0	2.5	3.0
8	---	---	---	12.5	9.5	11.0	5.0	3.5	4.0	3.0	1.5	2.5
9	---	---	---	9.5	7.5	8.5	5.0	3.5	4.0	3.0	1.5	2.5
10	---	---	---	8.0	6.0	7.0	5.5	3.0	4.0	3.5	2.0	3.0
11	---	---	---	6.0	4.5	5.5	7.0	5.0	6.0	3.0	1.5	2.0
12	---	---	---	5.5	3.0	4.5	8.0	7.0	7.5	3.0	2.0	2.5
13	---	---	---	4.0	2.0	3.0	8.0	6.5	7.0	3.5	2.5	2.5
14	---	---	---	4.0	2.0	3.0	7.0	5.0	6.0	3.0	2.0	2.5
15	---	---	---	3.0	.0	1.5	5.5	3.5	4.5	4.0	2.0	3.0
16	---	---	---	3.5	.0	1.5	6.5	4.0	5.0	3.0	1.0	2.0
17	---	---	---	4.5	.5	2.5	7.5	6.0	6.5	2.5	1.5	2.0
18	---	---	---	6.5	4.5	5.5	6.5	5.0	6.0	3.0	2.0	2.5
19	---	---	---	6.5	5.0	5.5	5.0	1.5	3.5	4.5	2.0	3.0
20	---	---	---	5.0	3.0	4.0	2.0	1.5	1.5	4.0	3.5	4.0
21	---	---	---	3.5	2.0	3.0	3.5	2.0	2.5	4.0	2.5	3.5
22	---	---	---	4.0	3.0	3.5	3.0	2.5	3.0	4.0	1.0	3.0
23	---	---	---	4.5	1.5	3.0	5.0	3.0	4.0	2.5	1.5	2.0
24	---	---	---	5.0	3.0	4.0	6.5	4.0	5.5	3.0	1.5	2.5
25	---	---	---	6.0	5.0	5.5	4.0	2.5	3.0	1.5	1.0	1.0
26	---	---	---	6.5	3.5	5.5	3.5	2.5	3.0	2.5	1.5	1.5
27	---	---	---	3.5	1.5	3.0	5.5	3.5	4.5	2.5	.5	2.0
28	---	---	---	2.5	1.5	1.5	7.5	4.5	6.0	1.0	.5	.5
29	---	---	---	3.0	.5	1.5	9.0	7.0	7.5	1.5	.5	1.0
30	---	---	---	5.0	2.0	3.0	7.5	6.0	7.0	2.0	1.0	1.5
31	---	---	---	---	---	---	7.0	5.0	6.0	2.0	1.0	1.5
MONTH	---	---	---	12.5	.0	4.5	9.0	1.5	5.0	11.5	.5	3.4

DEER CREEK BASIN
03049646 DEER CREEK NEAR DORSEYVILLE, PA--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997												
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	2.5	1.5	2.0	9.5	6.0	8.0	10.0	2.0	5.5	15.5	11.0	13.5
2	5.0	2.0	4.0	9.5	6.5	9.0	11.5	3.5	7.5	14.5	9.5	12.0
3	5.5	3.5	4.5	6.5	4.0	4.5	12.0	5.0	8.5	15.5	11.5	13.0
4	3.5	2.5	3.0	6.0	4.0	5.0	15.0	9.0	12.0	14.5	10.0	12.0
5	3.5	3.0	3.0	6.0	4.0	5.0	14.0	10.5	12.5	15.5	9.0	12.5
6	4.0	3.0	3.5	6.0	3.5	5.0	16.0	11.0	13.5	15.5	11.5	13.0
7	4.5	3.0	3.5	6.0	2.0	4.0	14.0	9.5	12.0	15.5	9.5	12.5
8	4.0	2.5	3.5	6.5	4.0	5.0	10.5	6.0	8.0	11.5	9.5	10.5
9	4.5	2.5	3.0	7.0	3.0	5.0	7.5	4.0	5.5	13.0	10.5	11.5
10	3.5	2.0	2.5	8.5	4.5	6.5	9.5	1.5	5.5	11.0	9.0	10.0
11	4.0	2.5	3.0	7.0	4.5	5.5	9.5	5.0	7.0	16.0	7.5	12.0
12	3.5	1.5	3.0	7.0	2.5	4.5	8.0	5.5	6.5	15.0	11.5	13.0
13	4.5	.0	1.5	6.0	3.0	4.5	8.0	5.5	7.0	16.0	11.5	13.5
14	2.5	.5	2.0	7.0	4.0	5.5	10.0	3.5	6.5	13.0	10.0	11.5
15	3.5	2.0	2.5	5.5	3.0	4.0	12.0	4.0	7.5	14.5	10.5	12.5
16	3.5	1.5	2.0	5.5	1.5	3.0	12.0	5.5	9.0	15.0	10.0	12.0
17	3.0	1.5	2.0	5.5	2.5	4.0	9.5	6.0	8.0	15.5	11.0	13.0
18	5.5	2.0	3.0	7.0	5.5	6.0	11.5	4.0	7.5	18.0	11.0	14.5
19	6.0	2.5	4.5	10.5	5.5	7.5	12.0	3.5	8.0	20.0	14.5	16.5
20	7.0	3.0	5.0	7.5	5.5	6.5	13.0	4.0	8.5	17.5	12.5	14.5
21	10.0	5.5	7.5	10.5	5.5	8.0	11.5	6.5	9.0	14.5	11.0	12.5
22	9.0	4.0	7.0	9.5	5.5	7.5	11.0	6.0	9.0	16.0	9.5	12.5
23	4.5	2.0	3.5	7.5	4.0	5.5	10.5	7.0	9.0	16.0	9.5	13.0
24	5.5	2.0	3.5	8.0	2.5	5.5	13.0	8.5	10.5	17.5	11.0	14.5
25	4.5	1.0	2.5	10.5	6.0	8.0	13.0	7.5	10.5	15.5	12.5	14.0
26	5.0	1.5	3.5	9.5	5.5	7.0	15.5	7.0	11.5	15.5	11.5	13.0
27	11.0	5.0	8.0	20.0	4.0	8.0	12.0	8.5	10.5	16.0	10.5	13.0
28	9.0	5.5	7.0	11.5	7.0	9.5	12.5	9.5	11.0	16.5	10.5	13.5
29	---	---	---	12.0	9.5	10.5	16.5	7.0	11.5	13.5	12.0	13.0
30	---	---	---	9.5	7.5	9.0	16.5	9.5	13.0	14.5	12.5	13.5
31	---	---	---	7.5	4.0	5.5	---	---	---	14.5	12.5	13.5
MONTH	11.0	.0	3.7	20.0	1.5	6.2	16.5	1.5	9.1	20.0	7.5	12.9

DEER CREEK BASIN

03049646 DEER CREEK NEAR DORSEYVILLE, PA--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	16.0	13.5	14.5	18.5	15.0	17.0	23.0	17.0	20.5	23.0	18.0	20.5
2	15.5	14.5	15.0	19.5	16.5	18.0	25.0	19.5	22.0	19.5	14.0	17.5
3	14.5	13.0	13.5	20.5	16.5	18.0	26.5	20.0	23.0	15.5	13.0	14.0
4	17.0	11.5	14.0	21.5	16.0	18.5	25.5	20.0	22.0	16.0	11.5	13.5
5	17.0	12.5	15.0	22.0	16.5	19.0	22.5	18.0	20.5	17.0	11.0	14.0
6	16.0	13.0	14.5	23.0	15.5	19.5	22.0	17.0	19.5	20.5	14.5	16.5
7	15.5	13.0	14.5	23.5	16.5	20.0	21.0	14.5	18.0	21.0	14.5	17.5
8	17.0	12.0	14.5	24.5	18.5	21.5	21.5	15.5	19.0	19.5	15.5	17.5
9	17.5	13.0	15.5	22.0	20.0	21.0	25.0	16.0	20.5	20.0	14.5	17.5
10	19.0	14.0	16.5	22.5	17.0	20.0	26.0	18.0	21.5	19.0	18.0	18.5
11	17.5	14.5	16.0	24.0	17.0	20.5	25.0	20.0	22.0	19.5	17.5	18.5
12	17.5	15.0	16.0	25.5	18.0	22.0	26.0	19.5	22.0	20.0	16.5	18.0
13	18.5	16.0	17.0	27.0	18.5	22.5	22.5	18.0	20.5	19.5	17.0	18.0
14	19.0	15.5	17.0	27.5	15.0	20.5	19.0	16.0	17.5	21.0	16.5	18.0
15	18.5	13.5	16.0	19.0	14.0	16.5	21.0	15.0	17.5	20.0	16.0	17.5
16	18.5	14.0	16.5	19.5	15.0	17.0	23.5	20.5	21.5	21.0	16.5	18.0
17	19.5	17.0	18.0	20.0	14.5	16.5	21.5	20.5	21.0	20.0	16.5	18.0
18	19.5	16.5	18.0	19.5	14.0	16.0	22.0	18.0	20.0	21.5	17.5	19.0
19	22.0	17.0	19.5	19.0	12.5	15.0	18.5	16.5	17.5	20.0	15.0	17.5
20	24.0	18.5	21.0	17.5	11.5	14.0	18.0	16.0	17.0	19.0	16.0	18.0
21	25.0	19.5	22.5	17.0	12.0	14.5	18.0	16.0	17.0	16.5	13.0	15.0
22	24.5	21.0	22.5	15.0	13.0	14.0	17.0	15.0	16.0	14.5	11.0	13.0
23	21.5	17.5	19.0	17.0	14.5	16.0	19.0	16.0	17.0	14.0	12.0	13.0
24	21.0	16.5	19.0	17.5	14.5	15.5	17.5	14.5	16.0	14.0	11.5	12.5
25	21.5	17.0	19.5	20.5	14.5	17.5	18.5	15.5	16.5	14.5	10.5	12.5
26	19.0	16.5	18.0	23.0	17.5	20.0	17.0	15.0	16.0	15.0	12.0	13.5
27	20.0	15.0	17.0	27.0	20.0	23.0	18.5	15.0	16.5	14.5	10.5	13.0
28	20.0	14.0	16.5	24.5	20.5	22.0	18.5	15.5	17.0	15.0	11.0	13.5
29	19.5	14.5	16.5	23.0	19.0	21.0	18.5	14.5	16.5	16.0	14.0	15.0
30	17.0	15.0	16.0	22.0	16.5	19.5	20.0	15.5	17.5	14.0	13.0	14.0
31	---	---	---	23.0	16.5	20.0	21.0	16.0	18.5	---	---	---
MONTH	25.0	11.5	17.0	27.5	11.5	18.6	26.5	14.5	19.0	23.0	10.5	16.1

PINE CREEK BASIN

03049800 LITTLE PINE CREEK NEAR ETNA, PA

LOCATION.--Lat 40°31'13", long 79°56'18", Allegheny County, Hydrologic Unit 05010009, on right bank at downstream side of highway bridge on Saxonburg Boulevard, 0.7 mi upstream from mouth, and 1.5 mi northeast of Etna.

DRAINAGE AREA.--5.78 mi².

PERIOD OF RECORD.--October 1962 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 775.26 ft above sea level.

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

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than a base discharge of 150 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 8	0845	153	3.17	May 20	1350	*222	*3.59
Jan. 11	--	Unknown	Ice jam				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.2	6.9	34	4.4	e5.4	7.0	9.7	7.1	8.9	1.1	.04	.39
2	.45	6.2	21	4.4	e4.5	20	8.8	6.6	20	1.2	.03	.39
3	.26	5.4	13	4.8	e3.7	17	8.1	6.3	11	1.1	.03	.39
4	.21	4.6	9.0	4.4	e9.0	23	7.8	8.2	8.6	.93	.12	.36
5	.21	4.4	6.8	16	30	25	7.4	5.8	6.6	.85	.09	.34
6	.21	4.5	8.4	12	16	35	7.2	5.7	5.0	.81	e.06	.36
7	.19	7.5	6.8	8.8	12	20	6.7	5.9	3.9	.75	e.04	.36
8	.19	68	5.5	e6.0	10	15	6.0	4.6	2.7	.70	e.03	.36
9	1.1	34	4.9	e4.1	8.8	12	6.0	13	.91	.81	e.02	.39
10	.87	19	4.2	e3.0	7.5	17	5.6	9.8	.45	.85	e.02	1.6
11	.21	11	24	e2.0	6.5	12	5.5	8.9	.39	.66	e.02	1.2
12	.19	6.9	58	e1.5	e5.6	10	12	7.6	.99	.54	5.2	.85
13	.19	4.7	41	e1.0	e5.0	8.9	20	7.2	39	.39	8.4	.53
14	.19	3.6	21	e.70	e4.7	29	14	6.6	14	.28	.60	.51
15	.19	2.9	12	e.60	e4.3	18	12	6.6	6.9	.35	.79	.47
16	.21	2.3	9.0	e.45	e4.1	13	11	5.7	5.9	.26	.48	.44
17	.33	2.0	e7.0	e.40	e3.8	11	10	4.8	32	.17	1.0	.48
18	15	4.4	e5.6	e.35	e7.0	9.7	10	4.7	15	.26	4.4	.57
19	23	3.5	e4.3	e.31	16	8.5	9.4	30	11	.14	.50	.47
20	43	2.7	e3.5	e1.1	14	7.4	8.9	38	6.4	.09	4.3	3.9
21	19	2.3	e2.8	e.58	13	6.7	8.1	7.2	4.6	.08	1.8	.89
22	15	2.0	e2.4	e1.2	11	5.9	8.0	2.5	3.4	.86	.79	.63
23	9.6	1.7	e2.5	e4.7	8.4	5.1	7.4	1.2	2.5	.55	.54	.61
24	7.0	1.6	e4.0	e2.7	7.0	4.5	6.9	e.90	2.1	.48	.40	.59
25	4.6	3.0	4.1	e8.0	7.2	6.3	6.0	e70	1.8	.43	.94	.58
26	3.3	11	3.2	e2.4	6.0	27	4.9	e64	1.6	.36	.45	.55
27	3.4	7.1	3.1	e4.0	6.5	15	4.0	e35	1.3	.33	.92	.52
28	8.8	5.3	5.4	e15	5.6	15	13	e20	.76	.37	2.7	3.2
29	4.1	4.4	5.4	20	---	14	11	e13	.55	.36	.61	13
30	7.9	6.3	4.7	e9.0	---	12	7.9	e8.6	.66	.10	.47	2.1
31	7.8	---	4.5	e6.2	---	11	---	9.3	---	.05	.41	---
TOTAL	177.90	249.2	341.1	150.09	242.6	441.0	263.3	424.80	218.91	16.21	36.20	37.03
MEAN	5.74	8.31	11.0	4.84	8.66	14.2	8.78	13.7	7.30	.52	1.17	1.23
MAX	.43	.68	.58	.20	.30	.35	.20	.70	.39	1.2	8.4	.13
MIN	.19	1.6	2.4	.31	3.7	4.5	4.0	.90	.39	.05	.02	.34
CFSM	.99	1.44	1.90	.84	1.50	2.46	1.52	2.37	1.26	.09	.20	.21
IN.	1.14	1.60	2.20	.97	1.56	2.84	1.69	2.73	1.41	.10	.23	.24

e Estimated.

PINE CREEK BASIN

03049800 LITTLE PINE CREEK NEAR ETNA, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1963 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	2.03	4.94	7.93	7.52	9.72	13.5	10.3	8.45	4.34	3.39	1.66	1.61
MAX	8.55	25.4	26.4	22.4	21.0	32.4	23.8	26.1	17.8	26.4	6.92	10.4
(WY)	1980	1986	1987	1965	1966	1994	1987	1968	1972	1990	1980	1990
MIN	.010	.51	.69	.82	2.17	1.30	2.33	1.74	.42	.016	.10	.040
(WY)	1964	1964	1964	1977	1980	1969	1971	1965	1965	1965	1965	1963

SUMMARY STATISTICS

FOR 1996 CALENDAR YEAR

FOR 1997 WATER YEAR

WATER YEARS 1963 - 1997

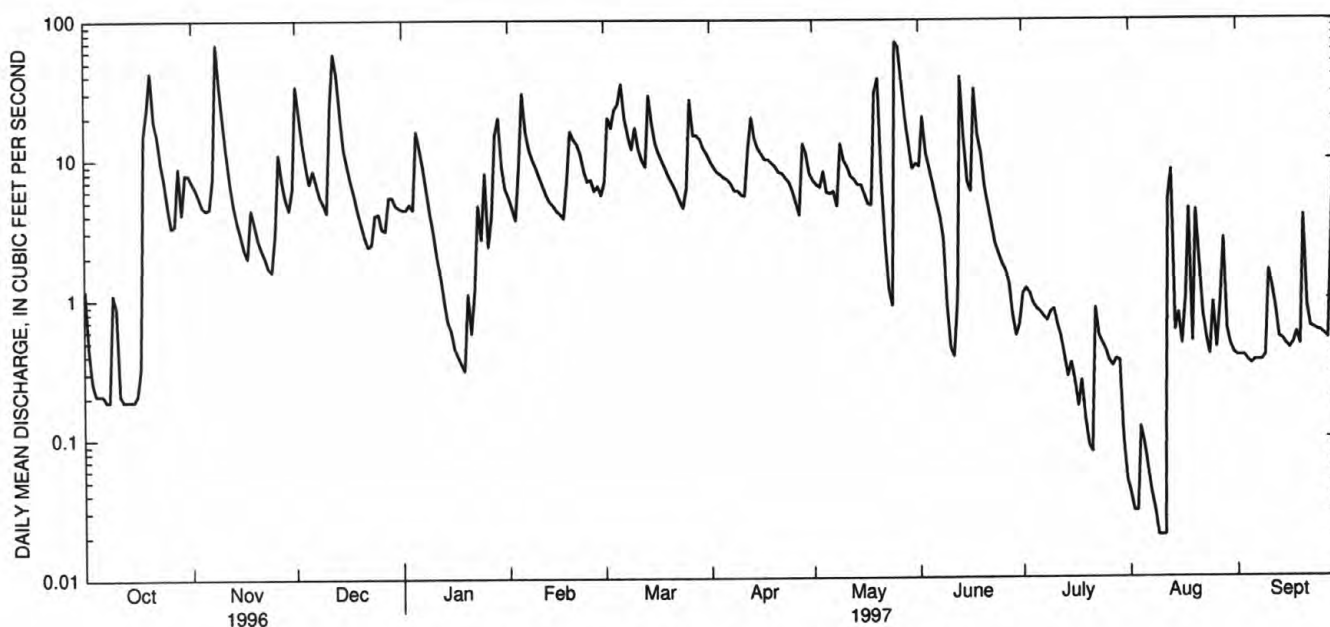
ANNUAL TOTAL	3014.26	2598.34	
ANNUAL MEAN	8.24	7.12	6.27
HIGHEST ANNUAL MEAN			10.8
LOWEST ANNUAL MEAN			2.68
HIGHEST DAILY MEAN	149	Jun 19	525
LOWEST DAILY MEAN	a.11	Aug 14	.00
ANNUAL SEVEN-DAY MINIMUM	a.13	Aug 30	.00
INSTANTANEOUS PEAK FLOW			b7190
INSTANTANEOUS PEAK STAGE			c10.28
INSTANTANEOUS LOW FLOW			.00
ANNUAL RUNOFF (CFSM)	1.42		1.08
ANNUAL RUNOFF (INCHES)	19.40		14.73
10 PERCENT EXCEEDS	20		15
50 PERCENT EXCEEDS	4.6		2.8
90 PERCENT EXCEEDS	.19		.31

a Computed using estimated discharges.

b From rating curve extended above 150 ft³/s on basis of slope-area measurement of peak flow at site 0.6 mi downstream at datum then in use.

c 10.41 ft, from outside floodmark.

e Estimated.



October 1, 1996 to September 30, 1997

MONONGAHELA RIVER BASIN

LAKES AND RESERVOIRS IN MONONGAHELA RIVER BASIN

03055500 TYGART LAKE.--Lat 39°18'50", long 80°02'00", Taylor County, W. Va., Hydrologic Unit 05020001, at dam on Tygart Valley River, 2.2 mi upstream from Threefork Creek, and 2.4 mi upstream from Grafton, W. Va. DRAINAGE AREA, 1,184 mi². PERIOD OF RECORD, April 1938 to current year. Prior to October 1960 published as "Tygart Reservoir". GAGE, water-stage recorder. Datum of gage is at sea level.

Lake is formed by concrete gravity dam completed and accepted February 1938, storage began May 15, 1938. Capacity, 285,000 acre-ft (from sedimentation resurvey made in 1959) between elevations 991.5 ft (sill of valves) and 1,167.0 ft (crest of spillway) above sea level. Dead storage, 2,700 acre-ft. Figures given herein represent total contents. Conservation pool elevation is 1,010.0 ft and water below elevation 991.5 ft cannot be withdrawn. Lake is used for flood control, for supplementary supply for navigation on Monongahela River during periods of low flow, and for recreation. Records furnished by U.S. Army Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 255,680 acre-ft, Nov. 7, 1985 (elevation, 1,156.69 ft); minimum since October 1939, 8,330 acre-ft, Jan. 25, 1940 (elevation, 1,005.15 ft).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 205,990 acre-ft, Mar. 7 (elevation, 1,139.07 ft); minimum, 27,750 acre-ft, Jan. 7 (elevation, 1,030.82 ft).

MONTHEND ELEVATION IN FEET ABOVE SEA LEVEL, AND CONTENTS AT 2400 HRS, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

Date	Elevation (feet)	Contents (acre- feet)	Change in contents (equivalent in ft ³ /s)
Sept. 30	1,078.65	86,200	-
Oct. 31	1,066.33	68,450	-289
Nov. 30	1,059.23	58,990	-159
Dec. 31	1,039.48	36,160	-371
CAL YR 1996	-	-	+ 12
Jan. 31	1,042.17	38,990	+ 46
Feb. 28	1,039.19	35,870	- 56
Mar. 31	1,069.63	72,990	+604
Apr. 30	1,091.70	107,300	+577
May 31	1,094.52	112,160	+ 79
June 30	1,094.87	112,770	+ 10
July 31	1,087.79	100,800	-195
Aug. 31	1,093.08	109,660	+144
Sept. 30	1,081.92	91,320	-308
WTR YR 1997	-	-	+ 7.1

MONONGAHELA RIVER BASIN

03070350 CHEAT RIVER NEAR MT. NEBO, WV
(National Water-Quality Assessment station)

LOCATION.--Lat 39°35'40", long 79°44'56", Preston County, Hydrologic Unit 05020004, on left bank 150 ft upstream of Jenkintown Bridge, 800 ft upstream of Big Sandy Creek, 1.3 mi northeast of the town of Bull Run, and 2.3 mi west southwest of Mt. Nebo, WV.

DRAINAGE AREA.--1,132 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1996 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 960 ft above sea level, from topographic map.

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

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than a base discharge of 22,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 8	Unknown	Unknown	Unknown	Mar. 2	Unknown	Unknown	Unknown
Dec. 2	1140	*33,500	*14.30				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1950	e2400	10200	e2500	3360	3700	4680	3420	1900	e760	564	472
2	1400	e2100	25900	e2200	2730	e25000	4260	2680	1770	e620	413	409
3	1220	e1800	13300	e1900	2300	e20000	4030	2240	2550	704	331	365
4	1080	e1600	e6000	e2000	2300	e19000	3610	2060	3520	653	517	331
5	965	e1400	e4700	e1900	4910	e11000	3080	2420	3290	501	1130	293
6	865	e1250	3800	e1800	6150	10500	2620	2230	2270	412	874	266
7	788	e1100	3270	e1600	4520	8890	2240	1800	1690	357	681	249
8	741	e8400	2890	e1400	3590	6160	1850	1560	1360	315	505	241
9	761	e18000	2630	e1250	3010	4810	1540	2240	1170	288	378	282
10	1090	e11000	2260	e1100	2470	4330	1350	1810	1030	405	307	915
11	1480	e7000	2330	e960	2060	4680	1220	2660	901	337	254	878
12	1310	4200	6770	e860	1750	3820	1150	4290	806	308	226	835
13	1090	3450	9640	e760	1460	3090	1240	4780	1350	259	242	707
14	983	2880	9370	e680	1380	2920	1330	4140	1640	233	380	554
15	e820	2450	6290	e620	1580	3800	1290	3600	1450	208	353	453
16	e740	2030	4600	e560	1960	3870	1130	3090	1060	197	336	370
17	e700	1780	3670	e500	1840	3060	1180	2850	946	195	1090	320
18	e620	1780	3010	e470	1630	2700	1420	2670	796	225	4820	296
19	e1000	2750	2520	e440	2080	5490	1720	3000	793	185	2880	275
20	e6400	3880	2080	e460	5520	9740	1880	5850	822	193	1700	282
21	10200	3180	1410	e500	6390	6250	1820	5710	779	161	4660	371
22	11500	2680	1250	e640	6200	4550	1770	4020	671	151	4620	589
23	8230	2210	1480	e1200	5860	3560	1680	2990	e560	196	2670	572
24	e5800	1860	2930	e2000	4110	2880	1540	2330	e480	1050	1580	446
25	3660	1680	5580	e3000	3140	2410	1700	2670	e400	2370	1110	353
26	3000	8800	4750	5650	2580	7030	1780	12700	e640	1510	877	300
27	2600	14100	3560	4360	2310	8480	1800	10600	3170	874	714	264
28	e3100	6890	3000	6420	2180	5350	2760	5620	e2600	614	841	267
29	e4000	4630	2870	9690	---	4210	5830	3740	e1250	679	688	5190
30	e3400	3800	3220	5770	---	3750	4420	2860	e850	1550	654	4690
31	e2700	---	e2800	4190	---	3950	---	2270	---	888	550	---
TOTAL	84193	131080	158080	67380	89370	208980	67920	114900	42514	17398	36945	21835
MEAN	2716	4369	5099	2174	3192	6741	2264	3706	1417	561	1192	728
MAX	11500	18000	25900	9690	6390	25000	5830	12700	3520	2370	4820	5190
MIN	620	1100	1250	440	1380	2410	1130	1560	400	151	226	241
CFSM	2.40	3.86	4.50	1.92	2.82	5.96	2.00	3.27	1.25	.50	1.05	.64
IN.	2.77	4.31	5.19	2.21	2.94	6.87	2.23	3.78	1.40	.57	1.21	.72

e Estimated.

MONONGAHELA RIVER BASIN

03070350 CHEAT RIVER NEAR MT. NEBO, WV--Continued

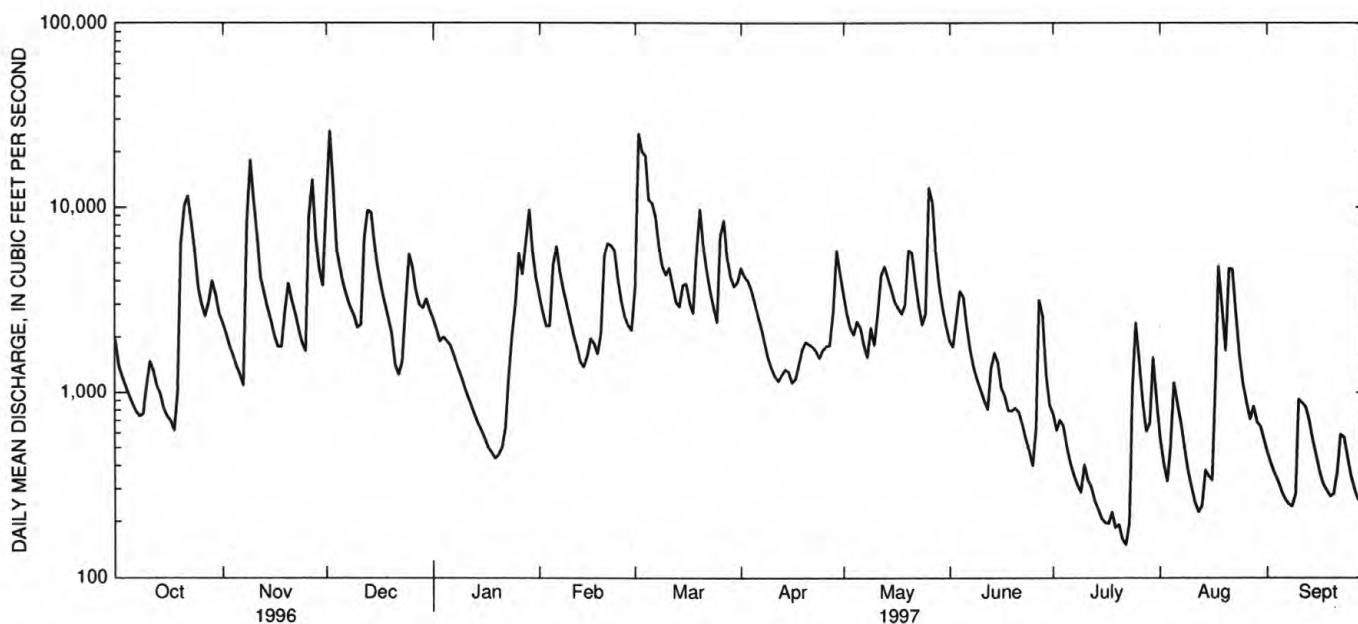
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1996 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	2716	4369	5099	2174	3192	6741	2264	3706	1417	561	1192	728
MAX	2716	4369	5099	2174	3192	6741	2264	3706	1417	561	1192	728
(WY)	1997	1997	1997	1997	1997	1997	1997	1997	1997	1997	1997	1997
MIN	2716	4369	5099	2174	3192	6741	2264	3706	1417	561	1192	728
(WY)	1997	1997	1997	1997	1997	1997	1997	1997	1997	1997	1997	1997

SUMMARY STATISTICS

FOR 1997 WATER YEAR

ANNUAL TOTAL	1040595	
ANNUAL MEAN	2851	
HIGHEST DAILY MEAN	25900	Dec 2
LOWEST DAILY MEAN	151	Jul 22
ANNUAL SEVEN-DAY MINIMUM	187	Jul 17
INSTANTANEOUS PEAK FLOW	33500	Dec 2
INSTANTANEOUS PEAK STAGE	14.30	Dec 2
INSTANTANEOUS LOW FLOW	136	Jul 22
ANNUAL RUNOFF (CFSM)	2.52	
ANNUAL RUNOFF (INCHES)	34.20	
10 PERCENT EXCEEDS	6060	
50 PERCENT EXCEEDS	1860	
90 PERCENT EXCEEDS	355	



October 1, 1996 to September 30, 1997

MONONGAHELA RIVER BASIN

03070350 CHEAT RIVER NEAR MT. NEBO, WV--Continued
(National Water-Quality Assessment station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1996 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: June 1997 to September 1997.

pH: June 1997 to September 1997.

WATER TEMPERATURE: October 1996 to current year.

INSTRUMENTATION.--Daily record measured and collected at hourly intervals with in-situ probes and electronic data loggers.

REMARKS.--All water-quality samples were collected and analyzed by the U.S. Geological Survey. Interruptions in the daily record were due to malfunctions of the equipment. Additional sites in the (NAWQA) fixed-station network are shown in figure 6 on page 28. An explanation of selected abbreviations used in the water-quality tables are given on pages 29-31.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum, 30.5°C, June 18; minimum 0.0°C, on several days during winter periods.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE	TIME	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 (MG/L) (00300)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	ACIDITY TOTAL HEATED (MG/L AS CACO3) (70508)	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)
OCT												
15...	1415	910	119	6.7	15.0	735	9.1	44	5.4	13	2.9	1.4
NOV												
12...	1030	4380	86	7.0	5.0	746	12.4	31	7.0	9.3	2.0	1.0
DEC												
03...	1300	12100	67	7.0	6.0	732	12.0	24	6.0	7.0	1.6	0.80
JAN												
08...	1215	1570	123	6.5	4.0	742	12.9	42	11	12	2.9	1.6
FEB												
04...	1200	2380	105	6.6	4.0	743	11.5	37	--	11	2.4	1.3
MAR												
06...	1130	10300	80	6.6	7.0	732	11.9	28	8.6	8.1	1.9	1.2
APR												
07...	1145	2200	103	6.9	13.0	733	10.2	37	3.0	11	2.4	1.3
MAY												
12...	1245	6020	73	7.3	10.5	726	11.0	26	1.8	7.8	1.6	1.3
JUN												
03...	1500	3050	99	7.2	18.0	735	8.7	35	9.0	10	2.3	1.3
JUL												
02...	1240	608	154	7.1	26.0	730	7.3	57	3.0	16	4.1	1.7
AUG												
27...	1045	777	124	7.2	22.0	736	8.4	50	2.2	15	3.2	1.7
SEP												
15...	1300	450	175	7.3	20.0	740	8.8	70	2.0	20	4.9	2.1

MONONGAHELA RIVER BASIN

03070350 CHEAT RIVER NEAR MT. NEBO, WV--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	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)	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)	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)
OCT 15...	0.90	7	35	1.5	<0.10	4.4	76	0.010	0.240	0.250	0.30
NOV 12...	0.70	15	23	1.3	<0.10	4.6	51	<0.010	0.400	0.100	<0.20
DEC 03...	0.60	7	15	1.2	<0.10	3.8	39	0.010	0.380	0.060	<0.20
JAN 08...	0.70	12	36	1.9	<0.10	4.4	72	0.010	0.440	0.230	0.30
FEB 04...	0.60	8	30	2.0	<0.10	3.9	52	<0.010	0.500	0.200	0.20
MAR 06...	0.70	5	21	1.8	<0.10	3.9	53	<0.010	0.660	0.070	<0.20
APR 07...	0.70	14	31	1.6	<0.10	3.9	63	<0.010	0.380	0.300	0.30
MAY 12...	0.60	8	17	1.5	<0.10	4.1	47	<0.010	0.390	0.068	<0.20
JUN 03...	0.62	11	25	1.7	<0.10	3.9	52	<0.010	0.300	0.272	0.25
JUL 02...	0.95	5	52	1.7	<0.10	4.5	116	<0.010	0.308	0.317	0.42
AUG 27...	0.83	11	37	1.8	<0.10	4.3	81	<0.010	0.329	0.064	<0.20
SEP 15...	1.10	10	60	2.2	<0.10	4.2	108	<0.010	0.309	0.339	0.31

DATE	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)	ALUM- INUM, DIS- SOLVED (µG/L AS AL) (01106)	IRON, DIS- SOLVED (µG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (µG/L AS MN) (01056)	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)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
OCT 15...	0.30	<0.010	<0.010	<0.010	43	<3.0	130	0.90	0.90	5	80
NOV 12...	0.20	<0.010	<0.010	<0.010	25	180	95	1.2	0.80	4	68
DEC 03...	<0.20	0.040	<0.010	<0.010	80	73	69	2.2	1.5	24	68
JAN 08...	0.30	<0.010	<0.010	<0.010	14	210	140	0.70	0.80	6	93
FEB 04...	0.20	<0.010	<0.010	<0.010	--	130	120	1.9	0.40	6	67
MAR 06...	<0.20	<0.010	<0.010	<0.010	36	90	94	1.5	0.70	10	73
APR 07...	0.20	<0.010	<0.010	<0.010	26	31	110	1.0	0.40	6	82
MAY 12...	<0.20	<0.010	<0.010	<0.010	60	45	60	1.5	0.50	5	27
JUN 03...	0.27	<0.010	<0.010	<0.010	74	31	81	0.90	0.30	7	78
JUL 02...	0.44	<0.010	<0.010	<0.010	75	8.4	252	1.4	0.40	5	60
AUG 27...	0.21	<0.010	<0.010	<0.010	--	11	154	2.2	0.80	5	75
SEP 15...	0.31	<0.010	<0.010	<0.010	73	5.0	238	2.3	--	9	83

MONONGAHELA RIVER BASIN

03070350 CHEAT RIVER NEAR MT. NEBO, WV--Continued

REMARKS.--The following data are for dissolved trace elements in surface water filtered through a 0.45µm filter.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	ARSENIC DIS-SOLVED (µG/L AS AS) (01000)	BARIUM, DIS-SOLVED (µG/L AS BA) (01005)	BERYL- LIUM, DIS-SOLVED (µG/L AS BE) (01010)	CADMIUM DIS-SOLVED (µG/L AS CD) (01025)	CHRO- MIUM, DIS-SOLVED (µG/L AS CR) (01030)	COBALT, DIS-SOLVED (µG/L AS CO) (01035)	COPPER, DIS-SOLVED (µG/L AS CU) (01040)
MAY 12...	1245	6020	<1	26	<1.0	<1.0	<1.0	2.1	<1.0
SEP 15...	1300	450	<1	40	<1.0	<1.0	<1.0	7.0	1.3

DATE	LEAD, DIS-SOLVED (µG/L AS PB) (01049)	MOLYB- DENUM, DIS-SOLVED (µG/L AS MO) (01060)	NICKEL, DIS-SOLVED (µG/L AS NI) (01065)	SILVER, DIS-SOLVED (µG/L AS AG) (01075)	ZINC, DIS-SOLVED (µG/L AS ZN) (01090)	ANTI- MONY, DIS-SOLVED (µG/L AS SB) (01095)	SELE- NIUM, DIS-SOLVED (µG/L AS SE) (01145)	URANIUM NATURAL DIS-SOLVED (µG/L AS U) (22703)
MAY 12...	<1.0	<1.0	3.6	<1.0	6.8	<1.0	<1	<1.0
SEP 15...	<1.0	<1.0	12	<1.0	26	<1.0	<1	<1.0

MONONGAHELA RIVER BASIN

03070350 CHEAT RIVER NEAR MT. NEBO, WV--Continued

REMARKS.--The following data are for trace elements and other constituents that were part of the suspended-sediment fraction of the water sample. Suspended sediments were dewatered using a continuous flow centrifuge, dried, and analyzed directly for total metals using a nitric, hydrofluoric, perchloric acid digestion. Whole water contributions by the suspended sediment were then calculated using the suspended-sediment concentration in kilograms per liter (kg/L) and the analyte concentration in milligrams per kilogram (mg/kg) from the direct analysis of the suspended sediments, resulting in micrograms per gram ($\mu\text{g/g}$) concentrations. Values reported in percent are the percent of that constituent in the suspended sediment. Dashed lines (--) indicate no data available due to an insufficient amount of sediment in the sample. When no trace element was detected in the sample, the default reporting value is the method detection limit preceded by a less-than sign (<).

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SEDI- MENT SUSP., FLOW- THROUGH CENTRIF (MG/L) (50279)	ALUM- INUM SED. SUS PERCENT (30221)	AN- TIMONY SED. SUSP. ($\mu\text{G/G}$) (29816)	ARSENIC SED. SUSP. ($\mu\text{G/G}$) (29818)	BARIUM SED. SUSP. ($\mu\text{G/G}$) (29820)	BERYL- LIUM SED. SUSP. ($\mu\text{G/G}$) (29822)	CADMIUM SED. SUSP. ($\mu\text{G/G}$) (29826)	CARBON SED. SUSP. PERCENT (30244)	CARBON, ORGANIC SUS- PENDE PERCENT (50465)
MAY 12...	1245	6020	7	7.5	8	13	460	9	2.5	8.2	9.0
SEP 15...	1300	450	2	12	1	14	190	43	3.4	--	--

DATE	CHRO- MIUM SED. SUSP. ($\mu\text{G/G}$) (29829)	COBALT SEDI- MENT SUSP. ($\mu\text{G/G}$) (35031)	COPPER SED. SUSP. ($\mu\text{G/G}$) (29832)	IRON SEDI- MENT SUSP. PERCENT (30269)	LEAD SED. SUSP. ($\mu\text{G/G}$) (29836)	LITHIUM SEDI- MENT SUSP. ($\mu\text{G/G}$) (35050)	MAN- GANESE SED. SUSP. ($\mu\text{G/G}$) (29839)	MERCURY SED. SUSP. ($\mu\text{G/G}$) (29841)	MOLYB- DENUM SED. SUSP. ($\mu\text{G/G}$) (29843)	NICKEL SED. SUSP. ($\mu\text{G/G}$) (29845)
MAY 12...	93	160	100	6.7	50	48	4300	.10	<25	140
SEP 15...	62	110	120	12	34	32	1900	.08	<10	190

DATE	PHOS- PHORUS SEDI- MENT SUSP. PERCENT (30292)	SELE- NIUM SED. SUSP. ($\mu\text{G/G}$) (29847)	SILVER SED. SUSP. ($\mu\text{G/G}$) (29850)	STRON- TIUM SEDI- MENT SUSP. ($\mu\text{G/G}$) (35040)	SULFUR SEDI- MENT SUSP. PERCENT (30308)	THAL- LIUM SUS SED ($\mu\text{G/G}$) (49955)	TITA- NIUM SEDI- MENT SUSP. PERCENT (30317)	URANIUM SEDI- MENT SUSP. ($\mu\text{G/G}$) (35046)	VANA- DIUM SED. SUSP. ($\mu\text{G/G}$) (29853)	ZINC SED. SUSP. ($\mu\text{G/G}$) (29855)
MAY 12...	810	2	<3	110	.60	<250	.35	<250	86	1400
SEP 15...	790	2	<1	67	--	<100	.14	<100	43	1800

MONONGAHELA RIVER BASIN

03070350 CHEAT RIVER NEAR MT. NEBO, WV--Continued

SPECIFIC CONDUCTANCE, $\mu\text{S}/\text{CM}$ @ 25 DEGREES CELSIUS, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	---	---	---	139	120	128	---	---	---	164	157	162
2	---	---	---	159	139	150	---	---	---	173	162	170
3	---	---	---	149	139	144	---	---	---	185	172	178
4	---	---	---	139	131	134	---	---	---	199	185	193
5	---	---	---	152	137	144	---	---	---	205	194	199
6	---	---	---	161	152	158	---	---	---	210	203	205
7	---	---	---	165	161	163	---	---	---	214	210	212
8	---	---	---	173	165	170	---	---	---	221	213	218
9	---	---	---	180	173	176	---	---	---	241	215	225
10	---	---	---	210	180	192	---	---	---	261	227	238
11	---	---	---	203	175	186	---	---	---	230	189	213
12	---	---	---	183	174	179	---	---	---	189	171	182
13	---	---	---	183	175	179	---	---	---	173	159	164
14	---	---	---	194	183	188	---	---	---	186	168	176
15	---	---	---	205	194	200	---	---	---	---	---	---
16	---	---	---	220	205	214	---	---	---	173	160	167
17	---	---	---	230	217	220	---	---	---	180	173	176
18	---	---	---	---	---	---	---	---	---	193	180	187
19	---	---	---	---	---	---	---	---	---	203	193	199
20	---	---	---	---	---	---	---	---	---	209	189	198
21	---	---	---	---	---	---	---	---	---	233	206	218
22	---	---	---	---	---	---	---	---	---	226	151	190
23	---	---	---	---	---	---	---	---	---	151	144	146
24	---	---	---	---	---	---	---	---	---	169	150	157
25	---	---	---	---	---	---	---	---	---	177	169	173
26	---	---	---	---	---	---	---	---	---	182	176	179
27	276	104	152	---	---	---	---	---	---	184	178	181
28	113	95	102	---	---	---	179	131	154	202	172	178
29	112	99	106	---	---	---	175	162	169	229	185	198
30	120	111	114	---	---	---	162	149	154	191	112	147
31	---	---	---	---	---	---	158	153	156	---	---	---
MONTH	276	95	119	230	120	172	179	131	158	261	112	187

MONONGAHELA RIVER BASIN

03070350 CHEAT RIVER NEAR MT. NEBO, WV--Continued

pH VALUES, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAY	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	---	---	---	7.6	7.2	7.3	---	---	---	7.5	7.3	7.4
2	---	---	---	7.4	7.0	7.1	---	---	---	7.4	7.2	7.3
3	---	---	---	7.5	7.2	7.3	---	---	---	7.4	7.2	7.3
4	---	---	---	7.7	7.4	7.5	---	---	---	7.2	7.0	7.1
5	---	---	---	7.8	7.6	7.6	---	---	---	7.1	7.0	7.1
6	---	---	---	7.8	7.5	7.7	---	---	---	7.1	6.9	7.0
7	---	---	---	7.7	7.5	7.7	---	---	---	7.2	6.8	7.0
8	---	---	---	7.7	7.4	7.6	---	---	---	7.1	6.7	7.0
9	---	---	---	7.6	7.5	7.6	---	---	---	7.1	6.4	6.9
10	---	---	---	7.6	7.1	7.4	---	---	---	7.2	5.9	6.6
11	---	---	---	7.5	7.1	7.3	---	---	---	7.4	7.2	7.3
12	---	---	---	7.7	7.4	7.5	---	---	---	7.6	7.4	7.5
13	---	---	---	7.7	7.4	7.6	---	---	---	7.6	7.5	7.5
14	---	---	---	7.7	7.4	7.6	---	---	---	7.7	7.4	7.6
15	---	---	---	7.8	7.3	7.6	---	---	---	---	---	---
16	---	---	---	7.5	7.3	7.4	---	---	---	7.5	7.4	7.5
17	---	---	---	7.5	7.1	7.4	---	---	---	7.8	7.5	7.5
18	---	---	---	---	---	---	---	---	---	7.6	7.3	7.4
19	---	---	---	---	---	---	---	---	---	7.4	7.1	7.3
20	---	---	---	---	---	---	---	---	---	7.2	7.0	7.1
21	---	---	---	---	---	---	---	---	---	7.1	6.5	6.8
22	---	---	---	---	---	---	---	---	---	7.6	6.8	7.1
23	---	---	---	---	---	---	---	---	---	7.9	7.6	7.7
24	---	---	---	---	---	---	---	---	---	7.9	7.6	7.7
25	---	---	---	---	---	---	---	---	---	7.8	7.6	7.7
26	---	---	---	---	---	---	---	---	---	7.8	7.3	7.5
27	7.7	5.9	7.2	---	---	---	---	---	---	7.4	7.2	7.3
28	7.8	7.0	7.3	---	---	---	7.4	7.1	7.2	7.3	6.9	7.2
29	8.6	7.2	8.1	---	---	---	7.4	7.2	7.3	8.1	6.3	7.6
30	8.7	7.6	8.1	---	---	---	7.5	7.3	7.3	7.6	7.4	7.5
31	---	---	---	---	---	---	7.5	7.4	7.4	---	---	---
MAX	8.7	7.6	8.1	7.8	7.6	7.7	7.5	7.4	7.4	8.1	7.6	7.7
MIN	7.7	5.9	7.2	7.4	7.0	7.1	7.4	7.1	7.2	7.1	5.9	6.6

MONONGAHELA RIVER BASIN

03070350 CHEAT RIVER NEAR MT. NEBO, WV--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	---	---	---	12.5	10.5	11.0	7.5	4.0	5.5	7.5	6.5	7.0
2	---	---	---	10.5	8.5	9.5	8.0	6.5	7.5	7.0	6.5	7.0
3	---	---	---	8.5	7.0	8.0	6.5	6.0	6.0	8.5	7.0	7.5
4	---	---	---	7.0	6.5	7.0	6.0	5.5	5.5	9.5	8.5	9.0
5	---	---	---	8.0	7.0	7.5	5.5	4.5	5.0	10.5	9.5	10.0
6	---	---	---	9.0	8.0	8.5	4.5	4.5	4.5	10.5	8.0	9.0
7	---	---	---	11.5	9.0	10.0	4.5	4.0	4.5	8.0	5.0	6.5
8	---	---	---	12.5	11.0	12.0	4.5	4.0	4.0	5.0	3.5	4.0
9	---	---	---	11.0	8.5	10.0	4.0	3.5	3.5	3.5	2.5	3.0
10	---	---	---	8.5	6.5	7.5	4.0	3.0	3.5	3.0	2.5	3.0
11	---	---	---	6.5	6.0	6.0	5.0	4.0	4.5	2.5	.5	1.0
12	---	---	---	6.0	4.5	5.0	6.5	4.5	5.5	.5	.0	.0
13	---	---	---	4.5	4.5	4.5	7.0	6.5	7.0	.5	.0	.5
14	---	---	---	4.5	4.0	4.0	7.0	6.0	6.5	2.5	.5	2.0
15	---	---	---	4.0	3.0	3.5	6.0	5.5	5.5	2.5	1.5	2.0
16	---	---	---	3.5	2.5	3.0	5.5	4.5	5.0	3.5	1.5	2.5
17	---	---	---	3.5	2.5	3.0	5.5	4.5	5.0	1.5	.5	1.0
18	17.0	15.5	16.0	4.5	3.5	4.0	5.5	5.5	5.5	1.5	.0	1.0
19	15.5	12.5	14.0	5.5	4.5	5.0	5.5	4.5	5.0	1.5	.0	1.0
20	12.5	10.0	10.5	6.0	5.5	5.5	4.5	2.0	3.5	2.5	1.5	2.0
21	10.0	9.5	10.0	5.5	5.0	5.0	2.0	.5	1.0	2.5	1.5	2.0
22	11.0	10.0	10.5	5.0	4.5	4.5	1.5	.5	1.0	3.0	1.0	1.5
23	11.5	11.0	11.0	5.0	4.0	4.5	2.0	1.5	1.5	1.0	.5	.5
24	12.0	11.5	11.5	5.5	4.5	4.5	2.0	2.0	2.0	.5	.0	.0
25	11.5	10.5	11.0	6.0	5.5	5.5	2.5	1.5	2.0	1.0	.0	.5
26	12.0	11.0	11.5	6.5	6.0	6.0	2.0	1.0	1.5	1.0	.5	.5
27	12.5	12.0	12.0	6.5	4.5	5.5	3.0	1.5	2.0	1.5	.5	1.0
28	13.0	12.5	13.0	4.5	3.0	3.5	4.5	2.5	3.5	2.5	1.5	2.0
29	13.0	12.0	12.5	3.0	2.5	3.0	6.5	4.5	5.5	2.0	1.0	1.5
30	14.0	13.0	13.5	4.0	3.0	3.0	7.0	6.5	6.5	2.0	1.0	1.5
31	14.0	12.5	13.0	---	---	---	7.5	7.0	7.5	3.0	2.0	2.5
MONTH	17.0	9.5	12.1	12.5	2.5	6.0	8.0	.5	4.4	10.5	.0	3.0

MONONGAHELA RIVER BASIN

03070350 CHEAT RIVER NEAR MT. NEBO, WV--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	3.0	3.0	3.0	8.5	7.5	8.0	---	---	---	14.5	13.0	14.0
2	3.5	2.5	3.0	8.5	8.0	8.5	---	---	---	15.0	13.0	14.0
3	4.5	3.5	4.0	8.5	6.5	7.5	---	---	---	16.0	14.5	15.0
4	4.5	4.0	4.0	7.0	6.5	7.0	---	---	---	15.5	13.5	14.0
5	4.5	4.0	4.5	7.5	7.0	7.5	---	---	---	14.5	12.5	13.5
6	4.0	3.5	3.5	7.5	6.0	7.0	---	---	---	14.5	14.0	14.0
7	3.5	3.0	3.0	6.0	5.0	5.5	---	---	---	15.0	13.5	14.0
8	3.0	3.0	3.0	5.5	5.0	5.0	13.0	12.0	12.5	14.5	13.5	14.0
9	3.0	3.0	3.0	6.0	5.0	5.5	12.0	9.0	10.5	14.5	13.5	14.0
10	3.0	2.5	2.5	8.5	6.0	7.0	9.0	8.0	8.5	13.5	10.0	11.5
11	2.5	1.5	2.0	8.0	7.0	7.5	10.5	8.5	9.5	11.0	8.5	10.0
12	2.5	2.0	2.5	7.0	6.0	6.5	11.0	10.5	10.5	12.0	10.0	11.0
13	2.5	1.5	2.0	7.0	6.0	6.5	11.0	9.0	10.0	12.5	11.0	12.0
14	2.5	1.5	2.0	7.5	6.5	7.0	10.5	9.0	9.5	12.0	11.5	11.5
15	3.0	2.5	2.5	7.5	6.0	6.5	10.5	9.0	10.0	12.0	11.0	11.5
16	3.0	2.0	2.0	6.0	4.5	5.0	12.5	10.5	11.5	11.5	10.5	11.0
17	2.5	1.0	1.5	4.5	4.0	4.5	12.5	10.5	12.0	12.5	11.0	11.5
18	5.0	2.0	3.0	5.5	4.5	5.0	11.0	10.0	10.5	15.0	12.0	13.5
19	5.5	3.5	4.5	6.0	5.0	5.5	10.5	9.5	10.0	18.0	14.5	16.0
20	6.0	4.5	5.5	6.5	6.0	6.0	11.0	9.0	10.0	18.0	16.5	17.0
21	7.5	6.0	6.5	8.5	6.0	7.0	11.0	10.0	10.0	17.0	14.0	15.5
22	8.0	7.0	7.5	8.5	8.0	8.5	11.5	9.0	10.5	14.0	12.5	13.5
23	7.0	6.0	6.0	8.0	7.0	7.5	11.5	11.0	11.0	15.0	12.5	14.0
24	6.0	4.5	5.0	8.0	6.5	7.5	11.0	10.5	11.0	16.5	14.0	15.0
25	5.5	4.0	5.0	10.0	7.5	8.5	11.0	10.5	11.0	17.0	16.0	16.5
26	5.0	4.0	4.5	10.0	8.5	9.0	12.5	10.5	11.5	16.0	14.0	15.0
27	7.0	4.5	5.5	8.5	7.0	8.0	12.5	11.5	11.5	15.0	13.0	14.0
28	7.5	6.5	7.0	9.5	8.0	8.5	11.5	11.0	11.5	16.0	14.0	15.0
29	---	---	---	10.5	9.5	10.0	11.5	10.0	11.0	16.0	15.0	15.0
30	---	---	---	10.5	10.0	10.0	13.0	10.5	12.0	17.0	15.0	16.0
31	---	---	---	10.0	7.5	9.0	---	---	---	17.0	16.5	16.5
MONTH	8.0	1.0	3.9	10.5	4.0	7.2	13.0	8.0	10.7	18.0	8.5	13.8

MONONGAHELA RIVER BASIN

03070350 CHEAT RIVER NEAR MT. NEBO, WV--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	18.0	16.5	17.5	26.5	25.0	25.5	26.0	24.5	25.0	24.5	22.5	23.5
2	19.5	17.5	18.5	27.5	25.5	26.5	25.5	24.5	25.0	25.0	23.5	24.5
3	18.5	16.5	18.0	29.5	26.5	28.0	26.5	24.5	25.5	26.0	24.5	25.0
4	17.0	15.5	16.5	28.0	25.0	27.0	26.5	25.0	26.0	25.0	23.5	24.5
5	17.0	15.0	16.0	25.0	23.0	24.0	26.0	22.0	23.0	23.5	22.0	22.5
6	17.0	16.0	16.5	24.0	22.0	23.5	22.5	21.5	22.0	22.5	21.5	22.0
7	17.0	16.0	16.5	25.5	22.5	24.0	23.5	22.0	22.5	23.0	21.5	22.5
8	18.0	16.0	17.0	27.5	24.0	26.0	23.5	21.5	22.5	23.0	22.0	22.5
9	18.5	17.0	18.0	26.5	25.0	26.0	24.0	21.5	23.0	23.0	22.5	22.5
10	21.0	18.5	19.5	27.0	25.0	26.0	25.0	23.0	24.5	23.0	21.0	22.0
11	22.5	20.0	21.0	27.5	24.0	26.0	25.5	24.0	24.5	21.5	20.5	21.0
12	24.0	19.0	21.5	28.0	25.0	27.0	27.0	24.5	26.0	21.0	20.5	20.5
13	22.5	19.0	21.0	28.0	26.0	27.0	27.0	26.5	27.0	21.0	20.0	20.5
14	21.5	20.5	21.0	28.5	26.0	27.5	28.0	26.5	27.5	20.5	19.5	20.0
15	22.0	19.5	21.0	30.0	25.5	27.5	26.5	25.0	26.0	---	---	---
16	22.5	21.0	22.0	---	---	---	27.5	26.0	27.0	---	---	---
17	24.0	22.0	23.0	---	---	---	28.0	26.0	27.0	---	---	---
18	30.5	21.0	24.0	---	---	---	26.0	22.5	23.5	---	---	---
19	27.0	19.0	23.0	30.0	28.0	29.5	22.5	21.5	22.0	---	---	---
20	29.5	23.0	25.5	29.0	27.5	28.5	22.0	21.0	21.5	---	---	---
21	---	---	---	28.5	27.0	28.0	21.0	20.0	20.5	---	---	---
22	---	---	---	28.0	26.5	27.5	20.0	18.5	19.0	---	---	---
23	---	---	---	27.5	26.5	27.0	18.5	18.0	18.5	---	---	---
24	---	---	---	28.5	24.5	26.5	19.0	18.5	18.5	---	---	---
25	---	---	---	24.5	23.5	24.0	20.0	19.0	19.5	---	---	---
26	---	---	---	24.5	23.0	23.5	21.0	20.0	20.5	---	---	---
27	26.5	22.5	23.5	26.0	24.5	25.0	22.0	21.0	21.5	---	---	---
28	23.5	22.0	23.0	28.5	25.5	27.0	22.5	21.5	22.0	---	---	---
29	25.0	22.5	24.0	29.5	27.0	28.0	22.0	21.5	21.5	---	---	---
30	25.0	24.0	24.5	27.5	25.0	26.0	22.5	21.0	22.0	---	---	---
31	---	---	---	25.0	24.0	24.5	23.5	22.0	22.5	---	---	---
MONTH	30.5	15.0	21.7	30.0	22.0	26.5	28.0	18.0	23.1	26.0	19.5	22.4

MONONGAHELA RIVER BASIN

03072000 DUNKARD CREEK AT SHANNOPIN, PA
(National water-quality assessment station)

LOCATION.--Lat 39°45'33", long 79°58'15", Greene County, Hydrologic Unit 05020005, on left bank 1,300 ft upstream from highway bridge at mine buildings at Shannopin, 1.2 mi north of Dunkard, 3.5 mi upstream from mouth, and 4 mi southwest of Greensboro.

DRAINAGE AREA.--229 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1940 to current year. Prior to December 1940 monthly discharge only, published in WSP 1305.

REVISED RECORDS.--WSP 1505: 1955.

GAGE.--Water-stage recorder. Datum of gage is 806.25 ft above sea level (levels by U.S. Army Corps of Engineers).

REMARKS.--Records good except for estimated daily discharges, which are fair. Some regulation at low flow by mine pumpage above station. Several measurements of water temperature were made during the year. U.S. Army Corps of Engineers satellite telemeter at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than a base discharge of 4,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 8	2100	5,840	9.52	Mar. 3	2400	4,260	8.61
Mar. 2	1600	*12,400	*12.38				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	363	162	1130	423	382	457	485	108	242	26	16	10
2	241	145	2220	358	306	7670	394	101	252	29	15	9.8
3	483	129	1080	318	257	3400	339	96	395	31	12	8.4
4	324	113	676	284	262	e1500	296	117	268	30	12	7.1
5	222	106	502	268	729	e800	254	142	197	24	11	6.2
6	171	101	588	314	702	1360	227	120	145	20	8.6	5.7
7	139	101	649	270	523	985	201	111	111	16	8.6	5.2
8	124	1950	557	231	437	702	169	93	89	15	9.4	5.1
9	117	3160	463	e200	385	544	151	187	75	16	9.6	8.1
10	119	1390	377	e170	328	757	136	320	66	17	8.3	33
11	105	811	342	e160	292	794	123	287	62	17	6.8	17
12	83	553	438	e150	266	584	117	243	61	17	6.5	15
13	70	412	1110	e140	e230	467	163	208	186	16	15	14
14	62	334	773	e135	e215	438	141	172	319	13	26	11
15	65	277	554	e130	e200	477	115	147	126	12	18	10
16	63	229	448	e125	e190	370	103	132	80	12	19	8.6
17	59	203	385	e120	e180	321	110	109	69	13	24	7.8
18	63	196	331	e115	e170	300	114	100	65	13	196	6.9
19	240	227	273	e110	e300	376	102	99	60	14	158	6.1
20	968	229	232	e110	714	401	90	302	56	12	71	8.5
21	1160	203	168	e105	590	363	84	378	50	9.1	75	12
22	782	185	182	e105	517	325	84	218	42	8.2	60	29
23	590	162	174	e100	390	277	84	156	36	12	41	26
24	430	149	195	e100	317	240	83	124	32	15	30	17
25	310	141	301	e350	276	211	85	243	31	19	25	13
26	241	210	259	455	249	e5300	83	1900	31	24	21	10
27	220	381	243	333	255	e1600	74	876	39	19	20	8.4
28	212	326	245	816	225	654	86	452	41	15	16	8.1
29	213	279	325	995	---	570	134	294	36	15	14	17
30	202	259	688	576	---	635	125	240	28	17	12	23
31	182	---	537	448	---	551	---	204	---	17	11	---
TOTAL	8623	13123	16445	8514	9887	33429	4752	8279	3290	533.3	975.8	367.0
MEAN	278	437	530	275	353	1078	158	267	110	17.2	31.5	12.2
MAX	1160	3160	2220	995	729	7670	485	1900	395	31	196	33
MIN	59	101	168	100	170	211	74	93	28	8.2	6.5	5.1
CFSM	1.21	1.91	2.32	1.20	1.54	4.71	.69	1.17	.48	.08	.14	.05
IN.	1.40	2.13	2.67	1.38	1.61	5.43	.77	1.34	.53	.09	.16	.06

e Estimated.

MONONGAHELA RIVER BASIN

03072000 DUNKARD CREEK AT SHANNOPIN, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	72.9	166	343	432	505	629	464	326	178	88.8	79.7	75.5
MAX	381	1149	1071	1050	1100	1475	1033	903	877	461	890	573
(WY)	1955	1986	1991	1994	1956	1994	1948	1968	1981	1996	1980	1975
MIN	1.73	2.44	7.46	26.5	63.5	112	80.9	57.4	10.2	4.62	2.45	2.39
(WY)	1952	1954	1954	1967	1954	1987	1971	1986	1966	1962	1962	1953

SUMMARY STATISTICS

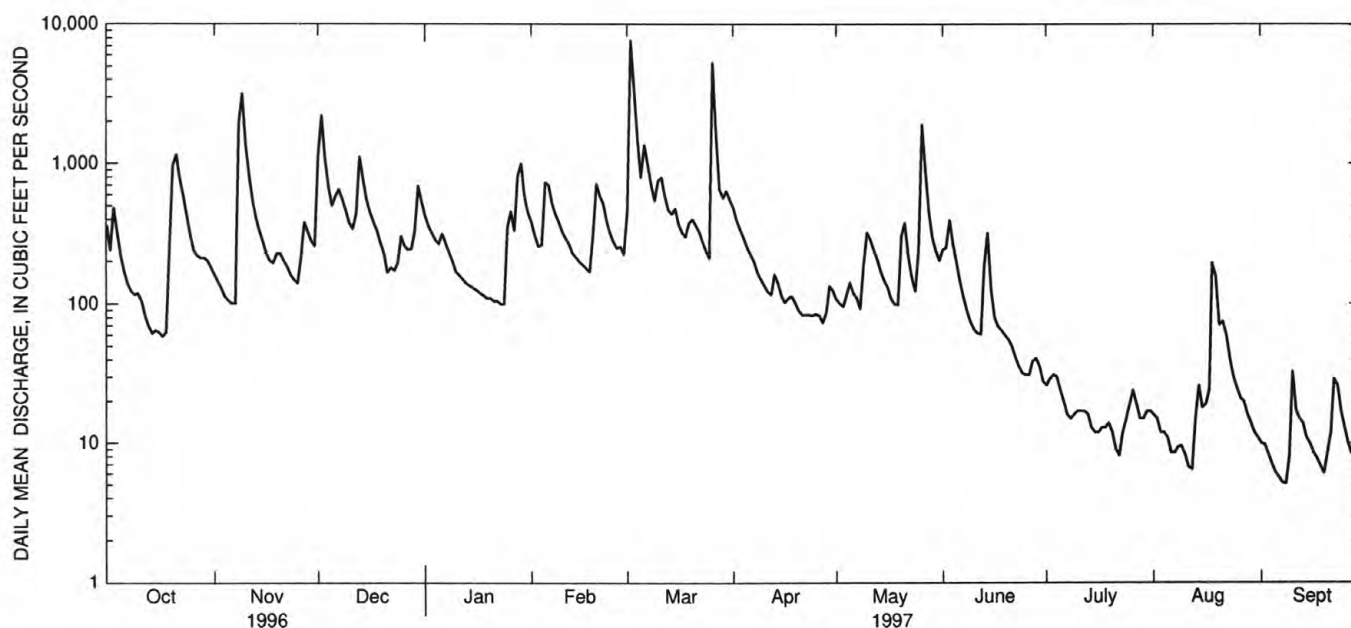
FOR 1996 CALENDAR YEAR

FOR 1997 WATER YEAR

WATER YEARS 1941 - 1997

ANNUAL TOTAL	182975	108218.1	
ANNUAL MEAN	500	296	280
HIGHEST ANNUAL MEAN			462
LOWEST ANNUAL MEAN			104
HIGHEST DAILY MEAN	e7200	7670	11200
LOWEST DAILY MEAN	16	5.1	.50
ANNUAL SEVEN-DAY MINIMUM	22	6.5	.73
INSTANTANEOUS PEAK FLOW		12400	17600
INSTANTANEOUS PEAK STAGE		12.38	14.27
INSTANTANEOUS LOW FLOW		4.9	.40
ANNUAL RUNOFF (CFSM)	2.18	1.29	1.22
ANNUAL RUNOFF (INCHES)	29.72	17.58	16.59
10 PERCENT EXCEEDS	1180	590	685
50 PERCENT EXCEEDS	240	158	99
90 PERCENT EXCEEDS	55	12	8.1

e Estimated.



October 1, 1996 to September 30, 1997

MONONGAHELA RIVER BASIN

03072000 DUNKARD CREEK AT SHANNOPIN, PA--Continued
(National Water-Quality Assessment station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--November 1975 to August 1981, April 1996 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: July 1997 to September 1997.

pH: July 1997 to September 1997.

WATER TEMPERATURE: October 1996 to September 1997.

INSTRUMENTATION.--Daily record measured and collected at hourly intervals with in-situ probes and electronic data loggers.

REMARKS.--All water-quality samples were collected and analyzed by the U.S. Geological Survey except those furnished by the Pennsylvania Department of Environmental Resources as noted. Interruptions in the daily record were due to malfunctions of the equipment. Additional sites in the (NAWQA) fixed-station network are shown in figure 6 on page 28. An explanation of selected abbreviations used in the water-quality tables are given on pages 29-31.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE	TIME	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)	OXYGEN, DIS- SOLVED (MG/L) (00300)	HARD- NESS TOTAL (MG/L AS CAC03) (00900)	ACIDITY TOTAL HEATED (MG/L AS CAC03) (70508)	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)
OCT												
16...	0900	63	810	7.9	12.0	736	9.7	180	2.0	48	14	93
NOV												
13...	0930	419	393	7.5	4.0	750	11.7	120	4.0	33	8.0	31
DEC												
04...	0900	707	318	7.5	5.0	742	11.6	96	8.0	27	6.9	23
JAN												
09...	0915	215	664	7.6	2.0	726	13.4	180	2.2	52	12	56
FEB												
05...	1000	746	480	7.6	4.0	741	12.0	130	6.0	38	8.9	40
MAR												
07...	0915	1030	318	7.4	5.0	753	11.8	100	2.4	30	6.9	19
APR												
08...	0900	170	497	7.8	11.0	740	9.9	160	0.60	44	11	37
MAY												
13...	0915	211	425	8.0	12.0	729	12.7	130	0.60	40	8.7	33
JUN												
04...	1200	268	508	8.0	17.0	740	10.0	150	2.0	44	10	42
JUL												
03...	0930	31	1180	7.9	24.0	730	7.0	340	4.0	98	24	119
AUG												
07...	1015	8.5	2210	7.7	20.0	742	8.4	650	2.4	180	47	249
SEP												
16...	0845	8.5	950	7.4	18.5	738	7.8	300	13	81	25	84

MONONGAHELA RIVER BASIN

03072000 DUNKARD CREEK AT SHANNOPIN, PA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	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)	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)	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)
OCT 16...	2.4	218	220	32	0.20	1.3	502	<0.010	<0.050	0.030	<0.20
NOV 13...	1.5	180	90	10	0.10	7.3	227	<0.010	0.500	0.020	<0.20
DEC 04...	1.3	60	70	8.7	<0.10	7.0	185	0.020	0.630	0.030	<0.20
JAN 09...	1.6	214	200	15	0.20	5.0	412	0.010	0.380	0.100	<0.20
FEB 05...	1.4	115	120	15	0.10	4.9	289	0.020	0.590	0.100	0.20
MAR 07...	1.3	106	83	6.8	0.10	6.6	194	<0.010	0.830	0.060	0.20
APR 08...	1.9	190	150	12	0.20	3.0	317	0.020	0.250	<0.015	<0.20
MAY 13...	1.4	80	120	9.1	0.10	3.6	269	<0.010	0.161	<0.015	<0.20
JUN 04...	1.5	92	150	10	<0.10	5.4	320	0.024	0.324	0.081	<0.20
JUL 03...	2.9	120	440	31	0.29	3.5	843	<0.010	0.188	<0.015	0.22
AUG 07...	3.9	100	1000	48	0.37	5.5	1770	<0.010	0.096	0.026	0.31
SEP 16...	3.6	102	340	28	0.34	6.1	662	<0.010	0.386	0.093	0.21
DATE	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)	ALUM- INUM, DIS- SOLVED (MG/L AS AL) (01106)	IRON, DIS- SOLVED (MG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (MG/L AS MN) (01056)	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)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
OCT 16...	<0.20	<0.010	0.010	<0.010	95	26	88	1.4	0.40	3	69
NOV 13...	<0.20	<0.010	<0.010	<0.010	43	8.0	51	1.6	0.20	3	68
DEC 04...	<0.20	<0.010	<0.010	<0.010	34	10	42	1.6	0.20	6	89
JAN 09...	<0.20	<0.010	<0.010	<0.010	59	22	79	1.1	0.30	3	86
FEB 05...	<0.20	<0.010	<0.010	<0.010	30	15	54	1.4	0.50	21	88
MAR 07...	<0.20	0.020	<0.010	<0.010	35	9.0	51	1.8	0.40	21	92
APR 08...	<0.20	<0.010	<0.010	<0.010	84	41	78	1.5	0.40	7	69
MAY 13...	<0.20	<0.010	<0.010	<0.010	75	20	46	1.7	0.20	7	85
JUN 04...	0.20	<0.010	<0.010	<0.010	106	16	40	2.3	0.40	22	83
JUL 03...	<0.20	<0.010	<0.010	<0.010	149	7.9	151	3.2	0.30	16	56
AUG 07...	<0.20	<0.010	<0.010	<0.010	54	<9.0	517	2.4	0.50	7	47
SEP 16...	<0.20	<0.010	<0.010	<0.010	42	<3.0	379	2.4	0.20	11	73

MONONGAHELA RIVER BASIN

03072000 DUNKARD CREEK AT SHANNOPIN, PA--Continued

REMARKS.--The following data are for dissolved trace elements in surface water filtered through a 0.45µm filter.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	ARSENIC DIS- SOLVED (µG/L AS AS) (01000)	BARIUM, DIS- SOLVED (µG/L AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (µG/L AS BE) (01010)	CADMIUM DIS- SOLVED (µG/L AS CD) (01025)	CHRO- MIUM, DIS- SOLVED (µG/L AS CR) (01030)	COBALT, DIS- SOLVED (µG/L AS CO) (01035)	COPPER, DIS- SOLVED (µG/L AS CU) (01040)
MAY 13...	0915	211	<1	38	<1.0	<1.0	1.2	<1.0	<1.0
SEP 16...	0845	8.5	<1	43	<1.0	<1.0	<1.0	7.8	2.7

DATE	LEAD, DIS- SOLVED (µG/L AS PB) (01049)	MOLYB- DENUM, DIS- SOLVED (µG/L AS MO) (01060)	NICKEL, DIS- SOLVED (µG/L AS NI) (01065)	SILVER, DIS- SOLVED (µG/L AS AG) (01075)	ZINC, DIS- SOLVED (µG/L AS ZN) (01090)	ANTI- MONY, DIS- SOLVED (µG/L AS SB) (01095)	SELE- NIUM, DIS- SOLVED (µG/L AS SE) (01145)	URANIUM NATURAL DIS- SOLVED (µG/L AS U) (22703)
MAY 13...	<1.0	<1.0	2.3	<1.0	18	<1.0	<1	<1.0
SEP 16...	<1.0	1.9	23	<1.0	31	<1.0	<1	<1.0

MONONGAHELA RIVER BASIN

03072000 DUNKARD CREEK AT SHANNOPIN, PA--Continued

REMARKS.--The following data are for trace elements and other constituents that were part of the suspended-sediment fraction of the water sample. Suspended sediments were dewatered using a continuous flow centrifuge, dried, and analyzed directly for total metals using a nitric, hydrofluoric, perchloric acid digestion. Whole water contributions by the suspended sediment were then calculated using the suspended-sediment concentration in kilograms per liter (kg/L) and the analyte concentration in milligrams per kilogram (mg/kg) from the direct analysis of the suspended sediments, resulting in micrograms per gram ($\mu\text{g/g}$) concentrations. Values reported in percent are the percent of that constituent in the suspended sediment. When no trace element was detected in the sample, the default reporting value is the method detection limit preceded by a less-than sign (<).

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SEDI- MENT SUSP., FLOW- THROUGH CENTRIF (MG/L) (50279)	ALUM- INUM SED, SUS PERCENT (30221)	AN- TIMONY SED. SUSP. ($\mu\text{G/G}$) (29816)	ARSENIC SED. SUSP. ($\mu\text{G/G}$) (29818)	BARIUM SED. SUSP. ($\mu\text{G/G}$) (29820)	BERYL- LIUM SED. SUSP. ($\mu\text{G/G}$) (29822)	CADMIUM SED. SUSP. ($\mu\text{G/G}$) (29826)	CARBON SED. SUSP. PERCENT (30244)	CARBON, ORGANIC SUS- PENDE PERCENT (50465)
MAY 13...	0915	211	5	5.9	3	13	430	6	1.8	6.9	7.0
SEP 16...	0845	8.5	5	8.9	1	16	320	17	2.0	7.8	7.0

DATE	CHRO- MIUM SED. SUSP. ($\mu\text{G/G}$) (29829)	COBALT SEDI- MENT SUSP. ($\mu\text{G/G}$) (35031)	COPPER SED. SUSP. ($\mu\text{G/G}$) (29832)	IRON SEDI- MENT SUSP. PERCENT (30269)	LEAD SED. SUSP. ($\mu\text{G/G}$) (29836)	LITHIUM SEDI- MENT SUSP. ($\mu\text{G/G}$) (35050)	MAN- GANESE SED. SUSP. ($\mu\text{G/G}$) (29839)	MERCURY SED. SUSP. ($\mu\text{G/G}$) (29841)	MOLYB- DENUM SED. SUSP. ($\mu\text{G/G}$) (29843)	NICKEL SED. SUSP. ($\mu\text{G/G}$) (29845)
MAY 13...	80	120	57	5.5	38	53	7400	.05	<25	160
SEP 16...	43	510	59	6.8	24	130	27000	.12	<10	390

DATE	PHOS- PHORUS SEDI- MENT SUSP. PERCENT (30292)	SELE- NIUM SED. SUSP. ($\mu\text{G/G}$) (29847)	SILVER SED. SUSP. ($\mu\text{G/G}$) (29850)	STRON- TIUM SEDI- MENT SUSP. ($\mu\text{G/G}$) (35040)	SULFUR SEDI- MENT SUSP. PERCENT (30308)	THAL- LIUM SUS SED ($\mu\text{G/G}$) (49955)	TITA- NIUM SEDI- MENT SUSP. PERCENT (30317)	URANIUM SEDI- MENT SUSP. ($\mu\text{G/G}$) (35046)	VANA- DIUM SED. SUSP. ($\mu\text{G/G}$) (29853)	ZINC SED. SUSP. ($\mu\text{G/G}$) (29855)
MAY 13...	2300	2	<3	310	3.0	<250	.27	<250	67	670
SEP 16...	1800	2	<1	330	3.1	<100	.14	<100	38	2000

MONONGAHELA RIVER BASIN
03072000 DUNKARD CREEK AT SHANNOPIN, PA--Continued

SPECIFIC CONDUCTANCE, $\mu\text{S}/\text{CM}$ @ 25 DEGREES CELSIUS, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	---	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	1240	1170	1180	---	---	---	---	---	---
5	---	---	---	1760	1240	1520	---	---	---	---	---	---
6	---	---	---	1870	1760	1830	---	---	---	---	---	---
7	---	---	---	1870	1850	1870	---	---	---	---	---	---
8	---	---	---	1850	1830	1840	---	---	---	---	---	---
9	---	---	---	1840	1820	1830	---	---	---	---	---	---
10	---	---	---	1820	1740	1780	---	---	---	---	---	---
11	---	---	---	1740	1610	1660	---	---	---	---	---	---
12	---	---	---	1610	1520	1560	---	---	---	---	---	---
13	---	---	---	1520	1380	1440	---	---	---	---	---	---
14	---	---	---	1380	1340	1350	---	---	---	---	---	---
15	---	---	---	1590	1360	1460	---	---	---	---	---	---
16	---	---	---	1950	1590	1810	---	---	---	---	---	---
17	---	---	---	2230	1950	2140	---	---	---	981	969	974
18	---	---	---	2460	2230	2400	---	---	---	988	967	978
19	---	---	---	2600	2460	2570	---	---	---	1020	985	1000
20	---	---	---	2580	2480	2540	---	---	---	1020	956	997
21	---	---	---	2500	2360	2420	---	---	---	956	906	921
22	---	---	---	2360	2190	2270	---	---	---	964	901	928
23	---	---	---	2190	2090	2110	---	---	---	964	914	944
24	---	---	---	2270	2110	2170	---	---	---	914	882	889
25	---	---	---	2810	2270	2490	---	---	---	901	874	886
26	---	---	---	3080	2810	2980	---	---	---	951	901	923
27	---	---	---	3070	2880	2950	---	---	---	1090	951	1010
28	---	---	---	2900	2860	2880	---	---	---	1220	1070	1100
29	---	---	---	3030	2890	2970	---	---	---	1230	1170	1210
30	---	---	---	3050	2930	3020	---	---	---	1170	1010	1080
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	---	---	---	3080	1170	2110	---	---	---	1230	874	989

MONONGAHELA RIVER BASIN

03072000 DUNKARD CREEK AT SHANNOPIN, PA--Continued

pH VALUES, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAY	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	---	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	7.7	7.3	7.5	---	---	---	---	---	---
5	---	---	---	7.5	7.3	7.4	---	---	---	---	---	---
6	---	---	---	7.4	7.2	7.3	---	---	---	---	---	---
7	---	---	---	7.3	7.1	7.2	---	---	---	---	---	---
8	---	---	---	7.3	7.1	7.2	---	---	---	---	---	---
9	---	---	---	7.2	7.1	7.1	---	---	---	---	---	---
10	---	---	---	7.3	7.1	7.2	---	---	---	---	---	---
11	---	---	---	7.3	7.1	7.2	---	---	---	---	---	---
12	---	---	---	7.3	7.1	7.2	---	---	---	---	---	---
13	---	---	---	7.3	7.1	7.2	---	---	---	---	---	---
14	---	---	---	7.2	7.0	7.1	---	---	---	---	---	---
15	---	---	---	7.2	7.0	7.1	---	---	---	---	---	---
16	---	---	---	7.2	7.0	7.1	---	---	---	---	---	---
17	---	---	---	7.2	7.0	7.1	---	---	---	7.3	7.2	7.3
18	---	---	---	7.2	7.0	7.1	---	---	---	7.3	7.2	7.2
19	---	---	---	7.3	7.0	7.1	---	---	---	7.3	7.1	7.3
20	---	---	---	7.3	7.0	7.1	---	---	---	7.3	7.1	7.2
21	---	---	---	7.1	6.9	7.0	---	---	---	7.4	7.3	7.3
22	---	---	---	7.0	6.8	6.9	---	---	---	7.7	7.4	7.6
23	---	---	---	7.2	6.8	6.9	---	---	---	7.7	7.7	7.7
24	---	---	---	7.3	7.0	7.2	---	---	---	7.7	7.5	7.6
25	---	---	---	7.4	7.1	7.2	---	---	---	7.5	7.4	7.5
26	---	---	---	7.5	7.2	7.3	---	---	---	7.5	7.4	7.5
27	---	---	---	7.3	7.1	7.2	---	---	---	7.5	7.3	7.5
28	---	---	---	7.2	7.0	7.1	---	---	---	7.5	7.4	7.5
29	---	---	---	7.2	6.9	7.0	---	---	---	7.6	7.3	7.4
30	---	---	---	7.3	7.1	7.2	---	---	---	7.7	7.6	7.6
31	---	---	---	---	---	---	---	---	---	---	---	---
MAX	---	---	---	7.7	7.3	7.5	---	---	---	7.7	7.7	7.7
MIN	---	---	---	7.0	6.8	6.9	---	---	---	7.3	7.1	7.2

MONONGAHELA RIVER BASIN
03072000 DUNKARD CREEK AT SHANNOPIN, PA--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	---	---	---	11.5	9.5	10.5	8.5	3.5	6.0	7.0	6.5	6.5
2	---	---	---	9.5	7.0	8.0	8.5	6.5	7.5	8.0	6.5	7.0
3	---	---	---	7.0	6.0	6.5	6.5	5.5	5.5	9.0	8.0	8.5
4	---	---	---	6.5	5.0	6.0	5.5	5.0	5.5	10.5	9.0	9.5
5	---	---	---	7.0	6.0	6.5	5.0	4.5	5.0	11.5	10.5	11.0
6	---	---	---	8.5	7.0	8.0	4.5	4.5	4.5	10.5	7.5	9.0
7	---	---	---	11.5	8.5	10.0	5.5	4.5	5.0	7.5	4.0	5.5
8	---	---	---	12.0	11.0	11.5	5.0	4.0	4.5	4.0	2.0	2.5
9	---	---	---	11.0	9.0	10.0	4.0	3.5	4.0	2.5	2.0	2.0
10	---	---	---	9.0	7.5	8.5	4.0	3.0	3.5	2.5	1.5	2.0
11	---	---	---	7.5	6.0	6.5	6.0	4.0	5.0	1.5	.0	.5
12	---	---	---	6.0	5.0	5.5	8.5	6.0	7.0	.5	.0	.0
13	---	---	---	5.0	4.5	5.0	9.0	8.5	9.0	.5	.0	.0
14	---	---	---	5.0	4.0	4.5	8.5	6.5	7.5	.5	.0	.0
15	---	---	---	4.0	3.0	3.5	6.5	5.0	5.5	.5	.0	.0
16	---	---	---	3.5	2.0	3.0	5.0	4.0	4.5	.5	.0	.0
17	---	---	---	4.0	2.5	3.0	6.0	5.0	5.5	.0	.0	.0
18	---	---	---	5.5	4.0	4.5	6.5	5.5	6.0	.0	.0	.0
19	---	---	---	6.0	5.0	5.5	5.5	3.0	4.5	.0	.0	.0
20	---	---	---	6.0	5.5	5.5	3.0	1.0	2.0	.0	.0	.0
21	---	---	---	5.5	5.0	5.0	1.0	.0	.5	.5	.0	.0
22	---	---	---	5.0	4.5	4.5	1.0	.0	.5	.5	.0	.0
23	---	---	---	4.5	3.5	4.0	2.5	1.0	2.0	.5	.0	.0
24	---	---	---	5.0	4.0	4.5	4.0	2.5	3.5	.5	.0	.0
25	---	---	---	5.5	4.5	5.0	3.0	1.5	2.5	.5	.0	.0
26	---	---	---	6.0	5.0	5.5	1.5	1.0	1.5	.5	.0	.0
27	---	---	---	5.0	4.0	4.5	2.5	1.5	2.0	.5	.0	.5
28	---	---	---	4.0	2.5	3.5	5.0	2.5	4.0	1.5	.0	.5
29	---	---	---	2.5	1.5	2.0	7.5	5.0	6.0	2.0	1.0	1.5
30	---	---	---	3.5	2.0	2.5	7.5	7.0	7.5	2.0	.5	1.0
31	13.5	11.5	12.5	---	---	---	7.5	7.0	7.0	3.0	1.5	2.0
MONTH	13.5	11.5	12.5	12.0	1.5	5.8	9.0	.0	4.7	11.5	.0	2.2

MONONGAHELA RIVER BASIN

03072000 DUNKARD CREEK AT SHANNOPIN, PA--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	3.5	2.5	3.0	9.0	7.5	8.5	8.5	6.0	7.5	---	---	---
2	3.5	2.5	3.0	9.5	9.0	9.5	10.0	6.5	8.0	---	---	---
3	4.0	3.0	3.5	9.0	6.0	7.5	11.0	8.0	9.5	---	---	---
4	4.0	3.0	3.5	7.0	6.0	6.5	14.0	10.5	12.0	---	---	---
5	4.5	4.0	4.5	7.0	6.5	7.0	14.0	12.5	13.5	---	---	---
6	4.5	4.0	4.0	7.0	6.5	7.0	15.5	13.5	14.0	---	---	---
7	4.0	3.5	4.0	6.5	5.0	6.0	15.5	13.0	14.0	---	---	---
8	4.0	3.0	3.0	7.0	5.5	6.0	---	---	---	---	---	---
9	3.5	2.5	3.0	7.0	5.5	6.5	---	---	---	---	---	---
10	3.5	2.5	3.0	8.0	6.5	7.5	---	---	---	---	---	---
11	3.5	2.5	3.0	7.5	6.5	7.0	---	---	---	---	---	---
12	3.0	2.5	3.0	7.0	5.5	6.0	---	---	---	---	---	---
13	2.5	1.0	1.5	6.5	5.5	6.0	---	---	---	---	---	---
14	2.5	1.0	2.0	8.0	6.5	7.0	---	---	---	---	---	---
15	3.0	2.5	2.5	7.5	5.5	6.5	---	---	---	---	---	---
16	2.5	2.0	2.0	6.0	4.0	5.0	---	---	---	---	---	---
17	2.5	1.0	2.0	5.5	4.0	5.0	---	---	---	---	---	---
18	4.0	1.5	3.0	6.0	5.0	5.5	---	---	---	---	---	---
19	5.5	3.5	4.5	8.0	5.5	6.5	---	---	---	---	---	---
20	7.0	5.0	6.0	8.5	7.0	7.5	---	---	---	---	---	---
21	8.5	6.5	7.5	10.0	7.0	8.5	---	---	---	---	---	---
22	9.0	7.5	8.5	9.5	8.5	9.0	---	---	---	---	---	---
23	7.5	6.0	6.5	9.0	7.5	8.0	---	---	---	---	---	---
24	6.0	5.0	5.5	9.0	6.5	7.5	---	---	---	---	---	---
25	5.0	3.5	4.5	11.0	7.5	9.0	---	---	---	---	---	---
26	4.5	3.0	4.0	11.0	8.0	9.5	---	---	---	---	---	---
27	8.0	4.5	6.5	9.5	7.0	8.0	---	---	---	---	---	---
28	8.5	6.5	7.5	11.0	8.5	9.5	---	---	---	---	---	---
29	---	---	---	11.5	10.5	11.0	---	---	---	---	---	---
30	---	---	---	11.0	10.5	11.0	---	---	---	---	---	---
31	---	---	---	10.5	7.5	9.0	---	---	---	---	---	---
MONTH	9.0	1.0	4.1	11.5	4.0	7.5	15.5	6.0	11.2	---	---	---

MONONGAHELA RIVER BASIN

03072000 DUNKARD CREEK AT SHANNOPIN, PA--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	---	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	26.5	24.0	25.0	---	---	---	---	---	---
5	---	---	---	24.0	22.0	23.0	---	---	---	---	---	---
6	---	---	---	24.5	20.5	22.5	---	---	---	---	---	---
7	---	---	---	24.5	21.0	23.0	---	---	---	---	---	---
8	---	---	---	25.5	22.0	24.0	---	---	---	---	---	---
9	---	---	---	24.5	22.5	23.5	---	---	---	---	---	---
10	---	---	---	25.0	21.5	23.0	---	---	---	---	---	---
11	---	---	---	25.5	21.5	23.5	---	---	---	---	---	---
12	---	---	---	26.0	22.0	24.0	---	---	---	---	---	---
13	---	---	---	26.0	23.0	24.5	---	---	---	---	---	---
14	---	---	---	26.5	23.0	25.0	---	---	---	---	---	---
15	---	---	---	28.0	24.0	26.0	---	---	---	---	---	---
16	---	---	---	28.0	25.0	26.5	---	---	---	---	---	---
17	---	---	---	27.5	24.0	26.0	---	---	---	22.0	19.0	20.5
18	---	---	---	27.5	24.5	26.0	---	---	---	23.5	20.0	21.5
19	---	---	---	28.0	24.5	26.0	---	---	---	22.0	18.5	20.5
20	---	---	---	26.5	22.5	24.5	---	---	---	20.5	19.0	20.0
21	---	---	---	27.0	22.0	24.5	---	---	---	19.0	17.0	18.0
22	---	---	---	25.5	23.0	24.0	---	---	---	18.0	15.5	17.0
23	---	---	---	25.0	22.5	23.5	---	---	---	17.5	16.0	16.5
24	---	---	---	24.5	22.5	23.5	---	---	---	17.0	15.0	16.0
25	---	---	---	25.0	22.5	24.0	---	---	---	17.5	14.5	16.0
26	---	---	---	25.0	22.5	24.0	---	---	---	17.5	15.0	16.0
27	---	---	---	27.5	23.5	25.0	---	---	---	18.5	14.5	16.5
28	---	---	---	27.0	25.0	26.0	---	---	---	16.5	15.0	15.5
29	---	---	---	26.0	23.5	24.5	---	---	---	17.5	15.5	16.5
30	---	---	---	25.0	21.5	23.5	---	---	---	17.0	16.0	16.5
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	---	---	---	28.0	20.5	24.4	---	---	---	23.5	14.5	17.6

MONONGAHELA RIVER BASIN

03072655 MONONGAHELA RIVER NEAR MASONTOWN, PA

LOCATION.--Lat 39°49'30", long 79°55'23", Greene County, Hydrologic Unit 05020005, on left bank, 84 ft upstream from Lock and Dam at Grays Landing, 0.9 mi upstream from Masontown, 1.2 mi upstream from Whitley Creek, 5.3 mi downstream from Dunkard Creek, 7.6 mi downstream from Cheat River, at mile 81.9.

DRAINAGE AREA.--4,440 mi².

PERIOD OF RECORD.--October 1995 to current year. Published as "at Greensboro" (Station 03072500) October 1938 to September 1995. Prior to January 1939 monthly discharge only, published in WSP 1305.

REVISED RECORDS.--WSP 1113: 1939 (M), 1941 (M). WSP 1435: 1939. WSP 1907: 1936 (M), 1955 (M).

GAGE.--Water-stage recorder and concrete dam control. Datum of gage is 769.00 ft above sea level (U.S. Army Corps of Engineers bench mark). Prior to Nov. 9, 1990, at datum 1.45 ft lower.

REMARKS.--Records good above 5,000 ft³/s, fair below and for estimated daily discharges, except those below 1,000 ft³/s, which are poor. Flow regulated since 1938 by Tygart Lake 69 mi upstream, since 1926 by Lake Lynn 11 mi upstream, and since 1990 by Stonewall Jackson Lake 120.6 mi upstream, combined capacity, 432,000 acre-ft. Several measurements of water temperature were made during the year. U.S. Army Corps of Engineers satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of July 1888 reached a stage of about 36 ft, from high-water profile by U.S. Army Corps of Engineers. Flood of Mar. 18, 1936, reached a stage of 28.4 ft, discharge, 130,000 ft³/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6190	6500	28300	10900	11100	13100	12000	6690	7580	2240	1670	1990
2	5410	8170	43300	9940	7090	48400	13600	6000	5910	2880	1020	2130
3	5610	4840	29300	9030	8410	46700	10000	5790	8260	2600	1090	1570
4	4840	6440	25500	8970	10800	49400	9550	5210	11700	2440	1100	1520
5	4480	5870	24900	5940	12100	29700	8340	6720	14500	2570	2670	1140
6	2940	6230	20100	8790	12500	29200	7910	7350	10500	1570	2660	1490
7	3730	4740	17500	7390	9510	28400	7720	7230	5560	1620	1770	1330
8	3560	17700	15500	5760	12300	29800	7640	7470	4440	1610	2390	1860
9	2600	38300	14700	5950	6600	24300	4890	6760	4650	1340	1050	1860
10	4580	25000	12100	8270	9220	19200	4250	13700	3680	2140	1050	2340
11	3040	24000	11300	5430	7650	22600	3660	14000	2630	2870	1170	3930
12	3420	22400	16200	4250	8110	21700	4020	14300	3260	1830	1310	2300
13	3560	17800	17800	5140	7970	20900	3220	13900	4840	1390	2420	2210
14	2610	14800	19800	4220	7730	19800	5410	12500	5020	1450	1160	1590
15	2980	12600	18400	3530	8960	9680	3560	14800	4260	1220	1520	2420
16	3010	9090	9120	4370	9200	11700	3800	14100	4110	906	1670	2280
17	3380	5040	14500	4650	9310	12500	4190	12100	3120	1140	3810	2060
18	3320	5280	9720	3430	7860	13100	4110	4300	2990	889	16700	1820
19	4920	7130	8780	2590	8290	16100	3180	8050	4070	874	7340	1580
20	20300	8310	9380	4760	11800	21000	3270	19200	3100	923	4780	1890
21	26400	8950	7510	4220	14900	21900	5420	17500	2890	822	6960	2270
22	31300	7690	5400	4280	13500	18900	5730	12900	2770	808	8340	2030
23	30900	6120	5860	5290	11000	13300	3880	11900	1820	1920	4690	2670
24	25400	4960	6470	8320	9900	13300	4370	8780	2080	3210	2730	1680
25	18700	7260	14700	10100	10000	10900	6190	9540	2030	4720	3330	2140
26	12500	13400	14500	11000	7250	17900	3110	28700	2440	3750	1790	1500
27	9100	26200	11600	13800	9300	20000	3460	23300	6750	2200	2180	2070
28	9840	24300	10700	18600	6800	17800	4240	22500	7200	2480	2410	1640
29	8230	22500	10700	21900	---	16900	9040	17400	4020	2260	2290	11200
30	11000	20200	12400	17900	---	11800	7910	12900	3970	4270	1560	12100
31	8850	---	12300	15700	---	12500	---	10400	---	2360	1540	---
TOTAL	286700	391820	478340	254420	269160	662480	177670	375990	150150	63302	96170	78610
MEAN	9248	13060	15430	8207	9613	21370	5922	12130	5005	2042	3102	2620
MAX	31300	38300	43300	21900	14900	49400	13600	28700	14500	4720	16700	12100
MIN	2600	4740	5400	2590	6600	9680	3110	4300	1820	808	1020	1140
†	-442	-280	-266	-70	-36	+506	+620	+75	+6.3	-211	+193	-373

† Change in contents, equivalent in cubic feet per second, in Tygart Lake, Stonewall Jackson Lake and Lake Lynn. Records of contents in Lake Lynn furnished by Allegheny Power Service Corp. Records of contents in Tygart Lake and Stonewall Jackson Lake furnished by U.S. Army Corps of Engineers.

MONONGAHELA RIVER BASIN

03072655 MONONGAHELA RIVER NEAR MASONTOWN, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	3462	6689	11260	11870	14250	16160	11820	9115	5714	4016	3906	2763
MAX	15260	29580	26520	24690	30880	37830	23180	29230	22100	13240	15120	12470
(WY)	1980	1986	1973	1952	1994	1963	1940	1996	1981	1958	1956	1971
MIN	439	369	1648	1840	3781	6192	3781	1836	926	676	592	482
(WY)	1954	1954	1966	1977	1941	1987	1946	1982	1965	1966	1965	1946

SUMMARY STATISTICS

FOR 1996 CALENDAR YEAR

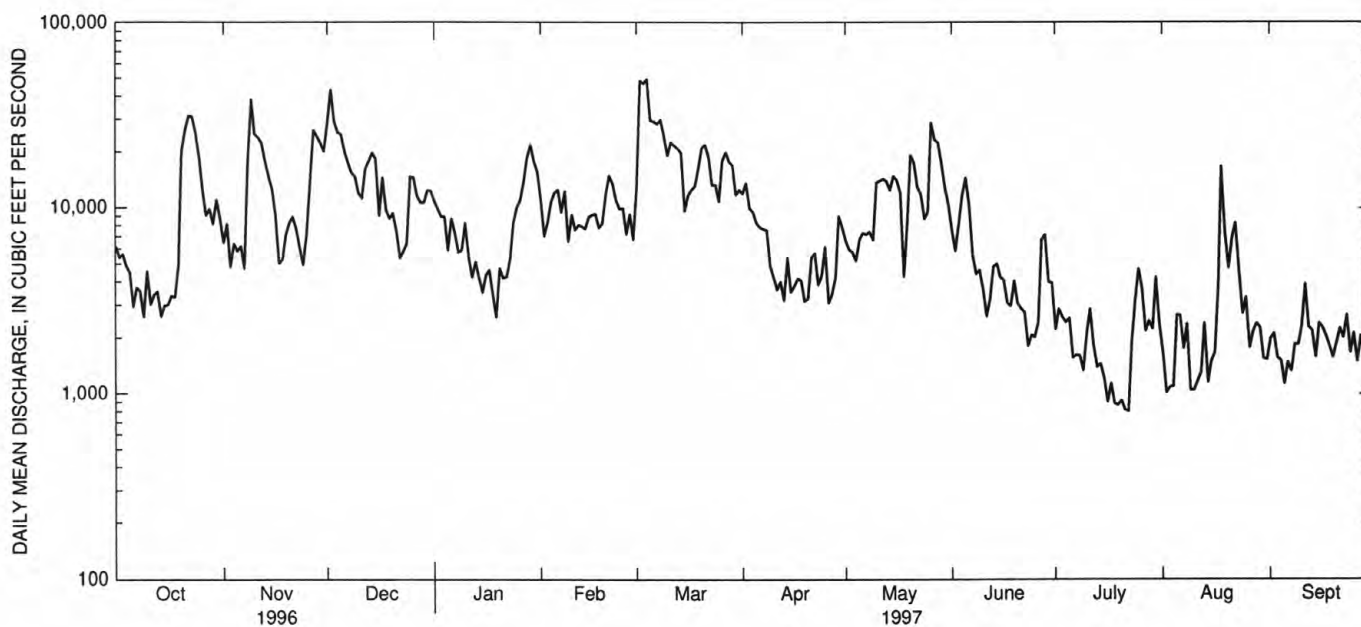
FOR 1997 WATER YEAR

WATER YEARS 1939 - 1997

ANNUAL TOTAL	5327960		3284812									
ANNUAL MEAN	14560	†+15	8999	†+9.3						8383		
HIGHEST ANNUAL MEAN										13010		1994
LOWEST ANNUAL MEAN										4995		1966
HIGHEST DAILY MEAN	84900	Jan 19	49400	Mar 4						154000	Nov 5	1985
LOWEST DAILY MEAN	1480	Jul 14	808	Jul 22						177	Sep 11	1988
ANNUAL SEVEN-DAY MINIMUM	2140	Aug 29	909	Jul 16						267	Nov 4	1953
INSTANTANEOUS PEAK FLOW			70900	Mar 2						220000	Nov 5	1985
INSTANTANEOUS PEAK STAGE			19.41	Mar 2						a39.39	Nov 5	1985
10 PERCENT EXCEEDS	30500		20000							21000		
50 PERCENT EXCEEDS	10900		6690							4770		
90 PERCENT EXCEEDS	3400		1680							1020		

† Change in contents, equivalent in cubic feet per second, in Tygart Lake, Stonewall Jackson Lake and Lake Lynn. Records of contents in Lake Lynn furnished by Allegheny Power Service Corp. Records of contents in Tygart Lake and Stonewall Jackson Lake furnished by U.S. Army Corps of Engineers.

a From outside floodmarks, datum then in use.



October 1, 1996 to September 30, 1997

MONONGAHELA RIVER BASIN

03074500 REDSTONE CREEK AT WALTERSBURG, PA

LOCATION.--Lat 39°58'48", long 79°45'52", Fayette County, Hydrologic Unit 05020005, on right bank, 15 ft upstream from highway bridge at Waltersburg, 400 ft upstream from Bolden Run, and 0.9 mi upstream from Allen Run.

DRAINAGE AREA.--73.7 mi².

PERIOD OF RECORD.--October 1942 to current year. Monthly discharge only for October 1942, published in WSP 1305.

REVISED RECORDS.--WSP 1435: 1943-45 (M), 1946, 1947 (M), 1948 (P), 1949-50 (M), 1951 (P), 1952 (M).

GAGE.--Water-stage recorder. Datum of gage is 883.28 ft above sea level. Prior to Nov. 15, 1973, nonrecording gage 15 ft downstream at same datum.

REMARKS.--Records good except for estimated daily discharges, which are fair. Some regulation at low flow by mine pumpage into stream above station. Several measurements of water temperature were made during the year. U.S. Army Corps of Engineers satellite telemeter at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than a base discharge of 1,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Oct. 20	1130	1,570	5.34	Mar. 2	0730	*2,250	*6.66
Nov. 8	1200	1,480	5.15	May 25	2400	1,330	4.82

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	133	89	303	e150	e66	108	135	61	120	e48	20	28
2	119	85	344	e130	e56	1120	123	57	130	e76	22	26
3	117	79	229	e120	e56	654	117	58	97	e60	20	30
4	95	74	171	e105	e74	485	108	61	93	e48	44	26
5	86	68	189	e96	e370	363	91	52	80	e48	45	24
6	e76	66	155	e90	e240	391	86	54	69	e38	24	25
7	e68	66	139	e82	e180	261	83	57	66	e35	22	25
8	e60	712	127	e76	e150	213	77	58	61	e33	20	26
9	e52	528	116	70	e130	174	76	81	58	e32	19	25
10	98	333	e115	e62	e115	184	72	65	52	e44	18	46
11	77	229	e140	e58	e100	150	71	67	51	e40	20	44
12	e60	171	e180	e54	e90	130	73	61	49	e35	33	47
13	e52	143	e250	e50	e80	115	77	60	123	e31	44	34
14	e47	129	e190	e48	e74	119	69	57	65	e28	50	32
15	e44	114	e150	e46	e70	103	66	59	48	e29	28	28
16	e40	106	e140	e44	66	91	64	51	43	e26	29	25
17	e41	100	e130	e43	e64	85	74	50	45	e23	150	20
18	125	104	e115	e40	e62	91	68	51	50	e25	296	25
19	305	115	e105	e39	e200	107	61	117	81	e27	80	20
20	1150	101	e100	e38	e560	89	59	222	99	e30	326	38
21	536	95	e94	e36	e300	84	58	135	e86	e25	130	27
22	488	89	e92	e35	e340	83	58	106	e72	e20	83	22
23	308	85	e90	e33	e250	81	55	87	e60	e16	61	20
24	226	81	e110	e31	e160	75	52	75	e52	e33	50	21
25	179	78	e160	e50	e110	72	53	498	e44	e28	50	20
26	149	126	e130	e100	e94	479	46	695	e60	23	39	20
27	132	111	e115	e200	81	224	44	276	e84	50	35	19
28	128	100	e125	e350	70	171	73	177	e62	33	36	42
29	121	96	e180	e740	---	171	64	140	e54	31	33	326
30	110	109	e230	e350	---	145	61	119	e48	23	32	82
31	96	---	e190	e150	---	156	---	117	---	20	29	---
TOTAL	5318	4382	4904	3516	4208	6774	2214	3824	2102	1058	1888	1193
MEAN	172	146	158	113	150	219	73.8	123	70.1	34.1	60.9	39.8
MAX	1150	712	344	740	560	1120	135	695	130	76	326	326
MIN	40	66	90	31	56	72	44	50	43	16	18	19
CFSM	2.33	1.98	2.15	1.54	2.04	2.96	1.00	1.67	.95	.46	.83	.54
IN.	2.68	2.21	2.48	1.77	2.12	3.42	1.12	1.93	1.06	.53	.95	.60

e Estimated.

MONONGAHELA RIVER BASIN

03074500 REDSTONE CREEK AT WALTERSBURG, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1943 - 1997 BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	50.6	69.1	116	133	158	194	161	128	81.3	56.6	50.4	49.0
MAX	225	459	308	284	376	470	310	274	413	187	172	161
(WY)	1980	1986	1973	1994	1986	1994	1948	1996	1972	1990	1980	1987
MIN	11.2	19.0	14.2	23.1	33.0	45.5	49.2	27.3	15.4	9.59	12.4	8.92
(WY)	1964	1967	1961	1967	1954	1969	1971	1963	1962	1962	1962	1991

SUMMARY STATISTICS

FOR 1996 CALENDAR YEAR

FOR 1997 WATER YEAR

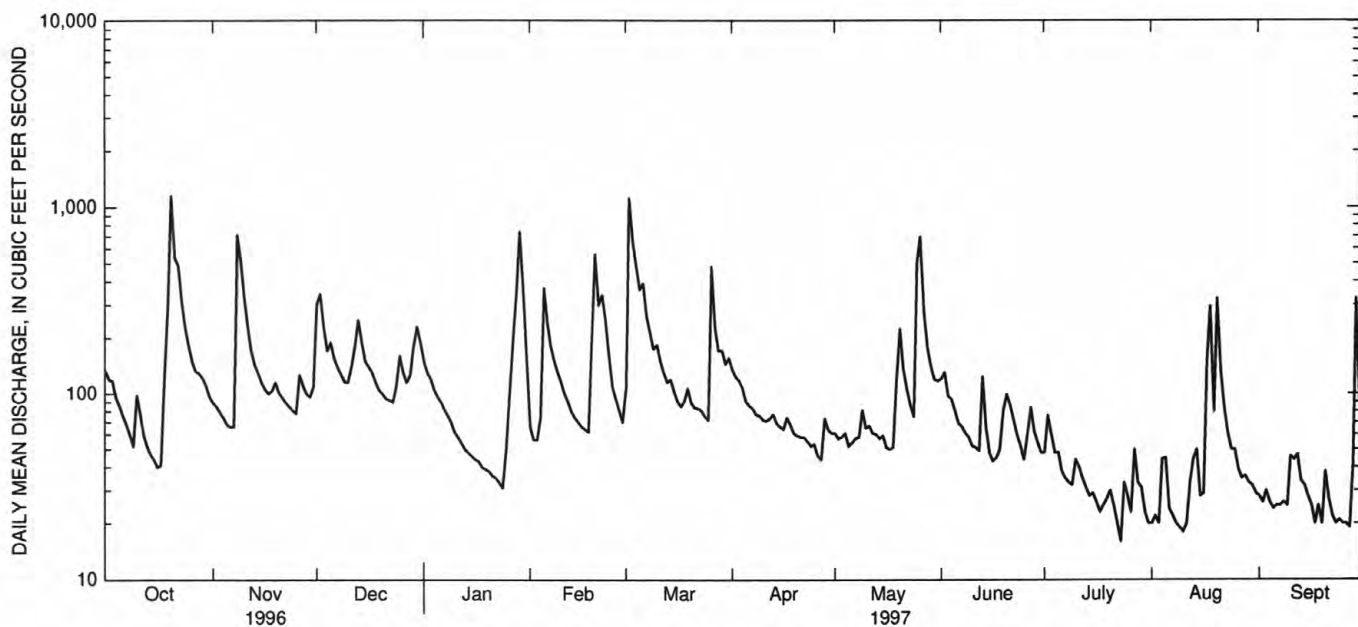
WATER YEARS 1943 - 1997

ANNUAL TOTAL	64634	41381	104
ANNUAL MEAN	177	113	166
HIGHEST ANNUAL MEAN			44.2
LOWEST ANNUAL MEAN			1994
HIGHEST DAILY MEAN	2400	Jan 19	6620
LOWEST DAILY MEAN	a33	Jan 1	4.8
ANNUAL SEVEN-DAY MINIMUM	a43	Aug 27	5.3
INSTANTANEOUS PEAK FLOW			8660
INSTANTANEOUS PEAK STAGE			14.83
INSTANTANEOUS LOW FLOW			b4.2
ANNUAL RUNOFF (CFSM)	2.40	1.54	1.41
ANNUAL RUNOFF (INCHES)	32.62	20.89	19.10
10 PERCENT EXCEEDS	346	227	212
50 PERCENT EXCEEDS	126	75	62
90 PERCENT EXCEEDS	53	27	21

a Computed using estimated discharges.

b Minimum observed.

c Estimated.



October 1, 1996 to September 30, 1997

MONONGAHELA RIVER BASIN

03075070 MONONGAHELA RIVER AT ELIZABETH, PA

LOCATION.--Lat 40°15'44", long 79°54'05", Allegheny County, Hydrologic Unit 05020005, on right bank 30 ft landward from upstream end of guide wall, 1,050 ft upstream from dam at lock 3 at Elizabeth, 0.4 mi downstream from Lobbs Creek, at mile 24.0.

DRAINAGE AREA.--5,340 mi².

PERIOD OF RECORD.--October 1933 to current year. Published as "at Charleroi" (station 03075000) October 1933 to September 1976. Monthly discharge prior to 1940, adjusted for reservoir contents, published in WSP 1305. Records for March 1886 to March 1905 (high-water periods, only), published in WSP 169, are unreliable and should not be used (peak discharge of July 11, 1888, as published in WSP 183, is still considered reliable).

REVISED RECORDS.--WSP 758: Drainage area. WSP 783: 1888 (M). WSP 1435: 1934, 1936. See also "PERIOD OF RECORD."

GAGE.--Water-stage recorder and concrete dam control. Datum of gage is 717.90 ft above sea level (U.S. Army Corps of Engineers bench mark). From Oct. 1, 1967 to Sept. 30, 1976, at site 17.5 mi upstream at datum 15.70 ft higher. Prior to Oct. 1, 1967, water-stage recorder at site 17.9 mi upstream at datum 17.43 ft higher. Oct. 1, 1965 to Sept. 30, 1967, auxiliary staff gage, Apr. 14, 1966 to Sept. 30, 1967, auxiliary water-stage recorder and Oct. 1, 1967 to Nov. 4, 1990, water-stage recorder at present site at datum 7.60 ft higher.

REMARKS.--Records good, except for estimated daily discharges, and those below 2,500 ft³/s, which are fair. Flow regulated by locks above station, since 1938 by Tygart Lake, since 1926 by Lake Lynn, and since 1990 by Stonewall Jackson Lake, combined capacity, 432,000 acre-ft. Several measurements of water temperature were made during the year. U.S. Army Corps of Engineers satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6510	6460	26800	11800	11800	9950	12300	6650	9050	e1800	2170	1940
2	5960	7630	46900	9690	8520	50300	14900	5810	6770	e2350	1420	1740
3	5850	5510	39300	9770	8010	70400	10800	6820	7470	e2150	1240	2170
4	5130	5660	26500	9110	10200	61800	9420	5280	12200	e2000	851	1730
5	4390	6340	26600	7150	13100	40800	9430	5260	14200	e2090	1820	1180
6	3430	6240	22000	8300	14600	31000	8380	6660	11900	e1490	2250	1030
7	3470	4990	18700	7830	10300	32800	7260	7080	6130	e1320	2640	1570
8	3320	16500	17000	6050	13000	32300	8390	7070	4590	e1310	1570	1180
9	3110	47500	14600	5850	7910	29100	5970	6420	4230	e1140	1890	2050
10	4020	32700	13900	7380	8790	19900	4340	11900	4200	e1720	1070	2460
11	2670	25300	10600	6070	8600	22800	4450	12800	3890	e2190	981	2580
12	3940	23400	16900	3880	7960	23100	4180	15100	3030	e1500	1040	3440
13	3130	18400	18900	5180	8550	21300	3340	14400	4190	e1120	1930	2130
14	3130	16800	21800	4350	7920	22400	5370	12200	5400	e1160	2070	1880
15	2550	13300	19400	3950	9350	12200	4430	15000	4120	e995	1360	1740
16	2590	10100	11200	3830	10500	11300	3550	13900	4050	e810	1470	2170
17	2920	6030	14100	4920	9140	12600	3890	13000	2910	e900	3520	2290
18	3460	5190	10700	3600	9120	13100	4500	4780	2600	e730	18100	1600
19	5140	7010	9550	2620	8980	16500	3440	8510	3610	e720	8740	1790
20	16500	8040	9920	4220	10900	19900	3110	17200	3440	e745	6470	1640
21	26400	9440	7670	4910	15900	22100	4730	19000	2420	e700	6200	1800
22	26900	8170	6450	4730	14000	19600	5680	14000	2790	e660	9030	2350
23	29400	6240	5310	4920	11700	14200	3820	12300	2180	1670	4600	2330
24	23100	5070	6610	6720	10800	13700	4260	9530	1410	2390	3720	1900
25	17900	6750	13200	10700	10100	12000	6160	13000	1710	4010	2650	1940
26	12000	11400	15100	10200	8020	19300	3640	34000	1970	3770	2300	1500
27	9140	25700	11400	14000	8680	24300	3250	29700	5570	2680	1860	1820
28	8770	24200	10700	17700	7950	19800	4490	23700	6590	2180	2340	1750
29	7670	23200	11000	23700	---	18000	8310	19000	3710	2330	2400	8770
30	10400	21400	12800	19300	---	13600	8030	13800	e3000	3320	1940	12600
31	7960	---	13300	16400	---	13300	---	11900	---	2550	1420	---
TOTAL	270860	414670	508910	258830	284400	743450	183820	395770	149330	54500	101062	75070
MEAN	8737	13820	16420	8349	10160	23980	6127	12770	4978	1758	3260	2502
MAX	29400	47500	46900	23700	15900	70400	14900	34000	14200	4010	18100	12600
MIN	2550	4990	5310	2620	7910	9950	3110	4780	1410	660	851	1030
†	-442	-280	-266	-70	-36	+506	+620	+75	+6.3	-211	+193	-373

† Change in contents, equivalent in cubic feet per second, in Tygart Lake, Stonewall Jackson Lake and Lake Lynn. Records of contents in Lake Lynn furnished by Allegheny Power Service Corp. Records of contents in Tygart Lake and Stonewall Jackson Lake furnished by U.S. Army Corps of Engineers.

e Estimated.

MONONGAHELA RIVER BASIN

03075070 MONONGAHELA RIVER AT ELIZABETH, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1934 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	3671	6808	11900	13620	15530	18260	13440	10290	6259	4336	4225	2984
MAX	16770	33750	29760	37480	33170	41930	26500	33610	24840	13570	17890	13300
(WY)	1980	1986	1973	1937	1994	1963	1940	1996	1981	1958	1956	1945
MIN	475	401	1991	2249	3210	6636	4478	2128	1009	915	812	581
(WY)	1954	1954	1966	1977	1934	1987	1971	1982	1936	1966	1957	1936

SUMMARY STATISTICS

FOR 1996 CALENDAR YEAR

FOR 1997 WATER YEAR

WATER YEARS 1934 - 1997

ANNUAL TOTAL	5925180		3440672		9251	
ANNUAL MEAN	16190	†+15	9426	†+9.3		
HIGHEST ANNUAL MEAN					14400	1996
LOWEST ANNUAL MEAN					5282	1954
HIGHEST DAILY MEAN	158000	Jan 20	70400	Mar 3	158000	Jan 20 1996
LOWEST DAILY MEAN	1660	Sep 2	660	Jul 22	206	Jun 29 1936
ANNUAL SEVEN-DAY MINIMUM	2180	Aug 29	752	Jul 16	301	Oct 1 1936
INSTANTANEOUS PEAK FLOW			83100	Mar 3	178000	Nov 6 1985
INSTANTANEOUS PEAK STAGE			20.32	Mar 3	30.39	Jan 20 1996
10 PERCENT EXCEEDS	32700		21300		22400	
50 PERCENT EXCEEDS	11100		6610		5210	
90 PERCENT EXCEEDS	3460		1730		1140	

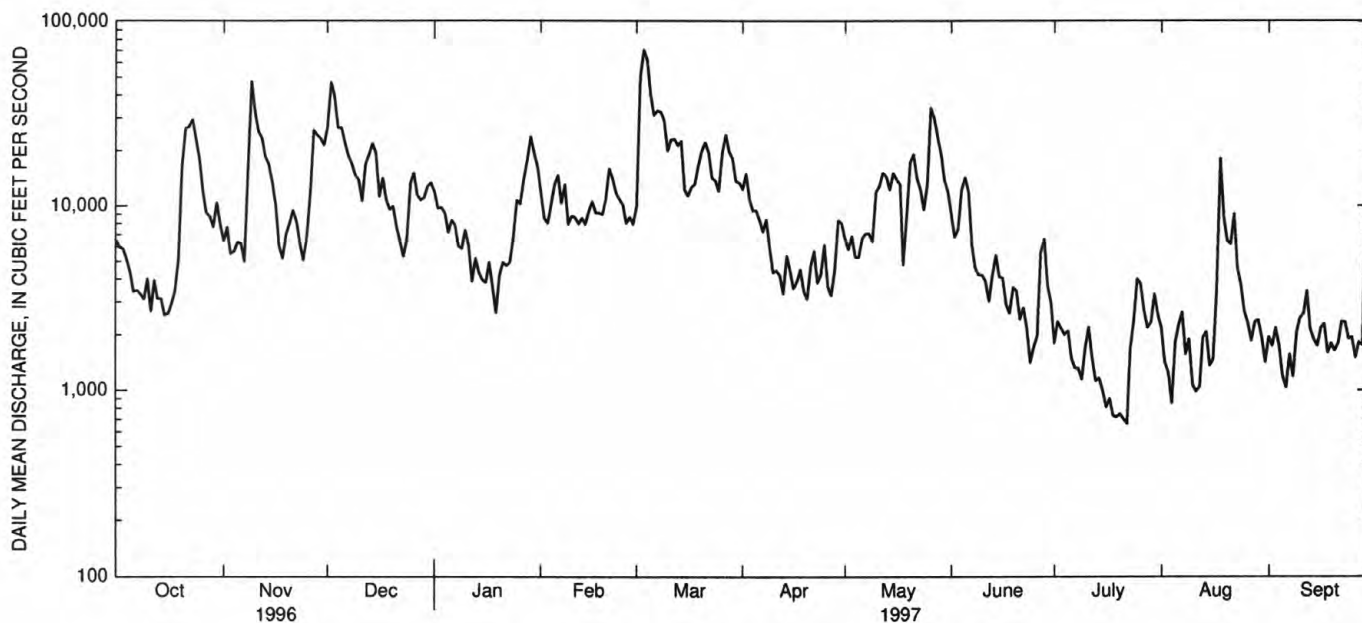
† Change in contents, equivalent in cubic feet per second, in Tygart Lake, Stonewall Jackson Lake and Lake Lynn. Records of contents in Lake Lynn furnished by Allegheny Power Service Corp. Records of contents in Tygart Lake and Stonewall Jackson Lake furnished by U.S. Army Corps of Engineers.

a Computed using estimated discharges.

b Gage height 23.60 ft, datum then in use.

c From peak-stage indicator.

e Estimated.



October 1, 1996 to September 30, 1997

YOUGHIOGHENY RIVER BASIN

03076500 YOUGHIOGHENY RIVER AT FRIENDSVILLE, MD

LOCATION.--Lat 39°39'13", long 79°24'31", Garrett County, Hydrologic Unit 05020006, on left bank 0.7 mi upstream from bridge on State Highway 42 at Friendsville, and 1.5 mi upstream from Bear Creek.

DRAINAGE AREA.--295 mi².

PERIOD OF RECORD.--August 1898 to December 1904 and October 1940 to current year. Annual maximum, water years 1905, 1923-31, 1940, published in WSP 1675. October, November 1940 monthly discharge only, published in WSP 1305. September 1922 to September 1926 (gage heights only) in reports of Pennsylvania Department of Forests and Waters.

REVISED RECORDS.--WSP 1385: Drainage area at former site, 1898-1905, 1941(M), 1942, 1944-45, 1948-49, 1951(M).

GAGE.--Water-stage recorder. Datum of gage is 1,487.33 ft above sea level. Aug. 17, 1898, to Dec. 31, 1904, and Sept. 1, 1922, to Sept. 30, 1926, nonrecording gages at bridge 0.7 mi downstream at datum 16.24 ft and 16.29 ft lower, respectively.

REMARKS.--Records good except those for estimated daily discharges (ice effect), which are fair. Low and medium flow regulated since July 1925 by Deep Creek Reservoir, 12 mi upstream from station (see station 03076000). U.S. Army Corps of Engineers satellite telemeter at station. Several measurements of water temperature were made during the year. Water-quality records for some prior periods have been collected at this location.

PEAK DISCHARGE FOR CURRENT YEAR.--Peak discharge 4,320 ft³/s, Dec. 2, gage height, 5.39 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	615	788	2210	500	620	827	943	439	423	216	153	206
2	579	451	3750	644	516	2540	915	475	906	212	132	263
3	373	446	2750	641	483	3130	796	442	943	310	86	118
4	313	581	2010	616	519	2830	699	446	898	225	181	204
5	286	446	1660	631	2010	3330	519	422	924	221	498	231
6	205	442	1490	461	1450	3780	454	361	607	112	230	189
7	279	428	1340	415	1010	2620	409	368	706	171	145	193
8	188	1220	1300	348	840	1910	356	329	383	118	179	262
9	224	2430	1130	315	1040	1170	581	667	388	91	85	198
10	455	1460	662	338	818	1510	419	975	279	149	97	204
11	498	1120	832	305	537	1340	297	1140	251	213	138	263
12	318	996	1890	297	573	e926	282	880	313	122	87	224
13	280	814	2250	379	511	729	329	741	994	209	84	112
14	330	631	2030	432	529	965	307	674	884	227	115	83
15	240	554	1580	329	405	1170	262	597	520	213	236	169
16	320	429	1360	303	379	849	238	614	419	206	250	79
17	407	410	1180	609	478	1060	263	474	317	217	333	80
18	342	493	1050	280	480	994	419	441	376	217	937	83
19	492	598	961	201	841	1500	330	601	611	194	503	156
20	1590	559	912	139	2160	1470	301	1090	497	105	373	106
21	2310	527	459	137	1660	1250	411	792	420	210	720	146
22	2360	537	403	200	1070	739	303	590	263	79	616	201
23	1660	377	393	654	816	618	284	586	292	79	429	159
24	1260	303	605	676	984	698	276	517	326	190	324	146
25	1120	454	908	1080	698	634	369	627	311	622	333	130
26	876	2020	623	1280	868	1910	400	2170	320	204	220	141
27	742	1980	540	758	633	1660	297	1320	827	181	203	61
28	972	1370	517	1700	564	1250	544	878	341	261	244	61
29	1080	1160	529	1430	---	1020	596	659	246	152	351	638
30	936	768	766	887	---	748	486	636	273	123	283	407
31	843	---	725	699	---	1010	---	475	---	101	160	---
TOTAL	22493	24792	38815	17684	23492	46187	13085	21426	15258	5950	8725	5513
MEAN	726	826	1252	570	839	1490	436	691	509	192	281	184
MAX	2360	2430	3750	1700	2160	3780	943	2170	994	622	937	638
MIN	188	303	393	137	379	618	238	329	246	79	84	61
(†)	-47.1	-37.0	-57.0	+27.6	+72.1	+65.0	+5.0	+102	-11.7	-84.7	-29.3	-74.1

† Change in contents in Deep Creek Reservoir, equivalent in cubic feet per second, provided by Pennsylvania Electric Co.

e Estimated.

YOUGHIOGHENY RIVER BASIN

03076500 YOUGHIOGHENY RIVER AT FRIENDSVILLE, MD--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1898 - 1905, 1941 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	286	502	860	883	991	1228	938	700	479	370	303	244
MAX	1103	2190	2147	1886	2277	2644	2231	1888	1823	1335	1319	1059
(WY)	1955	1986	1903	1996	1903	1963	1901	1996	1903	1990	1956	1996
MIN	50.2	55.7	145	140	337	285	327	176	84.2	64.6	51.0	49.8
(WY)	1992	1905	1944	1981	1954	1990	1995	1982	1969	1991	1991	1991

SUMMARY STATISTICS

FOR 1996 CALENDAR YEAR

FOR 1997 WATER YEAR

WATER YEARS 1898 - 1905
1941 - 1997

ANNUAL TOTAL	413669						243420					
ANNUAL MEAN	1130						667			645		
ANNUAL MEAN	1128	†-1.9					661	†-6.0		649		
HIGHEST ANNUAL MEAN										1052		1903
LOWEST ANNUAL MEAN										375		1954
HIGHEST DAILY MEAN	11200	Jan 19					3780	Mar 6		11200	Jan 19	1996
LOWEST DAILY MEAN	90	Jul 11					61	Sep 27, 28		8.2	Sep 11	1966
ANNUAL SEVEN-DAY MINIMUM	152	Jul 7					108	Sep 14		29	Sep 21	1972
INSTANTANEOUS PEAK FLOW							4320	Dec 2		a16100	Jan 19	1996
INSTANTANEOUS PEAK STAGE							5.39	Dec 2		b14.20	Mar 29	1924
INSTANTANEOUS LOW FLOW							55	Aug 3c		Unknown		
ANNUAL RUNOFF (CFSM)	3.83						2.26			2.19		
ANNUAL RUNOFF (CFSM)‡	3.82						2.24			2.20		
ANNUAL RUNOFF (INCHES)	52.16						30.70			29.73		
ANNUAL RUNOFF (INCHES)‡	51.94						30.42			29.88		
10 PERCENT EXCEEDS	2390						1440			1430		
50 PERCENT EXCEEDS	818						480			410		
90 PERCENT EXCEEDS	256						155			107		

† Change in contents in Deep Creek Reservoir, equivalent in cubic feet per second, provided by Pennsylvania Electric Co.

‡ Adjusted for change in reservoir contents since October 1940.

a From rating curve extended above 5,800 ft 3/s on basis of slope-area measurement of peak flow.

b From floodmarks, site and datum then in use.

c Also Sept. 27, 28.

YOUGHIOGHENY RIVER BASIN

3078000 CASSELMAN RIVER AT GRANTSVILLE, MD

LOCATION.--Lat 39°42'08", long 79°08'12", Garrett County, Hydrologic Unit 05020006, on left bank at downstream side of highway bridge, 0.3 mi upstream from Slaubaugh Run, 0.7 mi downstream from U.S. Highway 40, and 1.0 mi north-east of Grantsville.

DRAINAGE AREA.--62.5 mi².

PERIOD OF RECORD.--July 1947 to current year.

REVISED RECORDS.--WSP 1143: 1948.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 2,088.97 ft above sea level.

REMARKS.--Records good except those for estimated daily discharges (ice effect), which are fair. U.S. Army Corps of Engineers satellite telemeter at station. Several measurements of water temperature were made during the year. Water-quality records for some prior periods have been collected at this location.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 2	0400	*1,490	4.22	Feb. 19	2400	1,000	3.53
Dec. 5	0445	ice jam	a*4.72				

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	74	89	667	103	e155	276	199	65	106	27	6.3	9.8
2	67	83	954	103	e145	519	189	59	516	38	5.9	8.2
3	64	76	384	104	e140	377	159	58	352	28	5.5	7.8
4	56	69	279	107	e155	439	139	73	377	21	7.1	7.2
5	52	66	222	104	e380	559	124	64	232	17	17	6.2
6	49	62	203	97	e250	724	114	61	176	16	11	5.6
7	47	61	180	89	e180	400	103	69	147	14	7.8	5.6
8	53	502	169	91	e160	322	92	61	124	12	5.6	e5.5
9	74	488	154	104	e135	281	91	127	105	12	4.9	e5.5
10	127	261	139	110	e120	265	86	154	90	19	4.3	37
11	86	194	303	102	e105	219	83	160	79	14	4.3	46
12	64	159	565	e85	e95	181	82	117	74	9.9	5.1	31
13	57	138	475	e80	e90	156	100	110	180	8.8	17	20
14	52	126	329	e76	e97	334	86	107	149	7.9	21	14
15	49	112	244	e75	110	368	75	98	94	7.0	9.8	12
16	46	114	208	e100	105	223	68	90	76	6.5	7.7	9.5
17	44	96	187	e90	102	186	74	82	78	6.0	43	8.3
18	62	108	163	e80	107	190	84	80	69	9.2	138	7.9
19	270	111	145	e75	418	290	78	149	62	37	46	7.7
20	586	94	125	e70	650	241	67	405	52	14	83	8.0
21	350	84	130	e68	454	243	65	201	46	8.9	142	13
22	363	78	128	e110	455	198	67	149	41	8.1	65	13
23	246	72	131	281	283	167	62	124	41	23	43	9.8
24	189	70	162	e210	214	148	62	109	33	51	32	7.9
25	153	70	174	e240	176	135	64	292	29	41	25	6.8
26	132	473	154	e190	156	494	58	583	60	21	e22	6.3
27	126	240	109	e150	157	275	56	247	66	14	e19	5.7
28	143	163	119	e460	137	205	98	178	37	12	e17	14
29	142	138	128	e250	---	196	88	145	28	12	e15	146
30	114	174	129	e200	---	183	70	131	24	9.4	e13	54
31	98	---	110	e175	---	225	---	112	---	7.2	e11	---
TOTAL	4035	4571	7569	4179	5731	9019	2783	4460	3543	531.9	854.3	539.3
MEAN	130	152	244	135	205	291	92.8	144	118	17.2	27.6	18.0
MAX	586	502	954	460	650	724	199	583	516	51	142	146
MIN	44	61	109	68	90	135	56	58	24	6.0	4.3	5.5
CFSM	2.08	2.44	3.91	2.16	3.27	4.65	1.48	2.30	1.89	.27	.44	.29
IN.	2.40	2.72	4.51	2.49	3.41	5.37	1.66	2.65	2.11	.32	.51	.32

a Backwater from ice.

e Estimated.

YOUGHIOGHENY RIVER BASIN

03078000 CASSELMAN RIVER AT GRANTSVILLE, MD--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1947 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	47.8	88.1	151	163	196	264	209	137	73.0	49.8	38.1	35.3
MAX	288	449	341	376	414	582	468	312	200	175	202	290
(WY)	1955	1986	1973	1996	1956	1963	1970	1996	1951	1996	1956	1996
MIN	1.65	3.38	14.5	26.4	60.3	57.0	77.1	40.1	10.0	4.30	2.87	1.58
(WY)	1954	1954	1954	1977	1964	1990	1968	1976	1965	1965	1991	1991

SUMMARY STATISTICS

FOR 1996 CALENDAR YEAR

FOR 1997 WATER YEAR

WATER YEARS 1947 - 1997

ANNUAL TOTAL	82745	47815.5	
ANNUAL MEAN	226	131	
HIGHEST ANNUAL MEAN			121
LOWEST ANNUAL MEAN			203
HIGHEST DAILY MEAN			64.2
LOWEST DAILY MEAN	a3600	954	Dec 2
ANNUAL SEVEN-DAY MINIMUM	19	4.3	Aug 10,11
INSTANTANEOUS PEAK FLOW	25	6.1	Aug 6
INSTANTANEOUS LOW FLOW		1490	Dec 2
ANNUAL RUNOFF (CFSM)	3.62	c4.72	Feb 5
ANNUAL RUNOFF (INCHES)	49.25	3.8	Aug 10,11
10 PERCENT EXCEEDS	476	28.46	
50 PERCENT EXCEEDS	151	286	
90 PERCENT EXCEEDS	54	95	
		9.3	
			8.4

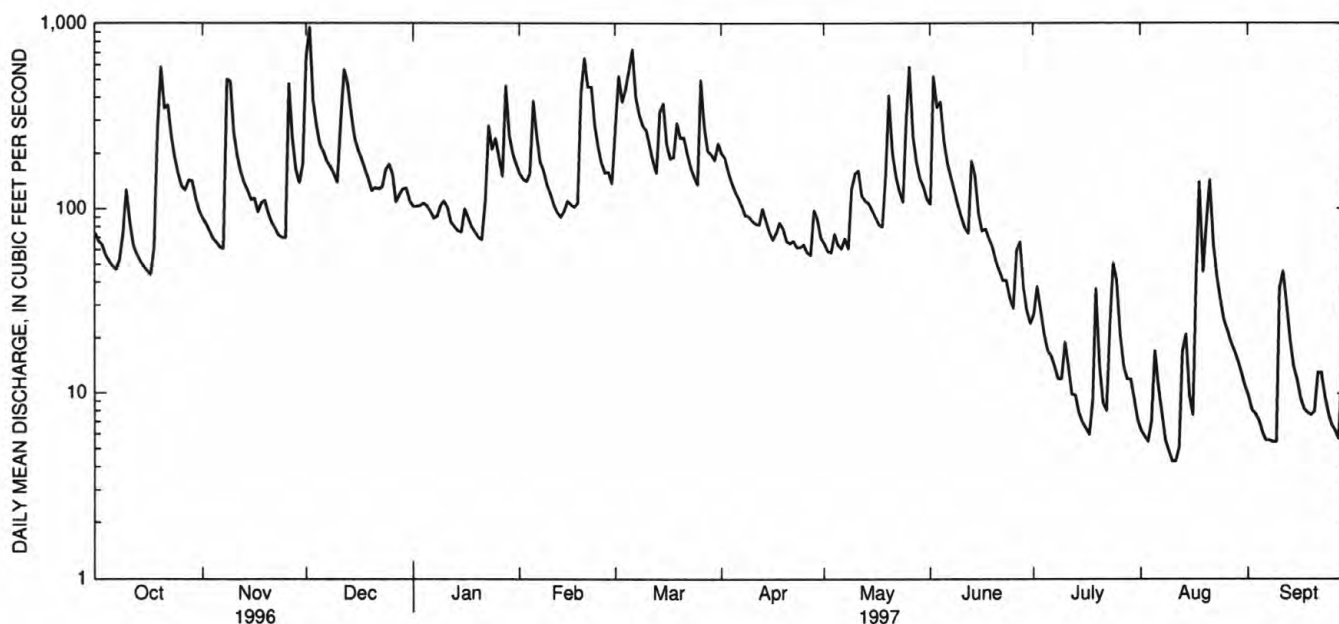
a Result of regulation from unknown source.

b From rating curve extended above 1,600 ft 3/s on basis of contracted-opening measurement at gage height 8.13 ft.

c Ice jam.

d Also Sept. 1, 1962.

e Estimated.



October 1, 1996 to September 30, 1997

YOUGHIOGHENYA RIVER BASIN

03079000 CASSELMAN RIVER AT MARKLETON, PA

LOCATION.--Lat 39°51'35", long 79°13'40", Somerset County, Hydrologic Unit 05020006, on right bank at downstream side of highway bridge at Markleton, 2 mi southwest of Casselman, and 7 mi downstream from Coxes Creek.

DRAINAGE AREA.--382 mi².

PERIOD OF RECORD.--August to September 1913 (gage heights and discharge measurements only), October 1920 to current year. Monthly discharge only for some periods, published in WSP 1305. October 1913 to September 1920 (gage heights and discharge measurements only) in reports of Water Supply Commission of Pennsylvania.

REVISED RECORDS.--WSP 743: Drainage area. WSP 1305: 1923-31. WSP 1435: 1932-34, 1935 (M), 1936-38. WSP 1625: 1924 (M).

GAGE.--Water-stage recorder. Datum of gage is 1,655.29 ft above sea level. Prior to Nov. 19, 1940, nonrecording gage at same site and datum.

REMARKS.--Records good except for estimated daily discharges, which are fair. Slight diversion above station to city of Frostburg, MD, in the Potomac River Basin. Several measurements of water temperature were made during the year. U.S. Army Corps of Engineers satellite telemeter at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than a base discharge of 8,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 2	0600	*8,140	*6.79	No other peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	562	461	3400	726	786	991	927	341	832	141	73	66
2	482	424	6040	685	689	3610	827	320	1780	311	71	60
3	443	386	2720	671	707	2700	734	301	1870	209	73	59
4	383	353	1770	643	872	2700	665	366	2300	155	76	59
5	341	335	1350	625	2490	3480	606	331	1470	132	120	56
6	310	320	1200	595	1650	4770	566	311	1070	121	109	52
7	292	314	1010	513	1080	2850	527	374	858	115	94	50
8	279	2770	935	415	960	2030	469	331	733	109	78	57
9	317	3900	859	e370	803	1640	456	504	614	104	69	54
10	424	2120	773	e310	703	1710	439	640	531	158	64	71
11	418	1450	1380	e290	627	1390	420	621	469	140	61	112
12	320	1130	2930	e270	e560	1140	412	529	436	112	77	132
13	276	921	2960	e250	e480	944	508	481	707	97	134	103
14	254	806	2220	e240	e440	1200	468	460	761	88	174	85
15	238	700	1550	e230	e410	1810	402	444	493	85	131	76
16	221	620	1260	e220	e390	1200	365	405	395	84	97	72
17	208	578	1090	e210	e380	988	390	371	369	83	181	70
18	223	579	937	e210	e450	924	434	357	345	79	675	70
19	1490	655	833	e200	2370	1440	402	555	310	101	367	66
20	3300	571	709	e200	4240	1210	362	1540	273	123	279	77
21	2500	494	566	e190	2850	1150	335	997	240	95	569	106
22	2160	446	598	e190	3020	990	335	719	221	83	337	89
23	1560	408	679	e390	1860	862	327	595	208	98	203	75
24	1210	387	847	e350	1320	785	315	522	195	129	142	73
25	965	374	944	e310	1030	736	305	2210	175	176	115	71
26	801	1540	651	e380	889	2660	298	4390	172	151	99	66
27	706	1340	642	e310	863	1680	277	1820	244	111	86	62
28	708	927	693	e1200	779	1200	434	1180	218	101	128	66
29	735	781	1100	1110	---	1060	461	908	167	107	102	781
30	614	830	1100	801	---	972	371	795	143	94	82	416
31	523	---	822	728	---	970	---	732	---	81	71	---
TOTAL	23263	26920	44568	13832	33698	51792	13837	24450	18599	3773	4937	3252
MEAN	750	897	1438	446	1204	1671	461	789	620	122	159	108
MAX	3300	3900	6040	1200	4240	4770	927	4390	2300	311	675	781
MIN	208	314	566	190	380	736	277	301	143	79	61	50
CFSM	1.96	2.35	3.76	1.17	3.15	4.37	1.21	2.06	1.62	.32	.42	.28
IN.	2.27	2.62	4.34	1.35	3.28	5.04	1.35	2.38	1.81	.37	.48	.32

e Estimated.

YOUGHIOGHENY RIVER BASIN

03079000 CASSELMAN RIVER AT MARKLETON, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1921 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	283	467	776	867	1043	1491	1155	798	439	264	219	200
MAX	1769	2975	2217	2709	2324	3860	2437	2147	1499	920	842	1756
(WY)	1955	1986	1973	1937	1956	1936	1970	1924	1941	1924	1956	1996
MIN	14.9	22.6	69.2	133	153	307	316	126	60.6	35.6	24.5	19.9
(WY)	1954	1954	1954	1925	1934	1990	1921	1926	1965	1965	1957	1943

SUMMARY STATISTICS

FOR 1996 CALENDAR YEAR

FOR 1997 WATER YEAR

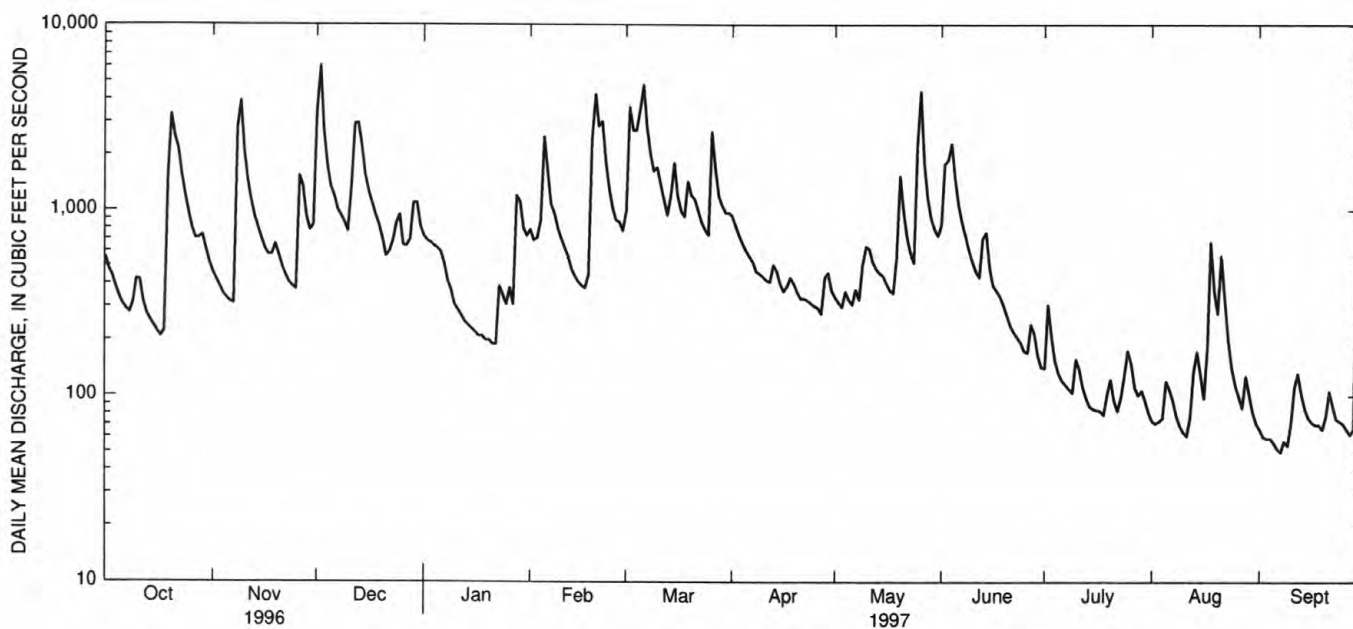
WATER YEARS 1921 - 1997

ANNUAL TOTAL	471538		262921									
ANNUAL MEAN	1288		720							665		
HIGHEST ANNUAL MEAN										1151		1996
LOWEST ANNUAL MEAN										336		1954
HIGHEST DAILY MEAN	e25000	Jan 19		6040	Dec 2					e25000	Jan 19	1996
LOWEST DAILY MEAN	90	Sep 3		50	Sep 7					11	Jul 23	1936a
ANNUAL SEVEN-DAY MINIMUM	123	Aug 30		55	Sep 3					12	Sep 4	1957
INSTANTANEOUS PEAK FLOW				8140	Dec 2					b50000	Oct 15	1954
INSTANTANEOUS PEAK STAGE				6.79	Dec 2					14.06	Oct 15	1954
INSTANTANEOUS LOW FLOW				48	Sep 7					10	Sep 9	1957
ANNUAL RUNOFF (CFSM)	3.37			1.89						1.74		
ANNUAL RUNOFF (INCHES)	45.92			25.60						23.66		
10 PERCENT EXCEEDS	2850			1660						1540		
50 PERCENT EXCEEDS	798			443						345		
90 PERCENT EXCEEDS	267			83						57		

a Also Sept. 7-9, 1957.

b Estimated on basis of summation of peak flows at nearby stations.

c Estimated.



October 1, 1996 to September 30, 1997

YOUGHIOGHENY RIVER BASIN

03080000 LAUREL HILL CREEK AT URSINA, PA
(National Water-Quality Assessment station)

LOCATION.--Lat 39°49'13", long 79°19'18", Somerset County, Hydrologic Unit 05020006, on right bank 500 ft downstream from bridge on State Highway 281 at Ursina, and 2.7 mi upstream from mouth.

DRAINAGE AREA.--121 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August to September 1913 (gage heights and discharge measurements only), October 1918 to current year. Monthly discharge only for some periods, published in WSP 1305. October 1913 to September 1918 (gage heights and discharge measurements only) in reports of Water Supply Commission of Pennsylvania.

REVISED RECORDS.--WSP 743: Drainage area. WSP 893: 1919-21, 1932-34. WSP 1305: 1922-31.
WSP 1435: 1919-20. WSP 1625: 1932 (M).

GAGE.--Water-stage recorder and masonry control. Datum of gage is 1,335.26 ft above sea level. Prior to July 18, 1939, nonrecording gage at bridge 0.5 mi downstream at datum 6.20 ft lower.

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

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than a base discharge of 3,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
May 25	2300	*3,720	*5.06	No other peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	300	193	1360	307	249	319	423	219	459	29	e18	15
2	243	179	1890	273	220	1470	376	195	757	47	e16	13
3	212	160	1060	258	218	1300	332	185	682	38	e18	13
4	173	141	678	247	280	1070	301	277	640	28	e20	20
5	145	130	491	236	893	1110	266	220	461	25	e23	17
6	127	129	413	232	652	1390	238	208	358	23	e25	16
7	113	122	336	191	425	976	209	257	292	22	e22	15
8	103	975	300	e165	358	675	179	226	239	21	e20	20
9	99	1420	267	e145	289	500	167	383	200	20	e18	20
10	141	919	216	e120	240	502	151	558	169	28	e16	19
11	136	610	323	e105	212	431	144	695	146	26	e14	22
12	98	447	1150	e96	191	340	140	516	130	21	e17	21
13	85	361	1340	e88	e170	284	208	419	290	18	e23	19
14	80	340	987	e82	e150	319	186	337	303	17	38	17
15	73	270	637	e77	e140	415	153	297	179	18	16	16
16	69	224	461	e74	e130	302	142	246	136	15	11	15
17	66	204	370	e71	e120	266	182	214	123	14	40	14
18	75	205	304	e68	e140	257	237	198	106	16	216	14
19	629	222	252	e66	429	343	226	314	114	17	93	15
20	1750	206	216	e64	1260	307	203	871	102	19	80	17
21	1250	195	193	e62	945	265	190	564	78	16	229	27
22	1090	186	186	e61	1070	244	180	406	67	e15	89	21
23	771	156	173	e61	740	216	167	322	62	e20	47	18
24	541	146	233	e60	497	197	155	269	51	e26	30	16
25	397	141	332	e80	366	187	142	1410	43	e34	25	15
26	310	250	292	e140	305	1030	134	2780	50	e33	21	14
27	259	230	215	e250	280	790	118	1270	53	e29	19	14
28	272	229	239	e504	256	499	279	705	40	e27	33	15
29	305	223	405	e916	---	446	294	474	32	e24	25	383
30	245	262	511	e857	---	429	231	367	29	e22	19	176
31	215	---	371	397	---	472	---	346	---	e19	16	---
TOTAL	10372	9475	16201	6353	11225	17351	6353	15748	6391	727	1297	1037
MEAN	335	316	523	205	401	560	212	508	213	23.5	41.8	34.6
MAX	1750	1420	1890	916	1260	1470	423	2780	757	47	229	383
MIN	66	122	173	60	120	187	118	185	29	14	11	13
CFSM	2.77	2.61	4.32	1.69	3.31	4.63	1.75	4.20	1.76	.19	.35	.29
IN.	3.19	2.91	4.98	1.95	3.45	5.33	1.95	4.84	1.96	.22	.40	.32

e Estimated.

YOUGHIOGHENY RIVER BASIN

03080000 LAUREL HILL CREEK AT URSINA, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1919 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	119	220	335	352	401	558	439	319	183	106	99.4	83.9
MAX	564	1011	815	1141	1000	1331	879	689	700	388	416	608
(WY)	1955	1986	1973	1937	1956	1936	1970	1924	1941	1985	1935	1971
MIN	6.15	8.91	42.2	57.0	89.3	155	114	52.0	29.4	9.20	8.90	5.73
(WY)	1931	1931	1931	1925	1934	1990	1921	1926	1965	1966	1983	1959

SUMMARY STATISTICS

FOR 1996 CALENDAR YEAR

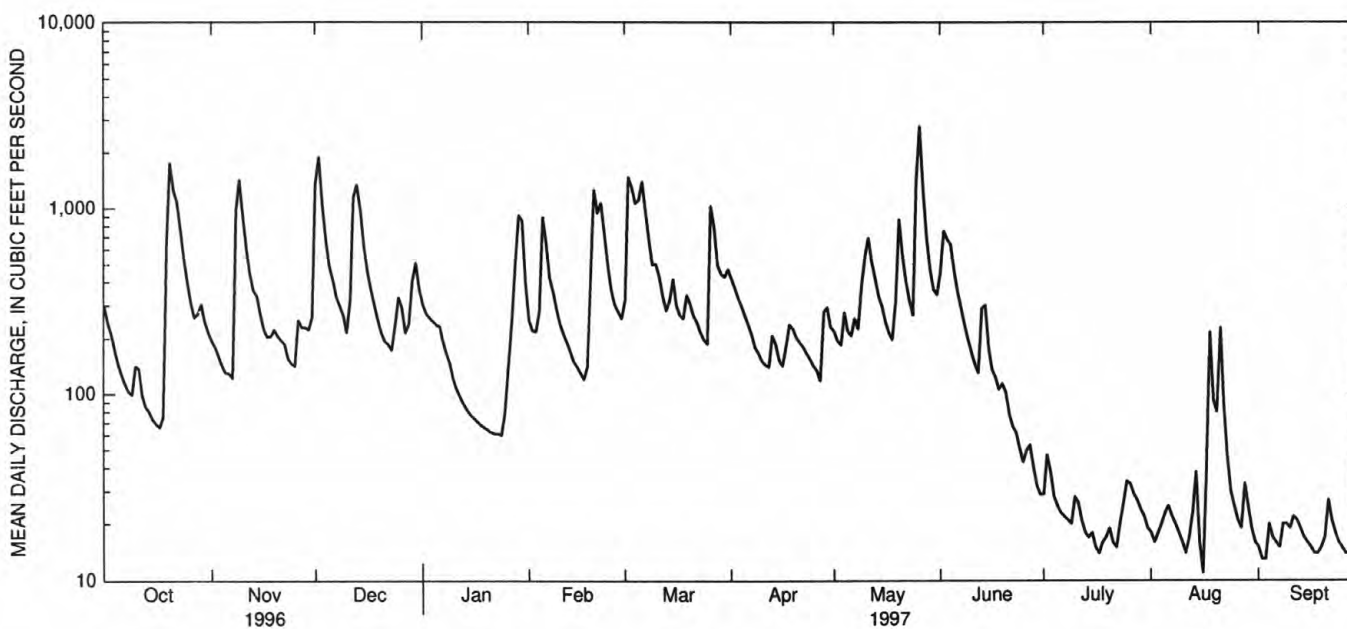
FOR 1997 WATER YEAR

WATER YEARS 1919 - 1997

ANNUAL TOTAL	163597	102530	
ANNUAL MEAN	447	281	
HIGHEST ANNUAL MEAN			267
LOWEST ANNUAL MEAN			395
HIGHEST DAILY MEAN	e4600	2780	1996
LOWEST DAILY MEAN	23	11	1931
ANNUAL SEVEN-DAY MINIMUM	27	15	164
INSTANTANEOUS PEAK FLOW		3720	6980
INSTANTANEOUS PEAK STAGE		5.06	2.4
INSTANTANEOUS LOW FLOW		10	3.4
ANNUAL RUNOFF (CFSM)	3.69	2.32	a10900
ANNUAL RUNOFF (INCHES)	50.30	31.52	10.63
10 PERCENT EXCEEDS	1040	680	2.2
50 PERCENT EXCEEDS	260	195	2.21
90 PERCENT EXCEEDS	75	18	30.02

a From rating curve extended above 6,100 ft³/s on basis of slope-area measurement of peak flow.

e Estimated.



MONONGAHELA RIVER BASIN

03080000 LAUREL HILL CREEK AT URSINA, PA--Continued
(National Water-Quality Assessment station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1975 to August 1981, April 1996 to current year.

REMARKS.--All water-quality samples were collected and analyzed by the U.S. Geological Survey except those furnished by the Pennsylvania Department of Environmental Resources as noted. This site was used as a comparable reference site for mining. Additional sites in the (NAWQA) fixed-station network are shown in figure 6 on page 28. An explanation of selected abbreviations used in the water-quality tables are given on pages 29-31.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE	TIME	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 PRESURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	HARDNESS TOTAL (MG/L AS CaCO3) (00900)	ACIDITY TOTAL HEATED (MG/L AS CaCO3) (70508)	CALCIUM DIS-SOLVED (MG/L AS Ca) (00915)	MAGNESIUM, DIS-SOLVED (MG/L AS Mg) (00925)	SODIUM, DIS-SOLVED (MG/L AS Na) (00930)
MAY 21...	1015	560	85	7.0	11.5	724	11.2	22	4.4	6.4	1.4	5.6
SEP 17...	0815	18	144	7.5	18.0	726	8.7	38	2.0	12	2.3	9.9
DATE		POTASSIUM, DIS-SOLVED (MG/L AS K) (00935)	ALKALINITY WAT DIS TOT IT FIELD (MG/L AS CaCO3) (39086)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLORIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUORIDE, 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)	NITROGEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITROGEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITROGEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N) (00625)
MAY 21...		0.69	11	9.2	9.5	<0.10	3.6	59	<0.010	0.589	<0.015	<0.20
SEP 17...		1.2	22	12	19	<0.10	0.90	75	<0.010	0.217	<0.015	<0.20
DATE		NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOSPHORUS TOTAL (MG/L AS P) (00665)	PHOSPHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOSPHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	ALUMINUM, DIS-SOLVED (μG/L AS AL) (01106)	IRON, DIS-SOLVED (μG/L AS FE) (01046)	MANGANESE, DIS-SOLVED (μG/L AS MN) (01056)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C) (00681)	CARBON, ORGANIC SUSPENDED TOTAL (MG/L AS C) (00689)	SEDIMENT, SUSPENDED (MG/L) (80154)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
MAY 21...		<0.20	<0.010	<0.010	<0.010	26	29	14	1.7	0.70	8	91
SEP 17...		<0.20	<0.010	<0.010	<0.010	6.7	9.4	13	--	--	1	50

MONONGAHELA RIVER BASIN

03080000 LAUREL HILL CREEK AT URSINA, PA--Continued

REMARKS.--The following data are for dissolved trace elements in surface water filtered through a 0.45µm filter.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	ARSENIC DIS- SOLVED (µG/L AS AS) (01000)	BARIUM, DIS- SOLVED (µG/L AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (µG/L AS BE) (01010)	CADMIUM DIS- SOLVED (µG/L AS CD) (01025)	CHRO- MIUM, DIS- SOLVED (µG/L AS CR) (01030)	COBALT, DIS- SOLVED (µG/L AS CO) (01035)	COPPER, DIS- SOLVED (µG/L AS CU) (01040)
MAY 21...	1015	560	<1	39	<1.0	<1.0	<1.0	<1.0	<1.0
SEP 17...	0815	18	<1	51	<1.0	<1.0	<1.0	<1.0	1.1

DATE	LEAD, DIS- SOLVED (µG/L AS PB) (01049)	MOLYB- DENUM, DIS- SOLVED (µG/L AS MO) (01060)	NICKEL, DIS- SOLVED (µG/L AS NI) (01065)	SILVER, DIS- SOLVED (µG/L AS AG) (01075)	ZINC, DIS- SOLVED (µG/L AS ZN) (01090)	ANTI- MONY, DIS- SOLVED (µG/L AS SB) (01095)	SELE- NIUM, DIS- SOLVED (µG/L AS SE) (01145)	URANIUM NATURAL DIS- SOLVED (µG/L AS U) (22703)
MAY 21...	<1.0	<1.0	1.9	<1.0	10	<1.0	<1	<1.0
SEP 17...	<1.0	<1.0	1.4	<1.0	1.4	<1.0	<1	<1.0

MONONGAHELA RIVER BASIN

03080000 LAUREL HILL CREEK AT URSINA, PA--Continued

REMARKS.--The following data are for trace elements and other constituents that were part of the suspended-sediment fraction of the water sample. Suspended sediments were dewatered using a continuous flow centrifuge, dried, and analyzed directly for total metals using a nitric, hydrofluoric, perchloric acid digestion. Whole water contributions by the suspended sediment were then calculated using the suspended-sediment concentration in kilograms per liter (kg/L) and the analyte concentration in milligrams per kilogram (mg/kg) from the direct analysis of the suspended sediments, resulting in micrograms per gram ($\mu\text{g/g}$) concentrations. Values reported in percent are the percent of that constituent in the suspended sediment. Dashed lines (--) indicate no data available due to an insufficient amount of sediment in the sample. When no trace element was detected in the sample, the default reporting value is the method detection limit preceded by a less-than sign (<).

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SEDI- MENT SUSP., FLOW- THROUGH CENTRIF (MG/L) (50279)	ALUM- INUM SED,SUS PERCENT (30221)	AN- TIMONY SED. SUSP. ($\mu\text{G/G}$) (29816)	ARSENIC SED. SUSP. ($\mu\text{G/G}$) (29818)	BARIUM SED. SUSP. ($\mu\text{G/G}$) (29820)	BERYL- LIUM SED. SUSP. ($\mu\text{G/G}$) (29822)	CADMIUM SED. SUSP. ($\mu\text{G/G}$) (29826)	CARBON SED. SUSP. PERCENT (30244)	CARBON, ORGANIC SUS PENDEED PERCENT (00683)
MAY 21...	1015	560	12	7.9	1	10	580	5	4.1	7.7	7.0
SEP 17...	0815	18	0	4.9	2	9	590	5	9.6	--	--

DATE	CHRO- MIUM SED. SUSP. ($\mu\text{G/G}$) (29829)	COBALT SEDI- MENT SUSP. ($\mu\text{G/G}$) (35031)	COPPER SED. SUSP. ($\mu\text{G/G}$) (29832)	IRON SEDI- MENT SUSP. PERCENT (30269)	LEAD SED. SUSP. ($\mu\text{G/G}$) (29836)	LITHIUM SEDI- MENT SUSP. ($\mu\text{G/G}$) (35050)	MAN- GANESE SED. SUSP. ($\mu\text{G/G}$) (29839)	MERCURY SED. SUSP. ($\mu\text{G/G}$) (29841)	MOLYB- DENUM SED. SUSP. ($\mu\text{G/G}$) (29843)	NICKEL SED. SUSP. ($\mu\text{G/G}$) (29845)
MAY 21...	83	50	26	4.2	43	63	3700	.08	<10	99
SEP 17...	80	54	65	4.1	53	44	11000	--	<25	200

DATE	PHOS- PHORUS SEDI- MENT SUSP. PERCENT (30292)	SELE- NIUM SED. SUSP. ($\mu\text{G/G}$) (29847)	SILVER SED. SUSP. ($\mu\text{G/G}$) (29850)	STRON- TIUM SEDI- MENT SUSP. ($\mu\text{G/G}$) (35040)	SULFUR SEDI- MENT SUSP. PERCENT (30308)	THAL- LIUM SUS SED ($\mu\text{G/G}$) (49955)	TITA- NIUM SEDI- MENT SUSP. PERCENT (30317)	URANIUM SEDI- MENT SUSP. ($\mu\text{G/G}$) (35046)	VANA- DIUM SED. SUSP. ($\mu\text{G/G}$) (29853)	ZINC SED. SUSP. ($\mu\text{G/G}$) (29855)
MAY 21...	1100	2	<3	120	.30	<100	.39	<100	96	580
SEP 17...	1700	2	<3	93	--	<250	.28	<250	65	600

YOUGHIOGHENY RIVER BASIN

03081000 YOUGHIOGHENY RIVER BELOW CONFLUENCE, PA

LOCATION.--Lat 39°49'39", long 79°22'22", Fayette County, Hydrologic Unit 05020006, on left bank 1.0 mi downstream from Casselman River, 1.5 mi northwest of Confluence, at mile 72.0.

DRAINAGE AREA.--1,029 mi².

PERIOD OF RECORD.--June 1940 to current year. Monthly discharge only for June 1940, published in WSP 1305.

GAGE.--Water-stage recorder. Datum of gage is 1,302.77 ft above sea level.

REMARKS.--Records good except for estimated daily discharges, which are fair. Flow regulated since 1925 by Deep Creek Reservoir and since 1943 by Youghiogheny River Lake 1.7 mi upstream. Several measurements of water temperature were made during the year. U.S. Army Corps of Engineers satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 17, or 18, 1936 reached a stage of 21.6 ft, from floodmarks, discharge, 85,000 ft³/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2550	2400	6790	2790	1950	1750	3290	1320	2240	633	771	922
2	2390	2330	10600	2680	1800	6270	2960	1270	3420	768	937	914
3	2300	2270	6510	2640	1750	5450	2780	1230	4260	809	849	904
4	2190	2190	5800	2600	2030	4700	2560	1380	5150	898	696	909
5	2100	2150	5400	2560	4400	5690	2240	1310	4430	858	722	886
6	2040	2130	5200	2530	3640	7560	1940	1250	3230	763	740	894
7	1690	2100	4150	2380	2620	5910	1640	1280	2130	587	726	890
8	1420	5100	3510	2200	2350	5310	1410	1090	1850	581	727	832
9	1440	8030	3370	2190	2050	4630	1190	1450	1670	696	745	902
10	1560	5530	2940	1900	1830	4610	1030	2010	1530	759	734	907
11	1590	5240	3230	1550	e1650	4200	986	2170	1290	759	688	956
12	1460	5110	6080	1440	e1500	3770	967	2460	1110	816	668	984
13	1390	4070	6380	e1350	e1350	3230	1150	2900	1550	832	768	967
14	1360	3160	5440	e1300	e1280	2890	1130	2890	1760	720	824	939
15	1350	2770	4300	e1250	e1180	3820	975	2310	1540	685	745	926
16	1230	2610	4010	e1200	e1100	3050	911	1610	1880	666	797	914
17	1310	2530	3900	e1200	e1050	2760	975	1350	1800	650	913	911
18	1330	2300	3620	e1100	e1000	2660	1240	1310	1440	772	1600	912
19	2850	2100	3370	e1100	e1900	3750	1400	1680	1030	1060	1170	909
20	6710	2490	3110	e1080	6540	3830	1220	3710	933	967	827	916
21	6730	2390	2860	e1050	4670	3650	952	4010	1000	743	1390	974
22	7020	2320	2860	e1050	5070	3470	934	3770	959	725	1100	949
23	6160	2220	2970	e1150	3610	3260	914	2810	818	734	1040	924
24	5370	2170	3210	e1200	2580	2490	888	1640	706	761	867	906
25	4210	1860	3580	e1100	2010	1970	963	4110	687	825	696	904
26	2980	2720	2810	e1200	1750	4910	1170	9330	707	924	672	896
27	2800	3570	2560	e1300	1660	4700	1040	5850	911	836	823	893
28	2770	3430	2600	e2500	1540	4170	1160	5930	1230	751	1010	902
29	2820	3480	3110	2840	---	3870	1440	4990	980	763	1010	1960
30	2630	3470	3560	2210	---	3660	1380	3120	634	747	961	1570
31	2510	---	3000	1940	---	3720	---	1940	---	718	933	---
TOTAL	86260	94240	130830	54580	65860	125710	42835	83480	52875	23806	27149	29172
MEAN	2783	3141	4220	1761	2352	4055	1428	2693	1763	768	876	972
MAX	7020	8030	10600	2840	6540	7560	3290	9330	5150	1060	1600	1960
MIN	1230	1860	2560	1050	1000	1750	888	1090	634	581	668	832
†	-576	-417	-67	-185	+721	+797	+8.4	+75	-47	-483	-309	-658

† Change in contents, equivalent in cubic feet per second, in Deep Creek Reservoir and Youghiogheny River Lake. Records of contents in Deep Creek Reservoir furnished by Pennsylvania Electric Co. Records of contents in Youghiogheny River Lake furnished by U.S. Army Corps of Engineers.

e Estimated.

YOUGHIOGHENY RIVER BASIN

03081000 YOUGHIOGHENY RIVER BELOW CONFLUENCE, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1205	1547	2394	2503	2861	3653	3017	2365	1494	1116	1064	1098
MAX	4699	5065	6171	5441	5204	7868	6984	5052	4137	2950	3565	3882
(WY)	1980	1986	1973	1974	1956	1963	1993	1996	1941	1985	1956	1971
MIN	287	433	384	496	903	778	1157	602	491	384	290	214
(WY)	1948	1954	1944	1981	1954	1990	1963	1982	1965	1942	1944	1946

SUMMARY STATISTICS

FOR 1996 CALENDAR YEAR

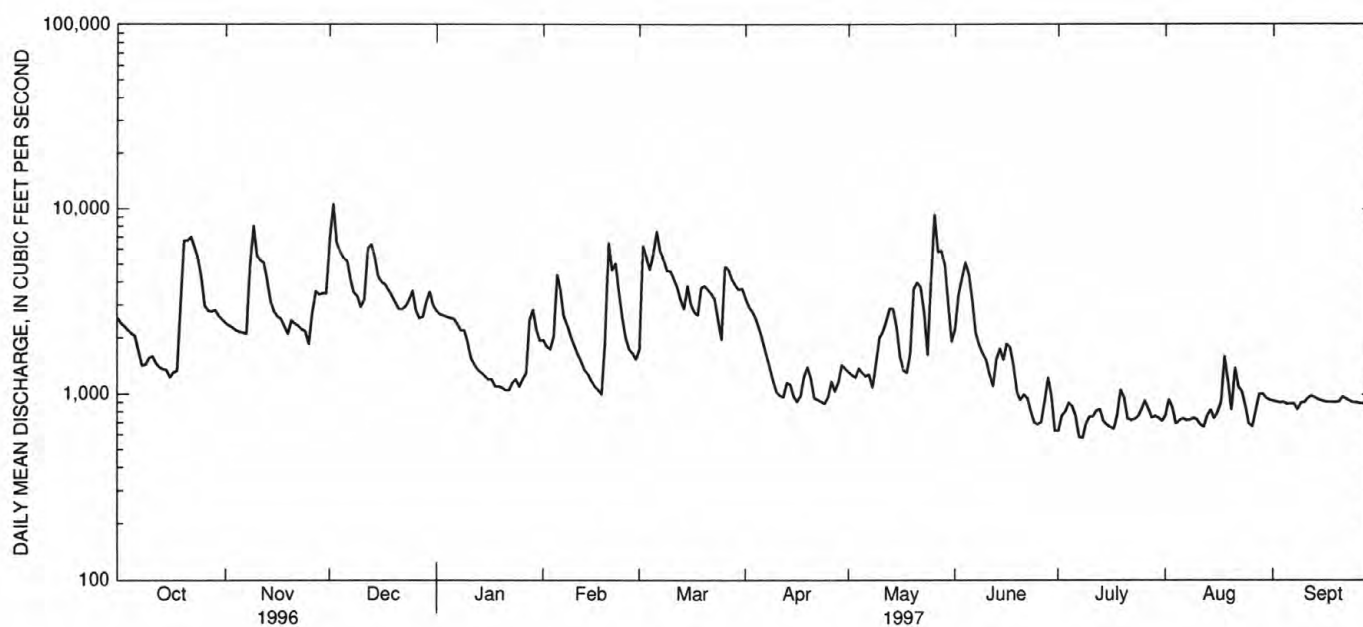
FOR 1997 WATER YEAR

WATER YEARS 1941 - 1997

ANNUAL TOTAL	1260178		816797									
ANNUAL MEAN	3443	†+9.1	2238	†-100						2023		
HIGHEST ANNUAL MEAN										2910		1996
LOWEST ANNUAL MEAN										1074		1954
HIGHEST DAILY MEAN	30500	Jan 19	10600	Dec 2					34600	Oct 16	1954	
LOWEST DAILY MEAN	846	Jul 11	581	Jul 8					121	Sep 27	1943	
ANNUAL SEVEN-DAY MINIMUM	927	Jul 9	709	Jul 6					175	Sep 16	1946	
INSTANTANEOUS PEAK FLOW			12600	Dec 2					a69500	Oct 15	1954	
INSTANTANEOUS PEAK STAGE			8.55	Dec 2					19.92	Oct 15	1954	
10 PERCENT EXCEEDS	6270		4650						4470			
50 PERCENT EXCEEDS	2730		1650						1280			
90 PERCENT EXCEEDS	1240		768						614			

† Change in contents, equivalent in cubic feet per second, in Deep Creek Reservoir and Youghiogheny River Lake. Records of contents in Deep Creek Reservoir furnished by Pennsylvania Electric Co. Records of contents in Youghiogheny River Lake furnished by U.S. Army Corps of Engineers.

a From rating curve extended above 25,000 ft³/s on basis of slope-area measurement of peak flow.



October 1, 1996 to September 30, 1997

YOUGHIOGHENY RIVER BASIN

03082500 YOUGHIOGHENY RIVER AT CONNELLSVILLE, PA

LOCATION.--Lat 40°01'03", long 79°35'38", Fayette County, Hydrologic Unit 05020006, on left bank at downstream side of Crawford Avenue bridge at Conneltsville, 1.2 mi upstream from Mounts Creek, at mile 44.0.

DRAINAGE AREA.--1,326 mi².

PERIOD OF RECORD.--July 1908 to current year. Monthly discharge only for some periods, published in WSP 1305.

REVISED RECORDS.--WSP 743: Drainage area. WSP 1305: 1912 (M), 1914 (M), 1916-17 (M), 1918, 1922-25. WSP 1435: 1919-20. WSP 1725: 1916, 1932 (monthly, yearly summaries).

GAGE.--Water-stage recorder. Datum of gage is 860.13 ft above sea level. Prior to Aug. 15, 1928, nonrecording gage, and Aug. 15, 1928 to July 7, 1958, water-stage recorder at same site and datum. July 8, 1958 to Sept. 8, 1959, nonrecording gage at site 0.4 mi downstream at different datum.

REMARKS.--Records good except for estimated daily discharges, which are fair. Flow regulated since 1925 by Deep Creek Reservoir, since 1943 by Youghiogheny River Lake 29.4 mi upstream, and by several smaller reservoirs above station. Several measurements of water temperature were made during the year. U.S. Army Corps of Engineers satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3320	2960	7500	3760	2830	2250	4400	1910	3150	737	732	1010
2	3020	2850	13200	3540	2630	9490	4020	1820	4600	843	945	985
3	2870	2730	8130	3440	2460	9470	3740	1730	5790	941	974	1010
4	2660	2620	7250	3350	2660	7630	3470	1980	6110	989	790	977
5	2520	2560	6690	3280	5610	7890	3090	1910	5560	966	781	950
6	2410	2520	6210	3240	5570	9760	2720	1780	4490	931	799	953
7	2220	2500	5360	2990	3970	7840	2390	1830	2890	699	783	944
8	1690	6060	4450	2790	3440	6930	2000	1570	2500	633	749	937
9	1700	12300	4240	2720	3010	5900	1820	2020	2260	658	763	939
10	2020	7990	3850	2620	2650	5690	1440	2970	2020	925	769	1020
11	2060	6550	3840	2120	e2400	5360	1350	3590	1770	825	744	1050
12	1810	6140	7460	1800	e2100	4730	1310	3420	1390	852	699	1070
13	1660	5230	8770	e1750	e1900	4280	1480	3840	1740	917	838	1060
14	1580	4090	7840	e1700	e1800	3600	1580	3790	2470	828	1000	1020
15	1530	3490	6000	e1600	e1650	4600	1360	3360	1750	729	829	996
16	1480	3230	5200	e1550	e1550	3950	1230	2450	2290	718	873	980
17	1470	3070	4970	e1500	e1450	3500	1330	1950	2210	695	1230	964
18	1530	3010	4540	e1450	e1400	3350	1740	1840	1960	688	2930	969
19	3630	2520	4190	e1450	e2000	4170	2080	2390	1400	1100	1940	952
20	11300	3050	3840	e1400	e7200	4690	1950	4820	1120	1130	1370	989
21	9840	2910	3440	e1350	6070	4390	1460	5430	1160	855	2010	1030
22	9940	2810	3370	e1350	6210	4230	1370	4870	1120	790	1570	1030
23	8200	2700	3520	e1400	4940	3930	1320	4180	1060	809	1330	989
24	6760	2620	3820	e1900	3690	3410	1280	2450	840	822	1150	963
25	5670	2470	4390	e1700	2920	2550	1230	6360	799	853	894	950
26	3920	2920	3700	e1900	2540	6800	1490	16300	820	972	810	945
27	3580	4060	3210	e1700	2400	6710	1430	8550	934	956	786	932
28	3520	3350	3260	e3000	2220	5600	1580	7520	1310	855	1130	986
29	3650	3450	3870	e3960	---	5100	2110	6490	1250	841	1150	2560
30	3360	3430	5040	3470	---	4840	2060	4600	806	818	1070	2310
31	3140	---	4180	2990	---	5020	---	2860	---	776	1030	---
TOTAL	114060	116190	165330	72770	89270	167660	59830	120580	67569	26151	33468	32470
MEAN	3679	3873	5333	2347	3188	5408	1994	3890	2252	844	1080	1082
MAX	11300	12300	13200	3960	7200	9760	4400	16300	6110	1130	2930	2560
MIN	1470	2470	3210	1350	1400	2250	1230	1570	799	633	699	932
†	-576	-417	-67	-185	+721	+797	+8.4	+75	-47	-483	-309	-658

† Change in contents, equivalent in cubic feet per second, in Deep Creek Reservoir and Youghiogheny River Lake. Records of contents in Deep Creek Reservoir furnished by Pennsylvania Electric Co. Records of contents in Youghiogheny River Lake furnished by U.S. Army Corps of Engineers.

e Estimated.

YOUGHIOGHENY RIVER BASIN

03082500 YOUGHIOGHENY RIVER AT CONNELLSVILLE, PA

LOCATION.--Lat 40°01'03", long 79°35'38", Fayette County, Hydrologic Unit 05020006, on left bank at downstream side of Crawford Avenue bridge at Conneltsville, 1.2 mi upstream from Mounts Creek, at mile 44.0.

DRAINAGE AREA.--1,326 mi².

PERIOD OF RECORD.--July 1908 to current year. Monthly discharge only for some periods, published in WSP 1305.

REVISED RECORDS.--WSP 743: Drainage area. WSP 1305: 1912 (M), 1914 (M), 1916-17 (M), 1918, 1922-25. WSP 1435: 1919-20. WSP 1725: 1916, 1932 (monthly, yearly summaries).

GAGE.--Water-stage recorder. Datum of gage is 860.13 ft above sea level. Prior to Aug. 15, 1928, nonrecording gage, and Aug. 15, 1928 to July 7, 1958, water-stage recorder at same site and datum. July 8, 1958 to Sept. 8, 1959, nonrecording gage at site 0.4 mi downstream at different datum.

REMARKS.--Records good except for estimated daily discharges, which are fair. Flow regulated since 1925 by Deep Creek Reservoir, since 1943 by Youghiogheny River Lake 29.4 mi upstream, and by several smaller reservoirs above station. Several measurements of water temperature were made during the year. U.S. Army Corps of Engineers satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3320	2960	7500	3760	2830	2250	4400	1910	3150	737	732	1010
2	3020	2850	13200	3540	2630	9490	4020	1820	4600	843	945	985
3	2870	2730	8130	3440	2460	9470	3740	1730	5790	941	974	1010
4	2660	2620	7250	3350	2660	7630	3470	1980	6110	989	790	977
5	2520	2560	6690	3280	5610	7890	3090	1910	5560	966	781	950
6	2410	2520	6210	3240	5570	9760	2720	1780	4490	931	799	953
7	2220	2500	5360	2990	3970	7840	2390	1830	2890	699	783	944
8	1690	6060	4450	2790	3440	6930	2000	1570	2500	633	749	937
9	1700	12300	4240	2720	3010	5900	1820	2020	2260	658	763	939
10	2020	7990	3850	2620	2650	5690	1440	2970	2020	925	769	1020
11	2060	6550	3840	2120	e2400	5360	1350	3590	1770	825	744	1050
12	1810	6140	7460	1800	e2100	4730	1310	3420	1390	852	699	1070
13	1660	5230	8770	e1750	e1900	4280	1480	3840	1740	917	838	1060
14	1580	4090	7840	e1700	e1800	3600	1580	3790	2470	828	1000	1020
15	1530	3490	6000	e1600	e1650	4600	1360	3360	1750	729	829	996
16	1480	3230	5200	e1550	e1550	3950	1230	2450	2290	718	873	980
17	1470	3070	4970	e1500	e1450	3500	1330	1950	2210	695	1230	964
18	1530	3010	4540	e1450	e1400	3350	1740	1840	1960	688	2930	969
19	3630	2520	4190	e1450	e2000	4170	2080	2390	1400	1100	1940	952
20	11300	3050	3840	e1400	e7200	4690	1950	4820	1120	1130	1370	989
21	9840	2910	3440	e1350	6070	4390	1460	5430	1160	855	2010	1030
22	9940	2810	3370	e1350	6210	4230	1370	4870	1120	790	1570	1030
23	8200	2700	3520	e1400	4940	3930	1320	4180	1060	809	1330	989
24	6760	2620	3820	e1900	3690	3410	1280	2450	840	822	1150	963
25	5670	2470	4390	e1700	2920	2550	1230	6360	799	853	894	950
26	3920	2920	3700	e1900	2540	6800	1490	16300	820	972	810	945
27	3580	4060	3210	e1700	2400	6710	1430	8550	934	956	786	932
28	3520	3350	3260	e3000	2220	5600	1580	7520	1310	855	1130	986
29	3650	3450	3870	e3960	---	5100	2110	6490	1250	841	1150	2560
30	3360	3430	5040	3470	---	4840	2060	4600	806	818	1070	2310
31	3140	---	4180	2990	---	5020	---	2860	---	776	1030	---
TOTAL	114060	116190	165330	72770	89270	167660	59830	120580	67569	26151	33468	32470
MEAN	3679	3873	5333	2347	3188	5408	1994	3890	2252	844	1080	1082
MAX	11300	12300	13200	3960	7200	9760	4400	16300	6110	1130	2930	2560
MIN	1470	2470	3210	1350	1400	2250	1230	1570	799	633	699	932
†	-576	-417	-67	-185	+721	+797	+8.4	+75	-47	-483	-309	-658

† Change in contents, equivalent in cubic feet per second, in Deep Creek Reservoir and Youghiogheny River Lake. Records of contents in Deep Creek Reservoir furnished by Pennsylvania Electric Co. Records of contents in Youghiogheny River Lake furnished by U.S. Army Corps of Engineers.

e Estimated.

YOUGHIOGHENY RIVER BASIN

03082500 YOUGHIOGHENY RIVER AT CONNELLSVILLE, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1925 - 1997, BY WATER YEAR (WY) (SINCE REGULATION)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1450	1939	3020	3322	3838	4932	4126	3129	1879	1338	1266	1207
MAX	5938	7518	8050	9737	7916	11370	8463	7142	5805	4143	4772	5400
(WY)	1955	1986	1973	1937	1939	1936	1993	1996	1941	1985	1956	1971
MIN	139	84.5	296	465	630	1189	1321	662	504	279	155	146
(WY)	1931	1931	1931	1925	1934	1990	1925	1926	1925	1930	1930	1925

SUMMARY STATISTICS

FOR 1996 CALENDAR YEAR

FOR 1997 WATER YEAR

WATER YEARS 1925 - 1997

ANNUAL TOTAL	1693313		1065348									
ANNUAL MEAN	4627	†+9.1	2919	†-100						2615		
HIGHEST ANNUAL MEAN										3944		1996
LOWEST ANNUAL MEAN										1223		1925
HIGHEST DAILY MEAN	a38000			Jan 19		16300		May 26		58100		Mar 18 1936
LOWEST DAILY MEAN	919			Jul 12		633		Jul 8		39		Nov 16 1930
ANNUAL SEVEN-DAY MINIMUM	1090			Jul 9		758		Aug 6		62		Nov 14 1930
INSTANTANEOUS PEAK FLOW						20700		May 26		a103000		Oct 16 1954
INSTANTANEOUS PEAK STAGE						10.38		May 26		21.96		Oct 16 1954
10 PERCENT EXCEEDS			8700			6060				5810		
50 PERCENT EXCEEDS			3680			2290				1630		
90 PERCENT EXCEEDS			1450			853				600		

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1909 - 1924, BY WATER YEAR (WY) (PRIOR TO REGULATION)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1126	1653	2574	4697	4098	5490	3830	2696	2379	1110	764	1100
MAX	5117	4937	5795	8679	9354	9777	6572	6675	5224	5102	1904	5158
(WY)	1912	1914	1922	1913	1918	1912	1914	1924	1910	1912	1912	1911
MIN	36.4	68.4	342	503	1589	1913	1335	1125	938	221	99.5	132
(WY)	1909	1909	1909	1918	1924	1915	1921	1911	1922	1918	1910	1922

SUMMARY STATISTICS

WATER YEARS 1909 - 1924

ANNUAL MEAN	2620											
HIGHEST ANNUAL MEAN	3976					1912						
LOWEST ANNUAL MEAN	1879					1923						
HIGHEST DAILY MEAN	59200					Mar 21 1912						
LOWEST DAILY MEAN	11					Oct 18 1910						
ANNUAL SEVEN-DAY MINIMUM	14					Oct 15 1910						
INSTANTANEOUS PEAK FLOW	b65900					Mar 29 1924						
INSTANTANEOUS PEAK STAGE	c20.5					Mar 29 1924						
INSTANTANEOUS LOW FLOW	11					Sep 23 1908d						
ANNUAL RUNOFF (CFSM)	1.98											
ANNUAL RUNOFF (INCHES)	26.84											
10 PERCENT EXCEEDS	6200											
50 PERCENT EXCEEDS	1370											
90 PERCENT EXCEEDS	195											

† Change in contents, equivalent in cubic feet per second, in Deep Creek Reservoir and Youghiogheny River Lake. Records of contents in Deep Creek Reservoir furnished by Pennsylvania Electric Co. Records of contents in Youghiogheny River Lake furnished by U.S. Army Corps of Engineers.

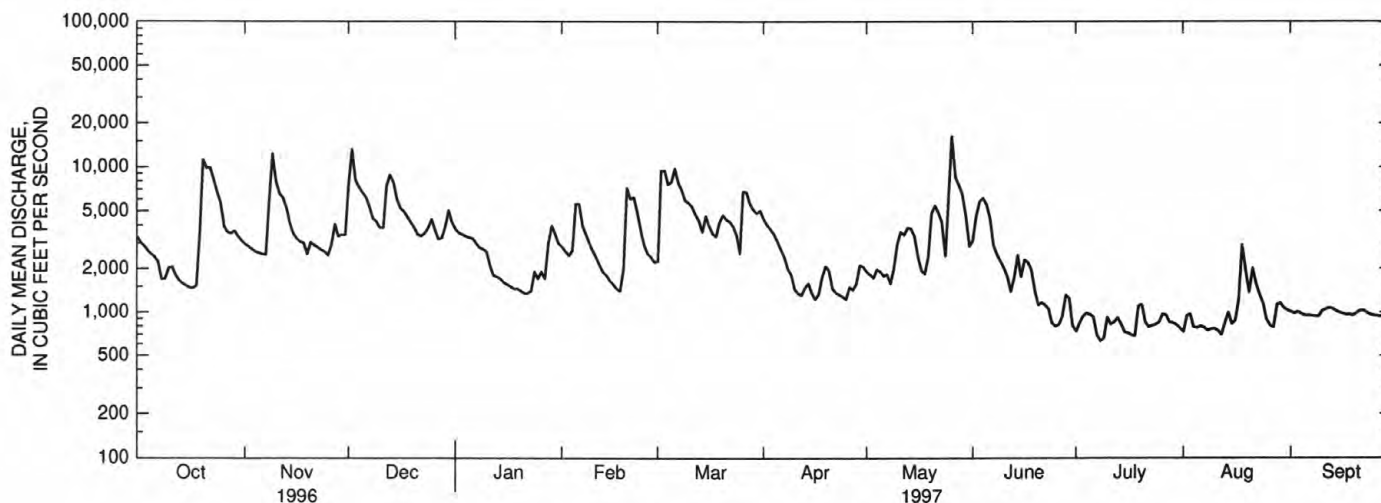
a From rating curve extended above 55,000 ft³/s.

b Estimated from hydrograph.

c From graph based on gage readings.

d Also Sept. 26, 27, 1908 and Oct. 18, 1910.

e Estimated.



October 1, 1996 to September 30, 1997

YOUGHIOGHENY RIVER BASIN

03083500 YOUGHIOGHENY RIVER AT SUTERSVILLE, PA
(National water-quality assessment station)

LOCATION.--Lat 40°14'24", long 79°48'24", Allegheny County, Hydrologic Unit 05020006, on left bank 500 ft upstream from highway bridge at Sutersville, 2.1 mi downstream from Sewickley Creek, at mile 15.2.

DRAINAGE AREA.--1,715 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1920 to current year. Monthly discharge only for some periods, published in WSP 1305.

REVISED RECORDS.--WSP 743: Drainage area. WSP 1305: 1924, 1926 (M), 1931 (M). WSP 1435: 1935-36.

GAGE.--Water-stage recorder. Datum of gage is 733.36 ft above sea level. Prior to June 1, 1939, nonrecording gage at site 500 ft downstream at same datum.

REMARKS.--Records good except for estimated daily discharges, which are fair. Flow regulated since 1925 by Deep Creek Reservoir, since 1943 by Youghiogheny River Lake 58 mi upstream, and by several smaller reservoirs above station. Several measurements of water temperature were made during the year. U.S. Army Corps of Engineers satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3640	3180	7510	4260	3180	2330	5380	2050	3600	810	776	1070
2	3310	3040	14600	3930	3010	8520	4250	1960	4400	955	803	1030
3	3120	2920	10600	3800	2720	12700	4130	1870	6460	1050	1010	1040
4	2870	2780	7980	3760	2840	10100	3850	1960	6240	985	941	1030
5	2660	2690	7560	3690	5630	9050	3490	2060	6250	1050	801	992
6	2530	2640	7140	3660	7060	10300	3100	1900	5120	988	801	964
7	2430	2630	6500	3400	4890	9190	2780	1920	3510	912	812	964
8	1950	6670	5140	3150	4010	7880	2340	1840	2820	697	780	980
9	1830	15400	4830	3010	3580	6680	2140	2050	2500	691	760	918
10	2040	11200	4490	3090	3120	6260	1820	2830	2250	840	784	1070
11	2200	7990	4040	2560	2810	6090	1630	3690	2040	902	775	1140
12	2010	7190	7400	2120	2610	5280	1610	3480	1710	853	737	1180
13	1800	6300	9720	e2000	2400	4750	1720	3840	1830	889	813	1110
14	1700	4820	9610	e1900	2290	4190	1830	3910	2560	915	1100	1050
15	1640	3990	7260	e1850	e2100	4690	1660	3780	2170	802	1050	1010
16	1630	3640	6030	e1800	e2000	4540	1480	2840	2060	768	995	990
17	1490	3420	5720	e1700	e1900	3830	1440	2220	2380	735	1430	977
18	1630	3410	5180	e1650	e1800	3620	1770	2030	2270	726	4500	994
19	3310	3150	4720	e1600	e1700	3950	2050	2680	1900	939	2960	971
20	12600	3160	4280	e1600	7280	5080	2110	4740	1450	1180	1930	996
21	12600	3220	3820	e1550	7040	4670	1820	6020	1270	1060	2770	1070
22	11900	3090	3630	e1550	6390	4500	1550	5350	1280	820	2290	1070
23	9800	2970	3720	e1500	5820	4180	1490	4670	1220	890	1660	1030
24	7790	2850	4020	e2000	4270	3950	1460	3150	1060	901	1430	981
25	6650	2800	4700	e2300	3350	2910	1430	8800	899	872	1200	959
26	4670	2930	4320	e2100	2880	7850	1490	25000	895	912	955	950
27	3930	4610	3540	e2000	2680	9000	1590	12100	1080	1020	883	935
28	3740	3760	3520	e3500	2500	6850	1720	9260	1150	938	1080	933
29	3930	3800	4000	6230	---	6030	2140	7940	1390	891	1270	2570
30	3680	3740	5690	4460	---	5720	2210	5810	1150	850	1190	3060
31	3400	---	4890	3550	---	5510	---	3810	---	814	1120	---
TOTAL	128480	133990	186160	85270	101860	190200	67480	145560	74914	27655	40406	34034
MEAN	4145	4466	6005	2751	3638	6135	2249	4695	2497	892	1303	1134
MAX	12600	15400	14600	6230	7280	12700	5380	25000	6460	1180	4500	3060
MIN	1490	2630	3520	1500	1700	2330	1430	1840	895	691	737	918
†	-576	-417	-67	-185	+721	+797	+8.4	+75	-47	-483	-309	-658

† Change in contents, equivalent in cubic feet per second, in Deep Creek Reservoir and Youghiogheny River Lake. Records of contents in Deep Creek Reservoir furnished by Pennsylvania Electric Co. Records of contents in Youghiogheny River Lake furnished by U.S. Army Corps of Engineers.

e Estimated.

YOUGHIOGHENY RIVER BASIN

03083500 YOUGHIOGHENY RIVER AT SUTERSVILLE, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1921 - 1997 BY WATER YEAR (WY) (SINCE REGULATION)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1540	2119	3695	4003	4582	5966	4894	3698	2260	1585	1450	1369
MAX	7006	5818	9373	8488	9630	13720	10230	8012	7318	4853	5707	6382
(WY)	1955	1922	1973	1974	1939	1936	1940	1996	1941	1985	1956	1971
MIN	107	209	596	611	716	1539	1637	1012	585	614	309	185
(WY)	1924	1923	1954	1925	1934	1990	1921	1982	1925	1942	1922	1922

SUMMARY STATISTICS

FOR 1996 CALENDAR YEAR

FOR 1997 WATER YEAR

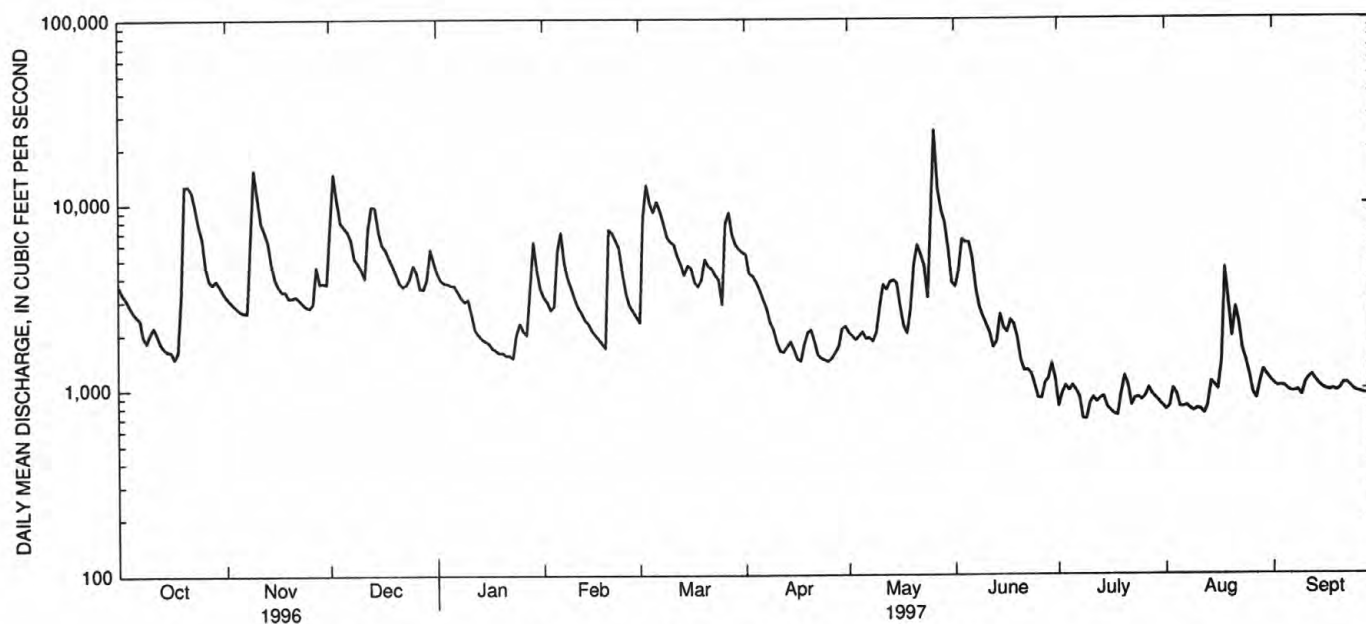
WATER YEARS 1921 - 1997

ANNUAL TOTAL	1947810		1216009									
ANNUAL MEAN	5322	†+9.1	3332	†-100						3090		
HIGHEST ANNUAL MEAN										4537		1996
LOWEST ANNUAL MEAN										1496		1925
HIGHEST DAILY MEAN	53000	Jan 20	25000	May 26						79000	Mar 18	1936
LOWEST DAILY MEAN	1060	Jul 12	691	Jul 9						57	Sep 30	1922
ANNUAL SEVEN-DAY MINIMUM	1230	Jul 9	778	Aug 6						64	Sep 24	1922
INSTANTANEOUS PEAK FLOW			29500	May 26						108000	Oct 16	1954
INSTANTANEOUS PEAK STAGE			15.29	May 26						a32.50	Oct 16	1954
INSTANTANEOUS LOW FLOW			682	Jul 8,9						b57	Sep 29	1922
10 PERCENT EXCEEDS	9650		6930							6850		
50 PERCENT EXCEEDS	4030		2570							1940		
90 PERCENT EXCEEDS	1640		927							692		

† Change in contents, equivalent in cubic feet per second, in Deep Creek Reservoir and Youghiogheny River Lake. Records of contents in Deep Creek Reservoir furnished by Pennsylvania Electric Co. Records of contents in Youghiogheny River Lake furnished by U.S. Army Corps of Engineers.

a From floodmark.

b Minimum observed.



October 1, 1996 to September 30, 1997

MONONGAHELA RIVER BASIN

03083500 YOUGHIOGHENY RIVER AT SUTERSVILLE, PA--Continued
(National Water-Quality Assessment station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1947 to September 1950, October 1958 to September 1959, October 1968 to September 1972, November 1975 to September 1981, April 1996 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: October 1996 to June 1997.

INSTRUMENTATION.--Daily record measured and collected at hourly intervals with an in-situ probe and electronic data logger.

REMARKS.--All water-quality samples were collected and analyzed by the U.S. Geological Survey except for those furnished by the Pennsylvania Department of Environmental Resources as noted. Interruptions in the daily record were due to malfunctions of the equipment. Additional sites in the (NAWQA) fixed-station network are shown in figure 6 on page 28. An explanation of selected abbreviations used in the water-quality tables are given on pages 29-31.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE	TIME	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)	OXYGEN, DIS- SOLVED (MG/L) (00300)	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)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)
OCT											
28...	1015	3700	209	7.4	14.0	739	9.7	65	18	4.9	9.9
NOV											
07...	0930	2630	240	7.4	11.0	738	9.6	76	21	5.7	13
DEC											
17...	0945	5780	180	7.2	5.0	728	13.1	58	16	4.5	8.4
JAN											
28...	1115	4970	500	7.2	0.0	746	13.6	100	29	7.5	46
FEB											
10...	1000	3140	282	7.2	2.0	745	13.8	77	21	5.9	20
MAR											
20...	1100	5160	211	7.0	6.0	735	13.0	68	18	5.5	11
APR											
09...	1030	2150	275	7.3	8.5	744	10.6	85	23	6.8	15
MAY											
23...	1000	4740	176	7.4	11.5	743	10.8	52	15	3.9	10
26...	1600	24600	150	7.4	15.0	740	10.2	50	15	3.4	6.4
JUN											
18...	0945	2260	233	7.5	20.5	733	7.8	66	18	5.0	14
JUL											
10...	0955	759	429	7.6	22.0	742	8.5	120	32	10	33
AUG											
13...	1015	750	348	7.5	24.0	737	7.0	91	25	7.2	29
SEP											
10...	0930	1050	319	7.5	21.0	733	7.7	84	23	6.6	21

MONONGAHELA RIVER BASIN

03083500 YOUGHIOGHENY RIVER AT SUTERSVILLE, PA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LINITY 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)	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)	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)
OCT 28...	1.5	41	50	10	<0.10	4.6	116	0.010	0.730	0.030	0.20
NOV 07...	1.4	39	60	11	<0.10	3.9	137	0.020	0.960	0.050	<0.20
DEC 17...	1.0	36	40	10	<0.10	4.6	107	0.010	0.960	0.030	<0.20
JAN 28...	2.5	52	68	72	0.20	5.1	272	0.020	1.20	0.250	1.7
FEB 10...	1.4	38	57	24	0.10	4.9	161	0.010	1.10	0.050	<0.20
MAR 20...	1.2	33	49	14	<0.10	4.4	125	0.030	1.00	0.040	<0.20
APR 09...	1.4	25	74	14	<0.10	4.1	165	<0.010	0.730	0.040	<0.20
MAY 23...	1.2	18	38	12	<0.10	4.2	108	<0.010	0.720	<0.015	0.23
26...	1.7	18	26	8.9	<0.10	4.8	85	<0.010	1.17	0.065	0.90
JUN 18...	1.4	25	55	12	<0.10	3.3	134	<0.010	0.075	<0.015	<0.20
JUL 10...	1.9	39	120	19	<0.10	3.4	269	<0.010	0.863	0.029	<0.20
AUG 13...	1.6	32	99	14	0.12	2.4	210	0.016	0.843	0.029	0.26
SEP 10...	1.7	34	83	14	<0.10	1.6	186	<0.010	0.625	<0.015	0.23

DATE	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)	IRON, DIS- SOLVED (MG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (MG/L AS MN) (01056)	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)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
OCT 28...	<0.20	0.020	<0.010	<0.010	8.0	65	1.7	0.30	3	85
NOV 07...	<0.20	0.020	<0.010	<0.010	47	74	1.7	0.30	1	71
DEC 17...	<0.20	<0.010	<0.010	<0.010	30	110	1.2	0.50	3	64
JAN 28...	0.40	0.690	<0.010	<0.010	15	190	1.8	1.4	249	90
FEB 10...	<0.20	<0.010	0.010	<0.010	89	160	1.3	0.30	3	82
MAR 20...	<0.20	0.030	<0.010	<0.010	41	170	1.3	0.60	8	59
APR 09...	<0.20	0.030	<0.010	<0.010	110	110	1.4	0.30	4	69
MAY 23...	<0.20	0.014	<0.010	<0.010	31	57	1.5	1.1	14	65
26...	0.29	0.208	<0.010	<0.010	44	101	3.4	3.6	161	79
JUN 18...	<0.20	<0.010	<0.010	<0.010	79	27	1.6	1.9	4	61
JUL 10...	<0.20	<0.010	<0.010	0.019	82	45	1.6	0.30	5	55
AUG 13...	0.21	<0.010	<0.010	0.016	52	22	2.0	0.30	5	40
SEP 10...	<0.20	0.021	<0.010	<0.010	44	19	2.1	0.20	4	64

MONONGAHELA RIVER BASIN

03083500 YOUGHIOGHENY RIVER AT SUTERSVILLE, PA--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	---	---	---	11.5	9.5	10.5	6.5	4.5	5.5	6.0	5.5	5.5
2	---	---	---	9.5	8.0	8.5	7.0	6.0	6.5	6.0	5.5	6.0
3	---	---	---	8.5	7.5	8.0	6.0	5.5	5.5	7.0	6.0	6.5
4	---	---	---	8.0	6.5	7.5	5.5	5.0	5.0	9.0	7.0	8.0
5	---	---	---	8.5	8.0	8.0	5.5	5.0	5.0	9.5	8.5	9.0
6	---	---	---	10.5	8.5	9.5	5.0	4.5	5.0	8.5	6.0	7.5
7	---	---	---	12.0	10.5	11.5	5.0	4.5	4.5	6.0	3.0	4.5
8	---	---	---	12.5	11.5	12.5	4.5	4.0	4.5	3.0	1.5	2.0
9	---	---	---	11.5	9.0	10.0	4.0	3.5	4.0	1.5	1.0	1.5
10	---	---	---	9.0	7.5	8.0	4.0	3.0	3.5	2.0	1.5	1.5
11	---	---	---	7.5	6.0	7.0	5.5	4.0	5.0	1.5	.0	.5
12	---	---	---	6.5	6.0	6.0	6.5	5.5	6.0	.5	.0	.0
13	---	---	---	6.5	6.0	6.0	7.0	6.5	7.0	.5	.0	.0
14	---	---	---	6.5	5.5	6.0	7.0	5.5	6.5	.0	.0	.0
15	---	---	---	5.5	4.5	5.0	5.5	4.5	5.0	.0	.0	.0
16	---	---	---	5.0	3.5	4.5	5.0	4.0	4.5	.0	.0	.0
17	---	---	---	5.5	4.0	4.5	5.5	5.0	5.0	.0	.0	.0
18	---	---	---	6.5	5.5	6.0	5.5	5.0	5.5	.0	.0	.0
19	---	---	---	7.0	6.5	7.0	5.0	3.0	4.5	.0	.0	.0
20	---	---	---	6.5	5.5	6.0	3.0	1.0	2.0	.0	.0	.0
21	---	---	---	5.5	5.0	5.0	1.0	.5	.5	.0	.0	.0
22	---	---	---	5.0	4.5	5.0	2.0	.5	1.0	.0	.0	.0
23	---	---	---	5.0	4.0	4.5	4.0	2.0	3.0	.0	.0	.0
24	---	---	---	5.5	4.5	5.0	4.5	3.5	4.5	.0	.0	.0
25	---	---	---	6.0	5.5	6.0	3.5	2.0	3.0	.0	.0	.0
26	---	---	---	6.5	5.5	6.5	2.0	1.5	2.0	.0	.0	.0
27	---	---	---	5.5	4.0	5.0	3.0	2.0	2.5	.0	.0	.0
28	---	---	---	4.0	3.0	3.5	5.0	3.0	4.0	.0	.0	.0
29	13.5	12.5	13.0	3.5	2.5	3.0	6.0	5.0	5.5	.0	.0	.0
30	14.0	12.5	13.5	4.5	3.0	3.5	6.5	6.0	6.0	.0	.0	.0
31	13.5	11.5	12.5	---	---	---	6.0	6.0	6.0	1.0	.0	.5
MONTH	14.0	11.5	13.0	12.5	2.5	6.6	7.0	.5	4.5	9.5	.0	1.7

MONONGAHELA RIVER BASIN

03083500 YOUGHIOGHENY RIVER AT SUTERSVILLE, PA--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	2.0	1.0	1.5	9.0	7.0	8.0	7.0	5.0	6.0	15.5	13.5	14.5
2	2.5	2.0	2.5	9.5	8.5	9.0	8.5	6.0	7.0	15.5	12.5	14.0
3	3.0	2.5	2.5	8.5	6.5	7.5	9.5	7.0	8.5	15.5	14.0	15.0
4	2.5	2.0	2.5	6.5	5.5	6.0	11.5	9.0	10.0	14.5	13.0	14.0
5	3.0	2.5	3.0	6.0	5.5	5.5	12.0	11.0	11.5	14.5	11.5	13.5
6	2.5	2.0	2.0	6.0	5.0	6.0	13.0	11.5	12.0	14.5	13.0	13.5
7	2.5	2.0	2.5	5.0	4.0	4.5	13.0	11.5	12.5	15.0	12.0	13.5
8	2.5	2.0	2.5	5.0	4.0	4.5	12.0	10.0	11.0	13.5	12.0	12.5
9	2.5	2.0	2.5	5.5	4.0	4.5	10.0	5.0	8.5	13.0	12.0	12.5
10	2.5	2.0	2.0	6.5	5.0	6.0	9.0	3.0	6.0	12.0	10.5	11.0
11	2.5	1.5	2.0	6.0	5.0	5.5	14.5	3.5	6.5	12.5	9.5	11.0
12	2.0	1.5	2.0	5.5	4.0	5.0	12.0	3.0	8.0	12.0	11.5	11.5
13	1.5	.5	1.0	5.0	4.0	5.0	9.5	4.5	7.0	13.0	11.0	12.0
14	1.0	.5	1.0	6.0	5.0	5.5	9.0	5.0	7.5	12.5	11.0	12.0
15	2.0	1.0	1.5	5.5	4.0	5.0	20.0	2.5	9.0	12.5	11.5	12.0
16	1.5	1.0	1.0	4.0	3.0	3.5	24.5	2.0	11.5	12.0	10.5	11.5
17	2.0	.0	1.0	4.0	3.0	3.5	9.5	3.0	6.5	13.5	11.5	12.5
18	---	---	---	4.5	3.5	4.0	10.5	2.0	8.0	16.0	12.0	14.0
19	5.0	3.0	4.0	6.5	4.5	5.5	10.5	8.0	9.5	18.5	15.0	17.0
20	5.5	4.0	4.5	6.0	5.5	5.5	11.0	8.0	10.0	18.0	16.5	17.5
21	6.5	4.5	5.5	7.5	5.0	6.0	11.5	4.5	9.0	16.5	13.5	15.0
22	7.0	6.0	6.5	7.5	6.5	7.0	26.5	1.5	10.5	13.5	12.0	13.0
23	6.0	5.0	5.5	6.5	5.5	6.0	12.5	6.0	9.0	14.0	11.5	12.5
24	5.0	3.5	4.5	7.0	5.0	6.0	18.0	7.5	10.5	16.0	12.5	14.5
25	4.0	3.0	3.5	9.0	6.0	7.5	21.5	3.5	11.0	16.0	15.0	16.0
26	3.5	3.0	3.5	9.0	7.0	8.0	27.0	2.5	11.5	15.0	14.0	14.5
27	7.0	3.5	5.5	8.0	6.0	7.0	16.0	6.0	10.5	15.5	14.0	14.5
28	7.5	6.0	7.0	9.5	7.5	8.5	11.5	8.5	11.0	14.5	13.5	14.0
29	---	---	---	9.5	9.0	9.0	13.5	10.5	12.0	14.0	12.5	13.0
30	---	---	---	9.5	8.5	9.0	15.0	11.5	13.5	14.0	12.5	13.0
31	---	---	---	8.5	6.0	7.5	---	---	---	15.0	13.5	14.0
MONTH	7.5	.0	3.1	9.5	3.0	6.2	27.0	1.5	9.5	18.5	9.5	13.5

MONONGAHELA RIVER BASIN

03083500 YOUGHIOGHENY RIVER AT SUTERSVILLE, PA--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

[illegible]

MONONGAHELA RIVER BASIN

03085000 MONONGAHELA RIVER AT BRADDOCK, PA
(National water-quality assessment station)

LOCATION.--Lat 40°23'28", long 79°51'30", Allegheny County, Hydrologic Unit 05020005, near right bank on river guide wall 300 ft upstream from dam at lock 2 at Braddock, 1,700 ft downstream from Turtle Creek, and 11.2 mi upstream of confluence with Allegheny River.

DRAINAGE AREA.--7,337 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1938 to current year. Monthly discharge only for some periods, published in WSP 1305.

GAGE.--Water-stage recorder and fixed-crest concrete dam control with streamward lock chamber usable as floodway during high flow since 1951. Datum of gage is 709.66 ft above sea level (U.S. Army Corps of Engineers bench mark). Prior to Aug. 13, 1951, at site 700 ft upstream, and Aug. 13, 1951 to Nov. 8, 1990 at present site at datum 2.50 ft lower.

REMARKS.--No estimated daily discharges. Records good. Flow regulated by locks and hydroelectric plants, since 1938 by Tygart Lake, since 1926 by Lake Lynn, since 1925 by Deep Creek Reservoir, since 1943 by Youghiogheny River Lake, and since 1990 by Stonewall Jackson Lake, combined capacity, 779,000 acre-ft. Figures of daily discharge include slight diversion from Beaver Run Reservoir in the Kiskiminetas River Basin to the borough of Jeannette in the Monongahela River Basin. U.S. Army Corps of Engineers satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 18, 1936 reached a stage of 38.8 ft from floodmarks, discharge, 210,000 ft³/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10800	10100	32300	17200	16700	11400	19000	9050	13800	5360	3220	2950
2	9550	10400	56900	14500	12700	50200	20100	7790	11800	4260	2300	2900
3	8760	8960	52500	14200	10700	77600	15900	9170	14300	4330	2290	3260
4	8070	8140	34800	13600	13200	70800	14100	7670	18800	3800	2060	2710
5	7240	8660	34500	11700	19200	51400	13800	7540	21500	3500	2400	2280
6	6310	8600	30400	11700	23600	40800	11900	8130	18200	3830	3270	2080
7	5820	7890	26800	11900	16800	42600	10400	9470	11000	2600	3800	2500
8	5570	20200	23700	9790	17700	39500	11300	9380	7910	3000	2440	2130
9	5110	59300	20200	9070	13100	36700	8980	8700	6910	2190	2940	2880
10	5420	46900	19800	10400	12000	28000	6640	14500	6830	2440	1970	3700
11	5490	34300	13800	9920	12600	29500	6330	17200	6240	3960	1970	3480
12	5710	31700	22400	6350	10700	29700	6160	19500	4910	3230	1860	5110
13	4700	26400	29800	6640	11400	27100	5520	19100	7590	2490	2630	3220
14	5150	23300	32300	6170	11200	28800	6840	16900	8570	2870	3590	3060
15	4080	18400	28300	6140	12100	19000	6880	19400	6980	2370	2700	2720
16	4480	14700	19700	6070	13700	16500	5230	18000	6300	1910	2980	3290
17	4320	10500	19700	7470	11700	17200	5440	16300	6950	1880	4800	3280
18	4950	8760	17700	5500	12100	17600	6460	8370	5720	2620	22000	2630
19	8480	10100	15200	4060	11700	21600	5660	11400	6710	2120	14400	2840
20	26300	10800	14300	5660	17100	25200	5550	21500	5780	2270	9280	2600
21	40500	13000	12200	7280	24600	27800	6170	26900	4330	2210	8930	2890
22	37800	11300	10800	6660	21600	25800	7360	21100	4450	2090	12200	3530
23	39800	9540	8850	6980	18900	20200	6100	17700	4120	2370	7130	3020
24	32300	8240	10600	9020	16600	18400	5870	13900	2870	3270	5760	3380
25	26000	8980	17600	14700	14500	16900	7270	23500	3270	5070	3950	2880
26	18300	13900	21100	13200	11600	25800	6010	56400	3240	5170	3730	2800
27	13900	29400	15800	17100	11400	35500	4930	45100	6950	4220	2790	3170
28	12800	29500	14700	21900	11700	28300	6060	33700	8250	3420	3360	3030
29	12500	27800	15600	30300	---	25300	9950	28800	6110	3560	3730	10700
30	14100	26600	18700	25300	---	21300	10900	21500	5060	3910	3400	18000
31	11600	---	19100	21500	---	19300	---	17100	---	4230	2520	---
TOTAL	405910	556370	710150	361980	410900	945800	262810	564770	245450	100550	150400	113020
MEAN	13090	18550	22910	11680	14680	30510	8760	18220	8182	3244	4852	3767
MAX	40500	59300	56900	30300	24600	77600	20100	56400	21500	5360	22000	18000
MIN	4080	7890	8850	4060	10700	11400	4930	7540	2870	1880	1860	2080
CFSM	1.78	2.53	3.12	1.59	2.00	4.16	1.19	2.48	1.12	.44	.66	.51
IN.	2.06	2.82	3.60	1.84	2.08	4.80	1.33	2.86	1.24	.51	.76	.57

MONONGAHELA RIVER BASIN

03085000 MONONGAHELA RIVER AT BRADDOCK, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	5455	9438	15900	17210	20810	24150	18690	14280	9115	6290	5901	4713
MAX	23130	42130	37600	36150	43120	54500	39180	40310	30240	15620	23720	18290
(WY)	1980	1986	1973	1952	1956	1963	1940	1996	1981	1958	1956	1971
MIN	1200	971	2748	3389	6387	8042	6473	3352	2107	1765	1531	1005
(WY)	1954	1954	1954	1977	1954	1969	1971	1982	1965	1966	1957	1946

SUMMARY STATISTICS

FOR 1996 CALENDAR YEAR

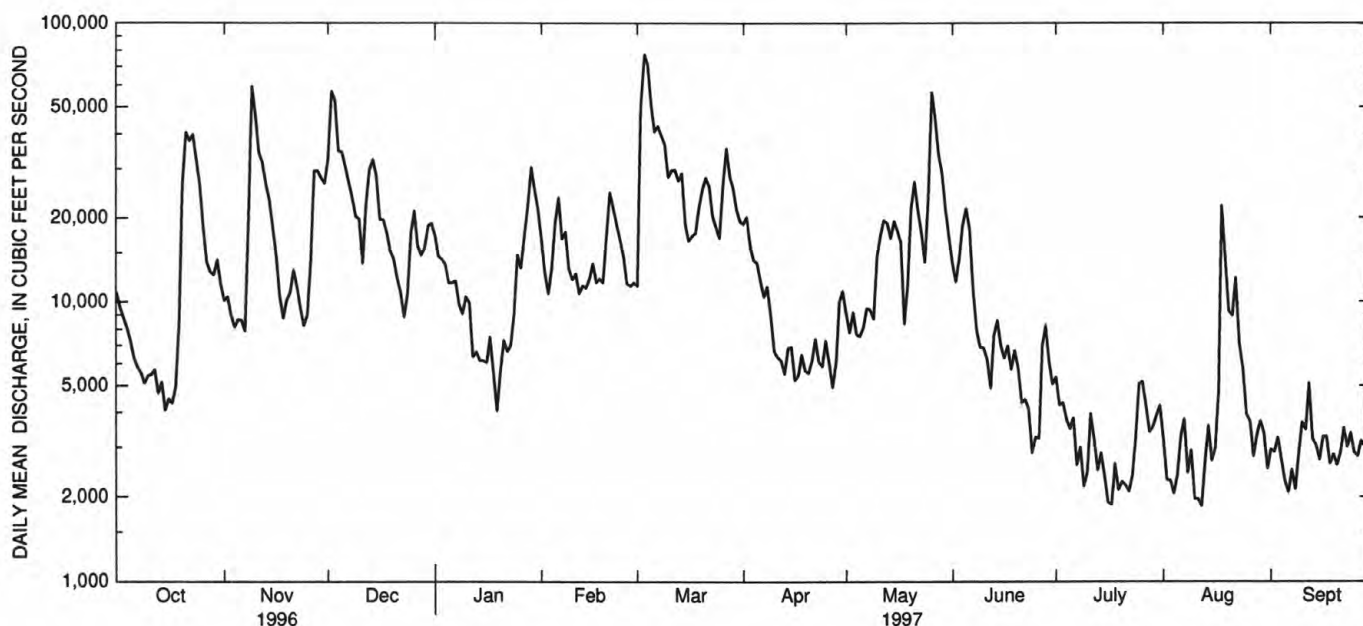
FOR 1997 WATER YEAR

WATER YEARS 1939 - 1997

ANNUAL TOTAL	7724750	4828110	12610
ANNUAL MEAN	21110	13230	18440
HIGHEST ANNUAL MEAN			6946
LOWEST ANNUAL MEAN			1996
HIGHEST DAILY MEAN	188000	Jan 20	77600
LOWEST DAILY MEAN	2780	Sep 2	1860
ANNUAL SEVEN-DAY MINIMUM	3330	Aug 30	2160
INSTANTANEOUS PEAK FLOW			83400
INSTANTANEOUS PEAK STAGE			18.67
ANNUAL RUNOFF (CFSM)	2.88		1.80
ANNUAL RUNOFF (INCHES)	39.17		24.48
10 PERCENT EXCEEDS	41000		28300
50 PERCENT EXCEEDS	15700		9790
90 PERCENT EXCEEDS	5400		2870

a Also Sept. 4, 22, 1946.

b Maximum gage height, 31.39 ft., June 24, 1972 (backwater from Allegheny River). Datum then in use.



October 1, 1996 to September 30, 1997

MONONGAHELA RIVER BASIN

03085000 MONONGAHELA RIVER AT BRADDOCK, PA--Continued
(National Water-Quality Assessment station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1958 to September 1993 (discontinued). September 1994 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: January 1973 to October 1975.

WATER TEMPERATURE: January 1973 to September 1979, November 1996 to current year.

SUSPENDED SEDIMENT DISCHARGE: January 1973 to September 1979.

INSTRUMENTATION.--From January 1973 to September 1979, specific conductance and water temperature were once daily readings by an observer. From January 1973 to September 1979, suspended-sediment samples were collected daily and more often during storm events by an observer. From November 1996 to current year, daily records of water temperature were measured and collected at hourly intervals with an in-situ probe and electronic data logger.

REMARKS.--All water-quality samples were collected and analyzed by the U.S. Geological Survey. Interruptions in the daily record were due to malfunctions of the equipment. Additional sites in the (NAWQA) fixed-station network are shown in figure 6 on page 28. An explanation of selected abbreviations used in the water-quality tables are given on pages 29-31.

EXTREMES FOR PERIOD OF RECORD.--

WATER TEMPERATURE: Maximum, 30.0°C, on several days during the summer periods; minimum, 0.0°C, on several days each year before 1979 water year.

SEDIMENT CONCENTRATIONS: Maximum daily, 830 mg/L, March 15, 19, 1978; minimum daily, 2 mg/L, November 29, 1976.

SEDIMENT DISCHARGES: Maximum daily, 210,000 tons, January 12, 1974; minimum daily, 14 tons, February 8, 1977.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum, 30.0°C, July 25; minimum 0.5°C, January 19, 20, 21, 29, 30.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DATE	TIME	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 (MG/L) (00300)	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)	SODIUM, DIS- SOLVED (MG/L AS Na) (00930)
OCT											
17...	0945	4310	392	7.8	16.5	736	10.6	120	33	8.5	26
NOV											
05...	0945	8620	270	7.3	10.5	745	10.3	91	26	6.3	14
DEC											
18...	0945	19100	247	7.4	6.0	735	12.6	80	22	6.0	12
JAN											
31...	0900	21900	294	7.3	4.0	733	13.9	88	25	6.3	16
FEB											
11...	0930	12000	295	7.3	3.0	740	12.6	86	24	6.3	18
MAR											
04...	1130	73100	199	7.2	8.0	739	11.2	71	21	4.6	7.7
APR											
23...	1000	6250	392	7.6	13.0	727	10.3	130	35	9.6	23
MAY											
22...	0800	23800	235	7.6	15.5	744	9.3	76	22	5.3	12
JUN											
17...	1000	7560	395	7.7	22.0	733	8.0	120	35	8.8	24
JUL											
24...	1000	2950	461	7.9	27.0	741	7.6	140	40	10	32
AUG											
19...	0850	13400	467	7.6	25.5	741	7.3	140	37	10	35
SEP											
08...	0930	2100	418	7.9	23.0	736	8.2	120	33	8.9	29

MONONGAHELA RIVER BASIN

03085000 MONONGAHELA RIVER AT BRADDOCK, PA.--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	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)	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)	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)
OCT 17...	2.1	54	110	16	0.10	4.4	238	0.020	0.840	0.080	0.20
NOV 05...	1.6	40	71	9.9	0.10	5.2	160	0.020	0.750	0.090	<0.20
DEC 18...	1.1	40	62	10	0.10	5.1	142	0.010	0.740	0.090	<0.20
JAN 31...	1.4	37	74	17	0.10	4.7	173	0.020	0.760	0.180	0.40
FEB 11...	1.3	42	67	18	0.10	4.9	174	0.020	0.890	0.100	<0.20
MAR 04...	1.5	28	44	9.5	<0.10	4.9	116	<0.010	0.930	0.090	1.4
APR 23...	1.6	39	120	15	<0.10	4.7	243	0.015	0.766	0.104	0.38
MAY 22...	1.2	28	59	9.5	0.11	4.6	152	0.012	0.576	0.059	0.66
JUN 17...	2.2	48	100	19	0.16	5.2	241	<0.010	0.074	0.325	0.26
JUL 24...	2.4	40	130	25	0.17	2.8	287	0.026	1.02	<0.015	0.37
AUG 19...	2.3	42	140	13	0.16	3.6	298	0.016	0.803	0.042	0.37
SEP 08...	2.2	42	110	19	0.13	1.9	248	0.012	0.908	0.015	0.33
DATE	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)	IRON, DIS- SOLVED (MG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (MG/L AS MN) (01056)	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)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)	
OCT 17...	<0.20	0.010	<0.010	<0.010	33	32	1.5	0.40	6	95	
NOV 05...	<0.20	0.020	<0.010	<0.010	28	98	1.9	0.50	8	90	
DEC 18...	<0.20	<0.010	<0.010	<0.010	10	120	1.2	0.60	7	94	
JAN 31...	0.30	0.030	<0.010	<0.010	8.0	160	1.5	0.90	24	83	
FEB 11...	<0.20	<0.010	<0.010	<0.010	21	120	1.4	0.40	6	75	
MAR 04...	<0.20	0.370	<0.010	<0.010	29	92	2.3	>5.0	304	93	
APR 23...	<0.20	0.070	0.011	<0.010	38	147	1.2	0.60	38	77	
MAY 22...	<0.20	0.168	<0.010	<0.010	33	120	1.5	0.50	250	34	
JUN 17...	0.26	<0.010	<0.010	<0.010	18	32	2.6	0.90	27	79	
JUL 24...	0.22	0.051	0.056	<0.010	17	1.4	2.0	0.90	12	53	
AUG 19...	<0.20	0.050	<0.010	<0.010	3.2	10	2.1	1.1	37	86	
SEP 08...	<0.20	0.034	0.010	<0.010	18	<1.0	1.7	1.7	14	65	

MONONGAHELA RIVER BASIN

03085000 MONONGAHELA RIVER AT BRADDOCK, PA--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

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

MONONGAHELA RIVER BASIN
03085000 MONONGAHELA RIVER AT BRADDOCK, PA--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997												
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	1.5	1.0	1.0	8.0	7.0	7.5	8.5	8.0	8.0	15.5	14.5	15.0
2	1.5	1.0	1.5	9.0	8.0	8.5	9.5	8.0	8.5	15.5	14.5	15.0
3	3.0	1.5	2.5	8.0	7.5	8.0	10.0	9.0	9.5	16.0	15.0	15.5
4	3.0	2.5	3.0	7.5	7.5	7.5	11.5	10.0	10.5	15.5	15.0	15.5
5	3.0	3.0	3.0	7.5	7.0	7.0	12.0	11.5	11.5	16.0	15.0	15.5
6	3.0	2.5	3.0	7.0	6.5	7.0	12.5	11.5	12.0	16.0	14.5	15.5
7	3.0	2.5	2.5	6.5	5.5	6.0	13.5	12.5	12.5	15.5	14.5	15.0
8	3.0	3.0	3.0	6.5	6.0	6.0	12.5	11.5	12.0	15.0	15.0	15.0
9	3.0	2.5	3.0	6.5	6.0	6.0	11.5	6.0	11.0	15.5	14.5	15.0
10	3.0	3.0	3.0	7.5	6.5	6.5	11.0	10.0	10.5	14.5	13.5	14.0
11	3.0	3.0	3.0	7.5	7.0	7.0	11.0	10.0	11.0	14.0	13.0	13.5
12	3.0	3.0	3.0	7.0	6.5	7.0	11.5	10.5	11.0	14.0	14.0	14.0
13	3.0	2.5	3.0	7.0	6.5	6.5	11.5	10.5	11.0	14.5	14.0	14.0
14	2.5	2.5	2.5	7.0	6.5	7.0	11.0	10.0	10.5	14.5	14.0	14.0
15	3.0	2.5	3.0	7.0	6.0	6.5	11.5	10.5	11.0	14.0	14.0	14.0
16	3.0	2.5	3.0	6.0	5.5	5.5	12.0	11.5	11.5	14.0	13.5	13.5
17	3.0	2.5	2.5	6.0	5.0	5.5	12.0	11.5	12.0	14.0	13.5	13.5
18	3.5	2.5	3.0	6.0	6.0	6.0	12.0	11.0	11.5	16.0	14.0	15.0
19	4.5	3.5	4.0	7.0	6.0	6.5	12.0	11.0	11.5	17.5	15.5	16.5
20	5.0	4.5	5.0	7.5	7.0	7.0	12.5	11.5	12.0	17.5	16.5	17.0
21	6.0	5.0	5.5	7.5	7.0	7.0	12.5	11.5	12.0	16.5	15.5	15.5
22	6.5	6.0	6.5	8.0	7.5	8.0	12.5	11.5	12.0	15.5	15.0	15.0
23	6.0	5.5	5.5	7.5	7.0	7.0	12.5	12.0	12.5	16.0	14.5	15.5
24	5.5	5.0	5.0	7.5	6.5	7.0	13.0	12.0	12.5	16.5	15.5	16.0
25	5.0	4.5	4.5	9.0	7.5	7.5	13.5	12.5	13.0	16.5	15.0	16.5
26	5.0	4.5	4.5	9.5	8.0	8.5	14.5	13.0	13.5	15.5	15.0	15.5
27	6.5	4.5	5.5	9.0	7.5	8.0	14.5	14.0	14.0	16.0	15.0	15.5
28	7.5	6.5	7.0	9.5	8.5	9.0	14.0	13.5	14.0	16.0	15.5	16.0
29	---	---	---	10.0	9.5	9.5	14.0	13.0	13.5	16.0	15.5	15.5
30	---	---	---	9.5	9.5	9.5	15.0	13.5	14.0	16.5	15.5	16.0
31	---	---	---	9.5	8.5	9.0	---	---	---	16.5	16.0	16.0
MONTH	7.5	1.0	3.6	10.0	5.0	7.2	15.0	6.0	11.7	17.5	13.0	15.1

MONONGAHELA RIVER BASIN

03085000 MONONGAHELA RIVER AT BRADDOCK, PA--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	17.0	16.5	17.0	27.5	22.5	26.0	28.0	27.5	28.0	---	---	---
2	17.5	17.0	17.5	27.0	23.5	26.0	28.0	27.5	27.5	---	---	---
3	17.5	17.0	17.5	27.5	26.5	27.0	27.5	27.0	27.0	---	---	---
4	17.0	16.5	17.0	27.5	27.0	27.0	27.5	27.0	27.0	---	---	---
5	17.5	16.5	17.0	27.0	26.5	27.0	27.0	26.0	26.5	---	---	---
6	18.0	17.5	17.5	27.0	26.0	26.5	26.5	25.5	26.0	---	---	---
7	18.0	17.5	18.0	27.0	26.5	26.5	27.0	26.5	26.5	---	---	---
8	19.0	17.5	18.5	27.0	26.5	26.5	27.0	26.5	27.0	---	---	---
9	20.0	18.5	19.5	27.0	26.5	27.0	26.5	26.0	26.5	---	---	---
10	21.5	19.5	20.5	27.0	26.0	26.5	27.5	26.0	26.5	---	---	---
11	22.0	21.0	21.5	28.0	26.0	27.0	27.0	26.5	26.5	---	---	---
12	22.5	21.5	22.0	28.0	27.5	28.0	27.0	26.0	26.5	---	---	---
13	22.0	19.5	21.0	28.5	28.0	28.5	27.0	26.5	26.5	---	---	---
14	22.5	22.0	22.5	29.0	28.5	28.5	28.0	26.5	27.0	---	---	---
15	22.5	22.0	22.5	29.5	28.5	29.0	28.0	26.5	27.5	---	---	---
16	23.0	22.0	22.5	29.5	28.5	29.0	27.5	26.5	27.0	---	---	---
17	23.5	22.0	22.5	29.5	29.0	29.0	27.5	26.5	27.0	---	---	---
18	23.5	22.5	23.0	29.5	28.5	29.0	28.0	25.5	26.5	---	---	---
19	24.5	23.0	24.0	29.0	28.5	29.0	25.5	25.0	25.5	---	---	---
20	26.0	24.0	25.0	29.5	28.0	28.5	25.5	25.0	25.0	---	---	---
21	26.0	25.0	25.5	28.5	28.0	28.5	25.0	23.5	24.5	---	---	---
22	26.5	26.0	26.0	28.0	27.5	28.0	24.5	23.5	24.0	---	---	---
23	27.0	26.5	26.5	27.5	27.0	27.5	23.5	23.0	23.5	---	---	---
24	28.0	26.5	27.0	27.5	26.5	27.0	23.5	23.0	23.0	---	---	---
25	28.0	27.0	27.5	30.0	27.5	28.5	23.5	23.0	23.0	---	---	---
26	28.0	27.5	27.5	29.5	28.0	29.0	24.0	23.0	23.5	---	---	---
27	29.5	27.5	28.5	28.0	27.5	27.5	24.5	24.0	24.0	---	---	---
28	29.5	27.5	28.5	28.0	27.0	27.5	25.5	24.0	24.5	---	---	---
29	28.0	27.0	27.5	27.5	27.0	27.0	25.5	25.0	25.0	---	---	---
30	27.5	27.0	27.5	27.5	27.0	27.5	25.5	25.0	25.5	---	---	---
31	---	---	---	28.5	27.5	28.0	---	---	---	---	---	---
MONTH	29.5	16.5	22.6	30.0	22.5	27.7	28.0	23.0	25.8	---	---	---

MONONGAHELA RIVER BASIN

LAKES AND RESERVOIRS IN MONONGAHELA RIVER BASIN

03076000 DEEP CREEK RESERVOIR.--Lat 39°30'34", long 79°23'28", Garrett County, Md., Hydrologic Unit 05020006, on Deep Creek at dam, 1.8 mi upstream from mouth, and 7 mi north of Oakland, Md. DRAINAGE AREA, 64.7 mi². PERIOD OF RECORD, July 1925 to current year. Prior to October 1950, monthend contents published in WSP 1305, and October 1950 to September 1955, monthend contents published in WSP 1385. GAGE, water-stage recorder at right end of spillway. Datum of gage is at sea level (unadjusted).

Reservoir is formed by an earthfill dam completed January 1925. Usable capacity, 92,975 acre-ft between elevations 2,425 ft (top of intake to outlet tunnel) and 2,462 ft (crest of spillway). Dead storage, 13,085 acre-ft. Figures given herein represent usable contents. Reservoir is used for hydroelectric power. Records furnished by Pennsylvania Electric Co.

EXTREMES FOR PERIOD OF RECORD.--July 1925 to Sept. 1995; Maximum contents, 93,260 acre-ft, July 24, 25, 1949 (elevation, 2,462.075 ft); minimum observed, 11,760 acre-ft, Sept. 30, 1925 (elevation, 2,433.45 ft).

EXTREMES FOR CURRENT YEAR.--Records not furnished to determine extremes for current year.

03077000 YOUGHIOGHENY RIVER LAKE.--Lat 39°47'56", long 79°22'06", Somerset County, Hydrologic Unit 05020006, remote control recorder at control house at dam, 1.2 mi upstream from Confluence, Pa., since June 1951. Water-stage recorder and transmitter at lat 39°45'21", long 79°24'00", at bridge on U.S. Highway 40, 500 ft upstream from Stuck Hollow Run, 0.6 mi upstream from Tub Run, on Youghiogheny River, 7.5 mi upstream from Youghiogheny River Dam, Pa. DRAINAGE AREA, 434 mi². PERIOD OF RECORD, October 1943 to current year. Prior to October 1970 published as "Youghiogheny River Reservoir." GAGE, water-stage recorder. Datum of gage is at sea level. Prior to Mar. 9, 1948, non-recording gage at dam at same datum. Mar. 9, 1948 to present, water-stage recorder also at transmitter site at datum.

Lake is formed by a rock-faced earthfill dam with uncontrolled side channel spillway. Storage began during construction and lake acted as a retention basin from December 1942 to December 1947. Dam became fully operational in January 1948. Lake first reached minimum pool elevation, 1,344.0 ft (capacity, 5,230 acre-ft) in December 1942. Capacity 254,000 acre-ft between elevations 1,319.50 ft (invert at intake to outlet tunnel) and 1,470.00 ft (full pool). Winter low-water pool elevation is 1,419.0 ft, capacity, 103,000 acre-ft. Summer pool normally occurs during period Mar. 15 to Apr. 15. Depletion of low-water storage for Youghiogheny River flow augmentation occurs normally during the period July through November. Figures given herein represent total contents. Lake is used for flood control, for low-flow augmentation of Youghiogheny River and downstream rivers, and for recreation. Records furnished by U.S. Army Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 222,610 acre-ft, May 16, 1967 (elevation, 1,460.95); minimum (after dam became fully operational), 3,700 acre-ft, Oct. 31, 1946 (elevation 1,340.30 ft).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 165,600 acre-ft, May 27 (elevation, 1,442.84 ft); minimum 64,190 acre-ft, Jan. 23 (elevation, 1,399.85).

MONTHEND ELEVATION IN FEET ABOVE SEA LEVEL, AND CONTENTS AT 2400 HRS, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

Date	Elevation (feet)	Contents (acre- feet)	Change in contents (equivalent in ft ³ /s)	Elevation (feet)	Contents (acre- feet)	Change in contents (equivalent in ft ³ /s)
<u>03076000 Deep Creek Reservoir</u>				<u>03077000 Youghiogheny River Lake</u>		
Sept. 30	2,458.7	80,760	-	1,435.89	145,800	-
Oct. 31	2,457.9	77,860	- 47	1,423.34	113,270	-529
Nov. 30	2,457.3	75,720	- 36	1,413.39	90,600	-381
Dec. 31	2,456.3	72,190	- 57	1,413.09	89,960	- 10
CAL YR 1996	-	-	- 1.9	-	-	+ 11
Jan. 31	2,456.8	73,950	+ 29	1,406.63	76,800	-214
Feb. 28	2,457.9	77,860	+ 70	1,423.20	112,930	+651
Mar. 31	2,459.0	81,860	+ 65	1,440.20	157,950	+732
Apr. 30	2,459.1	82,230	+ 6.2	1,440.25	158,080	+ 2.2
May 31	2,460.8	88,510	+102	1,439.68	156,450	- 27
June 30	2,460.6	87,770	- 12	1,438.94	154,340	- 35
July 31	2,459.2	82,600	- 84	1,429.94	129,830	-399
Aug. 31	2,458.7	80,760	- 30	1,423.09	112,670	-279
Sept. 30	2,457.5	76,420	- 73	1,407.16	77,840	-585
WTR YR 1997	-	-	- 6.0	-	-	- 94

CHARTIERS CREEK BASIN

03085500 CHARTIERS CREEK AT CARNEGIE, PA

LOCATION.--Lat 40°24'02", long 80°05'48", Allegheny County, Hydrologic Unit 05030101, on left bank 100 ft downstream from Hammond Street bridge, 0.3 mi downstream from Robinson Run, 0.8 mi upstream from Campbells Run, and 8.9 mi upstream from mouth.

DRAINAGE AREA.--257 mi².

PERIOD OF RECORD.--October 1919 to September 1933, October 1940 to current year. Published as "at Crafton" October 1971 to September 1975. Monthly discharge only for some periods, published in WSP 1305. June 1915 to September 1919 (gage heights and discharge measurements only) in reports of Water Supply Commission of Pennsylvania.

GAGE.--Water-stage recorder and concrete weir control. Datum of gage is 755.45 ft above sea level. Prior to Dec. 15, 1931, nonrecording gage at site 0.5 mi downstream at different datum. Jan. 8, 1932 to Sept. 30, 1933, nonrecording gage at site 1.0 mi downstream at different datum. Nov. 20, 1940 to Aug. 18, 1967, water-stage recorder at site 400 ft upstream at datum 1.00 ft higher. Oct. 1, 1971 to Sept. 30, 1975, nonrecording gage at site 4.6 mi downstream, at datum 725.99 ft above sea level.

REMARKS.--Records good except for estimated daily discharges, which are fair. Some regulations at low flow by mine drainage, reservoirs, and industrial usage above station. Several measurements of water temperature were made during the year. U.S. Army Corps of Engineers satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Sept. 2, 1912 reached a discharge of 20,000 ft³/s, from U.S. Army Corps of Engineers.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than a base discharge of 2,500 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar. 26	1530	2,660	4.98	May 26	0400	*8,350	*9.85

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	129	104	621	270	259	279	393	171	505	203	64	80
2	111	103	876	253	232	1210	355	166	489	178	65	78
3	101	103	459	247	216	1290	330	188	417	138	72	92
4	96	100	359	259	302	1230	313	233	371	124	68	85
5	91	97	301	401	829	828	296	184	321	111	68	76
6	87	100	320	507	562	872	286	183	284	106	61	73
7	87	116	290	342	416	692	265	195	254	101	59	72
8	84	1370	280	288	374	573	237	183	234	99	57	72
9	97	1090	250	272	e340	491	233	448	217	114	58	88
10	101	602	230	312	e300	610	220	337	204	117	57	330
11	89	400	346	246	e280	542	210	279	196	100	58	372
12	80	303	955	214	e260	452	292	236	200	97	59	156
13	78	243	1250	e200	e240	404	349	223	800	92	91	114
14	78	214	695	e180	e230	632	242	208	345	92	76	99
15	78	190	490	e160	e210	625	212	219	237	88	153	92
16	74	175	414	e190	e200	467	200	206	213	88	196	86
17	73	167	383	e180	e200	419	197	190	684	85	416	84
18	182	221	338	e165	e190	402	197	186	476	140	843	83
19	439	211	303	e150	e400	461	189	511	559	195	229	80
20	812	181	273	e140	597	409	180	1410	303	96	364	137
21	541	167	230	e135	483	382	174	553	228	80	410	107
22	485	159	237	e130	433	363	173	353	210	87	181	84
23	297	151	233	e210	362	333	176	281	191	93	133	82
24	217	145	285	210	328	329	175	240	177	92	112	81
25	172	161	326	420	298	305	183	3160	165	84	105	79
26	149	318	243	278	282	1700	170	4610	175	80	98	80
27	138	276	231	212	308	980	164	973	198	77	99	74
28	159	214	246	637	308	631	253	638	148	79	134	101
29	145	192	272	494	---	544	216	516	132	86	103	318
30	126	221	422	319	---	473	178	470	126	76	89	134
31	109	---	312	285	---	446	---	461	---	69	84	---
TOTAL	5505	8094	12470	8306	9439	19374	7058	18211	9059	3267	4662	3489
MEAN	178	270	402	268	337	625	235	587	302	105	150	116
MAX	812	1370	1250	637	829	1700	393	4610	800	203	843	372
MIN	73	97	230	130	190	279	164	166	126	69	57	72
CFSM	.69	1.05	1.57	1.04	1.31	2.43	.92	2.29	1.17	.41	.59	.45
IN.	.80	1.17	1.80	1.20	1.37	2.80	1.02	2.64	1.31	.47	.67	.51

e Estimated.

CHARTIERS CREEK BASIN

03085500 CHARTIERS CREEK AT CARNEGIE, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1920 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	117	199	293	355	461	586	473	344	230	174	142	129
MAX	393	1401	1003	986	1255	1361	999	887	694	951	960	757
(WY)	1980	1986	1951	1924	1926	1945	1961	1924	1980	1928	1980	1926
MIN	31.3	35.5	36.5	37.8	80.9	101	154	92.7	46.5	30.0	28.4	24.1
(WY)	1933	1931	1931	1931	1964	1969	1925	1926	1926	1926	1930	1927

SUMMARY STATISTICS

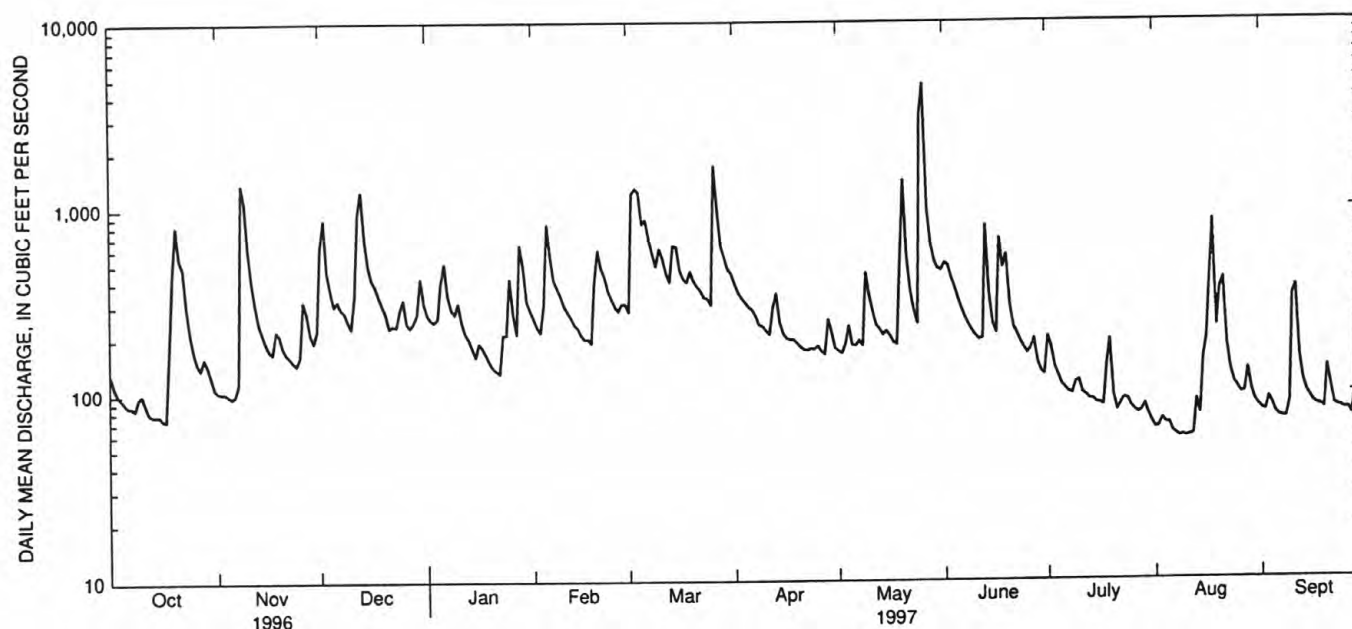
FOR 1996 CALENDAR YEAR

FOR 1997 WATER YEAR

WATER YEARS 1920 - 1997

ANNUAL TOTAL	141841	108934	
ANNUAL MEAN	388	298	292
HIGHEST ANNUAL MEAN			527
LOWEST ANNUAL MEAN			132
HIGHEST DAILY MEAN	e7050	Jan 19	4610
LOWEST DAILY MEAN	e62	Jan 16	57
ANNUAL SEVEN-DAY MINIMUM	a68	Jan 10	58
INSTANTANEOUS PEAK FLOW			8350
INSTANTANEOUS PEAK STAGE			9.85
INSTANTANEOUS LOW FLOW			53
ANNUAL RUNOFF (CFSM)	1.51	1.16	1.14
ANNUAL RUNOFF (INCHES)	20.53	15.77	15.42
10 PERCENT EXCEEDS	756	548	626
50 PERCENT EXCEEDS	251	213	161
90 PERCENT EXCEEDS	91	82	55

- a Computed using estimated discharges.
b Site and datum then in use.
c Minimum observed.
d Also at times in September 1932.
e Estimated.



October 1, 1996 to September 30, 1997

03086000 OHIO RIVER AT SEWICKLEY, PA

LOCATION.--Lat 40°32'57", long 80°12'21", Allegheny County, Hydrologic Unit 05030101, near left bank 50 ft upstream from Dashields Dam, 1.0 mi downstream from Narrows Run, 1.0 mi northwest of Sewickley, and 13.3 mi downstream from confluence of Allegheny and Monongahela Rivers.

DRAINAGE AREA.--19,500 mi², approximately.

PERIOD OF RECORD.--October 1933 to current year.

REVISED RECORDS.--WSP 1305: 1938-40 (adjusted monthly runoff). WSP 1435: 1934.

GAGE.--Water-stage recorder and fixed-crest concrete dam control. Datum of gage is 680.00 ft above sea level (U.S. Army Corps of Engineers bench mark). Prior to Nov. 22, 1933, nonrecording gage, Nov. 22, 1933 to May 4, 1981, water-stage recorder at site 1.5 mi upstream, Nov. 14, 1988 to July 12, 1990, nonrecording gage, and July 13, 1990 to June 13, 1991, water-stage recorder at present site at datum 10.41 ft higher.

REMARKS.--Records good except for estimated daily discharges, which are fair. Some regulation by locks, and by many reservoirs above station. Combined capacity of reservoirs and lakes, excluding that of Chautauqua Lake, but including Lake Lynn, Deep Creek Reservoir, and 15 smaller reservoirs, 2,773,000 acre-ft. Several measurements of water temperature were made during the year. Satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	54400	44800	73900	48900	47000	79300	54500	31200	43000	17300	6900	8310
2	48600	40500	118000	44600	40200	103000	53200	27600	41800	16800	6940	8410
3	43300	37700	118000	39900	36000	129000	45900	27800	50500	20500	6220	8150
4	39300	33400	93600	41500	40800	130000	42000	27100	62500	15600	6380	7170
5	33800	32600	94500	40900	56800	110000	40500	28300	63000	13800	5880	7010
6	29400	30600	86600	39100	75700	109000	35700	28000	56400	12400	7880	6580
7	25200	32000	78000	45900	68300	120000	30400	31200	46800	9380	7520	7560
8	22000	54100	65200	38800	65300	109000	29300	33100	38900	9550	6380	7080
9	19100	121000	57500	37500	57700	107000	28000	31900	33200	8820	7400	8480
10	17300	125000	55500	36600	45500	94000	22800	e34000	33000	8640	5600	10100
11	18800	103000	51200	35200	44400	99000	19900	e34000	29200	10800	6320	8550
12	17700	99900	72400	26600	37400	95500	20400	e34000	25100	13200	4820	13600
13	17800	95900	81700	20900	34400	86100	24000	e33000	33200	14800	8790	9360
14	17800	86500	86200	20400	31800	e87000	34900	e32000	31500	14300	10200	9000
15	15000	78800	81800	18700	32200	e100000	33600	e30000	27500	12000	9510	8130
16	14700	67200	65800	20300	33200	e84000	28300	e29000	21000	9170	10400	9230
17	13200	56800	63300	22400	27900	e70000	26600	e28000	25100	8000	14900	8420
18	15100	49700	62700	16100	28600	66600	27500	28100	21500	9690	37300	7930
19	26400	48300	55900	14100	31000	e68000	24700	34500	25800	8740	27900	6940
20	68300	48000	53000	15400	43200	e63000	23700	52700	25600	6870	21700	9500
21	92800	48700	43100	20700	66800	e59000	21100	68200	23600	6320	20300	8970
22	87300	43100	39700	19400	72700	e58000	23000	60300	23100	7470	24100	9270
23	97200	39100	34400	22800	88700	e57000	22000	52700	19300	7640	17900	7850
24	89900	34700	35300	31600	79300	e55000	20800	47200	15900	7880	13100	9620
25	79900	32200	45300	43200	72100	49900	23100	74500	15600	9480	10800	8100
26	69500	39900	56900	47200	65500	57500	24000	114000	15100	10700	11500	6920
27	59100	67900	52000	52900	61200	e84000	21500	89400	24100	8330	10500	7280
28	53400	68200	50600	58300	82800	e74000	22200	77600	26600	7560	10000	7730
29	49900	68500	48900	65400	---	67200	30700	76000	23100	7610	12000	17300
30	49600	63800	51600	58700	---	59800	34200	61400	18900	8190	9250	29900
31	45700	---	53300	53000	---	55300	---	50800	---	9620	7410	---
TOTAL	1331500	1791900	2025900	1097000	1466500	2586200	888500	1407600	939900	331160	365800	282450
MEAN	42950	59730	65350	35390	52380	83430	29620	45410	31330	10680	11800	9415
MAX	97200	125000	118000	65400	88700	130000	54500	114000	63000	20500	37300	29900
MIN	13200	30600	34400	14100	27900	49900	19900	27100	15100	6320	4820	6580
CFSM	2.20	3.06	3.35	1.81	2.69	4.28	1.52	2.33	1.61	.55	.61	.48
IN.	2.54	3.42	3.86	2.09	2.80	4.93	1.69	2.69	1.79	.63	.70	.54

e Estimated.

OHIO RIVER MAIN STEM

03086000 OHIO RIVER AT SEWICKLEY, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1934 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	15430	26150	40700	44980	49770	66370	56280	38350	24440	16010	13240	11910
MAX	51010	83490	88890	132000	91830	147900	124500	90380	70490	50770	48180	39450
(WY)	1955	1986	1973	1937	1939	1936	1940	1996	1989	1972	1956	1996
MIN	3073	3991	6705	10470	11610	18670	16790	9593	5001	3892	3565	3081
(WY)	1964	1954	1961	1977	1934	1969	1946	1934	1934	1966	1957	1946

SUMMARY STATISTICS

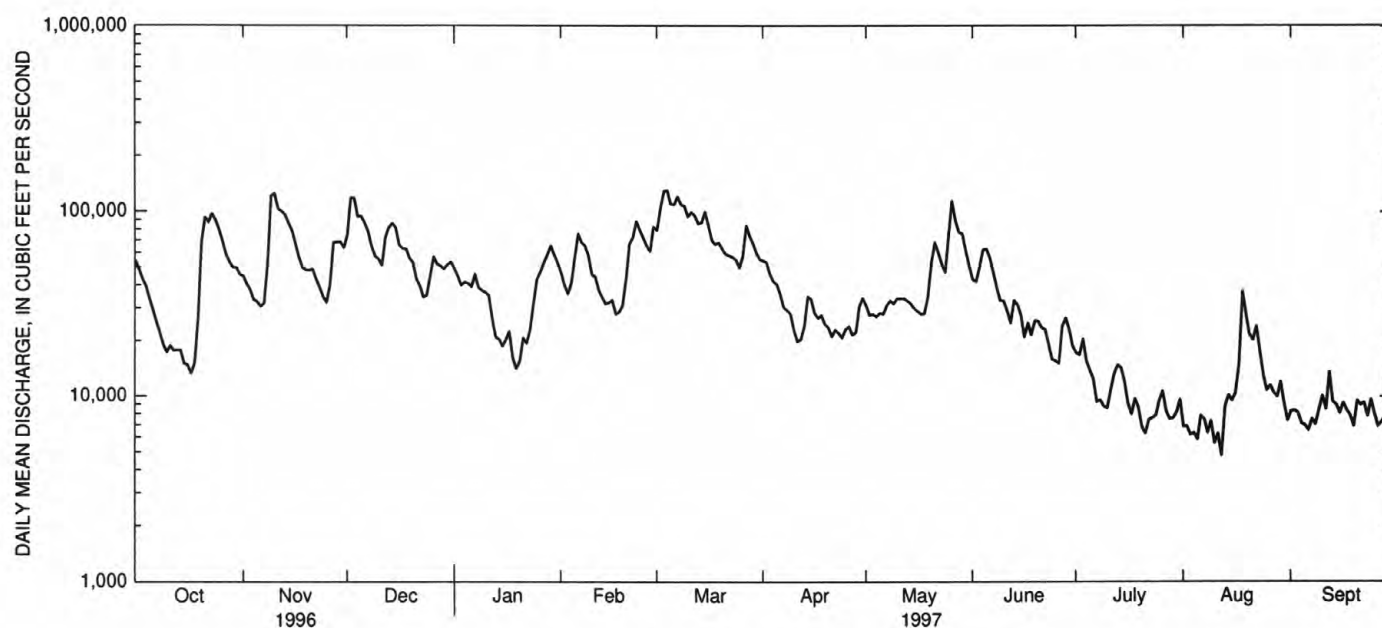
FOR 1996 CALENDAR YEAR

FOR 1997 WATER YEAR

WATER YEARS 1934 - 1997

ANNUAL TOTAL	19742380	14514410	33560
ANNUAL MEAN	53940	39770	46520
HIGHEST ANNUAL MEAN			21110
LOWEST ANNUAL MEAN			465000
HIGHEST DAILY MEAN	a357000	Jan 20	130000
LOWEST DAILY MEAN	7490	Sep 2	4820
ANNUAL SEVEN-DAY MINIMUM	8370	Aug 30	6560
INSTANTANEOUS PEAK FLOW			142000
INSTANTANEOUS PEAK STAGE			19.76
INSTANTANEOUS LOW FLOW			Nov 9
ANNUAL RUNOFF (CFSM)	2.77	2.04	1800
ANNUAL RUNOFF (INCHES)	37.66	27.69	1.72
10 PERCENT EXCEEDS	101000	82200	23.38
50 PERCENT EXCEEDS	47900	33100	74700
90 PERCENT EXCEEDS	15900	8260	22900
			5960

- a From floodmarks in gage house, site and datum then in use.
 e Estimated.



October 1, 1996 to September 30, 1997

BEAVER RIVER BASIN

03101500 SHENANGO RIVER AT PYMATUNING DAM, PA

LOCATION.--Lat 41°29'53", long 80°27'37", Crawford County, Hydrologic Unit 05030102, on left bank 500 ft downstream from Sugar Run, 900 ft downstream from Pymatuning Dam, 1.5 mi northwest of Jamestown, at mile 84.9.

DRAINAGE AREA.--167 mi².

PERIOD OF RECORD.--June 1934 to current year.

REVISED RECORDS.--WSP 823: 1934-36. WSP 1083: 1936 (M), 1937, 1940 (M), 1941-45. WSP 1335: 1940.

GAGE.--Water-stage recorder and concrete dam control. Datum of gage is 970.00 ft above sea level.

REMARKS.--No estimated daily discharges. Records good. Flow regulated since 1933 by Pymatuning Reservoir (station 03100500). Several measurements of water temperature were made during the year. U.S. Army Corps of Engineers satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	260	594	543	633	348	284	379	72	94	155	71	61
2	343	620	578	637	348	346	259	71	232	150	71	61
3	453	618	606	639	348	443	156	86	337	142	71	61
4	505	612	602	635	384	525	131	89	604	139	71	61
5	504	608	608	636	436	504	131	76	616	139	62	61
6	501	606	614	589	400	514	129	99	611	139	58	61
7	501	606	614	638	418	589	128	80	610	102	58	61
8	501	426	612	635	416	616	91	75	608	75	58	61
9	509	415	611	633	412	600	71	76	607	75	58	61
10	558	589	611	632	411	411	71	76	604	73	58	62
11	513	550	538	631	409	523	71	76	493	73	58	66
12	430	592	383	621	407	627	190	75	224	73	58	63
13	252	638	478	617	405	677	118	73	251	73	58	62
14	250	631	622	617	282	365	87	71	286	73	58	61
15	250	617	614	617	213	293	81	73	261	73	58	61
16	250	614	594	616	186	605	78	73	113	71	61	61
17	250	603	455	614	173	599	80	73	115	71	67	61
18	288	542	626	537	177	627	79	71	115	71	63	60
19	376	626	613	498	211	639	75	87	115	71	62	59
20	331	613	634	498	210	637	74	84	115	71	61	73
21	289	609	646	343	277	617	73	75	113	71	61	66
22	284	605	646	227	346	515	73	81	113	71	61	62
23	281	605	610	226	335	674	73	85	113	71	62	61
24	407	605	555	234	333	673	74	83	113	71	62	61
25	500	578	624	322	382	589	74	100	108	71	62	61
26	521	476	644	265	411	572	73	98	84	71	61	61
27	517	589	641	258	437	672	71	89	145	71	61	61
28	517	624	643	373	464	578	78	87	142	71	61	61
29	517	618	644	354	---	474	76	85	141	71	61	61
30	624	622	640	349	---	453	74	85	139	71	61	61
31	555	---	636	348	---	465	---	86	---	71	61	---
TOTAL	12837	17651	18485	15472	9579	16706	3218	2510	8222	2690	1914	1854
MEAN	414	588	596	499	342	539	107	81.0	274	86.8	61.7	61.8
MAX	624	638	646	639	464	677	379	100	616	155	71	73
MIN	250	415	383	226	173	284	71	71	84	71	58	59
CFSM	2.48	3.52	3.57	2.99	2.05	3.23	.64	.48	1.64	.52	.37	.37
IN.	2.86	3.93	4.12	3.45	2.13	3.72	.72	.56	1.83	.60	.43	.41

BEAVER RIVER BASIN

03101500 SHENANGO RIVER AT PYMATUNING DAM, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1935 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	174	184	300	277	283	265	200	160	162	153	164	188
MAX	601	588	753	728	783	682	608	548	773	408	587	558
(WY)	1982	1997	1987	1943	1952	1956	1950	1956	1947	1987	1956	1956
MIN	17.3	6.27	3.79	10.4	13.2	17.0	2.78	5.78	5.37	20.0	31.6	40.2
(WY)	1935	1935	1945	1936	1935	1992	1935	1935	1935	1968	1935	1935

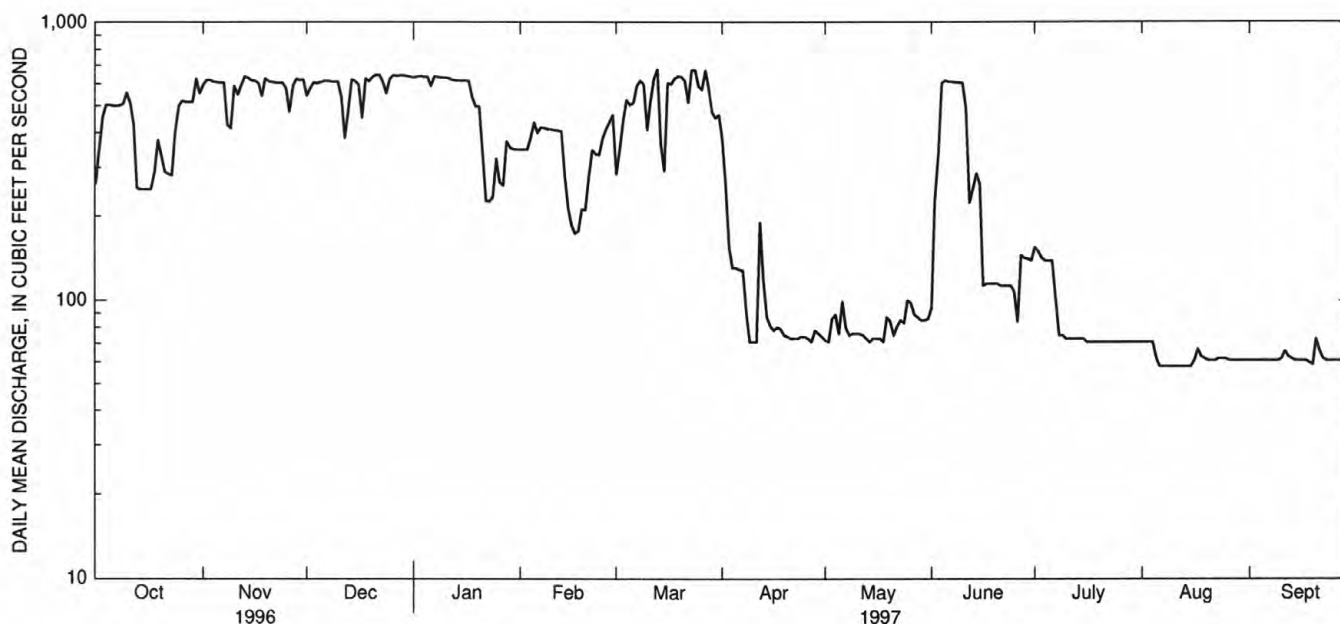
SUMMARY STATISTICS

FOR 1996 CALENDAR YEAR

FOR 1997 WATER YEAR

WATER YEARS 1935 - 1997

ANNUAL TOTAL	129319	111138	209
ANNUAL MEAN	353	304	330
HIGHEST ANNUAL MEAN			16.6
LOWEST ANNUAL MEAN			1956
HIGHEST DAILY MEAN	729	May 14	677
LOWEST DAILY MEAN	53	Apr 10	58
ANNUAL SEVEN-DAY MINIMUM	58	Apr 9	58
INSTANTANEOUS PEAK FLOW			804
INSTANTANEOUS PEAK STAGE			6.63
ANNUAL RUNOFF (CFSM)	2.12		1.82
ANNUAL RUNOFF (INCHES)	28.81		24.76
10 PERCENT EXCEEDS	615		621
50 PERCENT EXCEEDS	398		251
90 PERCENT EXCEEDS	86		61



October 1, 1996 to September 30, 1997

BEAVER RIVER BASIN

03102500 LITTLE SHENANGO RIVER AT GREENVILLE, PA

LOCATION.--Lat 41°25'19", long 80°22'35", Mercer County, Hydrologic Unit 05030102, on left bank 1,700 ft downstream from Williamson Crossing bridge, 1 mi northeast of Greenville, and 2.0 mi upstream from mouth.

DRAINAGE AREA.--104 mi².

PERIOD OF RECORD.--October 1913 to current year. Monthly discharge only for some periods, published in WSP 1305.

REVISED RECORDS.--WSP 743: Drainage area. WSP 1305: 1914, 1922-23, 1926-29. WSP 1335: 1923 (m).

GAGE.--Water-stage recorder. Datum of gage is 953.46 ft above sea level. Prior to Nov. 4, 1915, nonrecording gage; Nov. 4, 1915, to Sept. 30, 1918, water-stage recorder; Nov. 7, 1919, to Aug. 31, 1923, and Nov. 19, 1925, to June 20, 1934, nonrecording gage at site 1 mi downstream at datum 8.96 ft lower.

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

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
June 3	0500	*2,470	*7.79	No other peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	217	204	632	138	e125	e340	210	e140	170	107	e14	17
2	156	155	773	153	e120	e500	189	e120	689	157	e13	16
3	119	133	319	179	e115	477	159	e180	2110	95	e13	16
4	96	118	241	174	e230	297	140	e300	966	73	e12	15
5	82	105	211	213	e840	264	130	e260	374	62	e12	14
6	63	99	202	313	554	702	122	e305	244	54	e11	13
7	55	99	191	195	284	529	111	e260	184	49	e11	13
8	50	642	172	153	220	337	97	e220	152	e44	e11	13
9	72	1310	160	136	179	295	90	e250	128	e53	e11	12
10	273	1070	150	e115	e140	731	85	e270	108	e65	e11	25
11	162	609	323	e105	e120	690	82	e300	95	e55	e10	70
12	100	374	1270	e95	e105	321	218	e235	267	e42	e10	79
13	81	294	1060	e93	e100	235	736	e210	535	e32	e19	55
14	69	248	522	e90	e95	642	608	e170	250	e27	e17	38
15	60	209	298	e85	e85	1030	272	e230	151	e25	e14	29
16	56	184	242	e83	e80	450	196	196	110	e29	33	25
17	52	180	315	e80	e75	293	216	135	185	e22	113	22
18	100	286	312	e78	e85	247	268	113	166	e18	76	23
19	731	283	231	e76	e150	208	252	339	211	e16	44	21
20	675	215	174	e75	e340	180	199	471	145	e15	28	123
21	357	178	149	e74	e260	161	161	272	98	e19	24	154
22	293	155	140	e73	e200	171	139	190	78	e23	26	61
23	235	139	157	e300	e160	180	129	147	65	e30	35	42
24	218	126	503	e235	e120	154	126	123	58	e36	34	34
25	174	153	384	e380	e105	155	126	196	108	e24	31	30
26	141	599	233	e250	e95	313	112	368	1210	e20	30	27
27	120	453	198	e170	e150	330	97	194	561	e18	25	25
28	112	248	196	e330	e230	220	e240	131	170	e16	23	24
29	113	203	204	e250	---	179	e230	105	107	e15	22	175
30	278	200	175	e180	---	162	e170	105	93	e14	20	173
31	378	---	154	e140	---	187	---	106	---	e14	19	---
TOTAL	5688	9271	10291	5011	5362	10980	5910	6641	9788	1269	772	1384
MEAN	183	309	332	162	192	354	197	214	326	40.9	24.9	46.1
MAX	731	1310	1270	380	840	1030	736	471	2110	157	113	175
MIN	50	99	140	73	75	154	82	105	58	14	10	12
CFSM	1.76	2.97	3.19	1.55	1.84	3.41	1.89	2.06	3.14	.39	.24	.44
IN.	2.03	3.32	3.68	1.79	1.92	3.93	2.11	2.38	3.50	.45	.28	.50

e Estimated.

BEAVER RIVER BASIN

03102500 LITTLE SHENANGO RIVER AT GREENVILLE, PA

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1914 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	60.9	126	178	207	226	301	230	156	93.1	62.0	43.2	42.1
MAX	343	639	521	773	553	659	506	511	395	457	284	316
(WY)	1927	1986	1928	1937	1976	1963	1957	1929	1989	1958	1980	1926
MIN	5.19	6.31	16.8	21.3	36.0	66.5	16.7	21.8	11.9	5.91	5.33	5.90
(WY)	1964	1931	1961	1977	1963	1915	1915	1934	1934	1934	1930	1930

SUMMARY STATISTICS

FOR 1996 CALENDAR YEAR

FOR 1997 WATER YEAR

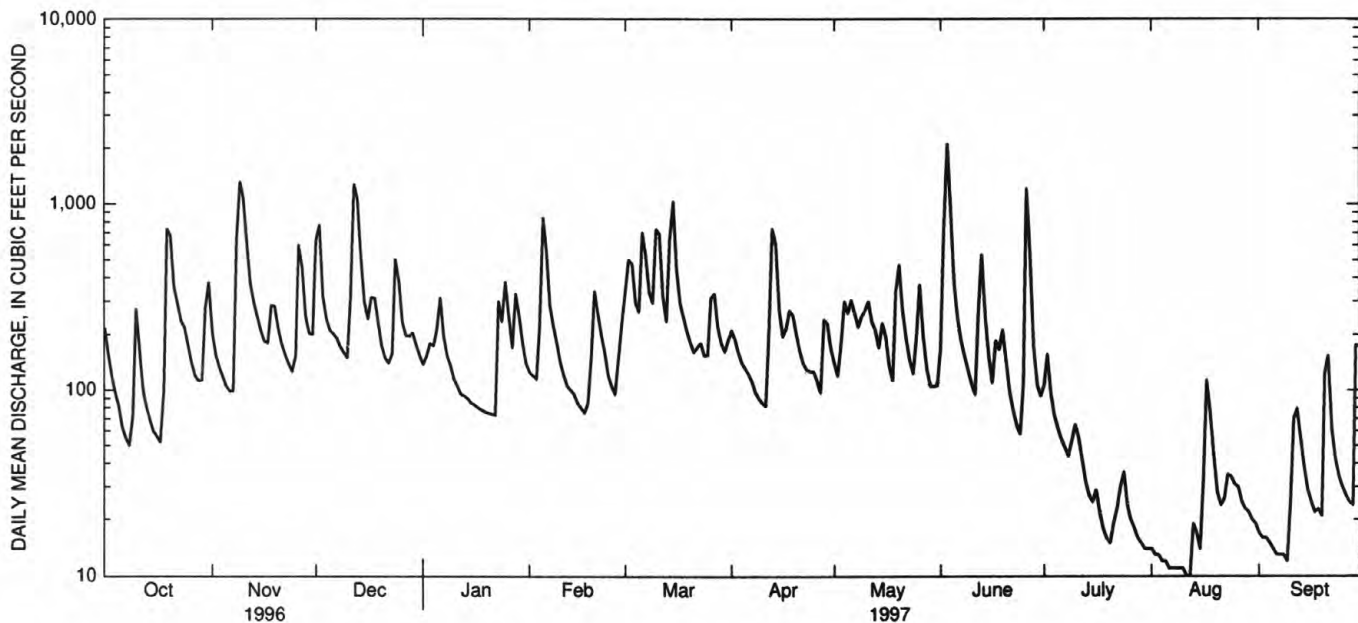
WATER YEARS 1914 - 1997

ANNUAL TOTAL	80304	72367	143
ANNUAL MEAN	219	198	218
HIGHEST ANNUAL MEAN			1956
LOWEST ANNUAL MEAN			65.6
HIGHEST DAILY MEAN	2690	Jan 19	2110
LOWEST DAILY MEAN	16	Sep 4	10
ANNUAL SEVEN-DAY MINIMUM	18	Aug 31	11
INSTANTANEOUS PEAK FLOW			2470
INSTANTANEOUS PEAK STAGE			7.79
INSTANTANEOUS LOW FLOW			Jun 3
ANNUAL RUNOFF (CFSM)	2.11	1.91	1.38
ANNUAL RUNOFF (INCHES)	28.72	25.89	18.73
10 PERCENT EXCEEDS	517	379	332
50 PERCENT EXCEEDS	141	150	66
90 PERCENT EXCEEDS	39	21	13

a Computed using estimated discharges.

b From rating curve extended above 3,200 ft³/s on basis of slope-area measurement at gage height 12.26 ft.

e Estimated.



October 1, 1996 to September 30, 1997

BEAVER RIVER BASIN

03102850 SHENANGO RIVER NEAR TRANSFER, PA

LOCATION.--Lat 41°21'13", long 80°23'53", Mercer County, Hydrologic Unit 05030102, on left bank at downstream side of covered wooden bridge, 200 ft downstream from highway bridge, 0.6 mi downstream from Big Run, 2.5 mi north-east of Transfer, at mile 71.8.

DRAINAGE AREA.--337 mi².

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

REVISED RECORDS.--WDR PA-71-3: 1966, 1967.

GAGE.--Water-stage recorder. Datum of gage is 913.94 ft above sea level (Pennsylvania Department of Transportation bench mark).

REMARKS.--Records good except for estimated daily discharges, which are fair. Flow regulated since 1933 by Pymatuning Reservoir (station 03100500) 13 mi upstream and by mills above station. Several measurements of water temperature were made during the year. U.S. Army Corps of Engineers satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	501	874	1950	852	628	971	754	241	421	345	94	91
2	558	836	1670	891	629	1270	570	225	2410	428	96	88
3	564	797	1110	924	685	1120	434	461	3410	313	95	88
4	645	770	968	907	977	1020	352	836	2030	277	95	84
5	627	751	914	1030	2040	1020	340	427	1180	255	91	84
6	608	743	923	1080	1210	1810	333	832	978	238	77	83
7	596	747	904	933	890	1380	319	643	883	219	76	81
8	589	2280	864	870	e700	1170	276	411	831	145	76	81
9	678	2500	841	848	e630	1100	217	445	795	144	76	80
10	1230	2350	825	853	e570	2090	208	434	769	143	74	134
11	797	1500	1500	819	e520	1480	203	389	745	133	74	234
12	676	1160	2820	853	e460	1070	1190	334	983	127	74	196
13	439	1100	2130	955	e420	1040	1970	304	1280	122	83	168
14	408	1010	1440	935	e380	2180	834	271	734	118	79	129
15	389	933	1100	846	e350	1600	497	302	541	115	80	111
16	379	886	1030	801	e330	1230	403	315	346	110	185	104
17	368	889	1100	847	e310	1060	697	284	451	106	329	101
18	541	1080	1180	963	e340	1000	593	256	399	105	229	101
19	1800	1080	1000	963	e550	963	396	663	439	103	144	97
20	1530	931	895	836	e900	915	323	810	336	102	110	364
21	947	859	867	613	864	889	288	502	276	105	102	345
22	805	816	866	522	871	790	272	361	245	110	110	185
23	706	788	917	943	700	938	276	310	224	109	132	142
24	734	769	1520	672	616	902	283	277	213	109	124	123
25	745	852	1210	1220	587	930	263	509	271	109	125	113
26	737	1700	1010	913	624	1180	230	713	2390	107	118	108
27	702	1270	949	676	2300	1130	215	403	928	105	104	105
28	699	1010	960	1230	1590	952	372	298	429	104	121	105
29	694	914	970	943	---	779	366	260	328	101	103	310
30	1300	938	910	705	---	717	274	260	317	98	97	352
31	1190	---	877	643	---	843	---	267	---	96	92	---
TOTAL	23182	33133	36220	27086	21671	35539	13748	13043	25582	4801	3465	4387
MEAN	748	1104	1168	874	774	1146	458	421	853	155	112	146
MAX	1800	2500	2820	1230	2300	2180	1970	836	3410	428	329	364
MIN	368	743	825	522	310	717	203	225	213	96	74	80
CFSM	2.22	3.28	3.47	2.59	2.30	3.40	1.36	1.25	2.53	.46	.33	.43
IN.	2.56	3.66	4.00	2.99	2.39	3.92	1.52	1.44	2.82	.53	.38	.48

e Estimated.

BEAVER RIVER BASIN

03102850 SHENANGO RIVER NEAR TRANSFER, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	308	562	849	666	687	693	551	426	338	259	208	264
MAX	1034	1627	1343	1242	1319	1212	1273	1119	1080	873	1005	717
(WY)	1991	1986	1991	1993	1990	1985	1994	1984	1989	1972	1980	1987
MIN	57.9	114	236	151	121	172	207	82.9	86.2	46.5	81.6	107
(WY)	1983	1992	1992	1977	1987	1969	1968	1987	1967	1968	1982	1994

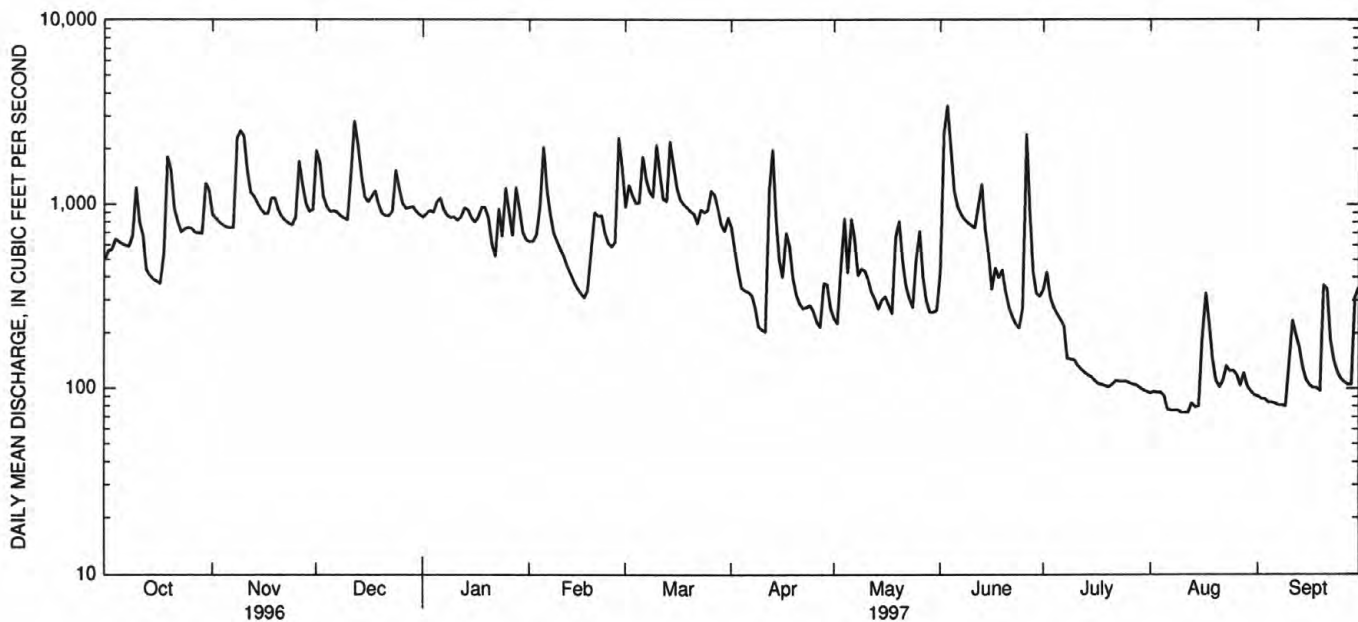
SUMMARY STATISTICS

FOR 1996 CALENDAR YEAR

FOR 1997 WATER YEAR

WATER YEARS 1966 - 1997

ANNUAL TOTAL	263939	241857	
ANNUAL MEAN	721	663	483
HIGHEST ANNUAL MEAN			663 1997
LOWEST ANNUAL MEAN			290 1992
HIGHEST DAILY MEAN	4510 Jan 19	3410 Jun 3	5120 Nov 5 1985
LOWEST DAILY MEAN	89 Jul 13	74 Aug 10-12	33 Jul 21 1968
ANNUAL SEVEN-DAY MINIMUM	95 Jul 7	75 Aug 6	39 Jul 17,22 1968
INSTANTANEOUS PEAK FLOW		4560 Jun 2	5390 Nov 5 1985
INSTANTANEOUS PEAK STAGE		8.94 Jun 2	10.47 Nov 5 1985
INSTANTANEOUS LOW FLOW			33 Jul 20-22 1968
ANNUAL RUNOFF (CFSM)	2.14	1.97	1.43
ANNUAL RUNOFF (INCHES)	29.14	26.70	19.49
10 PERCENT EXCEEDS	1380	1210	1020
50 PERCENT EXCEEDS	660	616	300
90 PERCENT EXCEEDS	133	104	102



October 1, 1996 to September 30, 1997

BEAVER RIVER BASIN

03105500 BEAVER RIVER AT WAMPUM, PA

LOCATION.--Lat 40°53'19", long 80°20'14", Lawrence County, Hydrologic Unit 05030104, on right bank at downstream side of bridge on State Highway 288 at Wampum, 2.9 mi upstream from Connoquenessing Creek, at mile 15.4.

DRAINAGE AREA.--2,235 mi².

PERIOD OF RECORD.--July 1914 to September 1918, August 1932 to current year. Monthly discharge only for some periods, published in WSP 1305. Published as "at Newport" 1914-18.

REVISED RECORDS.--WSP 728: Drainage area. WSP 1385: 1933-40, 1946, 1951-52. WSP 1725: 1960 (adjusted runoff). WDR PA-85-3: 1984 (M).

GAGE.--Water-stage recorder. Datum of gage is 736.24 ft above sea level (Penn Central Railroad bench mark). Prior to Sept. 20, 1914, nonrecording gage at site 500 ft downstream at datum 0.76 ft lower. Oct. 1, 1914 to Sept. 30, 1918, nonrecording gage at site 1 mi upstream at datum 0.84 ft higher. Aug. 26, 1932 to Nov. 16, 1938, nonrecording gage at present site and datum. Since 1932 an auxiliary gage 10 mi downstream at Beaver Falls (station 03107500) is used during periods of backwater from Connoquenessing Creek.

REMARKS.--No estimated daily discharges. Records good. Flow regulated since 1942 by Berlin Lake, since 1916 by Milton Reservoir, since 1966 by Michael J. Kirwan Reservoir, since 1943 by Mosquito Creek Lake, since 1929 by Meander Creek Reservoir, since 1933 by Pymatuning Reservoir, and since 1967 by Shenango River Lake 40 mi upstream. Several measurements of water temperature were made during the year. U.S. Army Corps of Engineers satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since 1912, 29.9 ft, Mar. 26, 1913, from floodmark, discharge, about 87,000 ft³/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3750	4250	8740	4700	4090	6680	3000	1950	4510	1860	810	846
2	3880	3600	9920	4040	3990	7160	2630	1790	12300	2260	810	834
3	3850	3040	7420	3860	4060	8020	2040	1910	16900	1780	810	808
4	3680	2880	6510	3320	4430	6170	1890	2790	9030	1540	830	775
5	3380	3260	6230	3810	8020	6180	1780	2820	7060	1470	835	755
6	2730	2890	6060	4640	7700	15000	1730	2980	6380	1440	808	744
7	2620	2710	5960	4320	6750	10600	1550	3120	6190	1200	789	734
8	2170	7030	5630	3890	5970	7710	1420	3300	6030	1120	788	730
9	2070	10500	4720	3630	5550	6570	1190	3360	5880	1180	782	750
10	2670	9500	4140	3470	4630	12200	1100	3380	5640	1220	779	1190
11	2060	7490	5450	2760	4340	11100	1050	3270	5200	1100	786	1990
12	2260	7090	18500	2290	3620	8190	2830	2660	4910	1070	807	1630
13	2200	6700	18800	1840	2670	6890	12200	2110	6090	1030	957	1160
14	2080	6320	11200	1840	2490	11000	7070	1850	5220	1010	895	947
15	1560	5940	7870	1700	2360	12000	4410	1770	4560	969	879	831
16	1210	5660	7220	1920	2210	8010	4330	1730	4240	938	1050	774
17	1150	5150	7900	1810	2040	5910	4900	1600	4690	926	3510	730
18	1300	5000	9540	1570	2100	6170	5670	1510	4470	904	2130	750
19	4600	5170	8820	1550	3540	6220	5180	2560	6260	921	1450	727
20	6690	4790	7490	1620	6240	6110	4460	3990	4100	903	1070	2660
21	5690	4320	6180	1660	5950	5120	3260	3690	3340	902	999	2350
22	5350	4030	5880	1820	5190	4750	2510	3380	2780	904	914	1500
23	5010	3680	5360	2740	4740	4390	2070	3230	2290	903	950	1080
24	5220	3450	7050	2800	4630	3650	1900	3010	1870	896	963	908
25	4980	3500	7690	4200	4170	2990	1800	4280	1240	896	1070	811
26	4590	7960	6580	4080	3590	3980	1610	7420	2320	880	1130	841
27	4310	8450	5710	3830	6370	4000	1450	4880	2690	861	948	787
28	4390	6680	5470	6490	8140	3270	2230	3530	2910	858	847	758
29	4370	5680	5360	5930	---	2830	2690	3470	2610	851	806	2090
30	4540	5380	5230	5070	---	2670	2270	3700	2110	831	782	1440
31	4690	---	4980	4590	---	3010	---	3270	---	818	786	---
TOTAL	109050	162100	233610	101790	129580	208550	92220	94310	153820	34441	31770	32930
MEAN	3518	5403	7536	3284	4628	6727	3074	3042	5127	1111	1025	1098
MAX	6690	10500	18800	6490	8140	15000	12200	7420	16900	2260	3510	2660
MIN	1150	2710	4140	1550	2040	2670	1050	1510	1240	818	779	727
CFSM	1.57	2.42	3.37	1.47	2.07	3.01	1.38	1.36	2.29	.50	.46	.49
IN.	1.82	2.70	3.89	1.69	2.16	3.47	1.53	1.57	2.56	.57	.53	.55

BEAVER RIVER BASIN

03105500 BEAVER RIVER AT WAMPUM, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1915 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1281	1838	2861	3401	3926	4985	3846	2657	1982	1494	1267	1205
MAX	5888	7936	7978	13030	8779	9098	9226	8362	8004	5893	4923	4759
(WY)	1991	1986	1991	1937	1915	1916	1994	1996	1989	1958	1956	1990
MIN	168	278	447	534	304	1074	657	288	222	198	156	153
(WY)	1934	1915	1961	1918	1934	1969	1915	1934	1934	1918	1933	1916

SUMMARY STATISTICS

FOR 1996 CALENDAR YEAR

FOR 1997 WATER YEAR

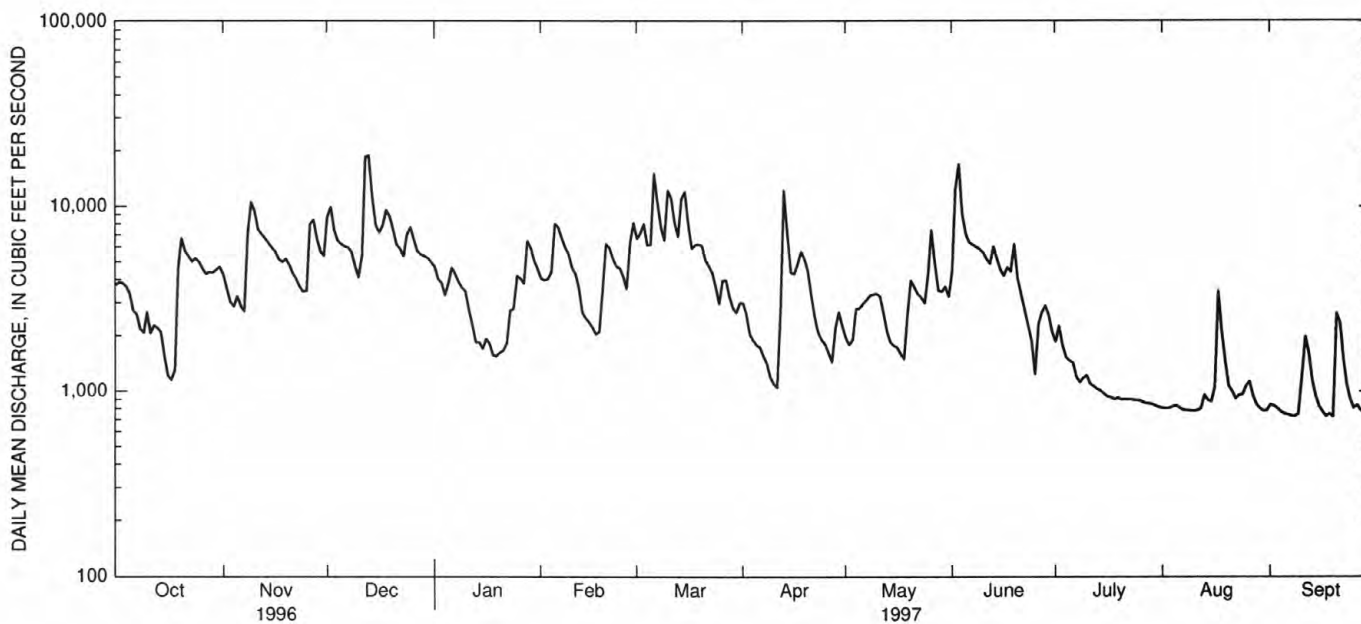
WATER YEARS 1915 - 1997

ANNUAL TOTAL	1636480	1384171	2563
ANNUAL MEAN	4471	3792	3995
HIGHEST ANNUAL MEAN			834
LOWEST ANNUAL MEAN			1956
HIGHEST DAILY MEAN	27200	Jan 19	18800
LOWEST DAILY MEAN	779	Aug 29	727
ANNUAL SEVEN-DAY MINIMUM	809	Aug 29	757
INSTANTANEOUS PEAK FLOW			19800
INSTANTANEOUS PEAK STAGE			12.12
INSTANTANEOUS LOW FLOW			689
ANNUAL RUNOFF (CFSM)	2.00	1.70	1.15
ANNUAL RUNOFF (INCHES)	27.24	23.04	15.58
10 PERCENT EXCEEDS	8320	7180	5850
50 PERCENT EXCEEDS	3720	3270	1430
90 PERCENT EXCEEDS	1160	849	554

a From slope-rating curve extended above 28,000 ft³/s on basis of contracted-opening measurement at gage height 21.44 ft.

b Maximum gage height, 24.86 ft., Jan. 22, 1959 (backwater from Connoquenessing Creek).

c Minimum discharge observed.



October 1, 1996 to September 30, 1997

BEAVER RIVER BASIN

03106000 CONNOQUENESSING CREEK NEAR ZELIENOPLE, PA

LOCATION.--Lat 40°49'01", long 80°14'33", Beaver County, Hydrologic Unit 05030105, on right bank at downstream side of highway bridge at Hazen, 0.3 mi upstream from Brush Creek, 4 mi southeast of Ellwood City, and 6.0 mi west of Zelienople.

DRAINAGE AREA.--356 mi².

PERIOD OF RECORD.--October 1919 to current year. Monthly discharge only for some periods, published in WSP 1305. June 1915 to September 1919 (gage heights and discharge measurements only) in reports of Water Supply Commission of Pennsylvania. Published as "at Hazen" 1915-16, 1929-63, and as "near Hazen" 1917-28.

REVISED RECORDS.--WSP 743: Drainage area. WSP 893: 1937-38, 1939 (M). WSP 1305: 1922-26, 1928. WSP 1335: 1920-21, 1924 (M). WSP 1385: 1952.

GAGE.--Water-stage recorder. Datum of gage is 852.31 ft above sea level. Prior to June 23, 1941, nonrecording gage at same site and datum.

REMARKS.--Records good except for estimated daily discharges, which are fair. Some regulation by mills above station. Several measurements of water temperature were made during the year. Satellite telemeter at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than a base discharge of 5,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 12	0630	5,820	8.54	May 26	0300	*10,400	*12.39
Jan. 28	--	Unknown	Ice jam				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	517	301	2190	423	e550	514	476	356	699	119	35	79
2	372	267	2450	416	e460	1330	404	327	1420	223	33	71
3	286	241	1450	429	e420	1390	373	327	1560	145	31	65
4	226	213	1080	421	e600	1270	360	413	985	110	32	61
5	186	195	840	814	2040	1190	337	319	732	91	34	58
6	161	186	771	1160	1310	3830	324	302	575	81	34	53
7	142	193	702	802	941	2390	297	302	472	72	32	51
8	131	2020	602	646	755	1510	256	260	398	69	28	48
9	127	3050	541	566	640	1060	243	330	334	71	27	46
10	184	2270	495	550	533	1650	229	322	283	72	26	122
11	160	1470	778	440	e440	1280	212	300	240	76	26	348
12	118	1000	4590	350	e380	981	345	273	240	64	26	368
13	101	743	3220	e280	e340	787	857	259	1120	56	259	172
14	95	608	1910	e230	e320	2460	580	238	866	52	307	117
15	89	497	1270	e190	e300	2420	473	225	464	49	95	94
16	87	422	964	e200	e280	1460	420	211	346	48	99	80
17	85	377	823	e190	e260	1040	414	199	724	45	969	71
18	125	436	698	e170	e300	853	387	216	578	44	1340	66
19	1090	483	580	e160	e600	705	341	981	553	41	422	64
20	1530	393	477	e140	1260	602	306	708	409	40	245	362
21	1170	339	365	e150	1010	531	279	497	324	38	334	410
22	940	305	393	e160	949	507	260	403	265	36	214	186
23	758	272	377	e300	734	454	251	332	221	38	167	140
24	647	256	526	e260	602	407	258	285	189	45	139	120
25	511	251	608	e420	499	366	246	4170	165	48	185	101
26	411	1010	446	e570	461	768	205	7550	150	50	271	92
27	344	980	412	e460	650	646	186	2320	150	44	162	85
28	376	737	420	e1450	635	538	514	1230	133	45	132	80
29	542	633	484	1190	---	521	525	831	114	65	112	777
30	401	593	544	847	---	525	399	689	105	57	95	478
31	357	---	458	693	---	540	---	580	---	41	85	---
TOTAL	12269	20741	31464	15077	18269	34525	10757	25755	14814	2075	5996	4865
MEAN	396	691	1015	486	652	1114	359	831	494	66.9	193	162
MAX	1530	3050	4590	1450	2040	3830	857	7550	1560	223	1340	777
MIN	85	186	365	140	260	366	186	199	105	36	26	46
CFSM	1.11	1.94	2.85	1.37	1.83	3.13	1.01	2.33	1.39	.19	.54	.46
IN.	1.28	2.17	3.29	1.58	1.91	3.61	1.12	2.69	1.55	.22	.63	.51

e Estimated.

BEAVER RIVER BASIN

03106000 CONNOQUENESSING CREEK NEAR ZELIENOPLE, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1920 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	165	338	566	654	759	992	765	523	334	206	152	135
MAX	1290	1648	1778	2607	2048	2324	2054	1283	1518	1373	775	1743
(WY)	1955	1986	1928	1937	1956	1945	1940	1983	1989	1928	1980	1926
MIN	11.3	12.3	22.3	16.4	97.7	154	182	62.3	24.4	20.5	11.2	11.4
(WY)	1931	1931	1961	1931	1934	1969	1946	1934	1934	1936	1930	1930

SUMMARY STATISTICS

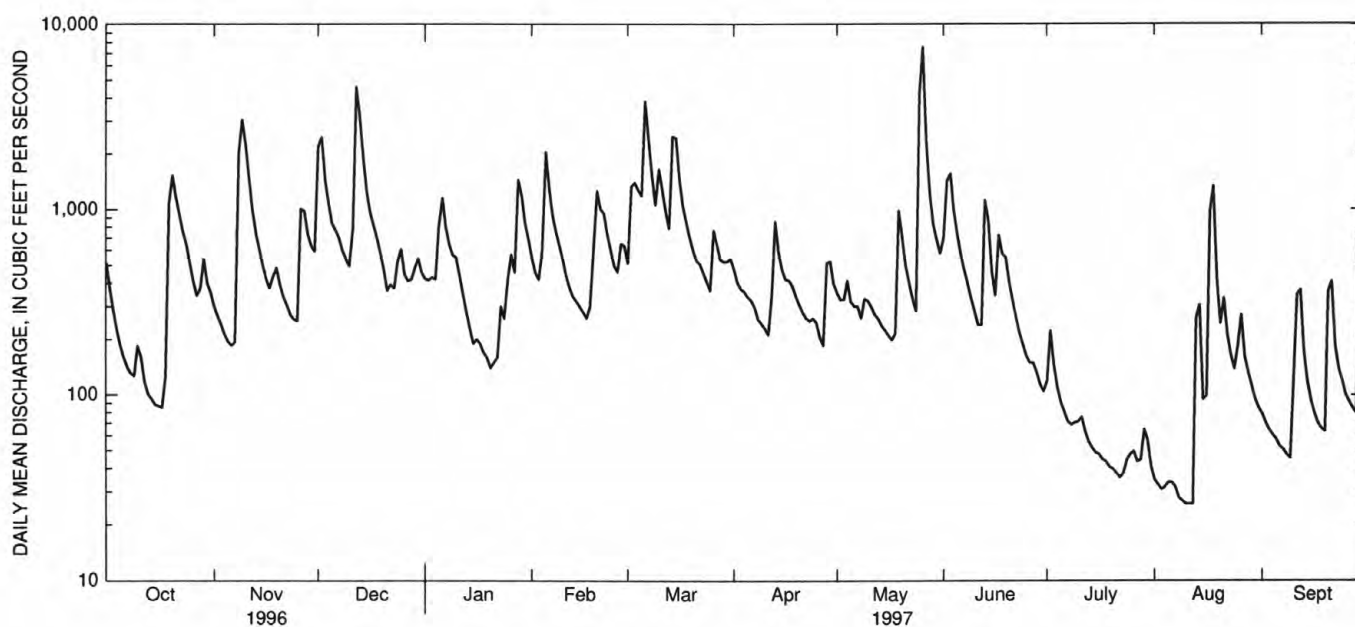
FOR 1996 CALENDAR YEAR

FOR 1997 WATER YEAR

WATER YEARS 1920 - 1997

ANNUAL TOTAL	233759		196607									
ANNUAL MEAN	639		539									
HIGHEST ANNUAL MEAN										464		
LOWEST ANNUAL MEAN										816		1928
HIGHEST DAILY MEAN	e9480	Jan 19				7550	May 26			221		1931
LOWEST DAILY MEAN	35	Sep 5				26	Aug 10-12			16000		1924
ANNUAL SEVEN-DAY MINIMUM	39	Aug 31				28	Aug 6			6.5		1936
INSTANTANEOUS PEAK FLOW						10400	May 26			8.7		1939
INSTANTANEOUS PEAK STAGE						12.39	May 26			23000		1924
INSTANTANEOUS LOW FLOW						26	Aug 10-13			16.66		1924
ANNUAL RUNOFF (CFSM)	1.79					1.51				6.0		1936
ANNUAL RUNOFF (INCHES)	24.43					20.54				1.30		
10 PERCENT EXCEEDS	1420					1180				17.72		
50 PERCENT EXCEEDS	384					356				1100		
90 PERCENT EXCEEDS	89					63				212		
										32		

e Estimated.



October 1, 1996 to September 30, 1997

BEAVER RIVER BASIN

03106300 MUDDY CREEK NEAR PORTERSVILLE, PA

LOCATION.--Lat 40°57'47", long 80°07'31", Butler County, Hydrologic Unit 05030105, on left bank 1,000 ft downstream of Lake Arthur Dam, 0.2 mi north of U.S. Highway 422, and 3 mi north of Portersville.

DRAINAGE AREA.--51.2 mi².

PERIOD OF RECORD.--March 1963 to September 1993, July 1994 to current year.

REVISED RECORDS.--WDR PA-79-3: 1978.

GAGE.--Water-stage recorder. Datum of gage is 1,160.91 ft above sea level (Pennsylvania Department of Environmental Protection bench mark). Prior to Apr. 8, 1963 nonrecording gage at site 2,000 ft downstream at different datum. Apr. 8 to May 1, 1963, nonrecording gage and May 2, 1963 to Sept. 30, 1980, water-stage recorder at site 1,000 ft downstream at datum 5.71 ft lower.

REMARKS.--Records fair. Some regulation from October 1966 to May 1969 and completely regulated thereafter by Lake Arthur (station 03106280) 1,000 ft upstream. Several measurements of water temperature were made during the year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	113	80	153	175	75	166	92	59	139	18	5.9	5.1
2	103	72	182	175	75	133	88	62	170	17	4.9	5.1
3	91	67	192	175	75	132	83	63	201	15	5.4	5.4
4	82	64	187	174	76	131	79	62	195	11	5.6	5.4
5	72	60	185	175	77	39.0	78	61	183	10	5.4	6.7
6	63	57	173	175	77	8.9	71	58	168	9.6	5.9	e5.4
7	54	60	160	175	93	6.9	61	56	153	8.2	5.1	e5.4
8	49	118	147	174	125	6.8	56	58	132	7.3	5.1	e5.4
9	45	187	150	174	125	13	55	55	115	8.2	5.1	e5.4
10	45	215	162	131	125	34	53	55	100	8.9	5.1	e5.4
11	43	210	170	75	124	53	51	56	90	8.2	5.1	5.4
12	39	201	254	75	124	66	66	53	85	7.3	5.4	5.4
13	35	187	282	75	125	76	89	51	105	6.7	5.4	5.4
14	32	170	280	74	125	121	97	49	100	6.4	4.9	4.9
15	31	156	267	74	125	154	97	43	90	5.9	5.4	4.9
16	28	140	244	74	125	170	95	41	82	5.4	5.4	5.4
17	28	126	225	75	124	172	94	40	79	5.2	5.4	5.4
18	37	121	204	75	155	165	88	43	77	5.2	5.4	6.2
19	66	114	202	75	180	156	85	61	74	5.2	5.6	5.4
20	98	112	199	74	183	144	81	64	68	5.2	5.4	5.2
21	111	111	181	74	181	134	78	60	61	5.2	5.4	5.4
22	118	98	163	74	181	125	72	56	53	4.9	5.4	5.4
23	117	93	151	74	181	118	71	53	46	4.9	5.4	5.4
24	110	86	168	74	181	110	67	51	41	5.2	5.4	4.9
25	106	83	178	75	181	102	62	101	36	5.2	5.4	6.2
26	98	102	167	75	181	111	57	168	32	5.2	5.4	5.4
27	91	113	155	75	183	110	57	180	29	5.2	5.1	4.9
28	94	115	147	77	184	106	68	172	26	5.4	5.1	3.8
29	100	113	140	75	---	98	70	157	23	4.7	5.4	6.7
30	92	112	135	75	---	98	68	145	19	4.9	5.4	4.2
31	87	---	155	75	---	93	---	136	---	5.4	5.6	---
TOTAL	2278	3543	5758	3272	3766	3152.6	2229	2369	2772	230.1	165.9	160.6
MEAN	73.5	118	186	106	135	102	74.3	76.4	92.4	7.42	5.35	5.35
MAX	118	215	282	175	184	172	97	180	201	18	5.9	6.7
MIN	28	57	135	74	75	6.8	51	40	19	4.7	4.9	3.8
CFSM	1.44	2.31	3.63	2.06	2.63	1.99	1.45	1.49	1.80	.14	.10	.10
IN.	1.66	2.57	4.18	2.38	2.74	2.29	1.62	1.72	2.01	.17	.12	.12

e Estimated.

BEAVER RIVER BASIN

03106300 MUDDY CREEK NEAR PORTERSVILLE, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1963 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	30.9	65.1	104	96.3	107	120	110	76.9	57.0	34.1	22.2	23.2
MAX	268	248	268	212	220	298	200	187	332	155	127	227
(WY)	1976	1973	1973	1965	1990	1964	1972	1983	1989	1990	1980	1975
MIN	1.11	1.50	2.41	2.40	31.0	10.8	2.78	2.97	1.53	3.01	1.98	.61
(WY)	1964	1970	1970	1970	1980	1973	1986	1986	1969	1965	1966	1969

SUMMARY STATISTICS

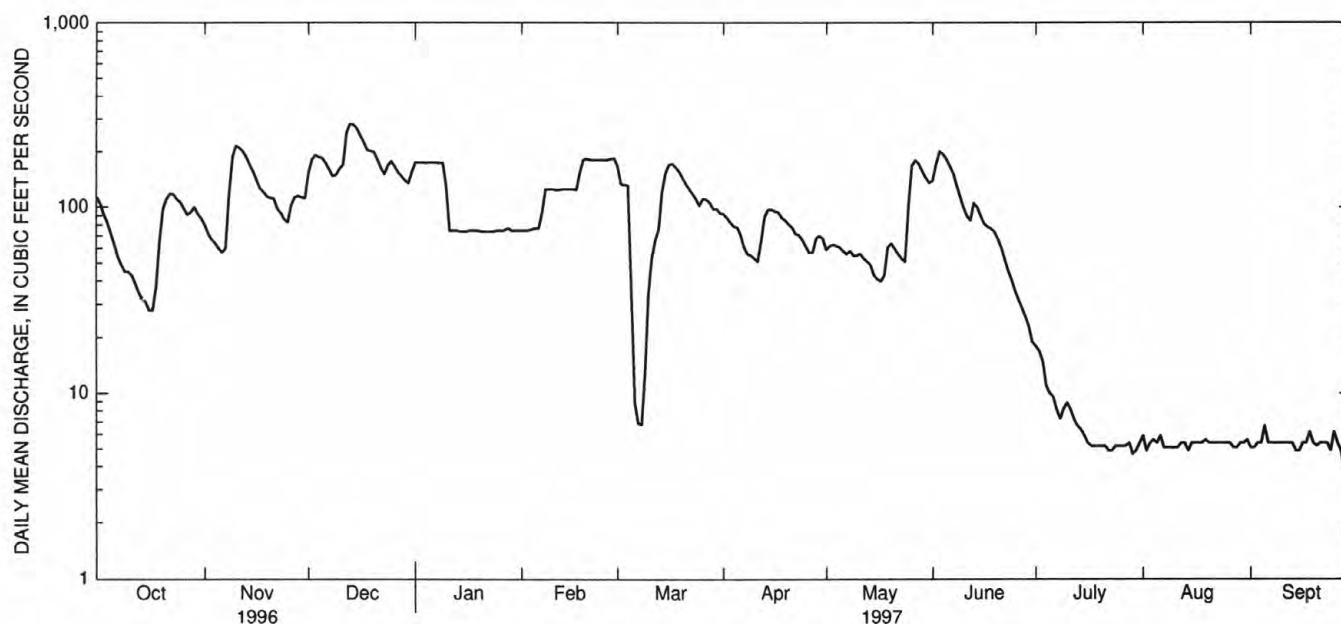
FOR 1996 CALENDAR YEAR

FOR 1997 WATER YEAR

WATER YEARS 1963 - 1997

ANNUAL TOTAL	34064.2	29696.2	70.8	
ANNUAL MEAN	93.1	81.4	98.9	1973
HIGHEST ANNUAL MEAN			24.1	1970
LOWEST ANNUAL MEAN				
HIGHEST DAILY MEAN	282	Dec 13	1450	Mar 10 1964
LOWEST DAILY MEAN	5.0	Mar 18	.50	Sep 1 1969
ANNUAL SEVEN-DAY MINIMUM	11	Aug 31	.54	Aug 29 1969
INSTANTANEOUS PEAK FLOW			286	Dec 13
INSTANTANEOUS PEAK STAGE			4.62	Dec 13
INSTANTANEOUS LOW FLOW				8.18
ANNUAL RUNOFF (CFSM)	1.82	1.59	.40	Sep 17 1966
ANNUAL RUNOFF (INCHES)	24.75	21.58	18.79	
10 PERCENT EXCEEDS	177	175	182	
50 PERCENT EXCEEDS	79	75	39	
90 PERCENT EXCEEDS	15	5.4	3.8	

a From rating curve extended above 820 ft³/s on basis of slope-area measurement of peak flow.



BEAVER RIVER BASIN

03106500 SLIPPERY ROCK CREEK AT WURTEMBERG, PA

LOCATION.--Lat 40°53'02", long 80°14'02", Lawrence County, Hydrologic Unit 05030105, on left bank at downstream side of highway bridge at Camp Allegheny, 2 mi north of Wurtemberg, and 2.8 mi upstream from mouth.

DRAINAGE AREA.--398 mi².

PERIOD OF RECORD.--October 1911 to current year. Monthly discharge only for some periods, published in WSP 1305.

REVISED RECORDS.--WSP 743: Drainage area. WSP 1305: 1914-18, 1920-22, 1923-24 (M), 1925-28, 1930.
WSP 1385: 1932, 1935, 1936 (M), 1937-39. WSP 1625: 1955.

GAGE.--Water-stage recorder. Datum of gage is 832.06 ft above sea level. Jan. 1, 1912 to Sept. 30, 1922, nonrecording gage at site 1.5 mi downstream at datum 13.77 ft lower and Oct. 1, 1922 to Sept. 30, 1940, nonrecording gage at site 2 mi downstream at datum 18.92 ft lower.

REMARKS.--Records good except for estimated daily discharges, which are fair. Some regulation since May 1969 by Lake Arthur (station 03106280) 13 mi upstream. Several measurements of water temperature were made during the year. U.S. Army Corps of Engineers satellite telemeter at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than a base discharge of 3,500 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 12	0500	*4,100	*5.47	June 2	1900	3,530	5.06
Mar. 6	0700	3,800	5.26				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	929	557	1950	596	e490	994	734	548	664	215	68	78
2	715	444	2370	602	e480	1560	616	469	1900	302	64	74
3	565	389	1490	656	e470	1700	558	518	3050	274	62	70
4	424	356	1140	653	e800	1240	528	579	1680	198	63	66
5	344	330	1000	764	e1900	1160	508	494	1040	165	61	64
6	309	320	915	1100	1730	3530	496	503	754	144	60	60
7	285	324	847	842	1100	2620	458	628	626	134	56	56
8	269	1780	751	691	904	1560	415	479	547	125	56	56
9	259	3110	713	629	781	1160	402	536	480	126	53	57
10	287	2480	718	613	681	2110	402	585	447	128	49	91
11	292	1790	1150	432	e600	1950	385	568	413	121	47	221
12	248	1260	3750	e400	e500	1210	709	509	363	113	47	464
13	221	958	2860	e350	e450	947	2570	475	737	109	69	367
14	208	797	1890	e310	e480	2360	1590	443	643	103	71	185
15	196	675	1360	e280	e520	3120	1010	436	453	102	75	124
16	181	610	1110	e260	e490	1840	826	447	376	98	126	105
17	174	581	1030	e240	e450	1310	721	457	402	94	541	94
18	230	669	949	e230	e490	1100	703	473	499	89	471	88
19	1350	762	831	e220	993	952	604	571	835	86	230	82
20	1850	647	717	e200	1800	848	537	915	536	83	140	316
21	1360	575	604	e210	1470	776	493	721	380	78	135	430
22	1080	520	605	e220	1250	736	466	509	314	83	138	219
23	876	480	609	e350	961	710	460	438	269	87	130	142
24	746	453	1010	e800	801	620	456	405	240	90	125	119
25	608	446	1090	e860	697	595	423	1280	219	90	124	108
26	498	1480	798	e1000	644	1020	387	1740	499	87	127	101
27	435	1500	709	e680	1170	989	371	978	856	86	115	93
28	513	938	684	e1100	1500	782	775	802	336	81	99	99
29	650	738	687	e960	---	715	914	739	231	77	94	493
30	598	708	634	e780	---	661	641	596	198	73	91	514
31	713	---	598	e600	---	779	---	546	---	69	83	---
TOTAL	17413	26677	35569	17628	24602	41654	20158	19387	19987	3710	3670	5036
MEAN	562	889	1147	569	879	1344	672	625	666	120	118	168
MAX	1850	3110	3750	1100	1900	3530	2570	1740	3050	302	541	514
MIN	174	320	598	200	450	595	371	405	198	69	47	56
CFSM	1.41	2.23	2.88	1.43	2.21	3.38	1.69	1.57	1.67	.30	.30	.42
IN.	1.63	2.49	3.32	1.65	2.30	3.89	1.88	1.81	1.87	.35	.34	.47

e Estimated.

BEAVER RIVER BASIN

03106500 SLIPPERY ROCK CREEK AT WURTEMBERG, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1969 - 1997, BY WATER YEAR (WY) (SINCE REGULATION)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	287	584	833	668	898	1094	939	646	552	359	283	261
MAX	741	1822	1576	1264	1949	1972	1608	1400	2075	1109	1323	992
(WY)	1976	1986	1978	1974	1981	1972	1987	1983	1989	1990	1980	1975
MIN	56.5	82.2	178	153	289	243	345	215	112	89.7	64.4	63.7
(WY)	1992	1992	1990	1977	1987	1969	1971	1976	1992	1988	1991	1991

SUMMARY STATISTICS

FOR 1996 CALENDAR YEAR

FOR 1997 WATER YEAR

WATER YEARS 1969 - 1997

ANNUAL TOTAL	287323	235491	
ANNUAL MEAN	785	645	615
HIGHEST ANNUAL MEAN			813
LOWEST ANNUAL MEAN			406
HIGHEST DAILY MEAN	7080	3750	8620
LOWEST DAILY MEAN	90	47	40
ANNUAL SEVEN-DAY MINIMUM	97	53	43
INSTANTANEOUS PEAK FLOW		4100	9090
INSTANTANEOUS PEAK STAGE		5.47	8.09
INSTANTANEOUS LOW FLOW		44	40
ANNUAL RUNOFF (CFSM)	1.97	1.62	1.55
ANNUAL RUNOFF (INCHES)	26.86	22.01	21.00
10 PERCENT EXCEEDS	1600	1350	1390
50 PERCENT EXCEEDS	553	509	380
90 PERCENT EXCEEDS	180	87	100

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1912 - 1968, BY WATER YEAR (WY) (PRIOR TO REGULATION)

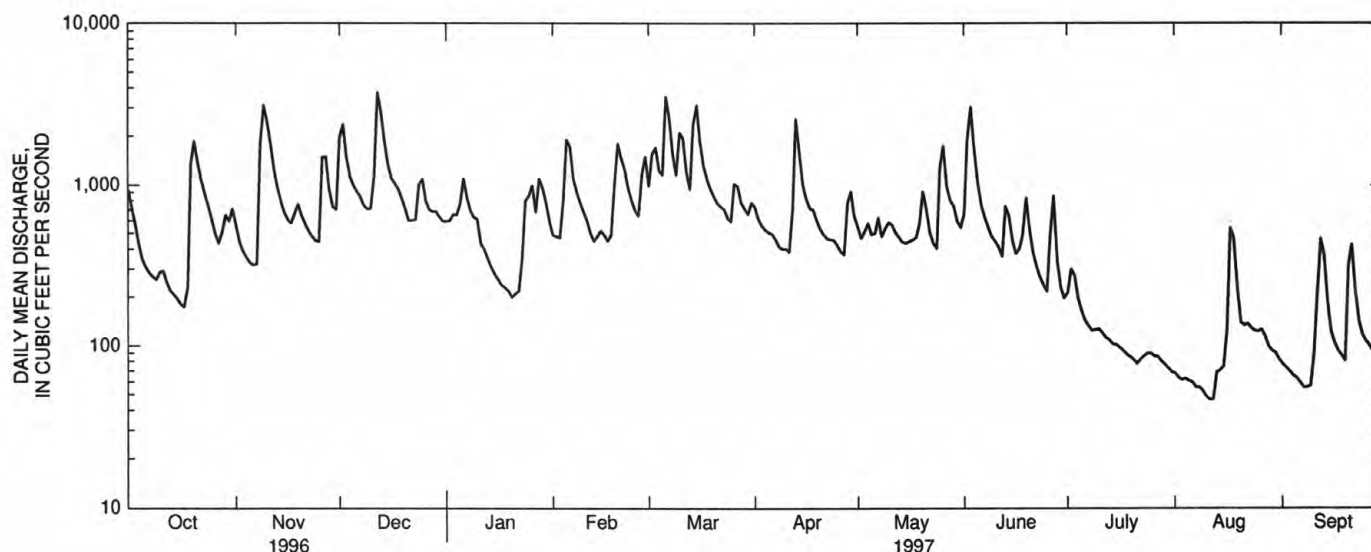
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	237	379	589	839	856	1203	911	653	386	237	191	160
MAX	1391	1329	2088	3161	2089	2728	1974	1472	1559	1307	905	1675
(WY)	1912	1922	1928	1937	1956	1913	1940	1924	1956	1958	1956	1926
MIN	37.7	43.0	58.5	56.3	94.7	291	238	94.3	79.3	54.8	35.3	38.2
(WY)	1964	1931	1931	1931	1934	1931	1925	1934	1936	1944	1930	1944

SUMMARY STATISTICS

WATER YEARS 1912 - 1968

ANNUAL MEAN	552	
HIGHEST ANNUAL MEAN	917	1956
LOWEST ANNUAL MEAN	216	1931
HIGHEST DAILY MEAN	16700	Mar 26 1913
LOWEST DAILY MEAN	20	Sep 11 1938
ANNUAL SEVEN-DAY MINIMUM	24	Sep 6 1938
INSTANTANEOUS PEAK FLOW	a19000	Jan 25 1937
INSTANTANEOUS PEAK STAGE	b12.05	Jan 25 1937
INSTANTANEOUS LOW FLOW	c16	Sep 13 1932
ANNUAL RUNOFF (CFSM)	1.39	
ANNUAL RUNOFF (INCHES)	18.85	
10 PERCENT EXCEEDS	1390	
50 PERCENT EXCEEDS	248	
90 PERCENT EXCEEDS	58	

- a From rating curve extended above 14,000 ft³/s.
b From floodmark, site and datum then in use.
c Minimum observed.



October 1, 1996 to September 30, 1997

BEAVER RIVER BASIN

03107500 BEAVER RIVER AT BEAVER FALLS, PA

LOCATION.--Lat 40°45'48", long 80°18'55", Beaver County, Hydrologic Unit 05030104, on left bank at Beaver Falls, 200 ft upstream from pumping plant of Beaver Falls Municipal Authority, 7.0 mi downstream from Connoquenessing Creek, at mile 5.5.

DRAINAGE AREA.--3,106 mi².

PERIOD OF RECORD.--October 1935 to current year (fragmentary records only prior to October 1956). Gage-height records collected at same site since 1908 are contained in reports of U.S. Weather Bureau.

REVISED RECORDS.--WSP 1725: 1960 (adjusted runoff).

GAGE.--Water-stage recorder and concrete dam control. Datum of gage is 727.48 ft above sea level (U.S. Army Corps of Engineers bench mark). Prior to Dec. 3, 1941, nonrecording gage at site 200 ft downstream at same datum.

REMARKS.--Estimated daily discharges are fair. Records good above 2,000 ft³/s, and fair below, except those below 1,200 ft³/s, which are poor. Pumpage from gage pool, averaging 3.4 ft³/s in 1935 and 6.0 ft³/s at present, for local water supply returns to river 2 mi downstream; information furnished by Beaver Falls Municipal Authority. Flow regulated since 1942 by Berlin Lake, since 1916 by Milton Reservoir, since 1966 by Michael J. Kirwan Reservoir, since 1943 by Mosquito Creek Lake, since 1929 by Meander Creek Reservoir, since 1933 by Pymatuning Reservoir, since 1967 by Shenango River Lake, all over 50 mi upstream, and since 1969 by Lake Arthur 29 mi upstream. U.S. Army Corps of Engineers satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 27, 1913 reached a stage of 17.4 ft, discharge, 103,000 ft³/s, from rating curve extended above 60,000 ft³/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4840	5060	12200	5700	5450	8610	4290	2870	5630	2080	1010	1010
2	4600	4260	15600	5020	5260	10100	3780	2610	14400	2630	953	998
3	4370	3570	11100	4920	5270	11900	3080	2720	22200	2190	955	968
4	4030	3320	9070	4380	5790	9410	2840	3720	12600	1840	1020	1000
5	3590	3610	e8600	4940	12500	8620	2680	3630	9160	1740	1040	1040
6	2920	3360	e8400	7120	11500	22200	2580	3670	7820	1680	1030	899
7	2740	3150	e8200	6010	9290	17200	2510	3960	7330	1460	1010	877
8	2300	9410	e8000	5230	7990	11700	2470	3950	6960	1360	968	862
9	2150	17100	e6800	4790	7260	9420	2270	4090	6640	1380	846	871
10	2750	15200	5400	4580	6050	15900	2140	4200	6320	1450	844	1280
11	2250	11400	6650	3650	5560	15400	2060	4060	5810	1320	918	2400
12	2260	9720	26600	2920	4820	11200	3430	3410	5460	1250	988	2430
13	2180	8670	25500	2420	3690	9070	16900	2820	8020	1200	1330	1800
14	2050	7930	16400	2410	3420	15200	11000	2450	7180	1170	1530	1310
15	1720	7280	11200	2310	3430	18800	6790	2330	5570	1130	1120	1130
16	1400	6810	9680	2680	3140	12400	5880	2280	4930	1120	1330	1040
17	1280	6220	9800	2600	2900	8870	5920	2150	5680	1070	4480	977
18	1460	6050	11400	2160	2930	8420	6830	2110	5460	1050	3950	978
19	6300	6430	10500	2110	5060	8230	6180	3750	7760	1020	2310	942
20	9950	5920	8900	2140	9530	7810	5350	5480	5150	1040	1560	2880
21	8530	5260	7240	2190	8900	6640	4060	4880	4000	1020	1510	3380
22	7310	4880	6880	2350	7800	6060	3260	6050	3330	1010	1340	2040
23	6500	4450	6350	3730	6720	5660	2790	6940	2750	1100	1280	1460
24	6450	4120	8260	4110	6180	4800	2610	6600	2330	1070	1260	1230
25	5980	4100	9620	5490	5550	4060	2480	13500	1710	1080	1390	1090
26	5390	9780	8000	5970	4850	5650	2210	26500	2580	1100	1580	1100
27	4990	11600	6830	5230	7760	5970	2000	14100	3560	1100	1300	1040
28	5000	8760	6550	9000	10800	4830	3230	7270	3220	1070	1130	1010
29	5430	7310	6460	8740	---	4230	4350	5130	2820	1070	1060	3090
30	5250	6800	6410	6880	---	4020	3410	5030	2260	1090	1010	2700
31	5630	---	5990	6060	---	4320	---	4410	---	1050	985	---
TOTAL	131600	211530	308590	137840	179400	296700	129380	166670	188640	40940	43037	43832
MEAN	4245	7051	9955	4446	6407	9571	4313	5376	6288	1321	1388	1461
MAX	9950	17100	26600	9000	12500	22200	16900	26500	22200	2630	4480	3380
MIN	1280	3150	5400	2110	2900	4020	2000	2110	1710	1010	844	862
CFSM	1.37	2.27	3.20	1.43	2.06	3.08	1.39	1.73	2.02	.43	.45	.47
IN.	1.58	2.53	3.70	1.65	2.15	3.55	1.55	2.00	2.26	.49	.52	.52

e Estimated.

BEAVER RIVER BASIN

03107500 BEAVER RIVER AT BEAVER FALLS, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1957 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1901	3196	4924	4793	5624	7032	5734	4047	2994	2363	1752	1839
MAX	6760	11520	11880	11620	12360	13040	13620	10880	11090	7925	6505	5804
(WY)	1991	1986	1991	1993	1990	1993	1957	1996	1989	1958	1980	1975
MIN	531	439	540	714	887	1606	1861	1271	966	916	777	740
(WY)	1992	1992	1961	1961	1963	1969	1971	1962	1992	1965	1991	1962

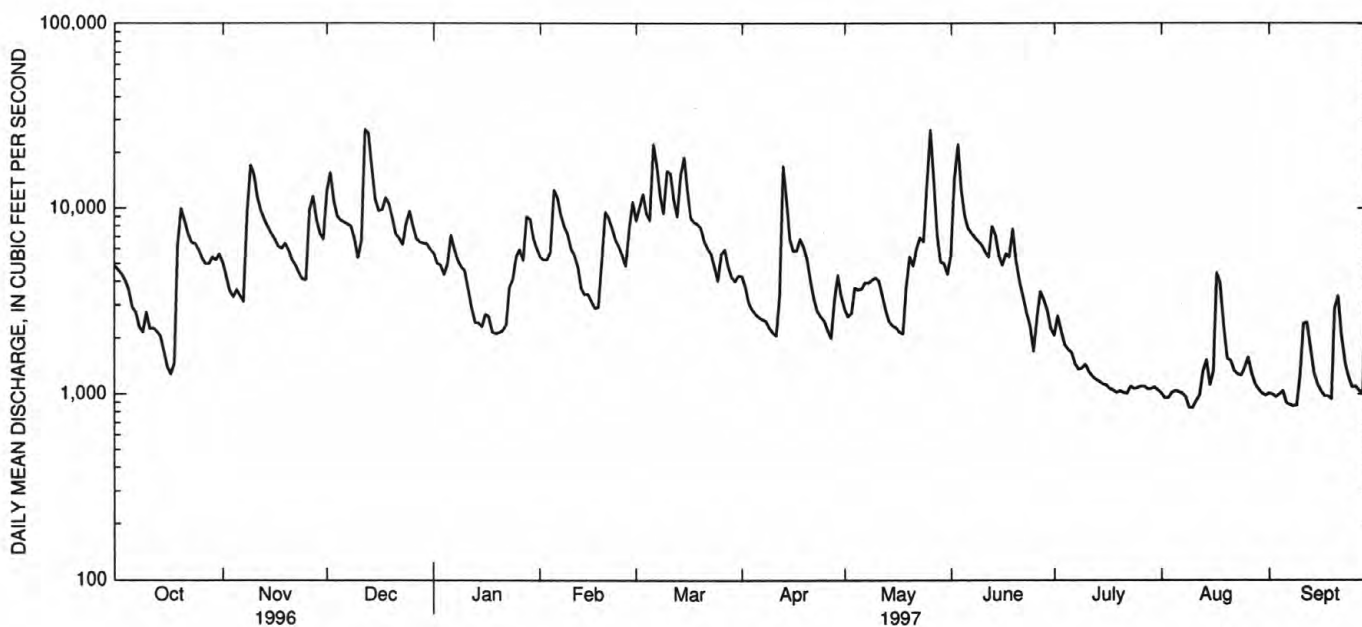
SUMMARY STATISTICS

FOR 1996 CALENDAR YEAR

FOR 1997 WATER YEAR

WATER YEARS 1957 - 1997

ANNUAL TOTAL	2175286	1878159	3841
ANNUAL MEAN	5943	5146	5146
HIGHEST ANNUAL MEAN			1938
LOWEST ANNUAL MEAN			1963
HIGHEST DAILY MEAN	44400	Jan 19, 20	26600
LOWEST DAILY MEAN	795	Sep 5	844
ANNUAL SEVEN-DAY MINIMUM	809	Aug 31	931
INSTANTANEOUS PEAK FLOW			30200
INSTANTANEOUS PEAK STAGE			9.83
INSTANTANEOUS LOW FLOW			May 26
ANNUAL RUNOFF (CFSM)	1.91	1.66	1.24
ANNUAL RUNOFF (INCHES)	26.05	22.49	16.80
10 PERCENT EXCEEDS	11300	9860	8400
50 PERCENT EXCEEDS	4480	4120	2400
90 PERCENT EXCEEDS	1440	1070	920



October 1, 1996 to September 30, 1997

BEAVER RIVER BASIN

LAKES AND RESERVOIRS IN BEAVER RIVER BASIN

03100500 PYMATUNING RESERVOIR.--Lat 41°29'54", long 80°27'47", Crawford County, Hydrologic Unit 05030102, in gatehouse at Pymatuning Dam on Shenango River, 1.8 mi northwest of Jamestown, Pa., and at mile 85.1. DRAINAGE AREA, 158 mi². PERIOD OF RECORD, October 1932 to current year. Contents prior to October 1938 published in WSP 1305. GAGE, water-stage recorder. Datum of gage is sea level. Prior to Nov. 20, 1934, nonrecording gage at same site and datum.

REMARKS.--Reservoir is formed in two parts. The main dam is earthfill with stone facing, provided with regulating gates (outlet gate sill elevation at 975.3 ft), and a spillway with crest elevation at 1,008.0 ft. An auxiliary dam 15 mi upstream from the main dam with spillway elevation at 1,010 ft has a fixed crest weir section in the earthfill causeway. Storage began Jan. 23, 1934, when all regulating gates were closed. Capacity, 188,040 acre-ft between elevations, 975.3 ft and 1,008.0 ft was reached in March 1936. Dead storage 10,150 acre-ft (93 acre-ft behind main dam below elevation 975.3 ft and 10,060 acre-ft behind upstream dam below elevation 1,010 ft). Upstream pool was filled (all dead storage accumulated) on March 5, 1934. Figures given herein represent usable contents. Reservoir is used for flood control, and for recreation. Dam built by Pennsylvania Department of Forests and Waters and now maintained by Pennsylvania Department of Environmental Protection.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 210,680 acre-ft, June 26, 1972 (elevation, 1,009.53 ft); minimum (after first filling), 110,570 acre-ft, Dec. 4, 1953 (elevation, 1,002.17 ft).

EXTREMES FOR CURRENT YEAR. Maximum contents, 191,970 acre-ft, Oct. 2 (elevation, 1,008.27 ft); minimum, 156,330 acre-ft, Jan. 21, 22 (elevation, 1,005.74 ft).

03106280 LAKE ARTHUR.--Lat 40°57'45", long 80°07'17", Butler County, Hydrologic Unit 05030105, in gatehouse at left end of spillway of Lake Arthur Dam on Muddy Creek, at Moraine State Park, 3 mi northeast of Portersville, Pa. DRAINAGE AREA, 50.8 mi². PERIOD OF RECORD, May 1969 to current year. GAGE, water-stage recorder. Datum of gage is sea level (Pennsylvania Department of Environmental Protection bench mark). Prior to Aug. 23, 1969, nonrecording gage at same site and datum.

REMARKS.--Lake is formed by an earthfill dam with concrete spillway. Storage began May 15, 1969. Usable capacity, 37,000 acre-ft between elevations 1,160 ft, sill of 6 ft outlet gate and 1,189.8 ft (spillway crest). No dead storage. Figures given herein represent usable contents. Lake is used for recreation. Dam built by Pennsylvania Department of Forests and Waters and now maintained by Pennsylvania Department of Environmental Protection.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 44,240 acre-ft, June 16, 1989 (elevation, 1,192.01 ft); minimum (after first filling), 21,320 acre-ft, Nov. 30, 1975 (elevation, 1,183.88 ft).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 40,970 acre-ft, Dec. 13, 14 (elevation, 1,191.05 ft); minimum, 34,260 acre-ft, Mar. 1 (elevation, 1,188.88 ft).

MONTHEND ELEVATION IN FEET ABOVE SEA LEVEL, AND CONTENTS AT 2400 HRS, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE	Elevation (feet)	Contents (acre- feet)	Change in contents (equivalent in ft ³ /s)	Elevation (feet)	Contents (acre- feet)	Change in contents (equivalent in ft ³ /s)
<u>03100500 Pymatuning Reservoir</u>				<u>03106280 Lake Arthur</u>		
Sept. 30	1,008.11	189,640	-	1,190.63	39,620	-
Oct. 31	1,007.28	177,710	-194	1,190.47	39,100	- 8.5
Nov. 30	1,007.26	177,420	- 4.9	1,190.58	39,460	+ 6.1
Dec. 31	1,006.98	173,460	- 64	1,189.94	37,420	-33
CAL YR 1996	-	-	+ 3.9	-	-	+ 2.6
Jan. 31	1,006.07	160,830	-205	1,189.28	35,440	-32
Feb. 28	1,006.79	170,790	+179	1,188.94	34,430	-18
Mar. 31	1,006.90	172,330	+ 25	1,190.56	39,390	+81
Apr. 30	1,007.19	176,430	- 69	1,190.42	38,940	- 7.6
May 31	1,008.05	188,760	+201	1,190.72	39,900	+16
June 30	1,008.18	190,660	+ 32	1,190.14	38,050	-31
July 31	1,007.44	179,980	-174	1,189.71	36,730	-21
Aug. 31	1,007.12	175,430	- 74	1,189.75	36,850	+ 2.0
Sept. 30	1,006.94	172,890	- 43	1,190.05	37,760	+15
WTR YR 1997	-	-	- 23	-	-	- 2.6

RACCOON CREEK BASIN

03108000 RACCOON CREEK AT MOFFATTS MILL, PA

LOCATION.--Lat 40°37'40", long 80°20'16", Beaver County, Hydrologic Unit 05030101, on left bank at downstream side of highway bridge at Moffatts Mill, 1.4 mi downstream from Gums Run, 4 mi south of Vanport, and 4.2 mi upstream from mouth.

DRAINAGE AREA.--178 mi².

PERIOD OF RECORD.--September 1941 to current year. May 1915 to July 1932 (gage heights and discharge measurements only) in reports of Water Supply Commission of Pennsylvania or Pennsylvania Department of Forests and Waters.

REVISED RECORDS.--WSP 1385: 1941-43.

GAGE.--Water-stage recorder. Datum of gage is 719.16 ft above sea level (U.S. Army Corps of Engineers bench mark). May 27, 1915 to July 31, 1932, and Sept. 2 to Dec. 3, 1941, nonrecording gage at same site and datum.

REMARKS.--Records good except for estimated daily discharges, which are fair. Normally, no regulation from Raccoon Creek Lake. Diversion out of the basin from Cherry Valley and Service Creek Reservoirs upstream increased from an average of 4.0 ft³/s at the close of 1957 to 6.8 ft³/s for the present year; diversion began with 2.0 ft³/s for September 1957. Published records do not include diversion. Records of diversion furnished by Western Pennsylvania Water Company and Ambridge Water Authority. Several measurements of water temperature were made during the year. Satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Apr. 15, 1922, reached a stage of 9.80 ft, discharge, 10,000 ft³/s. Flood of Mar. 5, 1920, also reached a stage of 9.80 ft, backwater from ice.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than a base discharge of 1,800 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
May 26	0600	*3,040	*5.79	June 13	1600	1,830	4.59

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	74	67	721	134	e160	164	207	109	361	85	22	22
2	58	64	781	132	e120	531	176	96	411	86	21	21
3	48	60	465	132	e92	611	163	109	468	82	21	20
4	41	55	335	128	e130	607	153	150	570	72	22	21
5	37	53	260	295	e520	540	146	114	395	66	22	21
6	35	52	254	467	460	871	144	114	288	63	20	18
7	33	55	234	315	339	645	137	120	227	61	18	18
8	32	488	201	225	282	490	116	114	189	56	17	18
9	37	830	184	203	241	367	113	252	160	56	17	19
10	56	584	159	207	208	565	108	232	141	65	16	107
11	47	366	229	150	e170	475	105	210	127	58	15	127
12	36	259	1090	111	e145	370	140	188	121	50	15	67
13	32	198	905	e100	e135	302	302	178	1050	46	44	47
14	31	167	587	e92	e130	642	218	165	686	43	50	36
15	30	138	406	e90	e120	655	178	165	332	41	30	31
16	29	121	318	e100	e115	464	160	152	240	39	44	30
17	28	113	285	e94	e110	367	155	136	576	38	117	28
18	41	123	242	e86	e105	315	150	138	399	36	92	27
19	192	140	205	e80	e230	288	132	474	371	47	71	26
20	438	120	170	e76	426	251	123	455	275	52	52	38
21	438	108	140	e110	367	222	115	294	218	38	95	45
22	310	99	158	e96	333	206	114	215	178	37	57	34
23	236	89	144	e150	250	177	110	173	150	43	41	28
24	183	86	194	e125	213	166	106	146	135	46	34	27
25	133	84	217	e230	181	157	103	840	120	40	33	26
26	109	229	174	e190	172	578	93	2060	112	34	34	25
27	93	291	166	e160	198	446	86	740	110	31	29	24
28	89	229	169	e140	167	330	148	431	97	32	36	24
29	95	193	169	e360	---	291	136	302	89	37	30	96
30	85	188	155	e300	---	247	112	277	83	29	26	70
31	74	---	144	e230	---	238	---	241	---	25	23	---
TOTAL	3200	5649	9861	5308	6119	12578	4249	9390	8679	1534	1164	1141
MEAN	103	188	318	171	219	406	142	303	289	49.5	37.5	38.0
MAX	438	830	1090	467	520	871	302	2060	1050	86	117	127
MIN	28	52	140	76	92	157	86	96	83	25	15	18
CFSM	.58	1.06	1.79	.96	1.23	2.28	.80	1.70	1.63	.28	.21	.21
IN.	.67	1.18	2.06	1.11	1.28	2.63	.89	1.96	1.81	.32	.24	.24

e Estimated.

RACCOON CREEK BASIN

03108000 RACCOON CREEK AT MOFFATTS MILL, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1942 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	64.4	113	197	248	323	413	342	264	143	86.2	70.4	56.1
MAX	359	764	717	737	788	1010	757	618	632	389	651	453
(WY)	1955	1986	1991	1952	1956	1945	1957	1983	1989	1990	1980	1975
MIN	7.98	14.8	15.1	34.5	47.7	56.3	94.7	65.6	26.3	15.6	10.2	9.73
(WY)	1964	1964	1964	1967	1964	1969	1946	1986	1988	1965	1965	1964

SUMMARY STATISTICS

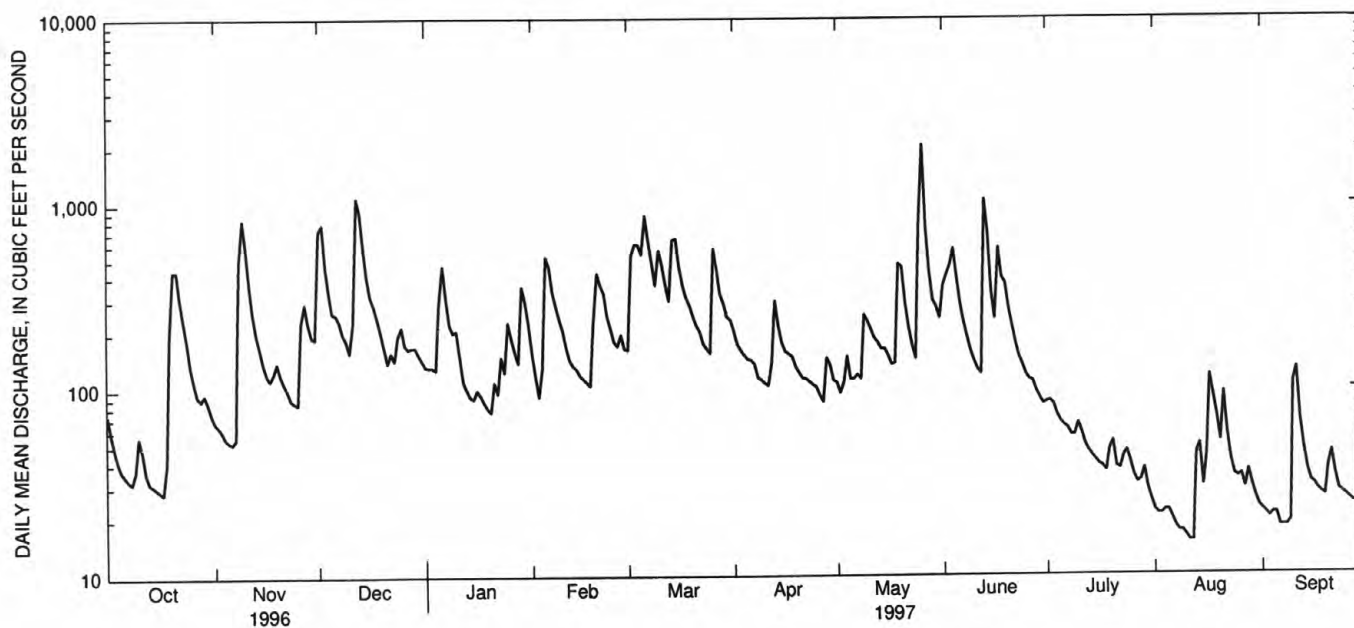
FOR 1996 CALENDAR YEAR

FOR 1997 WATER YEAR

WATER YEARS 1942 - 1997

ANNUAL TOTAL	95965	68872	193
ANNUAL MEAN	262	189	314
HIGHEST ANNUAL MEAN			90.9
LOWEST ANNUAL MEAN			1951
HIGHEST DAILY MEAN	e3400	2060	6120
LOWEST DAILY MEAN	15	15	4.8
ANNUAL SEVEN-DAY MINIMUM	16	17	5.6
INSTANTANEOUS PEAK FLOW		3040	8590
INSTANTANEOUS PEAK STAGE		5.79	9.71
INSTANTANEOUS LOW FLOW		13	4.5
ANNUAL RUNOFF (CFSM)	1.47	1.06	1.08
ANNUAL RUNOFF (INCHES)	20.06	14.39	14.70
10 PERCENT EXCEEDS	587	441	450
50 PERCENT EXCEEDS	160	132	98
90 PERCENT EXCEEDS	33	29	21

e Estimated.



October 1, 1996 to September 30, 1997

STREAMS TRIBUTARY TO LAKE ERIE

04213000 CONNEAUT CREEK AT CONNEAUT, OH

LOCATION.--Lat 41°55'37", long 80°36'15", Ashtabula County, Hydrologic Unit 04120101, on right bank at downstream side of Keefus Road bridge at Conneaut, and 6.4 mi upstream from mouth.

DRAINAGE AREA.--175 mi².

PERIOD OF RECORD.--July 1922 to December 1935, March 1950 to September 1961 (published as "at Amboy"), October 1961 to current year.

REVISED RECORDS.--WSP 714: 1926. WSP 784: 1933. WSP 1437: 1923-25(M), 1926-30, 1931-32(M), 1933, 1935(M). WSP 1912: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 610.30 ft above sea level. Prior to Aug. 17, 1924, nonrecording gage at same site and datum.

REMARKS.--Records fair, except for periods of estimated record, which are poor. Water-quality and sediment data collected at this site.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	283	324	877	243	229	788	607	138	840	41	12	20
2	163	186	1630	237	247	1060	381	118	1670	41	12	18
3	112	149	625	395	344	1070	279	168	3480	38	16	17
4	85	145	384	403	614	487	203	307	3780	45	15	15
5	71	156	413	363	1770	368	171	269	624	38	13	14
6	63	165	389	779	1760	909	153	433	302	34	16	13
7	57	144	337	466	514	1010	139	730	192	33	13	13
8	52	718	284	288	314	629	117	326	147	32	11	12
9	54	2610	241	246	234	824	107	250	123	52	10	11
10	230	2550	233	222	177	1700	108	634	97	44	9.6	13
11	410	1510	341	175	150	1750	109	871	84	40	9.6	18
12	201	887	1330	e150	132	557	254	442	78	38	10	14
13	124	747	2000	e135	94	341	1100	315	109	33	13	19
14	91	703	1070	e130	120	922	659	247	145	30	14	22
15	76	628	453	e150	122	2340	335	206	161	25	17	19
16	63	531	317	e170	106	656	219	284	90	24	37	16
17	56	501	611	e150	104	368	178	313	92	22	33	15
18	68	1500	974	e135	130	320	164	222	423	24	32	15
19	1300	2440	478	e125	418	287	158	562	552	20	26	12
20	2260	1090	243	e120	1680	223	136	1830	318	17	24	17
21	1090	622	127	e110	1100	191	115	837	201	16	22	15
22	790	436	e100	e350	841	183	119	311	124	19	72	19
23	534	348	e85	e1400	443	216	142	203	82	18	64	25
24	524	298	e800	910	254	195	160	171	66	17	57	18
25	417	407	1700	920	180	180	149	145	57	18	43	15
26	251	1770	583	1190	150	499	119	158	53	17	31	13
27	176	1800	374	495	2070	540	99	192	48	36	24	11
28	148	581	364	511	4560	279	125	131	49	19	25	10
29	135	355	794	637	---	214	224	99	43	16	21	10
30	245	300	543	708	---	259	187	91	38	15	21	13
31	561	---	336	290	---	680	---	108	---	13	22	---
TOTAL	10690	24601	19036	12603	18857	20045	7016	11111	14068	875	745.2	462
MEAN	345	820	614	407	673	647	234	358	469	28.2	24.0	15.4
MAX	2260	2610	2000	1400	4560	2340	1100	1830	3780	52	72	25
MIN	52	144	85	110	94	180	99	91	38	13	9.6	10
CFSM	1.97	4.69	3.51	2.32	3.85	3.69	1.34	2.05	2.68	.16	.14	.09
IN.	2.27	5.23	4.05	2.68	4.01	4.26	1.49	2.36	2.99	.19	.16	.10

e Estimated.

STREAMS TRIBUTARY TO LAKE ERIE

04213000 CONNEAUT CREEK AT CONNEAUT, OH

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1922 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	140	325	422	417	464	541	388	233	136	77.5	66.7	106
MAX	804	1373	1049	929	1115	987	839	670	1013	415	493	709
(WY)	1927	1986	1928	1990	1981	1972	1957	1953	1986	1969	1980	1990
MIN	4.95	17.1	35.1	81.0	39.6	235	69.9	20.2	5.46	2.79	3.19	3.56
(WY)	1924	1954	1961	1977	1934	1969	1935	1934	1934	1934	1923	1932

SUMMARY STATISTICS

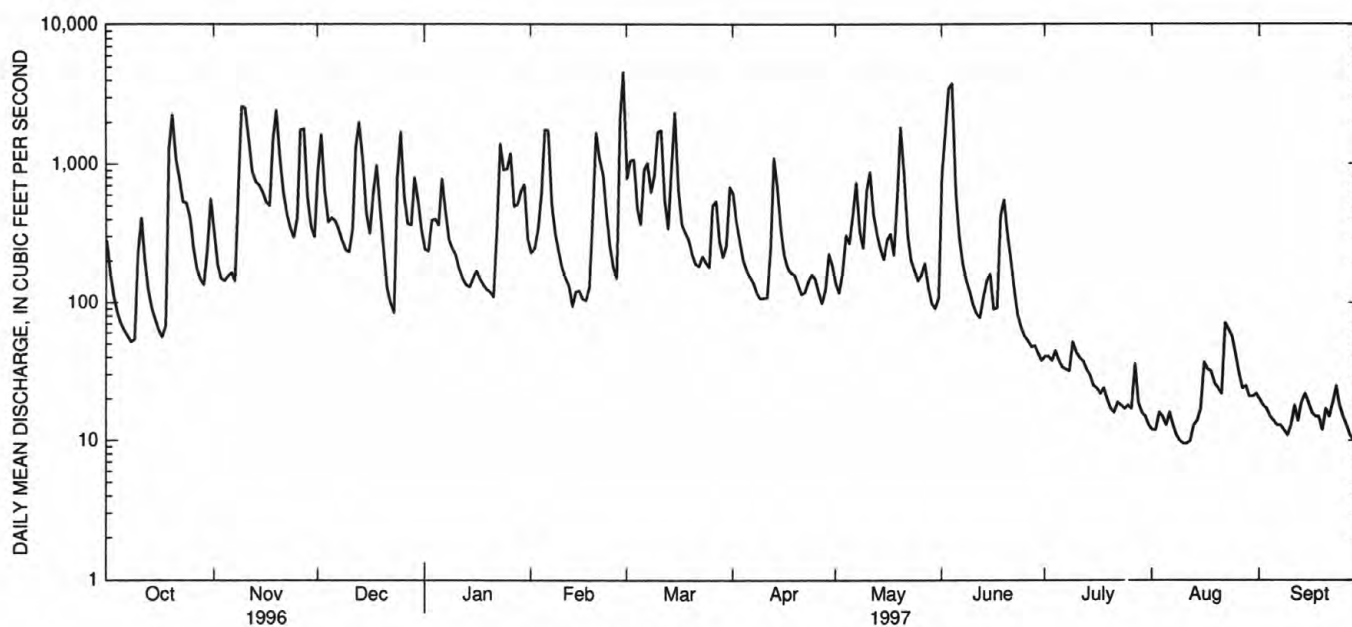
FOR 1996 CALENDAR YEAR

FOR 1997 WATER YEAR

WATER YEARS 1922 - 1997

ANNUAL TOTAL	173157.0	140109.2	276
ANNUAL MEAN	473	384	401
HIGHEST ANNUAL MEAN			140
LOWEST ANNUAL MEAN			1986
HIGHEST DAILY MEAN	5000	Jan 19	4560
LOWEST DAILY MEAN	8.2	Sep 6	9.6
ANNUAL SEVEN-DAY MINIMUM	9.4	Aug 31	11
INSTANTANEOUS PEAK FLOW			6400
INSTANTANEOUS PEAK STAGE			8.97
INSTANTANEOUS LOW FLOW			8.7
ANNUAL RUNOFF (CFSM)			2.19
ANNUAL RUNOFF (INCHES)	36.81	29.78	21.42
10 PERCENT EXCEEDS	1300	943	688
50 PERCENT EXCEEDS	203	175	97
90 PERCENT EXCEEDS	30	16	10

a Ice jam.



October 1, 1996 to September 30, 1997

STREAMS TRIBUTARY TO LAKE ERIE

04213075 BRANDY RUN NEAR GIRARD, PA

LOCATION.--Lat 41°59'31", long 80°17'29", Erie County, Hydrologic Unit 04120101, on left bank 100 ft upstream from highway bridge on Tannery Road, 0.5 mi upstream from mouth, and 1.8 mi southeast of Girard.

DRAINAGE AREA.--4.45 mi².

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

GAGE.--Water-stage recorder. Elevation of gage is 800 ft above sea level, from topographic map.

REVISED RECORDS.--WRD PA-94-3: 1987-89 (M).

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

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than a base discharge of 200 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 29	--	Unknown	Ice jam	May 19	1900	*247	a2.03
Feb. 27	--	Unknown	Ice jam				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.2	5.0	e30	5.3	9.2	e7.6	10	3.9	18	1.8	1.0	1.1
2	2.5	3.7	e13	8.8	11	e30	7.9	3.9	40	2.1	1.0	1.2
3	2.3	3.3	e8.4	9.7	12	12	6.7	7.3	52	3.4	1.0	1.2
4	2.2	3.3	9.4	7.8	26	8.6	6.4	8.6	10	2.0	4.2	.98
5	2.2	3.3	8.8	15	36	9.4	6.3	5.2	5.8	1.8	1.4	.95
6	1.9	3.3	7.6	11	13	23	6.0	9.6	4.3	1.6	1.2	.92
7	1.9	3.3	6.9	7.6	9.9	12	5.2	5.3	3.6	1.5	1.1	.90
8	1.7	3.3	5.9	e6.0	8.3	19	4.7	4.6	3.2	1.5	1.0	.94
9	2.2	26	5.9	e4.7	e6.6	15	4.7	5.2	2.9	11	.98	.99
10	13	31	5.9	e4.1	e5.6	58	4.4	34	2.7	3.3	.96	1.4
11	4.3	23	16	e3.3	e4.6	15	4.3	11	2.6	2.2	1.0	1.5
12	2.8	18	32	e2.9	e4.0	9.1	14	7.9	2.9	1.8	1.1	1.4
13	2.6	15	31	e2.5	e3.6	7.3	11	5.9	2.8	1.6	1.2	1.7
14	2.3	12	11	e2.2	e3.3	55	7.6	4.8	2.5	1.5	1.0	1.2
15	2.2	11	8.1	e2.0	e2.9	16	6.2	5.3	2.4	1.4	1.0	1.1
16	2.2	10	8.0	e1.9	e3.5	8.7	5.5	7.3	2.5	1.4	1.6	1.1
17	2.2	9.7	14	e6.0	e4.0	8.3	11	5.5	3.4	1.3	1.9	1.3
18	2.3	9.3	9.6	e5.2	e5.0	8.3	7.8	4.3	26	1.2	1.2	1.2
19	55	31	6.8	e4.0	e15	6.8	6.1	38	7.2	1.2	.99	1.4
20	35	46	e5.8	e3.0	21	6.7	5.1	19	3.9	1.2	.97	3.5
21	13	19	e5.4	e2.2	15	6.9	4.7	7.0	2.9	1.3	1.2	1.7
22	16	13	e5.0	e12	10	12	6.5	5.0	2.5	1.4	11	1.2
23	9.3	9.6	e11	e9.0	7.4	8.1	7.4	4.2	2.3	1.4	3.7	1.2
24	8.2	8.4	e45	e7.2	6.1	6.1	5.8	3.7	2.2	1.3	1.7	1.2
25	6.1	7.7	12	e16	e5.4	12	4.3	4.2	2.1	1.3	1.4	1.1
26	4.8	7.3	8.6	e10	e4.5	20	3.6	3.8	2.2	1.2	1.2	1.1
27	3.9	23	8.0	e4.5	e30	9.0	3.5	3.1	1.9	1.2	1.1	1.1
28	3.6	38	13	e15	e10	7.5	7.7	2.8	1.8	1.2	2.6	1.1
29	3.6	13	10	e30	---	15	5.2	2.8	1.6	1.1	1.4	2.3
30	3.6	e7.4	7.8	81	---	25	4.1	2.9	1.6	1.0	1.2	4.3
31	8.7	---	6.5	7.6	---	24	---	3.4	---	1.0	1.1	---
TOTAL	224.8	416.9	376.4	307.5	292.9	481.4	193.7	239.5	219.8	58.2	53.40	42.28
MEAN	7.25	13.9	12.1	9.92	10.5	15.5	6.46	7.73	7.33	1.88	1.72	1.41
MAX	55	46	45	81	36	58	14	38	52	11	11	4.3
MIN	1.7	3.3	5.0	1.9	2.9	6.1	3.5	2.8	1.6	1.0	.96	.90
CFSM	1.63	3.12	2.73	2.23	2.35	3.49	1.45	1.74	1.65	.42	.39	.32
IN.	1.88	3.49	3.15	2.57	2.45	4.02	1.62	2.00	1.84	.49	.45	.35

a Maximum gage height, 2.42 ft., Feb. 27 (backwater from ice).

e Estimated.

STREAMS TRIBUTARY TO LAKE ERIE

04213075 BRANDY RUN NEAR GIRARD, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1986 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	6.03	8.37	9.13	8.61	9.20	11.2	12.8	6.69	4.39	2.33	4.10	4.28
MAX	12.1	17.2	12.9	18.9	28.7	17.6	22.8	14.4	10.9	6.13	19.1	11.1
(WY)	1988	1993	1988	1990	1990	1989	1996	1989	1994	1992	1987	1992
MIN	1.30	2.03	2.49	3.13	2.21	6.52	6.46	1.56	.86	.81	.49	.75
(WY)	1992	1992	1990	1987	1987	1995	1997	1991	1991	1991	1991	1995

SUMMARY STATISTICS

FOR 1996 CALENDAR YEAR

FOR 1997 WATER YEAR

WATER YEARS 1986 - 1997

ANNUAL TOTAL	3989.60	2906.78	7.29	
ANNUAL MEAN	10.9	7.96	9.84	1996
HIGHEST ANNUAL MEAN			4.67	1995
LOWEST ANNUAL MEAN			405	Aug 2 1987
HIGHEST DAILY MEAN	e200 Jan 19	81 Jan 30	.14	Aug 3 1991
LOWEST DAILY MEAN	.95 Aug 10	.90 Sep 7	.16	Aug 1 1991
ANNUAL SEVEN-DAY MINIMUM	.95 Aug 29	.98 Sep 3	708	Jun 13 1994
INSTANTANEOUS PEAK FLOW		247 May 19	b3.36	Jun 13 1994
INSTANTANEOUS PEAK STAGE		a2.03 May 19	.19	Jul 11 1986
INSTANTANEOUS LOW FLOW		.72 Jul 31c	1.64	
ANNUAL RUNOFF (CFSM)	2.45	1.79	22.27	
ANNUAL RUNOFF (INCHES)	33.35	24.30	15	
10 PERCENT EXCEEDS	26	17	3.5	
50 PERCENT EXCEEDS	5.9	4.7	1.0	
90 PERCENT EXCEEDS	1.6	1.2		

a Maximum gage height, 2.42 ft., Feb. 27 (backwater from ice).

b Maximum gage height, 4.55 ft., Dec. 19, 1989 (backwater from ice).

c Also Aug. 9, 10, 14, 15, 19 and Sept. 4-9.

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 other 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 1997

Station name and number	Location and drainage area	Period of record	Water year 1997 maximum			Period of record maximum		
			Date	Gage height (ft)	Dis- charge (ft ³ /s)	Date	Gage height (ft)	Dis- charge (ft ³ /s)
<u>OHIO RIVER BASIN</u>								
POTATO CREEK BASIN								
Potato Creek at Smethport, Pa. (03009680)	Lat 41°48'35", long 78°25'50", McKean County, Hydrologic Unit 05010001, on leftbank 30 ft upstream from U.S. Highway 6 at east borough limits of Smethport, and 500 ft downstream from Marvin Creek. Drainage area is 160 mi ² .	1974-95† 1996-97	11- 8-96	10.13	3,930	1-19-96	13.19	8,160
ALLEGHENY RIVER BASIN								
Allegheny River at Warren, Pa. (03015310)	Lat 41°50'38", long 79°09'00", Warren County, Hydrologic Unit 05010002, on right bank at downstream end of municiple parking lot at Warren, 1,400 ft. downstream from confluence of Conewango Creek, and at mile 188.7. Drainage area is 3,131 mi ² .	1988-97	11-13-96	10.40	27,100	1- 3-91	10.19	31,700
FRENCH CREEK BASIN								
Woodcock Creek at Blooming Valley, Pa. (03022540)	Lat 41°41'26", long 80°02'54", Crawford County, Hydrologic Unit 05010004, on left bank at upstream side of bridge, 0.7 mi northeast of Blooming Valley, and 3.4 mi upstream from Woodcock Creek Dam. Drainage area is 31.1 mi ² .	1974-95† 1996-97	2-27-97	10.28	1,430	2-17-76	11.48	2,980

† Operated as a continuous-record gaging station.

a Maximum gage height, 11.41 ft., Apr. 16, 1994.

b Maximum gage height, 9.74 ft., Jan. 25, (backwater from ice).

c Maximum gage height, 12.27 ft., Feb. 26, 1977 (backwater from ice).

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

Crest-stage partial-record stations--continued

Annual maximum discharge at crest-stage partial-record stations during water year 1997--Continued

Station name and number	Location and drainage area	Period of record	<u>Water year 1997 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)
CLARION RIVER BASIN								
Clarion River at Johnsonburg, Pa. (03028500)	Lat 41°29'10", long 78°40'43", Elk County, Hydrologic Unit 05010005, on left bank at upstream side of highway bridge at Johnsonburg, 0.1 mi downstream from confluence of East and West Branches. Drainage area is 204 mi ² .	1945-95† 1996-97	10-19-96	5.74	2,890	1-19-96	10.14	12,800
KISKIMINETAS RIVER BASIN								
Little Conemaugh River at East Conemaugh, Pa. (03041000)	Lat 40°20'45", long 78°52'58", Cabria County, Hydrologic Unit 05010007, upstream from bridge on State Highway 271 at East Conemaugh, 300 ft downstream from Clapboard Run, and 2.7 mi upstream from confluence with Stoneycreek River. Drainage area is 183 mi ² .	1939-95† 1996-97	5-25-97	15.65	8,630	7-20-77	18.85	40,000
LAKE ERIE BASIN								
Mill Creek at Erie, Pa. (04213200)	Lat 42°05'54", long 80°04'35", Erie County, Hydrologic Unit 04120101, at bridge on West 38th Street, 100 ft west of State Highway 505, at Erie. Drainage area is 9.16 mi ² .	1964-97	2-27-97	11.13	712	9-17-96	15.06	3,310

† Operated as a continuous-record gaging station.

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

Miscellaneous sites

Stream	Tributary to	Location	Drainage area (mi ²)	Measured previously (water years)	Measurements Date	Discharge (ft ³ /s)
OHIO RIVER BASIN						
ALLEGHENY RIVER BASIN						
03010956 Tunungwant Creek	Allegheny River	Lat 41°57'44", long 78°37'30", McKean County, Hydrologic Unit 05010001, at bridge on State Highway 346 and 1.5 mi downstream from confluence of East and West branch Tunungwant Creek.	138	1989-96	11-19-96 4-30-97 5- 6-97 6-30-97 8-19-97	331 214 294 115 46.3
03017500 Tionesta Creek	Allegheny River	Lat 41°36'07", long 79°03'01", Forest County, Hydrologic Unit 05010003, in Allegheny National Forest, on left bank at downstream side of highway bridge at Lynch, 500 ft upstream from Bluejay Creek and 7 mi south of Sheffield.	233	1939-79† 1981, 1988-96	10-30-96 12-19-96 4- 9-97 5-29-97 8- 1-97 9-26-97	1,210 490 292 273 59.5 32.9
03022000 French Creek	Allegheny River	Lat 41°46'19", long 80°06'29", Crawford County, Hydrologic Unit 05010004, at downstream side of bridge at Venango, 1.2 mi upstream from Gravel Run and 2.2 mi downstream from Boles Run.	597	1938-46† 1994-96	10- 7-96 12- 2-96 3-26-97 5-19-97 7-22-97 9- 9-97	1,080 3,680 3,430 3,260 139 130
03025000 Sugar Creek	Allegheny River	Lat 41°25'43", long 79°52'48", Venango County, Hydrologic Unit 05010004, at bridge 0.8 mi north of Sugar Creek, 0.9 mi upstream from mouth, and 3 mi northeast of Franklin.	166	1932-79† 1989-96	10-28-96 12-17-96 2-12-97 4- 7-97 5-27-97 7-30-97 9-25-97	178 452 264 206 275 33.6 36.3
03029000 Clarion River	Allegheny River	Lat 41°25'15", long 78°44'10", Elk County, Hydrologic Unit 05010005, at bridge on State Highway 948 in Ridgway 50 ft downstream from Elk Creek.	303	1940-53† 1954, 1988-96†	11-18-96 3-19-97 5- 5-97 7- 2-97 8-25-97	970 921 630 911 232
03030852 Clarion River	Allegheny River	Lat 41°07'47", long 79°33'18", Clarion County, Hydrologic Unit 05010005, at bridge on State Highway 58 at Callensburg and 0.3 mi upstream from Licking Creek.	1,163	1970-72† 1979-95† 1996	10-31-96 12-16-96 4-10-97 5-30-97 7-29-97 9-24-97	488 3,880 4,500 4,150 120 156

† Operated as a continuous-record gaging station.

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES--Continued
 Discharge measurements made at miscellaneous sites during water year 1997

Stream	Tributary to	Location	Drainage area (mi ²)	Measured previously (water years)	Measurements Date	Discharge (ft ³ /s)
BEAVER RIVER BASIN						
03099600 Mahoning River	Beaver River	Lat 41°01'06", long 80°26'27", Lawrence County, Hydrologic Unit 05030103, at bridge on State Highway 224 and 0.4 mi northwest of Edinburg.	1,099	1989-96	10-10-96 12- 5-96 3-28-97 5-22-97 7-16-97 9-11-97	1,050 2,250 1,150 1,030 528 1,250
03104500 Shenango River	Beaver River	Lat 41°00'00", long 80°21'21", Lawrence County, Hydrologic Unit 05030102, at bridge on Grant Street in New Castle and 0.6 mi above confluence with Neshannock Creek.	792	1910-11† 1912-34† 1989-96	10-10-96 12- 5-96 1-30-97 3-28-97 5-23-97 7-16-97 9-10-97	1,150 3,020 2,100 1,260 1,700 241 373
03105810 Connoquenessing Creek	Beaver River	Lat 40°48'21", long 79°57'55", Butler County, Hydrologic Unit 05030105, at bridge on SR 3006 at Renfrew and 0.8 mi upstream from Thorn Creek.	137	1989-96	11- 1-96 12-20-96 2-13-97 4-14-97 5-30-97 7-30-97 9-23-97	107 163 116 163 265 19.1 48.3
03105940 Little Connoquenessing Creek	Beaver River	Lat 40°48'36", long 80°06'54", Butler County, Hydrologic Unit 05030105, on right bank at pumping station for Harmony Borough Water Authority, .85 mi northeast of Harmony Borough and 1.3 mi above mouth.	63.8	1996	10- 4-96 10-11-96 12- 9-96 3-27-97 5-27-97 5-27-97 7-17-97 9-11-97	38.7 25.2 94.7 102 295 288 4.98 32.4
LAKE ERIE BASIN						
04212945 Conneaut Creek	Lake Erie	Lat 41°55'04", long 80°28'09", Erie County, Hydrologic Unit 04120101, at bridge on Griffey Road and 1.2 mi northwest of Cherry Hill and 1.9 mi south of West Springfield.	149	1989-96	10- 7-96 12- 3-96 3-21-97 5-21-97 7-23-97 9- 8-97	55.3 331 351 417 9.86 6.86
04213273 Twelvemile Creek	Lake Erie	Lat 42°12'15", long 79°54'16", Erie County, Hydrologic Unit 04120101, at bridge on Malbert Place at Mooreheadville and 0.5 mi upstream from mouth.	12.5	1989-96	10- 8-96 12- 3-96 3-26-97 5-20-97 7-22-97 9- 8-97	5.62 24.9 59.5 59.5 3.28 1.64

† Operated as a continuous-record gaging station.

ANALYSES OF STREAMFLOW SAMPLES COLLECTED AT SPECIAL-STUDY SITES

ALLEGHENY-MONONGAHELA RIVER BASIN NAWQA PROJECT

SYNOPTIC SURVEY OF STREAMS IN THE LOWER CHEAT RIVER BASIN, WV

A surface-water synoptic survey was completed throughout the lower Cheat River Basin on July 15-17, 1997. The basic fixed integrator site, Cheat River near Mt. Nebo, WV., is affected by acid mine drainage (AMD), primarily in the lower third of the basin. The WV. Department of Environmental Protection (WVADEP) established 115 sampling sites in the lower part of the Cheat River Basin to assess the effects of AMD on three mainstream sites and 112 tributaries to the Cheat River. The WVADEP sampled these sites twice in 1996 during medium and high-flow conditions. The USGS District Office in Charleston, WV. had a cooperative agreement with the WVADEP to conduct an AMD assessment in the Cheat River Basin. The ALMN NAWQA study unit was also highly interested in AMD assessment in the Cheat River because of its integrator site status, so a low-base-flow synoptic sampling effort was planned and executed. The ALMN study unit provided the leadership for the synoptic survey and team leaders, the WVADEP provided four persons to help with sampling, and the USGS WV. District provided funding for the lab analysis, supplies, travel, and overtime. Water samples were collected at 111 sampling sites (four sites were dry) using NAWQA protocols. Field determinations included streamflow, pH, specific conductance and water temperature, and laboratory analysis at the USGS National Water Quality Laboratory included (schedule 1065) pH, specific conductance, alkalinity, sulfate, and total and dissolved iron, manganese and aluminum. Chilled samples were sent to the USGS Ocala service unit for heated acidity determinations. Quality control included seven replicate samples taken at seven individual sites. Excellent low-base-flow conditions prevailed throughout the 3-day sampling period. Streamflow at gaging stations within or near the sampling area were at or near the low flow for the year. No data was reported for sites 5, 13, 73 and 75 because they were dry during the 3-day sampling period.

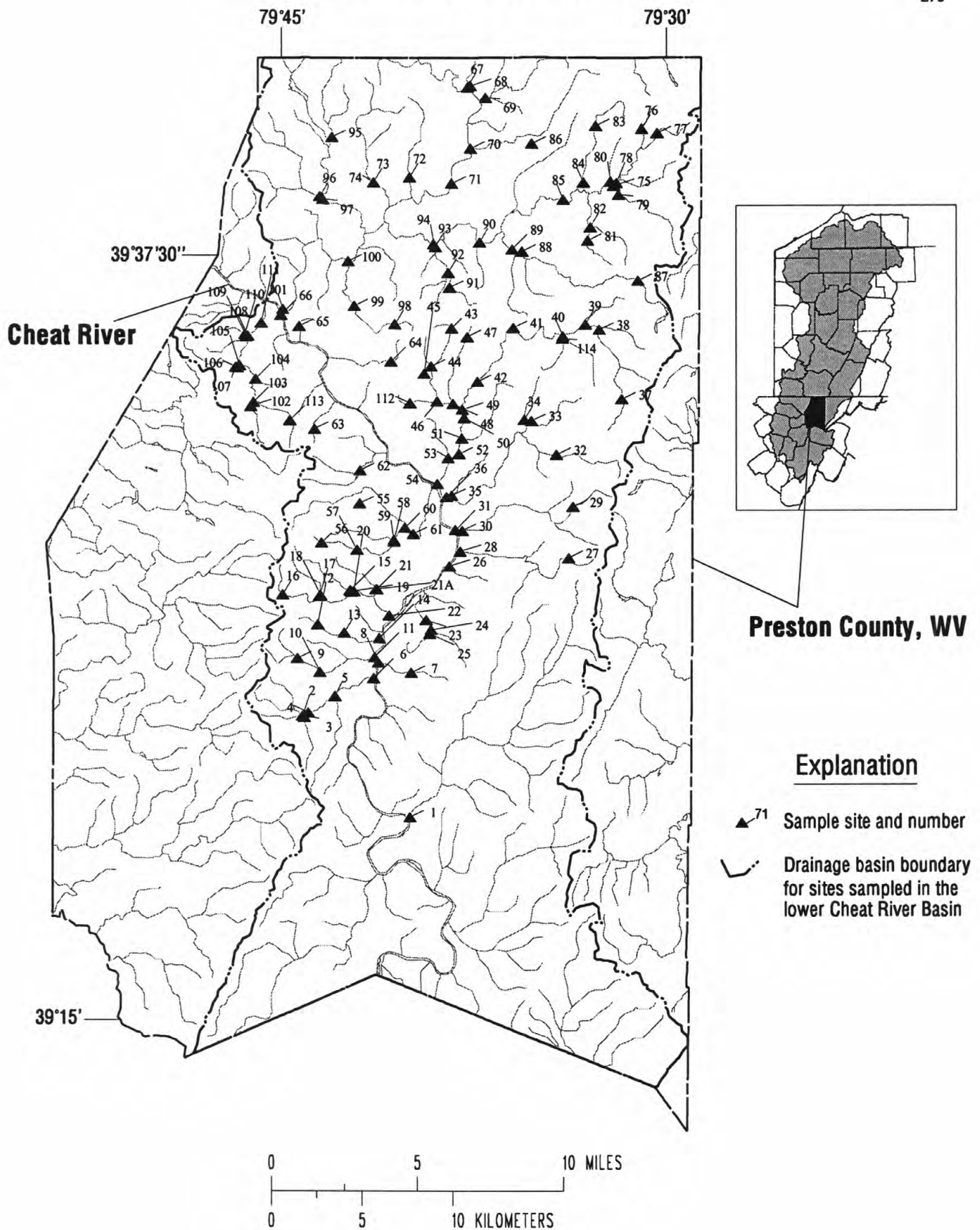


Figure 7. Location of sites sampled in streams of the lower Cheat River Basin, WV.

ANALYSIS OF STREAMFLOW SAMPLES COLLECTED AT SPECIAL-STUDY SITES

ALLEGHENY-MONONGAHELA RIVER BASIN NAWQA PROJECT

SYNOPTIC SURVEY OF LOWER CHEAT RIVER BASIN

REMARKS.--All samples collected by U.S. Geological Survey's Allegheny-Monongahela River Basin NAWQA project.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE	TIME	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)	PH WATER WHOLE LAB (STAND- ARD UNITS) (00403)	TEMPER- ATURE WATER (DEG C) (00010)	ACIDITY TOTAL HEATED (MG/L AS CAC03) (70508)	ALKA- LITY WAT.DIS FET LAB CAC03 (MG/L) (29801)
03070000 Cheat River at Rowlesburg (LAT 39 20 54N LONG 079 39 56W) Site 1								
JUL 1997 17...	1115	128	110	7.7	7.2	27.0	11	26
392352079440501 Right Fork Pringle Run at Mouth (LAT 39 23 52N LONG 079 44 05W) Site 2								
JUL 1997 17...	1450	.20	746	3.2	3.2	21.0	116	--
392350079440101 Left Fork Pringle Run at Mouth (LAT 39 23 50N LONG 079 44 01W) Site 3								
JUL 1997 18...	1545	.24	1100	3.1	2.9	22.0	238	1.9
392358079435201 Pringle Run below Forks (LAT 39 23 58N LONG 079 43 52W) Site 4								
JUL 1997 17...	1610	.96	772	3.4	3.2	22.0	130	1.9
392459079412001 Pringle Run at Mouth (LAT 39 24 59N LONG 079 41 20W) Site 6								
JUL 1997 18...	0940	.97	827	--	3.4	19.0	105	1.7
392509079395301 Joes Run above Unnamed Tributary No. 1 (LAT 39 25 09N LONG 079 39 53W) Site 7								
JUL 1997 17...	1400	.06	570	3.8	3.9	26.0	53	1.7
392527079410901 Joes Run near Mouth (LAT 39 25 27N LONG 079 41 09W) Site 8								
JUL 1997 17...	1230	.16	844	7.9	7.6	18.5	6.3	76
392534079441701 Lick Run below Forks (LAT 39 25 34N LONG 079 44 17W) Site 9								
JUL 1997 17...	1315	.25	520	3.1	3.3	20.0	73	1.6
392510079432501 Lick Run above Unnamed Tributary No. 1 (LAT 39 25 10N LONG 079 43 25W) Site 10								
JUL 1997 17...	1200	.20	1700	2.9	2.7	19.0	449	--
392536079411801 Lick Run near Mouth (LAT 39 25 36N LONG 079 41 18W) Site 11								
JUL 1997 18...	1055	1.7	2180	--	2.6	17.0	750	1.6
392634079433001 Heather Run above Unnamed Tributary No. 2 (LAT 39 26 34N LONG 079 43 30W) Site 12								
JUL 1997 17...	1020	.31	1660	--	2.7	17.0	331	1.7
392610079410701 Heather Run at Mouth (LAT 39 26 10N LONG 079 41 07W) Site 14								
JUL 1997 18...	1150	.65	1070	--	3.0	20.0	185	1.9
392734079421501 Morgan Run above Church Creek (LAT 39 27 34N LONG 079 42 15W) Site 15								
JUL 1997 16...	1725	.17	1160	--	2.9	25.0	191	1.6

ANALYSIS OF STREAMFLOW SAMPLES COLLECTED AT SPECIAL-STUDY SITES

ALLEGHENY-MONONGAHELA RIVER BASIN NAWQA PROJECT

SYNOPTIC SURVEY OF LOWER CHEAT RIVER BASIN--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE	SULFATE DIS- SOLVED (MG/L AS SO ₄) (00945)	ALUM- INUM, TOTAL RECOV- ERABLE (MG/L AS AL) (01105)	ALUM- INUM, TOTAL DIS- SOLVED (MG/L AS AL) (01106)	IRON, TOTAL RECOV- ERABLE (MG/L AS FE) (01045)	IRON, DIS- SOLVED (MG/L AS FE) (01046)	MANGA- NESE, TOTAL RECOV- ERABLE (MG/L AS MN) (01055)	MANGA- NESE, DIS- SOLVED (MG/L AS MN) (01056)
03070000	Cheat River at Rowlesburg (LAT 39 20 54N LONG 079 39 56W) Site 1						
JUL 1997 17...	19	50	42	70	24	31	18
392352079440501	Right Fork Pringle Run at Mouth (LAT 39 23 52N LONG 079 44 05W) Site 2						
JUL 1997 17...	330	11000	11100	5200	4300	2200	2160
392350079440101	Left Fork Pringle Run at Mouth (LAT 39 23 50N LONG 079 44 01W) Site 3						
JUL 1997 18...	450	24000	21100	12000	10800	2100	2010
392358079435201	Pringle Run below Forks (LAT 39 23 58N LONG 079 43 52W) Site 4						
JUL 1997 17...	290	13000	12400	4000	3600	2100	2060
392459079412001	Pringle Run at Mouth (LAT 39 24 59N LONG 079 41 20W) Site 6						
JUL 1997 18...	370	12000	11500	980	1000	2700	2680
392509079395301	Joes Run above Unnamed Tributary No. 1 (LAT 39 25 09N LONG 079 39 53W) Site 7						
JUL 1997 17...	170	17000	5880	640	570	6400	6430
392527079410901	Joes Run near Mouth (LAT 39 25 27N LONG 079 41 09W) Site 8						
JUL 1997 17...	300	60	39	100	<3.0	60	13
392534079441701	Lick Run below Forks (LAT 39 25 34N LONG 079 44 17W) Site 9						
JUL 1997 17...	160	16000	5620	2700	2500	1600	1540
392510079432501	Lick Run above Unnamed Tributary No. 1 (LAT 39 25 10N LONG 079 43 25W) Site 10						
JUL 1997 17...	760	43000	29800	50000	45900	2500	2370
392536079411801	Lick Run near Mouth (LAT 39 25 36N LONG 079 41 18W) Site 11						
JUL 1997 18...	1300	150000	55200	190000	113000	2500	2350
392634079433001	Heather Run above Unnamed Tributary No. 2 (LAT 39 26 34N LONG 079 43 30W) Site 12						
JUL 1997 17...	640	28000	21900	22000	20400	2800	2590
392610079410701	Heather Run at Mouth (LAT 39 26 10N LONG 079 41 07W) Site 14						
JUL 1997 18...	430	21000	14700	6700	5600	1800	1670
392734079421501	Morgan Run above Church Creek (LAT 39 27 34N LONG 079 42 15W) Site 15						
JUL 1997 16...	520	14000	11900	21000	20600	3500	3240

ANALYSIS OF STREAMFLOW SAMPLES COLLECTED AT SPECIAL-STUDY SITES

ALLEGHENY-MONONGAHELA RIVER BASIN NAWQA PROJECT

SYNOPTIC SURVEY OF LOWER CHEAT RIVER BASIN--Continued

WATER-QUALITY DATA, WATER YEARS OCTOBER 1996 TO SEPTEMBER 1997

DATE	TIME	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)	PH WATER WHOLE LAB (STAND- ARD UNITS) (00403)	TEMPER- ATURE WATER (DEG C) (00010)	ACIDITY TOTAL HEATED (MG/L AS CAC03) (70508)	ALKA- LINITY WAT.DIS FET LAB CAC03 (MG/L) (29801)
392727079445101 Church Creek near Headwaters (LAT 39 27 27N LONG 079 44 51W) Site 16								
JUL 1997 16...	2055	.12	655	--	3.3	21.0	126	1.6
392724079432601 Left Fork Unnamed Trib. of Church Ck. at Mouth (LAT 39 27 24N LONG 079 43 26W) Site 17								
JUL 1997 16...	1950	.07	1450	--	2.7	20.0	325	1.7
392725079432301 Right Fork Unnamed Tributary of Church Ck at Mouth (LAT 39 27 25N LONG 079 43 23W) Site 18								
JUL 1997 16...	1915	.08	1240	--	2.9	21.0	258	1.5
392732079421201 Church Creek at Mouth (LAT 39 27 32N LONG 079 42 12W) Site 19								
JUL 1997 16...	1815	.45	1720	--	2.6	24.0	601	1.7
392733079420601 Morgan Run below Church Creek (LAT 39 27 33N LONG 079 42 06W) Site 20								
JUL 1997 16...	1630	1.2	1920	--	2.6	21.0	685	1.8
392736079411301 Unnamed Trib.No.1 of Morgan Run near Mouth (LAT 39 27 36N LONG 079 41 13W) Site 21								
JUL 1997 16...	1350	.05	491	--	7.7	22.0	11	150
392736079411501 UNNAMED TRIBUTARY TO MORGAN RUN NEAR KINGWOOD, WV (LAT 39 27 36N LONG 079 41 15W) Site 21A								
JUL 1997 18...	1230	.12	372	--	7.1	20.0	13	65
392650079404401 Morgan Run at Mouth (LAT 39 26 50N LONG 079 40 44W) Site 22								
JUL 1997 16...	1510	1.7	1420	--	2.8	23.0	380	1.8
392642079391801 Buffalo Run below Unnamed Tributary No. 1 (LAT 39 26 42N LONG 079 39 18W) Site 23								
JUL 1997 17...	1530	.64	643	6.3	6.1	21.0	8.4	3.7
392625079390701 Buffalo Run above Unnamed Tributary No. 2 (LAT 39 26 25N LONG 079 39 07W) Site 24								
JUL 1997 17...	1445	1.1	693	4.5	4.6	20.5	20	<1.0
392618079391001 Unnamed Tributary No. 2 of Buffalo Run (LAT 39 26 18N LONG 079 39 10W) Site 25								
JUL 1997 17...	1510	.10	764	7.1	6.7	21.5	7.4	12
392817079382401 Ashpole Run at Mouth (LAT 39 28 17N LONG 079 38 24W) Site 26								
JUL 1997 17...	1010	.03	136	7.3	7.2	18.5	<5.0	14
392832079334701 Elsey Run near Headwaters (LAT 39 28 32N LONG 079 33 47W) Site 27								
JUL 1997 17...	1120	.05	68	7.2	6.9	20.5	<5.0	22

ANALYSIS OF STREAMFLOW SAMPLES COLLECTED AT SPECIAL-STUDY SITES

ALLEGHENY-MONONGAHELA RIVER BASIN NAWQA PROJECT

SYNOPTIC SURVEY OF LOWER CHEAT RIVER BASIN--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	ALUM- INUM, TOTAL RECOV- ERABLE (µG/L AS AL) (01105)	ALUM- INUM, TOTAL DIS- SOLVED (µG/L AS AL) (01106)	IRON, TOTAL RECOV- ERABLE (µG/L AS FE) (01045)	IRON, DIS- SOLVED (µG/L AS FE) (01046)	MANGA- NESE, TOTAL RECOV- ERABLE (µG/L AS MN) (01055)	MANGA- NESE, DIS- SOLVED (µG/L AS MN) (01056)
392727079445101 Church Creek near Headwaters (LAT 39 27 27N LONG 079 44 51W) Site 16							
JUL 1997 16...	270	18000	14500	4500	3400	3100	2920
392724079432601 Left Fork Unnamed Trib. of Church Ck. at Mouth (LAT 39 27 24N LONG 079 43 26W) Site 17							
JUL 1997 16...	550	34000	25300	18000	17200	6200	5980
392725079432301 Right Fork Unnamed Tributary of Church Ck at Mouth (LAT 39 27 25N LONG 079 43 23W) Site 18							
JUL 1997 16...	530	35000	26600	6600	6200	7800	7430
392732079421201 Church Creek at Mouth (LAT 39 27 32N LONG 079 42 12W) Site 19							
JUL 1997 16...	890	64000	46000	71000	72100	4000	3900
392733079420601 Morgan Run below Church Creek (LAT 39 27 33N LONG 079 42 06W) Site 20							
JUL 1997 16...	1000	100000	48800	100000	101000	3500	3470
392736079411301 Unnamed Trib.No.1 of Morgan Run near Mouth (LAT 39 27 36N LONG 079 41 13W) Site 21							
JUL 1997 16...	44	40	14	210	5.9	46	31
392736079411501 UNNAMED TRIBUTARY TO MORGAN RUN NEAR KINGWOOD (LAT 39 27 36N LONG 079 41 15W) Site 21A							
JUL 1997 18...	240	30	28	220	65	1400	1390
392650079404401 Morgan Run at Mouth (LAT 39 26 50N LONG 079 40 44W) Site 22							
JUL 1997 16...	680	38000	28000	41000	40900	2500	2310
392642079391801 Buffalo Run below Unnamed Tributary No. 1 (LAT 39 26 42N LONG 079 39 18W) Site 23							
JUL 1997 17...	310	90	37	20	<3.0	740	733
392625079390701 Buffalo Run above Unnamed Tributary No. 2 (LAT 39 26 25N LONG 079 39 07W) Site 24							
JUL 1997 17...	370	950	1000	90	42	1700	1700
392618079391001 Unnamed Tributary No. 2 of Buffalo Run (LAT 39 26 18N LONG 079 39 10W) Site 25							
JUL 1997 17...	320	20	10	50	<3.0	93	73
392817079382401 Ashpole Run at Mouth (LAT 39 28 17N LONG 079 38 24W) Site 26							
JUL 1997 17...	37	30	9.3	70	<3.0	14	4.0
392832079334701 Elsey Run near Headwaters (LAT 39 28 32N LONG 079 33 47W) Site 27							
JUL 1997 17...	2.1	300	13	3100	87	140	95

ANALYSIS OF STREAMFLOW SAMPLES COLLECTED AT SPECIAL-STUDY SITES

ALLEGHENY-MONONGAHELA RIVER BASIN NAWQA PROJECT

SYNOPTIC SURVEY OF LOWER CHEAT RIVER BASIN--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE	TIME	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)	PH WATER WHOLE LAB (STAND- ARD UNITS) (00403)	TEMPER- ATURE WATER (DEG C) (00010)	ACIDITY TOTAL HEATED (MG/L AS CAC03) (70508)	ALKA- LITY WAT.DIS FET LAB CAC03 (MG/L) (29801)
392843079375901 Elsey Run at Mouth (LAT 39 28 43N LONG 079 37 59W) Site 28								
JUL 1997 17...	0930	.46	86	7.3	7.5	18.5	<5.0	21
393002079333701 Dority Run at Mouth (LAT 39 30 02N LONG 079 33 37W) Site 29								
JUL 1997 16...	1450	.15	69	7.2	7.0	21.0	8.4	15
392920079375401 Daugherty Run at Mouth (LAT 39 29 20N LONG 079 37 54W) Site 30								
JUL 1997 17...	0845	1.1	215	7.5	7.3	19.0	<5.0	41
03070260 CHEAT RIVER AT ALBRIGHT, WV (LAT 39 29 21N LONG 079 38 10W) Site 31								
JUL 1997 18...	1355	E125	167	7.0	7.4	37.0	<5.0	14
393134079341501 Roaring Creek above Lick Run (LAT 39 31 34N LONG 079 34 15W) Site 32								
JUL 1997 16...	1210	.73	108	7.8	7.5	18.0	<5.0	39
393234079351301 Lick Run above Little Lick Run (LAT 39 32 34N LONG 079 35 13W) Site 33								
JUL 1997 16...	1110	.76	40	4.5	4.6	18.0	10	--
393236079353001 Little Lick Run at Mouth (LAT 39 32 36N LONG 079 35 30W) Site 34								
JUL 1997 16...	1000	.21	72	6.6	7.1	20.0	7.8	13
393022079381901 Unnamed Tributary No.1 of Roaring Ck. at Mouth (LAT 39 30 22N LONG 079 38 19W) Site 35								
JUL 1997 17...	0800	.02	226	8.0	8.0	18.0	6.5	100
393019079383101 Roaring Creek at Mouth (LAT 39 30 19N LONG 079 38 31W) Site 36								
JUL 1997 16...	1810	2.8	233	7.3	7.7	22.5	<5.0	17
393312079314301 Muddy Creek near Headwaters (LAT 39 33 12N LONG 079 31 43W) Site 37								
JUL 1997 16...	1335	.70	91	7.6	7.6	18.0	<5.0	27
393515079323501 Muddy Creek above Sugarcamp Run (LAT 39 35 15N LONG 079 32 35W) Site 38								
JUL 1997 17...	1515	1.7	130	7.1	7.0	17.0	<5.0	42
393524079330801 Jump Rock Run at Mouth (LAT 39 35 24N LONG 079 33 08W) Site 39								
JUL 1997 17...	1430	.12	30	--	4.8	17.0	<5.0	1.2
393503079340001 Unnamed Tributary of Muddy Ck at Mouth (LAT 39 35 03N LONG 079 34 00W) Site 40								
JUL 1997 18...	1100	2.2	88	7.7	7.6	18.5	<5.0	28

ANALYSIS OF STREAMFLOW SAMPLES COLLECTED AT SPECIAL-STUDY SITES

ALLEGHENY-MONONGAHELA RIVER BASIN NAWQA PROJECT

SYNOPTIC SURVEY OF LOWER CHEAT RIVER BASIN--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE	SULFATE DIS- SOLVED (MG/L AS SO ₄) (00945)	ALUM- INUM, TOTAL RECOV- ERABLE (µG/L AS AL) (01105)	ALUM- INUM, TOTAL DIS- SOLVED (µG/L AS AL) (01106)	IRON, TOTAL RECOV- ERABLE (µG/L AS FE) (01045)	IRON, DIS- SOLVED (µG/L AS FE) (01046)	MANGA- NESE, TOTAL RECOV- ERABLE (µG/L AS MN) (01055)	MANGA- NESE, DIS- SOLVED (µG/L AS MN) (01056)
392843079375901 Elsey Run at Mouth (LAT 39 28 43N LONG 079 37 59W) Site 28							
JUL 1997 17...	8.6	<10	11	50	4.4	<10	3.0
393002079333701 Dority Run at Mouth (LAT 39 30 02N LONG 079 33 37W) Site 29							
JUL 1997 16...	7.9	60	10	160	17	31	20
392920079375401 Daugherty Run at Mouth (LAT 39 29 20N LONG 079 37 54W) Site 30							
JUL 1997 17...	51	40	24	70	<3.0	11	4.4
03070260 CHEAT RIVER AT ALBRIGHT, WV (LAT 39 29 21N LONG 079 38 10W) Site 31							
JUL 1997 18...	46	140	146	110	28	67	63
393134079341501 Roaring Creek above Lick Run (LAT 39 31 34N LONG 079 34 15W) Site 32							
JUL 1997 16...	6.4	60	31	60	6.3	16	7.6
393234079351301 Lick Run above Little Lick Run (LAT 39 32 34N LONG 079 35 13W) Site 33							
JUL 1997 16...	13	580	577	100	39	230	224
393236079353001 Little Lick Run at Mouth (LAT 39 32 36N LONG 079 35 30W) Site 34							
JUL 1997 16...	10	90	15	720	43	150	132
393022079381901 Unnamed Tributary No.1 of Roaring Ck. at Mouth (LAT 39 30 22N LONG 079 38 19W) Site 35							
JUL 1997 17...	22	440	14	940	9.6	58	1.5
393019079383101 Roaring Creek at Mouth (LAT 39 30 19N LONG 079 38 31W) Site 36							
JUL 1997 16...	80	40	36	40	5.5	12	5.9
393312079314301 Muddy Creek near Headwaters (LAT 39 33 12N LONG 079 31 43W) Site 37							
JUL 1997 16...	6.1	140	24	220	8.0	28	5.9
393515079323501 Muddy Creek above Sugarcamp Run (LAT 39 35 15N LONG 079 32 35W) Site 38							
JUL 1997 17...	8.0	90	39	120	11	21	3.3
393524079330801 Jump Rock Run at Mouth (LAT 39 35 24N LONG 079 33 08W) Site 39							
JUL 1997 17...	8.7	340	225	540	41	310	287
393503079340001 Unnamed Tributary of Muddy Ck at Mouth (LAT 39 35 03N LONG 079 34 00W) Site 40							
JUL 1997 18...	8.4	100	70	70	11	16	6.4

ANALYSIS OF STREAMFLOW SAMPLES COLLECTED AT SPECIAL-STUDY SITES

ALLEGHENY-MONONGAHELA RIVER BASIN NAWQA PROJECT

SYNOPTIC SURVEY OF LOWER CHEAT RIVER BASIN--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE	TIME	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)	PH WATER WHOLE LAB (STAND- ARD UNITS) (00403)	TEMPER- ATURE WATER (DEG C) (00010)	ACIDITY TOTAL HEATED (MG/L AS CAC03) (70508)	ALKA- LINITY WAT.DIS FET LAB CAC03 (MG/L) (29801)
393518079355501 Muddy Creek at Brandonville Turnpike (LAT 39 35 18N LONG 079 35 55W) Site 41								
JUL 1997	17...	1800	2.8	220	6.1	7.0	21.0	<5.0 13
393343079371901 Muddy Creek above Martin Creek (LAT 39 33 43N LONG 079 37 19W) Site 42								
JUL 1997	18...	0955	3.5	351	7.4	7.5	21.5	<5.0 30
393517079381901 Glade Run near Headwaters (LAT 39 35 17N LONG 079 38 19W) Site 43								
JUL 1997	16...	1840	.77	1050	4.4	4.3	24.0	20 1.8
393410079390701 Unnamed Trib. No. 2 of Glade Run at Mouth (LAT 39 34 10N LONG 079 39 07W) Site 44								
JUL 1997	16...	1800	.19	2430	3.3	3.3	23.0	312 1.7
393357079392301 Unnamed Tributary No. 1 of Glade Run at Mouth (LAT 39 33 57N LONG 079 39 23W) Site 45								
JUL 1997	16...	1705	.08	2440	3.1	3.2	22.0	323 1.8
393308079385301 Glade Run at Mouth (LAT 39 33 08N LONG 079 38 53W) Site 46								
JUL 1997	16...	1530	1.8	2020	3.2	3.3	20.0	248 1.6
393502079374301 Fickey Run near headwaters (LAT 39 35 02N LONG 079 37 43W) Site 47								
JUL 1997	18...	0915	.00	164	7.1	6.9	19.5	7.1 44
393304079381601 Fickey Run at Mouth (LAT 39 33 04N LONG 079 38 16W) Site 48								
JUL 1997	16...	1430	1.2	3260	2.7	2.6	23.0	1350 1.8
393254079375401 Martin Creek at Mouth (LAT 39 32 54N LONG 079 37 54W) Site 49								
JUL 1997	16...	1320	3.3	2320	2.9	2.8	25.0	501 --
393239079375001 Muddy Creek below Martin Creek (LAT 39 32 39N LONG 079 37 50W) Site 50								
JUL 1997	16...	1215	11	1440	3.2	3.0	22.5	244 1.8
393203079375501 Crab Orchard Creek at Mouth (LAT 39 32 03N LONG 079 37 55W) Site 51								
JUL 1997	16...	1110	.75	855	8.0	8.1	19.5	8.4 120
393135079380201 Unnamed Tributary No. 2 of Muddy Creek (LAT 39 31 35N LONG 079 38 02W) Site 52								
JUL 1997	16...	1020	.00	66	6.9	6.7	16.5	<5.0 5.6
393128079382701 Sypolt Run at Mouth (LAT 39 31 28N LONG 079 38 27W) Site 53								
JUL 1997	16...	1610	.05	711	6.4	5.3	21.0	11 2.3

ANALYSIS OF STREAMFLOW SAMPLES COLLECTED AT SPECIAL-STUDY SITES

ALLEGHENY-MONONGAHELA RIVER BASIN NAWQA PROJECT

SYNOPTIC SURVEY OF LOWER CHEAT RIVER BASIN--Continued

WATER-QUALITY DATA, WATER YEARS OCTOBER 1996 TO SEPTEMBER 1997

DATE	SULFATE DIS- SOLVED (MG/L AS SO ₄) (00945)	ALUM- INUM, TOTAL RECOV- ERABLE (μG/L AS AL) (01105)	ALUM- INUM, DIS- SOLVED (μG/L AS AL) (01106)	IRON, TOTAL RECOV- ERABLE (μG/L AS FE) (01045)	IRON, DIS- SOLVED (μG/L AS FE) (01046)	MANGA- NESE, TOTAL RECOV- ERABLE (μG/L AS MN) (01055)	MANGA- NESE, DIS- SOLVED (μG/L AS MN) (01056)
393518079355501 Muddy Creek at Brandonville Turnpike (LAT 39 35 18N LONG 079 35 55W) Site 41							
JUL 1997 17...	70	780	47	230	87	510	475
393343079371901 Muddy Creek above Martin Creek (LAT 39 33 43N LONG 079 37 19W) Site 42							
JUL 1997 18...	130	110	49	140	15	71	37
393517079381901 Glade Run near Headwaters (LAT 39 35 17N LONG 079 38 19W) Site 43							
JUL 1997 16...	550	790	423	3800	2500	3800	3730
393410079390701 Unnamed Trib. No. 2 of Glade Run at Mouth (LAT 39 34 10N LONG 079 39 07W) Site 44							
JUL 1997 16...	1700	88000	40600	6900	5900	33000	30900
393357079392301 Unnamed Tributary No. 1 of Glade Run at Mouth (LAT 39 33 57N LONG 079 39 23W) Site 45							
JUL 1997 16...	1600	90000	40200	5500	5600	25000	21600
393308079385301 Glade Run at Mouth (LAT 39 33 08N LONG 079 38 53W) Site 46							
JUL 1997 16...	1200	66000	32000	4600	5000	14000	13900
393502079374301 Fickey Run near headwaters (LAT 39 35 02N LONG 079 37 43W) Site 47							
JUL 1997 18...	8.0	230	12	650	25	150	109
393304079381601 Fickey Run at Mouth (LAT 39 33 04N LONG 079 38 16W) Site 48							
JUL 1997 16...	2400	120000	83600	450000	243000	15000	14000
393254079375401 Martin Creek at Mouth (LAT 39 32 54N LONG 079 37 54W) Site 49							
JUL 1997 16...	1500	120000	42000	64000	61100	12000	12800
393239079375001 Muddy Creek below Martin Creek (LAT 39 32 39N LONG 079 37 50W) Site 50							
JUL 1997 16...	750	22000	20800	31000	16800	5900	5440
393203079375501 Crab Orchard Creek at Mouth (LAT 39 32 03N LONG 079 37 55W) Site 51							
JUL 1997 16...	330	120	21	290	<3.0	140	7.1
393135079380201 Unnamed Tributary No. 2 of Muddy Creek (LAT 39 31 35N LONG 079 38 02W) Site 52							
JUL 1997 16...	15	110	11	120	3.0	26	<1.0
393128079382701 Sybolt Run at Mouth (LAT 39 31 28N LONG 079 38 27W) Site 53							
JUL 1997 16...	360	120000	7.7	10000	4200	930	953

ANALYSIS OF STREAMFLOW SAMPLES COLLECTED AT SPECIAL-STUDY SITES

ALLEGHENY-MONONGAHELA RIVER BASIN NAWQA PROJECT

SYNOPTIC SURVEY OF LOWER CHEAT RIVER BASIN--Continued

WATER-QUALITY DATA, WATER YEARS OCTOBER 1996 TO SEPTEMBER 1997

DATE	TIME	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)	PH WATER WHOLE LAB (STAND- ARD UNITS) (00403)	TEMPER- ATURE WATER (DEG C) (00010)	ACIDITY TOTAL HEATED AS CAC03 (MG/L 70508)	ALKA- LINITY WAT.DIS FET LAB CAC03 (MG/L) (29801)
393042079385201 Muddy Creek at Mouth (LAT 39 30 42N LONG 079 38 52W) Site 54								
JUL 1997 16...	1650	11	1690	3.2	3.2	23.5	199	--
393008079415301 Greens Run above South Fork at Pleasantdale (LAT 39 30 08N LONG 079 41 04W) Site 55								
JUL 1997 18...	0945	.03	130	4.0	4.5	17.0	18	1.7
392858079432101 South Fork Greens Run near Headwaters (LAT 39 28 58N LONG 079 43 21W) Site 56								
JUL 1997 16...	1040	.03	143	--	4.0	20.0	35	1.7
392845079415901 South Fork Greens Run above limestone mines (LAT 39 28 45N LONG 079 41 59W) Site 57								
JUL 1997 16...	1220	.69	1870	2.7	2.6	16.0	616	1.8
392900079403301 South Fork Greens Run above Middle Fork (LAT 39 29 00N LONG 079 40 33W) Site 58								
JUL 1997 17...	1820	.64	1510	2.8	2.7	21.5	410	1.9
392903079403301 Middle Fork Greens Run at Mouth (LAT 39 29 03N LONG 079 40 33W) Site 59								
JUL 1997 17...	1800	.23	1960	2.6	2.7	21.5	559	1.6
392925079400701 Greens Run below South and Middle Forks (LAT 39 29 25N LONG 079 40 07W) Site 60								
JUL 1997 17...	1730	.65	1710	2.7	2.7	22.0	443	--
392914079394801 Greens Run below South Fork (LAT 39 29 14N LONG 079 39 48W) Site 61								
JUL 1997 17...	1645	.90	1490	2.8	2.8	22.0	332	1.8
393106079412001 Laurel Run above Hogback Run (LAT 39 31 06N LONG 079 41 52W) Site 62								
JUL 1997 18...	1020	.02	90	7.0	7.3	20.0	215	20
393219079433801 Hacklebarney Run near headwaters (LAT 39 32 19N LONG 079 43 38W) Site 63								
JUL 1997 18...	1145	.01	80	6.7	6.8	18.0	6.2	14
393418079404001 Conner Run near headwaters (LAT 39 34 18N LONG 079 40 40W) Site 64								
JUL 1997 18...	1030	.04	1120	3.2	3.1	19.0	<5.0	1.6
393520079441401 Gibson Run near Mouth (LAT 39 35 20N LONG 079 44 14W) Site 65								
JUL 1997 18...	1305	.02	60	6.8	7.3	22.0	6.3	21
393540079445601 Cheat River above Big Sandy Creek (LAT 39 35 40N LONG 079 44 56W) Site 66								
JUL 1997 17...	1830	174	220	6.2	7.1	31.0	<5.0	4.5

ANALYSIS OF STREAMFLOW SAMPLES COLLECTED AT SPECIAL-STUDY SITES

ALLEGHENY-MONONGAHELA RIVER BASIN NAWQA PROJECT

SYNOPTIC SURVEY OF LOWER CHEAT RIVER BASIN--Continued

WATER-QUALITY DATA, WATER YEARS OCTOBER 1996 TO SEPTEMBER 1997

DATE	SULFATE DIS- SOLVED (MG/L AS SO ₄) (00945)	ALUM- TOTAL RECOV- ERABLE (µG/L AS AL) (01105)	ALUM- INUM, DIS- SOLVED (µG/L AS AL) (01106)	IRON, TOTAL RECOV- ERABLE (µG/L AS FE) (01045)	IRON, DIS- SOLVED (µG/L AS FE) (01046)	MANGA- NESE, TOTAL RECOV- ERABLE (µG/L AS MN) (01055)	MANGA- NESE, DIS- SOLVED (µG/L AS MN) (01056)
393042079385201 Muddy Creek at Mouth (LAT 39 30 42N LONG 079 38 52W) Site 54							
JUL 1997 16...	870	17000	15500	17000	5300	4200	3660
393008079415301 Greens Run above South Fork at Pleasantdale (LAT 39 30 08N LONG 079 41 04W) Site 55							
JUL 1997 18...	52	1300	1260	60	29	930	902
392858079432101 South Fork Greens Run near Headwaters (LAT 39 28 58N LONG 079 43 21W) Site 56							
JUL 1997 16...	48	120	--	20000	--	490	--
392845079415901 South Fork Greens Run above limestone fines (LAT 39 28 45N LONG 079 41 59W) Site 57							
JUL 1997 16...	960	50000	34500	100000	96800	4000	3800
392900079403301 South Fork Greens Run above Middle Fork (LAT 39 29 00N LONG 079 40 33W) Site 58							
JUL 1997 17...	870	28000	27600	51000	49000	3300	3120
392903079403301 Middle Fork Greens Run at Mouth (LAT 39 29 03N LONG 079 40 33W) Site 59							
JUL 1997 17...	1000	37000	33900	70000	65100	4600	4160
392925079400701 Greens Run below South and Middle Forks (LAT 39 29 25N LONG 079 40 07W) Site 60							
JUL 1997 17...	890	31000	29200	48000	46800	3600	3370
392914079394801 Greens Run below South Fork (LAT 39 29 14N LONG 079 39 48W) Site 61							
JUL 1997 17...	710	26000	24400	34000	33100	3200	2910
393106079412001 Laurel Run above Hogback Run (LAT 39 31 06N LONG 079 41 52W) Site 62							
JUL 1997 18...	10	10	12	30	<3.0	11	5.3
393219079433801 Hacklebarney Run near headwaters (LAT 39 32 19N LONG 079 43 38W) Site 63							
JUL 1997 18...	13	290	14	610	37	270	225
393418079404001 Conner Run near headwaters (LAT 39 34 18N LONG 079 40 40W) Site 64							
JUL 1997 18...	580	21000	20500	9000	8600	10000	9290
393520079441401 Gibson Run near Mouth (LAT 39 35 20N LONG 079 44 14W) Site 65							
JUL 1997 18...	5.8	140	9.0	610	14	53	41
393540079445601 Cheat River above Big Sandy Creek (LAT 39 35 40N LONG 079 44 56W) Site 66							
JUL 1997 17...	81	70	46	40	<3.0	290	322

ANALYSIS OF STREAMFLOW SAMPLES COLLECTED AT SPECIAL-STUDY SITES

ALLEGHENY- MONONGAHELA RIVER BASIN NAWQA PROJECT

SYNOPTIC SURVEY OF LOWER CHEAT RIVER BASIN--Continued

WATER-QUALITY DATA, WATER YEARS OCTOBER 1996 TO SEPTEMBER 1997

DATE	TIME	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)	PH WATER WHOLE LAB (STAND- ARD UNITS) (00403)	TEMPER- ATURE WATER (DEG C) (00010)	ACIDITY TOTAL HEATED (MG/L AS CAC03) (70508)	ALKA- LITY WAT.DIS FET LAB CAC03 (MG/L) (29801)
394223079374201 Big Sandy Creek above Little Sandy Creek (LAT 39 42 23N LONG 079 37 42W) Site 67								
JUL 1997 16...	1100	4.2	140	6.2	7.2	25.0	7.0	27
394226079373501 Little Sandy Creek at Mouth (LAT 39 42 26N LONG 079 37 35W) Site 68								
JUL 1997 16...	1150	.87	60	5.9	7.1	22.0	<5.0	10
394205079370001 Unnamed Trib of Big Sandy Creek near Clifton (LAT 39 42 05N LONG 079 37 00W) Site 69								
JUL 1997 16...	1300	.03	240	6.4	7.3	21.0	<5.0	31
394022079373301 Glade Run at Mouth (LAT 39 40 35N LONG 079 37 35W) Site 70								
JUL 1997 16...	1335	.72	340	6.6	7.1	19.0	9.4	42
393933079381901 Big Sandy Creek at Bruceton Mills (LAT 39 39 33N LONG 079 38 19W) Site 71								
JUL 1997 16...	0915	5.6	160	6.1	7.3	24.0	<5.0	23
393944079395701 Glade Run near Mouth (LAT 39 39 44N LONG 079 39 57W) Site 72								
JUL 1997 17...	1345	<.01	253	7.2	7.2	21.0	7.9	48
393935079412101 Hazel Run near Mouth (LAT 39 39 35N LONG 079 41 21W) Site 74								
JUL 1997 17...	1250	.15	97	7.0	7.6	22.9	6.5	16
394110079305601 Cherry Run near Headwaters (LAT 39 41 10N LONG 079 30 56W) Site 76								
JUL 1997 16...	1715	.03	370	6.9	7.0	28.0	7.0	28
394102079302001 Unnamed Trib. No. 3 of Cherry Run near Headwaters (LAT 39 41 02N LONG 079 30 20W) Site 77								
JUL 1997 16...	1650	.06	30	6.1	6.8	19.0	<5.0	2.2
393934079315501 Cherry Run at Mouth (LAT 39 39 34N LONG 079 31 55W) Site 78								
JUL 1997 16...	1600	.59	80	6.3	6.5	22.0	6.0	6.2
393913079315001 Mill Run near Mouth (LAT 39 39 13N LONG 079 31 50W) Site 79								
JUL 1997 16...	1820	.51	50	6.3	6.5	17.0	20	3.4
394023079320901 Piney Run at Mouth (LAT 39 39 37N LONG 079 32 09W) Site 80								
JUL 1997 16...	1535	.08	230	6.8	7.3	24.0	11	72
393752079330201 Elk Run above unnamed tributaries (LAT 39 37 52N LONG 079 33 02W) Site 81								
JUL 1997 17...	1350	.14	180	6.6	6.5	17.0	6.0	13

ANALYSIS OF STREAMFLOW SAMPLES COLLECTED AT SPECIAL-STUDY SITES

ALLEGHENY- MONONGAHELA RIVER BASIN NAWQA PROJECT

SYNOPTIC SURVEY OF LOWER CHEAT RIVER BASIN--Continued

WATER-QUALITY DATA, WATER YEARS OCTOBER 1996 TO SEPTEMBER 1997

DATE	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	ALUM- INUM, TOTAL RECOV- ERABLE (µG/L AS AL) (01105)	ALUM- INUM, DIS- SOLVED (µG/L AS AL) (01106)	IRON, TOTAL RECOV- ERABLE (µG/L AS FE) (01045)	IRON, DIS- SOLVED (µG/L AS FE) (01046)	MANGA- NESE, TOTAL RECOV- ERABLE (µG/L AS MN) (01055)	MANGA- NESE, DIS- SOLVED (µG/L AS MN) (01056)
394223079374201 Big Sandy Creek above Little Sandy Creek (LAT 39 42 23N LONG 079 37 42W) Site 67							
JUL 1997 16...	23	70	18	280	31	110	106
394226079373501 Little Sandy Creek at Mouth (LAT 39 42 26N LONG 079 37 35W) Site 68							
JUL 1997 16...	8.1	110	16	600	14	140	111
394205079370001 Unnamed Trib of Big Sandy Creek near Clifton (LAT 39 42 05N LONG 079 37 00W) Site 69							
JUL 1997 16...	76	70	19	110	4.8	20	13
394022079373301 Glade Run at Mouth (LAT 39 40 35N LONG 079 37 35W) Site 70							
JUL 1997 16...	210	30	13	140	<3.0	39	2.8
393933079381901 Big Sandy Creek at Bruceton Mills (LAT 39 39 33N LONG 079 38 19W) Site 71							
JUL 1997 16...	36	70	12	420	83	190	127
393944079395701 Glade Run near Mouth (LAT 39 39 44N LONG 079 39 57W) Site 72							
JUL 1997 17...	6.0	160	11	1200	27	200	175
393935079412101 Hazel Run near Mouth (LAT 39 39 35N LONG 079 41 21W) Site 74							
JUL 1997 17...	18	120	16	1100	31	220	173
394110079305601 Cherry Run near Headwaters (LAT 39 41 10N LONG 079 30 56W) Site 76							
JUL 1997 16...	130	60	12	970	43	280	286
394102079302001 Unnamed Trib. No. 3 of Cherry Run near Headwaters (LAT 39 41 02N LONG 079 30 20W) Site 77							
JUL 1997 16...	8.0	430	124	2100	350	190	138
393934079315501 Cherry Run at Mouth (LAT 39 39 34N LONG 079 31 55W) Site 78							
JUL 1997 16...	22	150	20	520	120	460	449
393913079315001 Mill Run near Mouth (LAT 39 39 13N LONG 079 31 50W) Site 79							
JUL 1997 16...	16	310	52	440	32	450	420
394023079320901 Piney Run at Mouth (LAT 39 39 37N LONG 079 32 09W) Site 80							
JUL 1997 16...	40	100	11	2400	32	830	799
393752079330201 Elk Run above unnamed tributaries (LAT 39 37 52N LONG 079 33 02W) Site 81							
JUL 1997 17...	52	70	9.8	230	11	120	97

ANALYSIS OF STREAMFLOW SAMPLES COLLECTED AT SPECIAL-STUDY SITES

ALLEGHENY- MONONGAHELA RIVER BASIN NAWQA PROJECT

SYNOPTIC SURVEY OF LOWER CHEAT RIVER BASIN--Continued

WATER-QUALITY DATA, WATER YEARS OCTOBER 1996 TO SEPTEMBER 1997

DATE	TIME	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)	PH WATER WHOLE LAB (STAND- ARD UNITS) (00403)	TEMPER- ATURE WATER (DEG C) (00010)	ACIDITY TOTAL HEATED (MG/L AS CAC03) (70508)	ALKA- LITY WAT.DIS FET LAB CAC03 (MG/L) (29801)
393752079325601 Elk Run near Mouth (LAT 39 38 16N LONG 079 32 56W) Site 82								
JUL 1997 17...	1310	.41	170	6.5	7.3	20.5	<5.0	8.2
394115079324301 Hog Run near Headwaters (LAT 39 41 15N LONG 079 32 43W) Site 83								
JUL 1997 16...	1745	.12	690	7.3	7.8	21.0	9.9	130
393935079331201 Hog Run near Mouth (LAT 39 39 35N LONG 079 33 12W) Site 84								
JUL 1997 16...	1500	.23	380	7.0	7.6	29.0	6.5	62
393905079335901 Little Sandy Creek below Hog Run (LAT 39 39 05N LONG 079 33 59W) Site 85								
JUL 1997 17...	1150	2.3	290	6.7	7.5	23.0	<5.0	31
394044079351201 Barnes Run (LAT 39 40 04N LONG 079 35 12W) Site 86								
JUL 1997 16...	1425	.13	260	6.3	6.9	25.0	11	21
393641079310501 Beaver Creek near Headwaters (LAT 39 36 41N LONG 079 31 05W) Site 87								
JUL 1997 17...	1615	.52	30	5.1	6.2	17.0	6.0	1.4
393733079353501 Beaver Creek above Glade Run (LAT 39 37 33N LONG 079 35 35W) Site 88								
JUL 1997 17...	1030	1.6	180	6.4	7.0	18.0	6.5	3.9
393737079355801 Beaver Creek near Mouth (LAT 39 37 37N LONG 079 35 58W) Site 89								
JUL 1997 17...	0930	1.6	200	6.4	7.3	18.0	6.0	5.3
393749079371401 Little Sandy Creek below Beaver Creek (LAT 39 37 49N LONG 079 37 14W) Site 90								
JUL 1997 17...	0825	4.3	340	6.2	7.8	18.0	<5.0	13
393629079382401 Webster Run near Headwaters (LAT 39 36 29N LONG 079 38 24W) Site 91								
JUL 1997 17...	1820	.53	464	7.3	6.6	21.5	15	25
393655079382701 Unnamed Tributary of Webster Run (LAT 39 36 55N LONG 079 38 27W) Site 92								
JUL 1997 17...	1720	.10	955	4.6	4.4	21.5	62	2.0
393741079385701 Webster Run at Mouth (LAT 39 37 41N LONG 079 38 57W) Site 93								
JUL 1997 17...	1610	.52	879	7.3	6.9	21.2	8.4	17
393746079390101 Little Sandy Creek near Mouth (LAT 39 37 46N LONG 079 39 01W) Site 94								
JUL 1997 17...	1515	6.3	372	7.3	6.8	27.5	<5.0	14

ANALYSIS OF STREAMFLOW SAMPLES COLLECTED AT SPECIAL-STUDY SITES

ALLEGHENY- MONONGAHELA RIVER BASIN NAWQA PROJECT

SYNOPTIC SURVEY OF LOWER CHEAT RIVER BASIN--Continued

WATER-QUALITY DATA, WATER YEARS OCTOBER 1996 TO SEPTEMBER 1997

DATE	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	ALUM- INUM, TOTAL RECOV- ERABLE (µG/L AS AL) (01105)	ALUM- INUM, DIS- SOLVED (µG/L AS AL) (01106)	IRON, TOTAL RECOV- ERABLE (µG/L AS FE) (01045)	IRON, DIS- SOLVED (µG/L AS FE) (01046)	MANGA- NESE, TOTAL RECOV- ERABLE (µG/L AS MN) (01055)	MANGA- NESE, DIS- SOLVED (µG/L AS MN) (01056)
393752079325601 Elk Run near Mouth (LAT 39 38 16N LONG 079 32 56W) Site 82							
JUL 1997 17...	56	70	16	110	13	190	191
394115079324301 Hog Run near Headwaters (LAT 39 41 15N LONG 079 32 43W) Site 83							
JUL 1997 16...	250	80	22	230	<3.0	120	120
393935079331201 Hog Run near Mouth (LAT 39 39 35N LONG 079 33 12W) Site 84							
JUL 1997 16...	110	80	21	1000	43	270	281
393905079335901 Little Sandy Creek below Hog Run (LAT 39 39 05N LONG 079 33 59W) Site 85							
JUL 1997 17...	81	70	8.9	390	8.4	420	409
394044079351201 Barnes Run (LAT 39 40 04N LONG 079 35 12W) Site 86							
JUL 1997 16...	82	30	9.0	710	40	2200	2270
393641079310501 Beaver Creek near Headwaters (LAT 39 36 41N LONG 079 31 05W) Site 87							
JUL 1997 17...	11	390	175	520	28	270	244
393733079353501 Beaver Creek above Glade Run (LAT 39 37 33N LONG 079 35 35W) Site 88							
JUL 1997 17...	65	150	25	110	36	800	820
393737079355801 Beaver Creek near Mouth (LAT 39 37 37N LONG 079 35 58W) Site 89							
JUL 1997 17...	72	70	16	120	49	720	759
393749079371401 Little Sandy Creek below Beaver Creek (LAT 39 37 49N LONG 079 37 14W) Site 90							
JUL 1997 17...	110	30	--	80	--	56	--
393629079382401 Webster Run near Headwaters (LAT 39 36 29N LONG 079 38 24W) Site 91							
JUL 1997 17...	180	60	17	130	3.4	54	39
393655079382701 Unnamed Tributary of Webster Run (LAT 39 36 55N LONG 079 38 27W) Site 92							
JUL 1997 17...	510	7100	7070	170	160	5100	4700
393741079385701 Webster Run at Mouth (LAT 39 37 41N LONG 079 38 57W) Site 93							
JUL 1997 17...	420	70	39	70	15	1300	1430
393746079390101 Little Sandy Creek near Mouth (LAT 39 37 46N LONG 079 39 01W) Site 94							
JUL 1997 17...	140	80	46	70	5.6	230	239

ANALYSIS OF STREAMFLOW SAMPLES COLLECTED AT SPECIAL-STUDY SITES

ALLEGHENY- MONONGAHELA RIVER BASIN NAWQA PROJECT

SYNOPTIC SURVEY OF LOWER CHEAT RIVER BASIN--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE	TIME	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)	PH WATER WHOLE LAB (STAND- ARD UNITS) (00403)	TEMPER- ATURE WATER (DEG C) (00010)	ACIDITY TOTAL HEATED (MG/L AS CAC03) (70508)	ALKA- LINITY WAT.DIS FET LAB CAC03 (MG/L) (29801)
394055079425801 Laurel Run above Patterson Run (LAT 39 40 55N LONG 079 42 58W) Site 95								
JUL 1997 17...	0915	.20	51	6.9	6.9	18.0	<5.0	10
393910079432601 Little Laurel Run at Mouth (LAT 39 39 10N LONG 079 43 26W) Site 96								
JUL 1997 17...	1015	.23	276	6.7	6.6	19.0	<5.0	9.1
393905079431901 Laurel Run near Mouth (LAT 39 39 05N LONG 079 43 19W) Site 97								
JUL 1997 17...	1115	.51	92	7.4	7.3	21.5	<5.0	17
393524079403101 Sovern Run at headwaters (LAT 39 35 24N LONG 079 40 31W) Site 98								
JUL 1997 18...	0940	.34	1090	3.3	3.3	19.0	209	1.9
393556079420601 Sovern Run at Hudson (LAT 39 35 56N LONG 079 42 06W) Site 99								
JUL 1997 18...	1240	.63	860	3.5	3.5	20.0	169	1.7
393715079422001 Sovern Run at Mouth (LAT 39 37 15N LONG 079 42 20W) Site 100								
JUL 1997 17...	1405	.23	553	4.0	4.1	19.5	94	1.8
393550079445201 Big Sandy Creek at Mouth (LAT 39 35 50N LONG 079 44 52W) Site 101								
JUL 1997 17...	1635	18	253	7.1	7.1	26.5	9.4	14
393259079460601 Right Fork Bull Run at Mouth (LAT 39 32 59N LONG 079 46 06W) Site 102								
JUL 1997 16...	0945	.27	1360	3.6	3.7	19.0	172	2.0
393306079460001 Left Fork Bull Run at Mouth (LAT 39 33 06N LONG 079 46 00W) Site 103								
JUL 1997 16...	1110	.03	178	7.2	7.5	24.0	11	23
393347079455501 Unnamed Tributary No. 2 at Mouth (LAT 39 33 47N LONG 079 45 55W) Site 104								
JUL 1997 16...	1205	.15	1490	3.0	3.1	19.0	262	--
393411079463201 Bull Run below Unnamed Tributary No.2 (LAT 39 34 11N LONG 079 46 32W) Site 105								
JUL 1997 16...	1440	.39	995	3.4	3.5	20.0	121	1.7
393407079463701 Lick Run at Mouth (LAT 39 34 07N LONG 079 46 37W) Site 106								
JUL 1997 16...	1320	2.2	1090	3.1	3.2	19.0	154	1.7
393408079464101 Mountain Run at Mouth (LAT 39 34 08N LONG 079 46 41W) Site 107								
JUL 1997 16...	1400	.09	633	3.3	3.4	20.5	103	1.6

ANALYSIS OF STREAMFLOW SAMPLES COLLECTED AT SPECIAL-STUDY SITES

ALLEGHENY-MONONGAHELA RIVER BASIN NAWQA PROJECT

SYNOPTIC SURVEY OF LOWER CHEAT RIVER BASIN--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE	SULFATE DIS- SOLVED (MG/L AS SO ₄) (00945)	ALUM- INUM, TOTAL RECOV- ERABLE (µG/L AS AL) (01105)	ALUM- INUM, DIS- SOLVED (µG/L AS AL) (01106)	IRON, TOTAL RECOV- ERABLE (µG/L AS FE) (01045)	IRON, DIS- SOLVED (µG/L AS FE) (01046)	MANGA- NESE, TOTAL RECOV- ERABLE (µG/L AS MN) (01055)	MANGA- NESE, DIS- SOLVED (µG/L AS MN) (01056)
394055079425801 Laurel Run above Patterson Run (LAT 39 40 55N LONG 079 42 58W) Site 95							
JUL 1997 17...	7.5	30	14	70	15	31	25
393910079432601 Little Laurel Run at Mouth (LAT 39 39 10N LONG 079 43 26W) Site 96							
JUL 1997 17...	61	40	23	30	13	44	42
393905079431901 Laurel Run near Mouth (LAT 39 39 05N LONG 079 43 19W) Site 97							
JUL 1997 17...	13	40	22	50	7.4	13	11
393524079403101 Sovern Run at headwaters (LAT 39 35 24N LONG 079 40 31W) Site 98							
JUL 1997 18...	600	24000	24300	4300	4300	5900	5470
393556079420601 Sovern Run at Hudson (LAT 39 35 56N LONG 079 42 06W) Site 99							
JUL 1997 18...	460	22000	21100	1500	1500	4900	4480
393715079422001 Sovern Run at Mouth (LAT 39 37 15N LONG 079 42 20W) Site 100							
JUL 1997 17...	290	13000	12600	200	190	3700	3450
393550079445201 Big Sandy Creek at Mouth (LAT 39 35 50N LONG 079 44 52W) Site 101							
JUL 1997 17...	85	70	63	20	7.0	33	30
393259079460601 Right Fork Bull Run at Mouth (LAT 39 32 59N LONG 079 46 06W) Site 102							
JUL 1997 16...	810	23000	20800	560	690	6700	6620
393306079460001 Left Fork Bull Run at Mouth (LAT 39 33 06N LONG 079 46 00W) Site 103							
JUL 1997 16...	52	70	44	60	19	65	57
393347079455501 Unnamed Tributary No.2 at Mouth (LAT 39 33 47N LONG 079 45 55W) Site 104							
JUL 1997 16...	770	29000	25900	5200	5100	10000	10300
393411079463201 Bull Run below Unnamed Tributary No. 2 (LAT 39 34 11N LONG 079 46 32W) Site 105							
JUL 1997 16...	540	15000	13900	440	550	5700	5880
393407079463701 Lick Run at Mouth (LAT 39 34 07N LONG 079 46 37W) Site 106							
JUL 1997 16...	520	15000	14300	8700	7400	880	871
393408079464101 Mountain Run at Mouth (LAT 39 34 08N LONG 079 46 41W) Site 107							
JUL 1997 16...	260	12000	12300	660	690	1100	1120

ANALYSIS OF STREAMFLOW SAMPLES COLLECTED AT SPECIAL-STUDY SITES

ALLEGHENY- MONONGAHELA RIVER BASIN NAWQA PROJECT

SYNOPTIC SURVEY OF LOWER CHEAT RIVER BASIN--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE	TIME	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)	PH WATER WHOLE LAB (STAND- ARD UNITS) (00403)	TEMPER- ATURE WATER (DEG C) (00010)	ACIDITY TOTAL HEATED (MG/L AS CAC03) (70508)	ALKA- LINITY WAT.DIS FET LAB CAC03 (MG/L) (29801)
393503079461301 Bull Run above Middle Run (LAT 39 35 03N LONG 079 46 13W) Site 108								
JUL 1997								
16...	1550	2.7	1090	3.2	3.2	21.5	155	1.8
393502079461701 Middle Run at Mouth (LAT 39 35 02N LONG 079 46 17W) Site 109								
JUL 1997								
16...	1645	.16	914	3.2	3.3	22.0	124	1.9
393506079462001 Unnamed Tributary No. 1 at Mouth (LAT 39 35 06N LONG 079 46 20W) Site 110								
JUL 1997								
16...	1720	.08	388	4.0	4.1	20.0	39	1.7
393526079454201 Bull Run at Mouth (LAT 39 35 26N LONG 079 45 42W) Site 111								
JUL 1997								
16...	1900	4.7	1090	3.2	3.2	21.5	154	1.9
393305079395601 Martin Creek at Headwaters (LAT 39 33 05N LONG 079 39 56W) Site 112								
JUL 1997								
17...	1820	.29	1880	3.8	3.7	27.0	81	1.8
393234079443501 Left Fork Bull Run at Headwaters (LAT 39 32 34N LONG 079 44 35W) Site 113								
JUL 1997								
18...	1110	.00	80	6.5	6.6	16.0	15	6.9
393459079340101 Unnamed Tributary of Muddy Creek (LAT 39 34 59N LONG 079 34 01W) Site 114								
JUL 1997								
18...	1200	.16	42	5.2	5.1	19.0	7.0	1.6

ANALYSIS OF STREAMFLOW SAMPLES COLLECTED AT SPECIAL-STUDY SITES

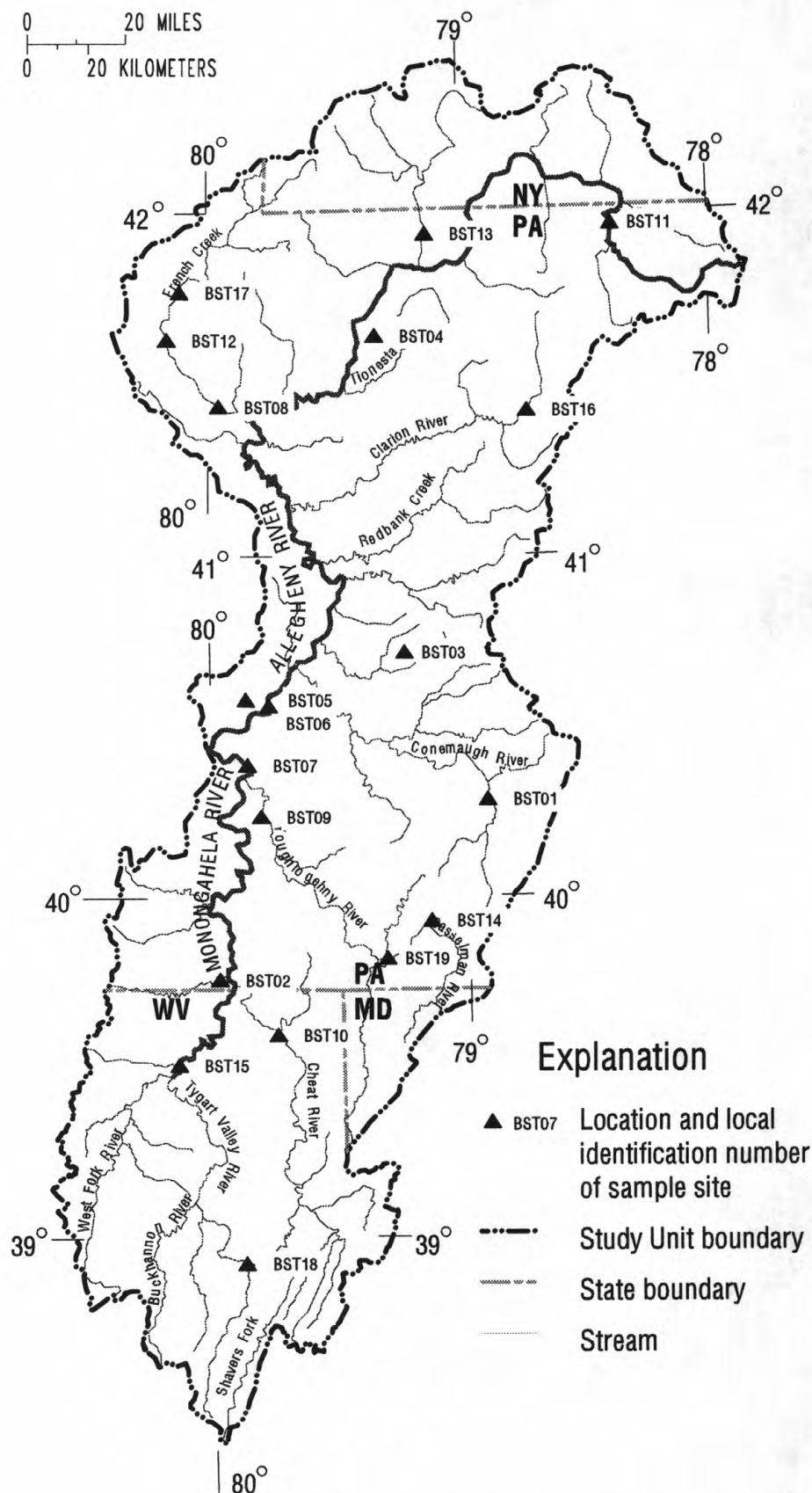
ALLEGHENY- MONONGAHELA RIVER BASIN NAWQA PROJECT

SYNOPTIC SURVEY OF LOWER CHEAT RIVER BASIN--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE	SULFATE DIS- SOLVED (MG/L AS SO ₄) (00945)	ALUM- INUM, TOTAL RECOV- ERABLE (µG/L AS AL) (01105)	ALUM- INUM, TOTAL DIS- SOLVED (µG/L AS AL) (01106)	IRON, TOTAL RECOV- ERABLE (µG/L AS FE) (01045)	IRON, DIS- SOLVED (µG/L AS FE) (01046)	MANGA- NESE, TOTAL RECOV- ERABLE (µG/L AS MN) (01055)	MANGA- NESE, DIS- SOLVED (µG/L AS MN) (01056)
393503079461301 Bull Run above Middle Run (LAT 39 35 03N LONG 079 46 13W) Site 108							
JUL 1997 16...	540	14000	15000	5300	5000	1700	1640
393502079461701 Middle Run at Mouth (LAT 39 35 02N LONG 079 46 17W) Site 109							
JUL 1997 16...	430	11000	11200	2400	2500	2100	2090
393506079462001 Unnamed Tributary No. 1 at Mouth (LAT 39 35 06N LONG 079 46 20W) Site 110							
JUL 1997 16...	170	3100	3150	100	81	840	842
393526079454201 Bull Run at Mouth (LAT 39 35 26N LONG 079 45 42W) Site 111							
JUL 1997 16...	530	15000	14900	3400	3400	1700	1690
393305079395601 Martin Creek at Headwaters (LAT 39 33 05N LONG 079 39 56W) Site 112							
JUL 1997 17...	1100	13000	5740	1200	990	14000	13500
393234079443501 Left Fork Bull Run at Headwaters (LAT 39 32 34N LONG 079 44 35W) Site 113							
JUL 1997 18...	21	940	13	1200	71	380	317
393459079340101 Unnamed Tributary of Muddy Creek (LAT 39 34 59N LONG 079 34 01W) Site 114							
JUL 1997 18...	12	480	324	230	22	150	150

ANALYSES OF STREAMBED SEDIMENTS AND FISH TISSUE AT SPECIAL STUDY SITES
ALLEGHENY AND MONONGAHELA RIVER BASIN NAWQA PROJECT



The following tables contain records of selected trace elements and organic compounds measured in bed sediments and fish tissue at a network of 19 sites. This network was established as part of the National Water-Quality Assessment (NAWQA) project in the Allegheny-Monongahela River Basin (ALMN).

The 19 sites were selected to provide a broad spatial coverage within the basin. Ten sites are co-located with other NAWQA surface-water and ecological sampling efforts in ALMN. Additional water-quality information is available at these sites. These ten sites were selected to examine specific land-use related issues. The remaining sites were selected downstream of small urban/industrial areas in the basins (8 sites) and in a basin with low human population density as a reference site (1 site).

Bed-sediment samples were used to assess the sediment-size fraction less than 64 microns (0.064 mm) for trace elements, and the less than 2 mm size fraction for organic compounds. Composite bed sediment material was collected from 10 to 15 depositional areas at each site. Composite samples of 5-10 whole fish were analyzed for synthetic organic compounds while composite samples of dissected livers of 5-10 fish were used for the trace elements analysis. Each composite consisted of only one species of fish. The species of fish used for each analysis is recorded in the tables. Duplicate composite samples were taken at 2 sites to compare variation within a species at a site. At two sites duplicate collection of two different fish species were made. Composite samples of each species were analyzed from these sites to examine between species variation.

Figure 8. Location and local identification number of streambed sediments and fish tissue collection sites in the Allegheny – Monongahela River Basin NAWQA study unit.

ANALYSES OF STREAMBED SEDIMENTS AND FISH TISSUE AT SPECIAL STUDY SITES

ALLEGHENY AND MONONGAHELA 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 water years 1996 and 1997. Local identifiers footnoted with "0" have surface-water quality data published for water year 1997 in this report.

<u>Local Identifier</u>	<u>Station Number</u>	<u>County</u>	<u>Hydrologic Unit</u>	<u>Site Name and Description</u>
BST01 ⁰	03040000	Cambria	05010007	Stonycreek River at Ferndale, Pa., lat 40°17'08", long 78°55'15", on right bank 50 ft upstream from highway bridge at Ferndale, 0.4 mi downstream from Bens Creek, 1.2 mi upstream from Johnstown city limits, and 5.2 mi upstream from confluence with Little Conemaugh River.
BST02 ⁰	03072000	Greene	05020005	Dunkard Creek at Shannopin, Pa., lat 39°45'33", long 79°58'15", on left bank 1,300 ft upstream from highway bridge at mine buildings at Shannopin, 1.2 mi north of Dunkard, 3.5 mi upstream from mouth, and 4 mi southwest of Greensboro. Fish for fish tissue analysis collected on Dunkard Creek below confluence of Meadow Run, 2.0 miles west of gage at Shannopin.
BST03 ⁰	03037350	Indiana	05010006	South Branch Plum Creek at Five Points, Pa., lat 40°43'08", long 79°14'12", on left bank, about 0.6 midownstream of Mudlick Run and about 2 mi upstream of the Indiana-Armstrong County boundary.
BST04 ⁰	03015795	Warren	05010003	East Hickory Creek near Queen, Pa., lat 41°38'31", long 79°20'18" in the Allegheny National Forest, on right bank 20 ft downstream of Forest Service Road 119 bridge, 0.2 mi downstream of Camp Run, 0.5 mi upstream of Jaybuck Run, and 1.7 mi northeast of Queen.
BST05 ⁰	03049646	Allegheny	05010009	Deer Creek near Dorseyville, Pa., lat 40°34'57", long 79°51'41", on left bank, 0.5 mi upstream from Blue Run 0.6 mi downstream from Cunningham Run, and about 1.0 mi north of Indianola.
BST06 ⁰	03049625	Allegheny	05010009	Allegheny River at New Kensington, Pa., lat 40°33'52", long 79°46'22", at New Kensington highway bridge, 5.1 mi downstream from dam at lock 4 at Natrona, 5.3 mi downstream from gaging station at Natrona, and 19.0 mi upstream from mouth.
BST07 ⁰	03085000	Allegheny	05020005	Monongahela River at Braddock, Pa., lat 40°23'28", long 79°51'30", near right bank on river guide wall 300 ft upstream from dam at lock 2 at Braddock, 1,700 ft downstream from Turtle Creek, and 11.2 mi upstream of confluence with Allegheny River. Fish for fish tissue analysis and bed sediment collected on Monongahela River from 7 to 9 river miles below gage at Braddock.
BST08 ⁰	03024000	Venango	05010004	French Creek at Utica, Pa., lat 41°26'15", long 79°57'22", on right bank at upstream side of bridge on SR 3017 at Utica and 2,000 ft upstream from Mill Creek. Fish for fish tissue analysis and bed sediment collected on French Creek 2.2 river miles upstream of gage at Utica.
BST09 ⁰	03083500	Allegheny	05020006	Youghiogheny River at Sutersville, Pa., lat 40°14'24", long 79°48'24", on left bank 500 ft upstream from highway bridge at Sutersville, 2.1 mi downstream from Sewickley Creek, at mile 15.2. Fish for fish tissue analysis collected 2.5 miles upstream of gage at Sutersville.
BST10 ⁰	03070350	Preston	05020004	Cheat River near Mount Nebo, WV., lat 39°35'40", long 79°44'56", on left bank 150 ft upstream of Jenkintown Bridge, 800 ft upstream of Big Sandy Creek, 1.3 mi northeast of the town of Bull Run, and 2.3 mi west southwest of Mt. Nebo. Fish for fish tissue analysis collected where the Cheat River flows into Cheat Lake 3.7 river miles downstream of gage near Mount Nebo.

ANALYSES OF STREAMBED SEDIMENTS AND FISH TISSUE AT SPECIAL STUDY SITES

ALLEGHENY AND MONONGAHELA RIVER BASIN NAWQA PROJECT

SITE DESCRIPTIONS--Continued

<u>Local Identifier</u>	<u>Station Number</u>	<u>County</u>	<u>Hydrologic Unit</u>	<u>Site Name and Description</u>
BST11	03010500	McKean	05010001	Allegheny River at Eldred, Pa., lat 41°57'48", long 78°23'11", on right bank at site of former highway bridge, 600 ft upstream from bridge on State Highway 346, 1,000 ft upstream from Knapp Creek, 0.5 mi north of Eldred, at mile 267.8.
BST12	03023100	Crawford	05010004	French Creek at Meadville, Pa., lat 41°37'57", long 80°09'35", on left bank 30 ft upstream from bridge on Mercer Street at Meadville, 300 ft downstream from Mill Run, 2,600 ft downstream from Cussewago Creek, at mile 30.5. Fish for fish tissue analysis and bed sediment collected 4.0 river miles downstream of gage at Meadville.
BST13	03015000	Warren	05010002	Conewango Creek at Russell, Pa., lat 41°56'17", long 79°08'00", on left bank at highway bridge at Russell, 0.5 mi upstream from Akeley Run, and 8.0 mi upstream from mouth.
BST14	03078818	Somerset	05020006	Coxes Creek above Wilson Creek at Rockwood, Pa., lat 39°55'44", long 79°08'51", fish for fish tissue analysis and bed sediment collected from 500 ft reach of Coxes Creek immediately above Wilson Creek, and 1.0 mi northeast of Rockwood and 1.0 mi upstream of confluence of Coxes Creek with Casselman River.
BST15	03062000	Marion	05020003	Monongahela River at Hault, WV., lat 39°30'25", long 80°07'50", 0.75 mi downstream from Buffalo Creek, 2.5 mi downstream from Fairmont, and 4.0 mi downstream from the confluence of West Fork and Tygart Valley River.
BST16	03029000	Elk	05010005	Clarion River at Ridgway, Pa., lat 41°25'15", long 78°44'10", at bridge on State Highway 948 in Ridgway, 50 ft downstream from Elk Creek. Fish for fish tissue analysis and bed sediment collected 2.7 river miles downstream of gage at Ridgway.
BST17	03022000	Crawford	05010004	French Creek at Venango, Pa., lat 41°46'19", long 80°06'29", at downstream side of bridge at Venango, 1.2 mi upstream from Gravel Run and 2.2 mi downstream from Boles Run. Fish for fish tissue analysis and bed sediment collected 5.7 river miles downstream of gage at Venango.
BST18	03050500	Randolph	05020001	Tygart Valley River near Elkins, WV., lat 38°55'30", long 79°52'45", on left bank 1.4 mi upstream from Leading Creek, 1.5 mi west of Elkins, and at mile 78.3.
BST19 ⁰	03080000	Somerset	05020006	Laurel Hill Creek at Ursina, Pa., lat 39°49'13", long 79°19'18", on right bank 500 ft downstream from bridge on State Highway 281 at Ursina, and 2.7 mi upstream from mouth. Bed sediment collected 3.2 river miles upstream of gage at Ursina.

ANALYSES OF STREAMBED SEDIMENTS AND FISH TISSUE AT SPECIAL STUDY SITES

ALLEGHENY AND MONONGAHELA RIVER BASIN NAWQA PROJECT

STREAMBED SEDIMENTS

REMARKS.--Explanation of column headings--SED, BM: streambed sediment, bottom material; WS, <2MM: wet sieve, less than 2 millimeters; DW, REC: dry weight recoverable; µG/KG: micrograms per kilogram; SURROGT: surrogate--see definition of terms; E: estimated value--see definition of terms.

As part of quality assurance protocols, duplicate field samples for organochlorines in streambed sediment were collected and analyzed in the laboratory for sites BST06 and BST07.

ORGANOCHLORINE COMPOUNDS IN STREAMBED SEDIMENTS, WATER YEARS OCTOBER 1995 TO SEPTEMBER 1997

LOCAL ID	STATION NUMBER	DATE	TIME	AGENCY COL-LECTING SAMPLE (CODE NUMBER)	AGENCY ANA-LYZING SAMPLE (CODE NUMBER)	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)
				(00027)	(00028)	(49459)	(49325)	(49326)	(49327)	(49328)	(49329)
BST11	03010500	08-22-96	1030	1028	80020	<50	<1.00	<1.00	<1.00	<1.00	<2.00
BST13	03015000	08-21-96	1300	1028	80020	<50	<1.00	<1.00	<1.00	<1.00	<2.00
BST04	03015795	08-12-96	1530	1028	80020	<50	<1.00	<1.00	<1.00	<1.00	<2.00
BST17	03022000	08-28-96	1130	1028	80020	<50	<1.00	<1.00	<1.00	E1.40	<2.00
BST12	03023100	08-28-96	1540	1028	80020	<50	<1.00	E1.80	<1.00	E1.70	<2.00
BST08	03024000	08-14-96	1500	1028	80020	100	<1.00	<1.00	<1.00	<1.00	<2.00
BST16	03029000	08-23-96	1200	1028	80020	65	<1.00	<1.00	<1.00	<1.00	<2.00
BST03	03037350	08-20-96	1030	1028	80020	<50	<1.00	<1.00	<1.00	<1.00	<2.00
BST01	03040000	10-09-96	1330	1028	80020	<50	<1.90	<1.00	<1.00	<1.00	<2.00
BST06	03049625	10-07-96	1600	1028	80020	<50	<1.40	3.90	<1.00	1.90	<2.00
BST06		10-07-96	1630	1028	80020	<50	<1.70	3.80	<1.00	1.70	<2.00
BST05	03049646	08-19-96	1400	1028	80020	<50	<1.00	E1.20	<1.00	1.60	<2.00
BST18	03050500	09-26-96	0900	1028	80020	<50	<1.00	<1.00	<1.00	<1.00	<2.00
BST15	03062000	09-25-96	1305	1028	80020	51	<5.90	E6.30	<1.00	E1.00	<2.00
BST10	03070350	10-17-96	1130	1028	80020	<50	<1.00	<1.00	<1.00	<1.00	<2.00
BST02	03072000	10-10-96	1000	1028	80020	<50	<2.50	1.30	<1.00	<1.00	<2.00
BST14	03078818	09-10-96	1430	1028	80020	<50	<1.80	E1.80	<1.00	<1.00	<2.00
BST19	03080000	10-11-96	1000	1028	80020	<50	<1.00	<1.00	<1.00	<1.00	<2.00
BST09	03083500	10-08-96	1130	1028	80020	<50	<7.60	3.90	<1.00	3.40	<3.80
BST07	03085000	10-04-96	1200	1028	80020	120	<6.50	E4.00	<13.0	2.60	<4.30
BST07		10-04-96	1210	1028	80020	140	<5.80	E4.70	<13.0	2.80	<4.90
LOCAL ID	DATE	P, P'-DDT, SED, BM WS, <2MM DW, REC (µG/KG) (49330)	CIS-CHLOR-DANE, SED, BM WS, <2MM DW, REC (µG/KG) (49320)	TRANS-CHLOR-DANE, SED, BM WS, <2MM DW, REC (µG/KG) (49321)	CHLORO-NEB, SED, BM WS, <2MM DW, REC (µG/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)
		(49330)	(49320)	(49321)	(49322)	(49316)	(49317)	(49318)	(49341)	(49342)	(49460)
BST11	08-22-96	<2.00	<1.00	<1.00	<5.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.0
BST13	08-21-96	<2.00	<1.00	<1.00	<5.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.0
BST04	08-12-96	<2.00	<1.00	<1.00	<5.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.0
BST17	08-28-96	<2.00	<1.00	<1.00	<5.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.0
BST12	08-28-96	<2.00	<1.00	<1.00	<5.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.0
BST08	08-14-96	<2.00	<1.00	<1.00	<5.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.0
BST16	08-23-96	<2.00	<1.00	<1.00	<5.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.0
BST03	08-20-96	<2.00	<1.00	<1.00	<5.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.0
BST01	10-09-96	<2.00	<1.00	<1.00	<5.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.0
BST06	10-07-96	2.90	<1.00	1.10	<5.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.0
BST06	10-07-96	2.20	<1.00	1.10	<5.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.0
BST05	08-19-96	E2.20	<1.00	1.20	<5.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.0
BST18	09-26-96	<2.00	<1.00	<1.00	<5.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.0
BST15	09-25-96	<2.00	2.20	E2.70	<5.00	E1.60	1.70	<1.00	<1.00	<1.00	<1.0
BST10	10-17-96	<2.00	<1.00	<1.00	<5.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.0
BST02	10-10-96	<2.00	<1.00	<1.00	<5.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.0
BST14	09-10-96	<2.00	<1.00	<1.00	<5.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.0
BST19	10-11-96	<2.00	<1.00	<1.00	<5.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.0
BST09	10-08-96	3.00	2.20	2.40	<5.00	1.00	1.60	<1.00	<1.00	<1.00	<1.0
BST07	10-04-96	E4.40	<1.00	<1.00	<5.00	<1.50	<1.00	<1.00	<1.00	<1.00	<1.0
BST07	10-04-96	<2.00	<1.00	<1.00	<5.00	<2.00	<1.00	<1.00	<1.00	<1.00	1.9

ANALYSES OF STREAMBED SEDIMENTS AND FISH TISSUE AT SPECIAL STUDY SITES

ALLEGHENY AND MONONGAHELA RIVER BASIN NAWQA PROJECT

STREAMBED SEDIMENTS--Continued

ORGANOCHLORINE COMPOUNDS IN STREAMBED SEDIMENTS, WATER YEARS OCTOBER 1995 TO SEPTEMBER 1997

LOCAL ID	DATE	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)	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- BHC, SED, BM WS, <2MM DW, REC (μG/KG) (49338)	BETA- BHC, SED, BM WS, <2MM DW, REC (μG/KG) (49339)
BST11	08-22-96	<1.00	<1.00	<2.00	<1.00	<1.00	<5.00	<5.00	<5.00	<5.00	<1.00	<1.00
BST13	08-21-96	<1.00	<1.00	<2.00	<1.00	<1.00	<5.00	<5.00	<5.00	<5.00	<1.00	<1.00
BST04	08-12-96	<1.00	<1.00	<2.00	<1.00	<1.00	<5.00	<5.00	<5.00	<5.00	<1.00	<1.00
BST17	08-28-96	<1.00	<1.00	<2.00	<1.00	<1.00	<5.00	<5.00	<5.00	<5.00	<1.00	<1.00
BST12	08-28-96	<1.00	<1.00	<2.00	<1.00	<1.00	<7.50	<5.00	<5.00	<5.60	<1.00	<1.00
BST08	08-14-96	<1.00	<1.00	<2.00	<1.00	<2.00	<5.00	<5.00	<5.00	<5.00	<1.00	<1.00
BST16	08-23-96	<1.00	<1.00	<2.00	<1.00	<1.00	<5.00	<5.00	<5.00	<5.00	<1.00	<1.00
BST03	08-20-96	<1.00	<1.00	<2.00	<1.00	<1.00	<5.00	<5.00	<5.00	<5.00	<1.00	<1.00
BST01	10-09-96	<1.00	<1.00	<2.00	<1.00	<1.00	<15.0	<5.00	<6.40	<5.00	<1.00	<1.00
BST06	10-07-96	<1.00	1.50	<2.00	<1.00	<1.00	<8.70	<5.00	<5.50	<5.00	<1.00	<1.10
BST06	10-07-96	<1.00	<1.00	<2.00	<1.00	<1.00	<11.0	<5.00	<5.00	<5.00	<2.00	<1.10
BST05	08-19-96	<1.00	<1.00	<2.00	<1.00	<1.00	<5.00	<8.60	<5.00	<5.00	<1.00	<1.00
BST18	09-26-96	<1.00	<1.00	<2.00	<1.00	<1.00	<5.60	<5.00	<5.00	<5.00	<1.00	<1.00
BST15	09-25-96	<1.00	<1.00	<2.00	<1.00	<1.00	18.0	14.0	<5.00	<38.0	<1.00	<1.00
BST10	10-17-96	<1.00	<1.00	<2.00	<1.00	<1.00	<8.10	<5.00	<5.00	<5.80	<1.00	<1.00
BST02	10-10-96	<1.00	<1.00	<2.00	<1.00	<1.00	<5.00	<5.00	<5.00	<5.00	<1.00	<1.00
BST14	09-10-96	<1.00	<1.00	<2.00	<1.00	<1.00	<5.00	<21.0	<5.00	<5.00	<1.00	<1.00
BST19	10-11-96	<1.00	<1.00	<2.00	<1.00	<1.00	<5.00	<5.00	<5.00	<5.00	<1.00	<1.00
BST09	10-08-96	<1.00	<1.00	<2.00	<1.00	<1.00	<5.00	<5.00	<8.70	<5.00	<1.00	<1.00
BST07	10-04-96	<1.00	<5.30	<2.00	<1.00	<1.00	<5.00	<5.90	<5.00	<5.00	<1.00	<1.00
BST07	10-04-96	<1.00	<1.00	<2.00	<1.00	<1.00	<7.70	<5.00	<5.00	<5.00	<1.00	<1.00

LOCAL ID	DATE	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)	DCPA, SED, BM WS, <2MM DW, REC (μG/KG) (49324)	TOXA- PHENE SED, BM WS, <2MM DW, REC (μG/KG) (49351)	ALPHA- BHC, D6 SURROGT SED, BM WS, <2MM DW, REC PERCENT (49275)	BIPHENYL 3,5-DICHLOR SURROGT SED, BM WS, <2MM DW, REC PERCENT (49277)	OCTACHLOR BIPHENYL SURROGT SED, BM WS, <2MM DW, REC PERCENT (49276)	BED MAT. FALL DIAM. % FINER THAN .004 MM (80157)	BED MAT. SIEVE DIAM. % FINER THAN .062 MM (80164)
BST11	08-22-96	<1.00	<1.00	<1.00	<5.00	<200	82.0	72.0	85.0	7	17
BST13	08-21-96	<1.00	<1.00	<1.00	<5.00	<200	75.0	72.0	83.0	8	23
BST04	08-12-96	<1.00	<1.00	<1.00	<5.00	<200	73.0	96.0	--	4	11
BST17	08-28-96	<1.00	<1.00	<1.00	<5.00	<200	88.0	64.0	76.0	6	22
BST12	08-28-96	<1.00	<1.00	<1.00	<5.00	<200	91.0	68.0	78.0	9	29
BST08	08-14-96	<1.00	<1.00	<1.00	<5.00	<200	63.0	62.0	--	11	44
BST16	08-23-96	<1.00	<1.00	<5.00	<5.00	<200	66.0	68.0	83.0	8	17
BST03	08-20-96	<1.00	<1.00	<1.00	<5.00	<200	69.0	70.0	85.0	10	23
BST01	10-09-96	<1.00	<1.00	<1.00	<5.00	<200	79.0	58.0	66.0	3	5
BST06	10-07-96	<1.00	<1.00	<1.00	<5.00	<200	86.0	64.0	74.0	28	67
BST06	10-07-96	<1.00	<1.00	<1.00	<5.00	<200	84.0	65.0	85.0	18	51
BST05	08-19-96	<1.00	<1.00	<1.00	<5.00	<200	71.0	67.0	74.0	16	43
BST18	09-26-96	<1.00	<1.00	<1.00	<5.00	<200	86.0	78.0	86.0	11	33
BST15	09-25-96	<1.00	<1.00	<1.00	<5.00	<200	84.0	71.0	84.0	22	48
BST10	10-17-96	<1.00	<1.00	<1.00	<5.00	<200	84.0	69.0	74.0	3	10
BST02	10-10-96	<1.00	<1.00	<1.00	<5.00	<200	76.0	67.0	71.0	4	8
BST14	09-10-96	<1.00	<1.00	<1.00	<5.00	<200	78.0	72.0	80.0	4	8
BST19	10-11-96	<1.00	<1.00	<1.00	<5.00	<200	96.0	79.0	78.0	4	9
BST09	10-08-96	<1.00	<1.00	<1.00	<5.00	<200	85.0	70.0	76.0	15	29
BST07	10-04-96	<1.00	<1.00	<1.00	<5.00	<200	78.0	61.0	79.0	10	24
BST07	10-04-96	<1.00	<1.00	<1.00	<5.00	<200	88.0	65.0	90.0	10	23

ANALYSES OF STREAMBED SEDIMENTS AND FISH TISSUE AT SPECIAL STUDY SITES

ALLEGHENY AND MONONGAHELA RIVER BASIN NAWQA PROJECT

STREAMBED SEDIMENTS--Continued

REMARKS.--Explanation of column headings--**BED MAT**: bed material; **SED, BM**: streambed-sediment bottom material; **WS, <2MM**: wet sieve, less than 2 millimeters; **DW, REC**: dry weight recoverable; **SURROGT**: surrogate--See definition of terms; **E**: estimated value--see definition of terms.

As part of quality assurance protocols, a duplicate field sample for semi-volatile organic compounds in streambed sediments was collected at site BST06.

SEMI-VOLATILE ORGANIC COMPOUNDS IN STREAMBED SEDIMENTS, WATER YEARS OCTOBER 1995 TO SEPTEMBER 1997

LOCAL ID	STATION NUMBER	DATE	TIME	AGENCY COL-LECTING	AGENCY ANA-LYZING	ACENAPH THENE	ACENAPH THYLENE	ACRI-DINE	PHENOL	ANTHRA-CENE	9,10-ANTHRA-QUINONE	
				SAMPLE (CODE NUMBER) (00027)	SAMPLE (CODE NUMBER) (00028)	SED, BM WS, <2MM DW, REC (μG/KG) (49429)	SED, BM WS, <2MM DW, REC (μG/KG) (49428)	SED, BM WS, <2MM DW, REC (μG/KG) (49430)	C8-ALKYL- SED, BM WS, <2MM DW, REC (μG/KG) (49424)	SED, BM WS, <2MM DW, REC (μG/KG) (49434)	SED, BM WS, <2MM DW, REC (μG/KG) (49437)	
BST11	03010500	08-22-96	1030	1028	80020	<50	<50	<50	<50	<50	E7.0	
BST13	03015000	08-21-96	1300	1028	80020	E9.0	<5.0	<50	<50	65	E20	
BST04	03015795	08-12-96	1530	1028	80020	<50	E11	<50	<50	<50	<50	
BST17	03022000	08-28-96	1130	1028	80020	<5.0	E20	E11	<50	E26	E23	
BST12	03023100	08-28-96	1540	1028	80020	E7.0	E34	E21	<50	82	58	
BST08	03024000	08-14-96	1500	1028	80020	<5.0	E35	E9.0	<50	E43	E28	
BST16	03029000	08-23-96	1200	1028	80020	72	63	E30	<50	220	240	
BST03	03037350	08-20-96	1030	1028	80020	<50	<50	<50	<50	<50	E13	
BST01	03040000	10-09-96	1330	1028	80020	E16	E20	<50	<50	E47	<50	
BST06	03049625	10-07-96	1600	1028	80020	E32	63	<50	<50	110	160	
BST06		10-07-96	1630	1028	80020	E32	52	<50	<50	E110	180	
BST05	03049646	08-19-96	1400	1028	80020	E31	60	E32	<50	170	120	
BST18	03050500	09-26-96	0900	1028	80020	<50	E15	E19	<50	E23	E32	
BST15	03062000	09-25-96	1305	1028	80020	74	86	<50	91	210	200	
BST10	03070350	10-17-96	1130	1028	80020	<50	E17	<50	<50	E28	<50	
BST02	03072000	10-10-96	1000	1028	80020	<50	E21	<50	<50	E38	<50	
BST14	03078818	09-10-96	1430	1028	80020	69	E30	E32	<50	110	77	
BST19	03080000	10-11-96	1000	1028	80020	<50	E20	<50	<50	E29	<50	
BST09	03083500	10-08-96	1130	1028	80020	E33	59	<50	54	130	220	
BST07	03085000	10-04-96	1210	1028	80020	840	E180	<250	<250	1400	<250	
LOCAL ID	DATE	AZO-BENZENE	BENZ(A) ANTHRA-CENE	BENZOCINOLINE	BENZOB FLUOR-ANTHENE	BENZO K FLUOR-ANTHENE	BENZO(G HI)PERY LENE	BENZO(A) PYRENE	2,2'-BI QUINO-LINE,	METHANE 2CHLORO 1MTHETH	BIS2CHL 1MTHETH ETHER	PHTHALA TE, BIS2 ETHHEXL
		SED, BM WS, <2MM DW, REC (μG/KG) (49443)	SED, BM WS, <2MM DW, REC (μG/KG) (49436)	WS <2MM DRY WGT REC (μG/KG) (49468)	SED, BM WS, <2MM DW, REC (μG/KG) (49458)	SED, BM WS, <2MM DW, REC (μG/KG) (49397)	SED, BM WS, <2MM DW, REC (μG/KG) (49408)	SED, BM WS, <2MM DW, REC (μG/KG) (49389)	SED, BM WS, <2MM DW, REC (μG/KG) (49391)	SED, BM WS, <2MM DW, REC (μG/KG) (49401)	SED, BM WS, <2MM DW, REC (μG/KG) (49457)	SED, BM WS, <2MM DW, REC (μG/KG) (49426)
BST11	08-22-96	<50	E30	<50	E46	E20	E19	E34	<50	<50	--	E35
BST13	08-21-96	<50	150	<50	140	150	69	140	<50	<50	--	58
BST04	08-12-96	<50	54	<50	70	E46	56	61	<50	<50	--	55
BST17	08-28-96	<50	87	<50	97	71	56	84	<50	<50	--	E100
BST12	08-28-96	<50	220	<50	240	200	120	230	<50	<50	--	E290
BST08	08-14-96	<50	170	<50	170	130	100	160	<50	<50	--	99
BST16	08-23-96	<50	500	<50	490	480	270	530	<50	<50	--	160
BST03	08-20-96	<50	E25	<50	E33	E20	E29	E28	<50	<50	--	E26
BST01	10-09-96	<50	180	<50	270	140	100	160	<50	<50	--	86
BST06	10-07-96	<50	440	<50	490	410	180	480	<50	<50	--	340
BST06	10-07-96	<50	310	<50	350	280	130	270	<50	<50	--	260
BST05	08-19-96	<50	470	<50	460	560	180	520	<50	<50	--	180
BST18	09-26-96	<50	57	<50	96	54	62	63	<50	<50	--	E270
BST15	09-25-96	<50	680	<50	710	460	240	590	<50	<50	--	E400
BST10	10-17-96	<50	E42	<50	63	E37	E36	E40	<50	<50	--	65
BST02	10-10-96	<50	140	<50	140	100	92	160	<50	<50	E12	<50
BST14	09-10-96	<50	220	<50	E190	E210	170	260	<50	<50	--	E140
BST19	10-11-96	<50	73	<50	82	65	56	90	<50	<50	--	<50
BST09	10-08-96	<50	420	<50	470	370	170	400	<50	<50	--	E540
BST07	10-04-96	<250	1600	<250	1300	1500	E850	1900	<250	<250	--	510

ANALYSES OF STREAMBED SEDIMENTS AND FISH TISSUE AT SPECIAL STUDY SITES

ALLEGHENY AND MONONGAHELA RIVER BASIN NAWQA PROJECT

STREAMBED SEDIMENTS--Continued

SEMI-VOLATILE ORGANIC COMPOUNDS IN STREAMBED SEDIMENTS, WATER YEARS OCTOBER 1995 TO SEPTEMBER 1997

LOCAL ID	DATE	4-BROMO PHNPHNL ETHER SED, BM WS, <2MM DW, REC (µG/KG) (49454)	PHTHALA TEBUTYL BENZYL- SED, BM WS, <2MM DW, REC (µG/KG) (49427)	CARBA- ZOLE SED, BM WS, <2MM DW, REC (µG/KG) (49449)	M-CRE- SOL, 4- CHLORO- SED, BM WS, <2MM DW, REC (µG/KG) (49422)	NAPTHAL ENE, 2- CHLORO- SED, BM WS, <2MM DW, REC (µG/KG) (49407)	PHENOL, 2CHLORO BED MAT WS, <2MM DRY WGT REC (µG/KG) (49467)	4CHLORO PHNPHN LEATHER SED, BM WS, <2MM DW, REC (µG/KG) (49455)	CHRY- SENE SED, BM WS, <2MM DW, REC (µG/KG) (49450)	P- CRESOL SED, BM WS, <2MM DW, REC (µG/KG) (49451)	DIBENZ (AH), AN THRACEN SED, BM WS, <2MM DW, REC (µG/KG) (49461)	THIOPH ENE, DI- BENZO- SED, BM WS, <2MM DW, REC (µG/KG) (49452)
BST11	08-22-96	<50	E18	<50	<50	<50	<50	<50	E41	<5.0	<50	<50
BST13	08-21-96	<50	E20	E10	<50	<50	<50	<50	160	<50	E24	<50
BST04	08-12-96	<50	79	<5.0	<50	<50	<50	<50	E16	100	<50	<50
BST17	08-28-96	<50	58	E15	<50	<50	<50	<50	74	E25	E43	E9.0
BST12	08-28-96	<50	66	E33	<50	<50	<50	<50	240	86	82	E19
BST08	08-14-96	<50	92	E13	<50	<50	<50	<50	150	300	73	E13
BST16	08-23-96	<50	E44	81	<50	<50	<50	<50	630	580	140	55
BST03	08-20-96	<50	E13	<50	<50	<50	<50	<50	E43	E27	<50	<50
BST01	10-09-96	<50	<50	E37	<50	<50	<50	<50	480	<50	62	62
BST06	10-07-96	<50	E100	69	<50	<50	<50	<50	470	82	120	58
BST06	10-07-96	<50	110	68	<50	<50	<50	<50	360	93	84	62
BST05	08-19-96	<50	53	62	<50	<50	<50	<50	550	140	85	E47
BST18	09-26-96	<50	E58	E15	<50	<50	<50	<50	67	E26	<50	E10
BST15	09-25-96	<50	<50	100	<50	<50	<50	<50	690	150	150	180
BST10	10-17-96	<50	E35	E22	<50	<50	<50	<50	84	E29	<50	E24
BST02	10-10-96	<50	<50	E31	<50	<50	<50	<50	170	E30	E49	E42
BST14	09-10-96	<50	<50	67	<50	<50	<50	<50	E550	180	<50	E34
BST19	10-11-96	<50	<50	<50	<50	<50	<50	<50	83	<50	E43	<50
BST09	10-08-96	<50	E100	76	<50	<50	<50	<50	550	230	100	78
BST07	10-04-96	<250	<250	540	<250	<250	<250	<250	3400	250	400	260

LOCAL ID	DATE	PHTHAL- ATE, DIBUTYL SED, BM WS, <2MM DW, REC (µG/KG) (49381)	BENZENE O-DI- CHLORO- SED, BM WS, <2MM DW, REC (µG/KG) (49439)	BENZENE M-DI- CHLORO- SED, BM WS, <2MM DW, REC (µG/KG) (49441)	BENZENE P-DI- CHLORO- SED, BM WS, <2MM DW, REC (µG/KG) (49442)	PHTHAL- ATE, D IETHYL SED, BM WS, <2MM DW, REC (µG/KG) (49383)	NAPTHAL ENE, 12 DIMETHL SED, BM WS, <2MM DW, REC (µG/KG) (49403)	NAPTHAL ENE, 16 DIMETHL SED, BM WS, <2MM DW, REC (µG/KG) (49404)	NAPTHAL ENE, 26 DIMETHL SED, BM WS, <2MM DW, REC (µG/KG) (49406)	3,5- XYLENOL SED, BM WS, <2MM DW, REC (µG/KG) (49421)	PHTHAL- ATE, DI- METHYL SED, BM WS, <2MM DW, REC (µG/KG) (49384)
BST11	08-22-96	E23	<50	<50	<50	<50	<50	<50	E18	<50	<50
BST13	08-21-96	E38	<50	<50	<50	E27	<50	<50	E18	<50	<50
BST04	08-12-96	63	<50	<50	<50	E22	<50	<50	<5.0	<50	<50
BST17	08-28-96	56	<50	<50	<50	56	<5.0	E10	E24	<50	<50
BST12	08-28-96	62	<50	<50	<50	E36	E5.0	E18	E31	<50	E8.0
BST08	08-14-96	87	<50	<50	<50	E23	E9.0	E12	E29	<50	<50
BST16	08-23-96	E38	<50	<50	<50	60	E20	83	100	<50	<50
BST03	08-20-96	E26	<50	<50	<50	E26	<5.0	E24	E46	<50	<50
BST01	10-09-96	55	<50	<50	<50	E32	E20	65	140	<50	<50
BST06	10-07-96	100	<50	<50	<50	200	74	180	190	<50	<50
BST06	10-07-96	77	<50	<50	<50	380	75	180	210	<50	<50
BST05	08-19-96	59	<50	<50	<50	E35	76	260	290	<50	<50
BST18	09-26-96	E50	<50	<50	<50	E14	<50	E16	E19	<50	<50
BST15	09-25-96	65	<50	<50	E6.0	E12	350	740	760	150	<50
BST10	10-17-96	54	<50	<50	<50	E19	E19	62	72	<50	<50
BST02	10-10-96	53	<50	<50	<50	<50	66	190	160	<50	<50
BST14	09-10-96	E26	<50	<50	<50	E19	<50	<50	E45	<50	<50
BST19	10-11-96	57	<50	<50	<50	E26	<50	E25	E34	<50	<50
BST09	10-08-96	82	<50	<50	<50	59	98	260	310	E45	<50
BST07	10-04-96	<250	<250	<250	<250	<250	E150	330	320	<250	<250

ANALYSES OF STREAMBED SEDIMENTS AND FISH TISSUE AT SPECIAL STUDY SITES

ALLEGHENY AND MONONGAHELA RIVER BASIN NAWQA PROJECT

STREAMBED SEDIMENTS--Continued

SEMI-VOLATILE ORGANIC COMPOUNDS IN STREAMBED SEDIMENTS, WATER YEARS OCTOBER 1995 TO SEPTEMBER 1997

LOCAL ID	DATE	TOLUENE 2,4-DI- NITRO- SED, BM WS, <2MM DW, REC (μG/KG) (49395)	TOLUENE 2,6-DI- NITRO- SED, BM WS, <2MM DW, REC (μG/KG) (49396)	PHTHAL ATE, D IOCTYL SED, BM WS, <2MM DW, REC (μG/KG) (49382)	FLUOR- ANTHENE BED MAT WS <2MM DRY WGT REC (μG/KG) (49466)	9H-FLU- ORENE SED, BM WS, <2MM DW, REC (μG/KG) (49399)	BENZENE HEXA- CHLORO- SED, BM WS, <2MM DW, REC (μG/KG) (49343)	INDENO 123-CD PYRENE SED, BM WS, <2MM DW, REC (μG/KG) (49390)	ISOPHOR ONE SED, BM WS, <2MM DW, REC (μG/KG) (49400)	ISO- QUINO- LINE, BM SED, BM WS, <2MM DW, REC (μG/KG) (49394)	ANTHRA- CENE, 2- METHYL- SED, BM WS, <2MM DW, REC (μG/KG) (49435)
BST11	08-22-96	<50	<50	<50	66	<50	<1.00	E34	<50	<50	<50
BST13	08-21-96	<50	<50	<50	330	E20	<1.00	100	<50	<50	E5.0
BST04	08-12-96	<50	<50	<50	92	<50	<1.00	E47	<50	<50	<50
BST17	08-28-96	<50	<50	<50	150	E16	<1.00	81	<50	<50	E25
BST12	08-28-96	<50	<50	E54	540	E24	<1.00	190	<50	<50	E40
BST08	08-14-96	<50	<50	<50	290	E17	<1.00	120	<50	<50	E31
BST16	08-23-96	<50	<50	<50	1300	99	<50.0	380	<50	<50	E49
BST03	08-20-96	<50	<50	<50	E43	<50	<1.00	E27	<50	<50	<50
BST01	10-09-96	<50	<50	E37	250	E33	<1.00	160	<50	<50	E46
BST06	10-07-96	<50	<50	<50	640	74	<1.00	360	<50	<50	87
BST06	10-07-96	<50	<50	<50	510	93	<1.00	220	<50	<50	73
BST05	08-19-96	<50	<50	<50	1200	64	<1.00	270	<50	<50	E43
BST18	09-26-96	<50	<50	<50	84	<50	<1.00	E81	<50	<50	E30
BST15	09-25-96	<50	<50	E220	980	190	<1.00	E490	<50	<50	94
BST10	10-17-96	<50	<50	<50	61	E29	<1.00	E37	<50	<50	E35
BST02	10-10-96	<50	<50	<50	170	E33	<1.00	87	<50	<50	E41
BST14	09-10-96	<50	<50	<50	660	62	<1.00	160	<50	<50	E36
BST19	10-11-96	<50	<50	E37	100	<50	<1.00	64	<50	<50	E36
BST09	10-08-96	<50	<50	<50	720	72	<1.00	270	<50	E47	92
BST07	10-04-96	<250	<250	<250	4800	460	<1.00	E700	<250	<250	290

LOCAL ID	DATE	9H-FLU- ORENE, 1METHYL SED, BM WS, <2MM DW, REC (μG/KG) (49398)	PHENAN THRENE 1METHYL SED, BM WS, <2MM DW, REC (μG/KG) (49410)	PYRENE, 1- METHYL, SED, BM WS, <2MM DW, REC (μG/KG) (49388)	4HCYPEN PHENAN THRENE SED, BM WS, <2MM DW, REC (μG/KG) (49411)	NAPHTH- ALENE, SED, BM WS, <2MM DW, REC (μG/KG) (49402)	BENZENE NITRO- SED, BM WS, <2MM DW, REC (μG/KG) (49444)	DPROPYL AMINE, N NITROSO SED, BM WS, <2MM DW, REC (μG/KG) (49431)	DIPHNYL AMINE, N NITROSO SED, BM WS, <2MM DW, REC (μG/KG) (49433)	BENZENE PNTCHLR NITRO- SED, BM WS, <2MM DW, REC (μG/KG) (49446)
BST11	08-22-96	<50	<50	<5.0	<50	<5.0	<50	<50	<50	<50
BST13	08-21-96	<50	E5.0	E6.0	E26	<5.0	<50	<50	<50	<50
BST04	08-12-96	<50	E16	<50	E17	<50	<50	<50	<50	<50
BST17	08-28-96	<50	E10	E28	E14	E20	<50	<50	<50	<50
BST12	08-28-96	E18	E29	E42	E48	E21	<50	<50	<50.0	<50
BST08	08-14-96	E21	E35	E38	E40	<5.0	<50	<50	<50	<50
BST16	08-23-96	E44	130	110	120	130	<50	<50	<50	<50
BST03	08-20-96	<50	E11	<5.0	<50	E23	<50	<50	<50	<50
BST01	10-09-96	71	130	66	<50	380	<50	<50	<50	<50
BST06	10-07-96	<50	170	120	93	190	<50	<50	<50	<50
BST06	10-07-96	<50	190	120	90	210	<50	<50	<50	<50
BST05	08-19-96	67	220	110	120	300	<50	<50	<50	<50
BST18	09-26-96	<50	E20	E33	E16	<5.0	<50	<50	<50	<50
BST15	09-25-96	180	390	160	140	1300	<50	<50	<50	<50
BST10	10-17-96	<50	63	56	<50	E43	<50	<50	<50	<50
BST02	10-10-96	E49	140	71	<50	200	<50	<50	<50	<50
BST14	09-10-96	<50	88	68	E56	120	<50	<50	<50	<50
BST19	10-11-96	<50	E28	57	E25	E15	<50	<50	<50.0	<50
BST09	10-08-96	88	260	130	110	270	<50	<50	<50	<50
BST07	10-04-96	E220	1500	430	780	1900	<250	<250	<250	<250

ANALYSES OF STREAMBED SEDIMENTS AND FISH TISSUE AT SPECIAL STUDY SITES

ALLEGHENY AND MONONGAHELA RIVER BASIN NAWQA PROJECT

STREAMBED SEDIMENTS--Continued

SEMI-VOLATILE ORGANIC COMPOUNDS IN STREAMBED SEDIMENTS, WATER YEARS OCTOBER 1995 TO SEPTEMBER 1997

LOCAL ID	DATE	PHENAN- THRENE SED, BM WS, <2MM DW, REC (µG/KG) (49409)	PHENAN- THRI- DINE SED, BM WS, <2MM DW, REC (µG/KG) (49393)	PHENOL SED, BM WS, <2MM DW, REC (µG/KG) (49413)	PYRENE, SED, BM WS, <2MM DW, REC (µG/KG) (49387)	QUINO- LINE, SED, BM WS, <2MM DW, REC (µG/KG) (49392)	BENZENE 124TRI- CHLORO- SED, BM WS, <2MM DW, REC (µG/KG) (49438)	NAPTHAL ENE, 236 TRIMETH SED, BM WS, <2MM DW, REC (µG/KG) (49405)	BIPHENL 2FLUORO SURROGT SED, BM WS, <2MM DW, REC (µG/KG) (49279)	BENZENE NITROD5 SURROGT SED, BM WS, <2MM DW, REC (µG/KG) (49280)	TERPHEN YL D14- SURROGT SED, BM WS, <2MM DW, REC (µG/KG) (49278)
BST11	08-22-96	E24	<50	<50	52	<50	<50	<50	100	87.0	98.0
BST13	08-21-96	220	<50	<50	250	<50	<50	<50	97.0	84.0	97.0
BST04	08-12-96	<50	<50	E28	E34	<50	<50	<50	99.0	92.0	110
BST17	08-28-96	68	<50	E8.0	120	<50	<50	E18	72.0	88.0	100
BST12	08-28-96	240	E14	51	420	<50	<50	E21	69.0	88.0	100
BST08	08-14-96	120	E9.0	E20	230	<50	<50	E22	99.0	83.0	120
BST16	08-23-96	930	<50	160	1100	E8.0	<50	E49	70.0	79.0	100
BST03	08-20-96	E50	<50	<5.0	E41	<50	<50	<5.0	92.0	88.0	98.0
BST01	10-09-96	620	<50	<50	240	E21	<50	70	77.0	69.0	95.0
BST06	10-07-96	500	<50	53	670	<50	<50	120	79.0	84.0	110
BST06	10-07-96	590	<50	E41	520	<50	<50	130	83.0	87.0	120
BST05	08-19-96	810	<50	68	960	<50	<50	97	67.0	89.0	110
BST18	09-26-96	E42	<50	E16	79	<50	<50	E16	75.0	73.0	94.0
BST15	09-25-96	1300	<50	81	890	<50	<50	300	79.0	75.0	96.0
BST10	10-17-96	140	<50	E33	72	<50	<50	E46	74.0	74.0	95.0
BST02	10-10-96	330	<50	<50	200	<50	<50	60	79.0	79.0	96.0
BST14	09-10-96	380	<50	<50	660	<50	<50	E40	56.0	70.0	--
BST19	10-11-96	52	<50	<50	100	<50	<50	<50	73.0	69.0	91.0
BST09	10-08-96	720	<50	85	660	E25	<50	150	79.0	79.0	110
BST07	10-04-96	3900	<250	<250	4300	<250	<250	260	64.0	48.0	160

ANALYSES OF STREAMBED SEDIMENTS AND FISH TISSUE AT SPECIAL STUDY SITES

ALLEGHENY AND MONONGAHELA RIVER BASIN NAWQA PROJECT

STREAMBED SEDIMENTS--CONTINUED

REMARKS.--Explanation of column headings--**BOT MAT**: bottom material; **<63μ WS**: less than 63 microns by wet sieve; **μG/G**: micrograms per gram; **SED. BM**: streambed sediment, bottom material; **DRY WGT**: dry weight; **REC**: recoverable; **DW, REC**: dry weight recoverable; **WS, <2MM**: wet sieve, less than 2 millimeters. **G/KG**: grams per kilogram. To convert percent composition to μG/G, multiply percent by 10,000.

As part of quality assurance protocols, duplicate field samples of trace elements in streambed sediments were collected and analyzed in the laboratory for sites BST06 and BST07.

TRACE ELEMENTS IN STREAMBED SEDIMENTS, WATER YEARS OCTOBER 1995 TO SEPTEMBER 1997

LOCAL IFIER	DATE	TIME	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	ALUM- INUM BOT MAT <63μ WS FIELD PERCENT (34790)	ANTI- MONY BOT MAT <63μ WS FIELD (μG/G) (34795)	ARSENIC BOT MAT <63μ WS FIELD (μG/G) (34800)	BERYL- LIUM BOT MAT <63μ WS FIELD (μG/G) (34810)	BISMUTH BOT MAT <63μ WS FIELD (μG/G) (34816)	CADMIUM BOT MAT <63μ WS FIELD (μG/G) (34825)
BST11	08-22-96	1030	1028	80020	7.1	2.0	24	2	<10	1.0
BST13	08-21-96	1300	1028	80020	5.6	0.7	17	2	<10	0.5
BST04	08-12-96	1530	1028	80020	6.0	0.9	21	3	<10	1.5
BST17	08-28-96	1130	1028	80020	5.0	0.7	15	1	<10	0.4
BST12	08-28-96	1540	1028	80020	5.6	0.9	18	2	<10	0.5
BST08	08-14-96	1500	1028	80020	5.6	0.8	19	2	<10	0.4
BST16	08-23-96	1200	1028	80020	6.9	2.0	20	4	<10	4.0
BST03	08-20-96	1030	1028	80020	7.7	0.8	13	2	<10	0.4
BST01	10-09-96	1330	1028	80020	11	0.9	20	20	<10	1.1
BST06	10-07-96	1600	1028	80020	7.2	1.0	17	3	<10	1.3
BST06	10-07-96	1630	1028	80020	7.2	1.0	18	3	<10	1.3
BST05	08-19-96	1400	1028	80020	7.2	0.9	14	2	<10	0.6
BST18	09-26-96	0900	1028	80020	6.4	1.0	11	2	<10	0.5
BST15	09-25-96	1305	1028	80020	8.2	1.0	16	3	<10	1.7
BST10	10-10-96	1500	1028	80020	7.8	1.0	15	4	<10	0.6
BST02	10-10-96	1000	1028	80020	8.5	0.9	14	4	<10	0.5
BST14	09-10-96	1430	1028	80020	7.5	1.0	13	5	<10	2.1
BST19	10-11-96	1000	1028	80020	7.3	0.9	8.8	3	<10	2.3
BST09	10-08-96	1130	1028	80020	7.6	1.0	15	4	<10	2.0
BST07	10-04-96	1200	1028	80020	7.9	2.0	15	4	<10	1.9
BST07	10-04-96	1210	1028	80020	7.9	2.0	14	4	<10	1.8

LOCAL ID	DATE	CALCIUM BOT MAT <63μ WS FIELD PERCENT (34830)	CERIUM BOT MAT <63μ WS FIELD (μG/G) (34835)	CHRO- MIUM BOT MAT <63μ WS FIELD (μG/G) (34840)	COBALT BOT MAT <63μ WS FIELD (μG/G) (34845)	COPPER BOT MAT <63μ WS FIELD (μG/G) (34850)	EURO- PIUM BOT MAT <63μ WS FIELD (μG/G) (34855)	GALLIUM BOT MAT <63μ WS FIELD (μG/G) (34860)	GOLD BOT MAT <63μ WS FIELD (μG/G) (34870)	HOLMIUM BOT MAT <63μ WS FIELD (μG/G) (34875)	IRON BOT MAT <63μ WS FIELD PERCENT (34880)	LANTHA- NUM BOT MAT <63μ WS FIELD (μG/G) (34885)
BST11	08-22-96	0.25	100	73	28	30	<2	16	<8	<4	5.2	51
BST13	08-21-96	0.63	64	60	15	32	<2	13	<8	<4	3.6	32
BST04	08-12-96	0.22	75	63	29	17	<2	15	<8	<4	4.5	39
BST17	08-28-96	0.51	66	49	13	20	<2	12	<8	<4	3.1	32
BST12	08-28-96	0.46	69	61	15	48	<2	13	<8	<4	3.6	34
BST08	08-14-96	0.42	72	58	14	28	<2	12	<8	<4	3.6	37
BST16	08-23-96	1.1	80	82	47	120	<2	16	<8	<4	5.1	40
BST03	08-20-96	0.24	94	82	24	24	<2	18	<8	<4	4.8	47
BST01	10-09-96	0.28	100	90	66	120	3	13	<8	<4	8.2	45
BST06	10-07-96	0.41	93	120	69	38	<2	17	<8	<4	5.2	49
BST06	10-07-96	0.40	93	110	77	39	<2	18	<8	<4	5.2	49
BST05	08-19-96	1.3	76	88	23	29	<2	17	<8	<4	4.0	39
BST18	09-26-96	0.17	83	69	20	26	<2	14	<8	<4	3.7	43
BST15	09-25-96	0.39	100	91	43	62	<2	20	<8	<4	5.5	54
BST10	10-10-96	0.20	100	85	63	31	<2	18	<8	<4	5.6	49
BST02	10-10-96	0.44	110	88	38	37	<2	20	<8	<4	5.5	58
BST14	09-10-96	0.43	83	84	100	49	<2	16	<8	<4	5.6	42
BST19	10-11-96	0.28	99	89	37	26	<2	17	<8	<4	4.1	53
BST09	10-08-96	0.50	90	87	74	54	<2	18	<8	<4	6.9	46
BST07	10-04-96	0.50	100	110	64	79	<2	18	<8	<4	6.8	54
BST07	10-04-96	0.47	100	100	62	73	<2	18	<8	<4	6.6	53

ANALYSES OF STREAMBED SEDIMENTS AND FISH TISSUE AT SPECIAL STUDY SITES

ALLEGHENY AND MONONGAHELA RIVER BASIN NAWQA PROJECT

STREAMBED SEDIMENTS--CONTINUED

TRACE ELEMENTS IN STREAMBED SEDIMENTS, WATER YEARS OCTOBER 1995 TO SEPTEMBER 1997

LOCAL ID	DATE	LEAD	LITHIUM	MAGNE-	MANGA-	MERCURY	MOLYB-	NEODYM-	NICKEL	NIOBIUM	PHOS-	POTAS-
		BOT MAT <63 μ WS FIELD (μ G/G) (34890)	BOT MAT <63 μ WS FIELD (μ G/G) (34895)	BOT MAT <63 μ WS FIELD PERCENT (34900)	BOT MAT <63 μ WS FIELD (μ G/G) (34905)	BOT MAT <63 μ WS FIELD (μ G/G) (34910)	BOT MAT <63 μ WS FIELD (μ G/G) (34915)	BOT MAT <63 μ WS FIELD (μ G/G) (34920)	BOT MAT <63 μ WS FIELD (μ G/G) (34925)	BOT MAT <63 μ WS FIELD (μ G/G) (34930)	BOT MAT <63 μ WS FIELD PERCENT (34935)	BOT MAT <63 μ WS FIELD PERCENT (34940)
BST11	08-22-96	47	70	0.55	1900	0.20	<2	46	45	14	0.13	1.9
BST13	08-21-96	39	50	0.70	1600	0.07	<2	30	30	11	0.10	1.6
BST04	08-12-96	35	60	0.42	2200	0.06	<2	35	52	12	0.08	1.6
BST17	08-28-96	30	40	0.56	880	0.04	<2	30	25	7	0.08	1.3
BST12	08-28-96	57	50	0.60	910	0.09	<2	32	30	9	0.11	1.5
BST08	08-14-96	35	50	0.55	1100	0.05	<2	34	30	9	0.10	1.6
BST16	08-23-96	120	70	0.42	2100	0.77	<2	37	82	14	0.21	1.5
BST03	08-20-96	36	60	0.60	1200	0.05	<2	42	42	15	0.09	1.7
BST01	10-09-96	48	60	0.34	830	0.24	<2	70	90	15	0.16	1.2
BST06	10-07-96	44	70	0.56	3300	0.12	<2	54	110	15	0.10	1.8
BST06	10-07-96	45	70	0.55	3700	0.11	<2	56	110	15	0.10	1.8
BST05	08-19-96	50	60	0.63	1400	0.07	<2	32	47	16	0.09	1.7
BST18	09-26-96	31	50	0.50	660	0.08	<2	43	34	14	0.08	1.8
BST15	09-25-96	61	60	0.58	1300	0.14	<2	58	66	17	0.11	1.9
BST10	10-10-96	29	70	0.59	1600	0.05	<2	53	74	16	0.06	2.0
BST02	10-10-96	33	60	0.63	1600	0.05	<2	63	55	17	0.12	2.0
BST14	09-10-96	70	70	0.41	2500	0.19	<2	38	120	14	0.27	1.4
BST19	10-11-96	37	60	0.42	1400	0.07	<2	53	63	17	0.09	1.6
BST09	10-08-96	54	70	0.52	2800	0.16	<2	52	110	15	0.18	1.7
BST07	10-04-96	86	70	0.57	1800	0.28	<2	56	100	17	0.13	1.8
BST07	10-04-96	77	70	0.56	1800	0.22	<2	58	99	15	0.13	1.8

LOCAL ID	DATE	SELE-	SILVER	SODIUM	STRON-	SULFUR	TANTA-	THORIUM	TIN	URANIUM	VANA-
		BOT MAT <63 μ WS FIELD (μ G/G) (34950)	BOT MAT <63 μ WS FIELD (μ G/G) (34955)	BOT MAT <63 μ WS FIELD PERCENT (34960)	BOT MAT <63 μ WS FIELD (μ G/G) (34965)	BOT MAT <63 μ WS FIELD (μ G/G) (34970)	BOT MAT <63 μ WS FIELD (μ G/G) (34975)	BOT MAT <63 μ WS FIELD (μ G/G) (34980)	BOT MAT <63 μ WS FIELD (μ G/G) (34985)	BOT MAT <63 μ WS FIELD (μ G/G) (35000)	BOT MAT <63 μ WS FIELD (μ G/G) (35005)
BST11	08-22-96	0.6	0.2	0.31	74	0.05	<40	17	<5	5.7	98
BST13	08-21-96	0.3	0.3	0.66	85	0.06	<40	14	<5	3.6	75
BST04	08-12-96	0.6	0.1	0.34	65	0.05	<40	16	<5	4.1	90
BST17	08-28-96	0.3	0.1	0.71	71	0.06	<40	13	<5	3.7	67
BST12	08-28-96	0.4	0.7	0.60	73	0.09	<40	14	<5	3.7	80
BST08	08-14-96	0.4	0.2	0.61	72	0.05	<40	12	<5	4.1	80
BST16	08-23-96	1.2	1.4	0.21	89	0.25	<40	15	7	4.7	91
BST03	08-20-96	0.6	0.1	0.34	100	<0.05	<40	13	<5	4.7	110
BST01	10-09-96	2.5	0.3	0.14	90	--	<40	--	<5	--	82
BST06	10-07-96	0.7	0.3	0.37	100	0.10	<40	17	<5	4.2	97
BST06	10-07-96	0.6	0.3	0.36	100	0.10	<40	12	<5	4.3	97
BST05	08-19-96	0.8	0.2	0.44	190	0.10	<40	14	<5	3.7	95
BST18	09-26-96	0.3	0.4	0.32	90	<0.05	<40	14	<5	4.9	93
BST15	09-25-96	0.9	0.6	0.31	150	0.13	<40	18	<5	5.0	100
BST10	10-10-96	0.5	0.1	0.28	110	0.08	<40	15	<5	5.2	100
BST02	10-10-96	0.5	0.1	0.43	150	0.16	<40	15	<5	4.8	100
BST14	09-10-96	1.7	1.5	0.16	120	0.15	<40	14	<5	5.0	99
BST19	10-11-96	0.8	0.1	0.18	100	0.25	<40	12	<5	5.2	98
BST09	10-08-96	1.2	0.7	0.26	120	0.16	<40	15	<5	4.3	98
BST07	10-04-96	1.3	0.7	0.31	130	0.17	<40	12	<5	5.6	100
BST07	10-04-96	1.2	0.6	0.32	130	0.19	<40	13	<5	5.4	100

ANALYSES OF STREAMBED SEDIMENTS AND FISH TISSUE AT SPECIAL STUDY SITES
ALLEGHENY AND MONONGAHELA RIVER BASIN NAWQA PROJECT
STREAMBED SEDIMENTS--CONTINUED

TRACE ELEMENTS IN STREAMBED SEDIMENTS, WATER YEARS OCTOBER 1995 TO SEPTEMBER 1997

LOCAL ID	DATE	YTTER- BIUM BOT MAT <63 μ WS FIELD (μ G/G) (35015)	YTTRIUM BOT MAT <63 μ WS FIELD (μ G/G) (35010)	ZINC BOT MAT <63 μ WS FIELD (μ G/G) (35020)	TITA- NIUM, SED, BM WS, <63U DRY WGT REC (PERCENT) (49274)	CARBON, ORG + INORG, SED, BM WS, <63 μ DW, REC PERCENT (49267)	CARBON, INORG, SED, BM WS, <63U DW, REC (PER- CENT) (49269)	CARBON, ORGANIC SED, BM WS, <63U DW, REC (PER- CENT) (49266)	CARBON, ORG + INORG, SED, BM WS, <2MM DW, REC (G/KG) (49272)	CARBON, INORG, SED, BM WS, <2MM DW, REC (G/KG) (49270)	CARBON, ORGANIC SED, BM WS, <2MM DW, REC (G/KG) (49271)
BST11	08-22-96	3	31	210	0.350	2.76	0.01	2.75	7.40	<0.100	7.40
BST13	08-21-96	3	26	140	0.290	1.84	0.12	1.72	6.50	0.500	6.00
BST04	08-12-96	3	24	190	0.320	3.72	0.01	3.71	16.0	<0.100	16.0
BST17	08-28-96	3	26	110	0.280	1.74	0.08	1.66	10.0	<0.100	10.0
BST12	08-28-96	3	26	150	0.300	2.29	0.06	2.23	17.0	0.200	17.0
BST08	08-14-96	3	26	120	0.300	2.05	0.05	2.00	14.0	<0.100	14.0
BST16	08-23-96	3	33	560	0.400	6.68	0.16	6.52	40.0	0.200	40.0
BST03	08-20-96	3	27	130	0.390	1.90	0.02	1.88	6.50	<0.100	6.50
BST01	10-09-96	9	98	700	0.330	--	--	--	120	0.200	120
BST06	10-07-96	3	36	330	0.380	2.78	0.13	2.65	39.0	0.700	38.0
BST06	10-07-96	3	37	340	0.380	3.14	0.13	3.01	39.0	0.800	38.0
BST05	08-19-96	3	28	170	0.420	2.60	0.29	2.31	31.0	1.10	30.0
BST18	09-26-96	3	26	130	0.400	1.96	0.01	1.95	11.0	0.100	11.0
BST15	09-25-96	3	34	1100	0.440	2.77	0.06	2.71	42.0	0.700	41.0
BST10	10-10-96	4	36	280	0.430	2.06	0.02	2.04	--	--	--
BST02	10-10-96	4	38	190	0.440	2.47	0.06	2.41	18.0	<0.100	18.0
BST14	09-10-96	3	34	530	0.360	4.85	0.04	4.81	23.0	0.100	23.0
BST19	10-11-96	3	32	310	0.480	3.40	0.02	3.38	17.0	<0.100	17.0
BST09	10-08-96	3	36	410	0.390	4.11	0.13	3.98	54.0	0.400	54.0
BST07	10-04-96	4	40	510	0.420	3.39	0.11	3.28	110	0.400	110
BST07	10-04-96	3	36	490	0.390	3.46	0.10	3.36	73.0	0.500	72.0

ANALYSES OF STREAMBED SEDIMENTS AND FISH TISSUE AT SPECIAL STUDY SITES

ALLEGHENY AND MONONGAHELA RIVER BASIN NAWQA PROJECT

FISH TISSUE

REMARKS.--Explanation of column headings--WH ORG: whole organism; WW, REC: wet weight recoverable; µg/KG: micrograms per kilogram; SURROGT: surrogate--see definition of terms; CC: common carp; GR: golden redhorse; WS: white sucker; E: estimated value--see definition of terms.

As part of quality assurance protocols, duplicate field samples of whole carp were collected and analyzed at the laboratory for sites BST06 and BST07.

ORGANOCHLORINE COMPOUNDS IN WHOLE FISH, WATER YEARS OCTOBER 1995 TO SEPTEMBER 1997

LOCAL ID	FISH TYPE	DATE	TIME	AGENCY COL-LECTING SAMPLE (CODE NUMBER)	AGENCY ANA-LYZING SAMPLE (CODE NUMBER)	PCB, BIOTA, WH ORG WW, REC (µG/KG)	O,P'-DDT, BIOTA, WH ORG WW, REC (µG/KG)	P,P'-DDT, BIOTA, WH ORG WW, REC (µG/KG)	O,P'-DDD, BIOTA, WH ORG WW, REC (µG/KG)	P,P'-DDD, BIOTA, WH ORG WW, REC (µG/KG)
				(00027)	(00028)	(49354)	(49377)	(49376)	(49374)	(49375)
BST11	GR	08-22-96	1230	1028	80020	<50.0	<5.00	<5.00	<5.00	<5.00
BST13	GR	08-21-96	1700	1028	80020	170	<5.00	<5.00	<5.00	E5.80
BST04	WS	09-05-96	1300	1028	80020	<50.0	<5.00	<5.00	<5.00	<5.00
BST17	GR	08-28-96	1130	1028	80020	<50.0	<5.00	<5.00	<5.00	E6.30
BST12	GR	08-29-96	1000	1028	80020	130	<5.00	5.20	<5.00	<5.00
BST08	GR	08-29-96	1530	1028	80020	360	<5.00	<5.00	<5.00	E18.0
BST08	CC	09-02-97	1400	1028	80020	1100	<5.00	<5.00	<6.00	E7.30
BST16	CC	08-23-96	1200	1028	80020	380	<5.00	<5.00	<5.00	<5.00
BST16	WS	08-23-96	1230	1028	80020	240	<5.00	<5.00	<5.00	<5.00
BST03	WS	08-20-96	1400	1028	80020	<50.0	<5.00	<5.00	<5.00	<5.00
BST06	CC	09-16-96	1210	1028	80020	1700	14.0	11.0	19.0	54.0
BST06	CC	09-16-96	1200	1028	80020	1700	18.0	9.00	8.90	39.0
BST05	WS	08-19-96	1500	1028	80020	100	<5.00	11.0	<5.00	E7.20
BST15	CC	09-25-96	1300	1028	80020	1100	<5.00	<5.00	<5.00	6.20
BST10	GR	08-27-97	1100	1028	80020	<50.0	<5.00	<5.00	<5.00	<5.00
BST02	GR	08-06-97	1200	1028	80020	100	<5.00	<5.00	<5.00	<5.00
BST14	WS	09-10-96	1500	1028	80020	<50.0	<5.00	<5.00	<5.00	E12.0
BST09	CC	09-23-96	1130	1028	80020	1000	<5.00	<5.00	<5.00	8.20
BST07	CC	09-19-96	1100	1028	80020	2600	<5.00	<5.00	<5.00	26.0
BST07	CC	09-19-96	1110	1028	80020	2600	<5.00	<5.00	<5.00	22.0

LOCAL ID	DATE	O,P'-DDE, BIOTA, WH ORG WW, REC (µG/KG)	P,P'-DDE, BIOTA, WH ORG WW, REC (µG/KG)	CIS-CHLOR-DANE, BIOTA, WH ORG WW, REC (µG/KG)	TRANS-CHLOR-DANE, BIOTA, WH ORG WW, REC (µG/KG)	CIS-NONA-CHLOR, BIOTA, WH ORG WW, REC (µG/KG)	TRANS-CHLOR, BIOTA, WH ORG WW, REC (µG/KG)	OXY-CHLOR DANE, BIOTA, WH ORG WW, REC (µG/KG)	HEPTA-CHLOR, BIOTA, WH ORG WW, REC (µG/KG)	HEPTA-CHLOR EPOXIDE, BIOTA, WH ORG WW, REC (µG/KG)	PENTA CHLORO ANISOLE, BIOTA, WH ORG WW, REC (µG/KG)
		(49373)	(49372)	(49380)	(49379)	(49359)	(49358)	(49357)	(49369)	(49368)	(49356)
BST11	08-22-96	<5.00	5.70	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00
BST13	08-21-96	<5.00	42.0	<5.00	<5.00	<5.00	7.40	<5.00	<5.00	<5.00	5.00
BST04	09-05-96	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00
BST17	08-28-96	<5.00	37.0	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00
BST12	08-29-96	<5.00	27.0	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00
BST08	08-29-96	<5.00	43.0	19.0	10.0	<5.00	20.0	E5.20	<5.00	<5.00	<5.00
BST08	09-02-97	<5.00	100	8.8	<5.00	<5.00	13.0	<5.00	<5.00	<5.00	<5.00
BST16	08-23-96	<5.00	15.0	<5.00	<5.00	<5.00	8.50	<5.00	<5.00	<5.00	<5.00
BST16	08-23-96	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00
BST03	08-20-96	<5.00	22.0	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00
BST06	09-16-96	<5.00	260	27.0	14.0	12.0	44.0	<5.00	<5.00	<5.00	<5.00
BST06	09-16-96	<5.00	228	57.0	36.0	21.0	69.0	<5.00	<5.00	<5.00	<5.00
BST05	08-19-96	<5.00	25.0	13.0	6.10	<5.00	14.0	5.40	<5.00	<5.00	<5.00
BST15	09-25-96	<5.00	27.0	46.0	26.0	12.0	42.0	<5.00	<5.00	<5.00	<5.00
BST10	08-27-97	<5.00	6.70	E3.90	E1.70	E2.20	E4.80	<5.00	<5.00	<5.00	<5.00
BST02	08-06-97	<5.00	7.50	7.80	E3.60	<5.00	11.0	E3.20	<5.00	<5.00	<5.00
BST14	09-10-96	<5.00	16.0	<5.00	<5.00	<5.00	8.70	<5.00	<5.00	<5.00	<5.00
BST09	09-23-96	<5.00	65.0	95.0	29.0	14.0	120	<5.00	<5.00	<5.00	<7.90
BST07	09-19-96	<5.00	150	230	140	44.0	220	<5.00	<5.00	<5.00	5.40
BST07	09-19-96	<5.00	130	220	140	33.0	200	<5.00	<5.00	<5.00	<5.00

ANALYSES OF STREAMBED SEDIMENTS AND FISH TISSUE AT SPECIAL STUDY SITES

ALLEGHENY AND MONONGAHELA RIVER BASIN NAWQA PROJECT

FISH TISSUE--Continued

ORGANOCHLORINE COMPOUNDS IN WHOLE FISH, WATER YEARS OCTOBER 1995 TO SEPTEMBER 1997

LOCAL ID	DATE	ALDRIN, BIOTA, WH ORG	DIEL- DRIN, BIOTA, WH ORG	ENDRIN, BIOTA, WH ORG	MIREX, BIOTA, WH ORG	METHOXY CHLOR, O,P'-, BIOTA, WH ORG	METHOXY CHLOR, P,P'-, BIOTA, WH ORG	ALPHA- BHC, BIOTA, WH ORG	BETA- BHC, BIOTA, WH ORG	DELTA- BHC, BIOTA, WH ORG
		WW, REC (μG/KG) (49353)	WW, REC (μG/KG) (49371)	WW, REC (μG/KG) (49370)	WW, REC (μG/KG) (49360)	WW, REC (μG/KG) (49362)	WW, REC (μG/KG) (49361)	WW, REC (μG/KG) (49366)	WW, REC (μG/KG) (49365)	WW, REC (μG/KG) (49364)
BST11	08-22-96	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00
BST13	08-21-96	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00
BST04	09-05-96	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00
BST17	08-28-96	<5.00	<5.00	<5.00	<5.00	9.60	<5.00	<5.00	<5.00	<5.00
BST12	08-29-96	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00
BST08	08-29-96	<5.00	23.0	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00
BST08	09-02-97	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00
BST16	08-23-96	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00
BST16	08-23-96	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00
BST03	08-20-96	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00
BST06	09-16-96	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00
BST06	09-16-96	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00
BST05	08-19-96	<5.00	<5.00	<10.0	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00
BST15	09-25-96	<5.00	<5.00	<5.00	<5.00	<5.00	<10.0	<5.00	<5.00	<5.00
BST10	08-27-97	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00
BST02	08-06-97	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00
BST14	09-10-96	<5.00	7.20	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00
BST09	09-23-96	<5.00	14.0	<5.00	<5.00	<5.00	<10.0	<5.00	<5.00	<5.00
BST07	09-19-96	<5.00	18.0	<5.00	<5.00	<5.00	<10.0	<5.00	<5.00	<5.00
BST07	09-19-96	<5.00	29.0	<5.00	<5.00	<5.00	<10.0	<5.00	<5.00	<5.00
LOCAL ID	DATE	LINDANE BIOTA, WH ORG	BENZENE HEXA- CHLORO- BIOTA, WH ORG	DCPA, BIOTA, WH ORG	TOXA- PHENE, BIOTA, WH ORG	LIPIDS, BIOTA, WH ORG	ALPHA- BHC,D6 SURROGT BIOTA, WH ORG	BIPHENYL 35DICHL SURROGT BIOTA, WH ORG	SET NUMBER SCHED- ULE 2101 (NO.)	SAMPLE WEIGHT SCHED- ULE 2101 (GRAMS)
		WW, REC (μG/KG) (49363)	WW, REC (μG/KG) (49367)	WW, REC (μG/KG) (49378)	WW, REC (μG/KG) (49355)	PERCENT (49289)	PERCENT (49261)	PERCENT (49264)	(99822)	(99852)
BST11	08-22-96	<5.00	<5.00	<5.00	<200	3.60	84.0	107	96263	10.0
BST13	08-21-96	<5.00	<5.00	<5.00	<200	10.0	87.0	77.0	96278	10.0
BST04	09-05-96	<5.00	<5.00	<5.00	<200	3.00	84.0	71.0	96278	10.0
BST17	08-28-96	<5.00	<5.00	<5.00	<200	5.20	81.0	71.0	96278	10.0
BST12	08-29-96	<5.00	<5.00	<5.00	<200	4.00	69.0	86.0	96263	10.0
BST08	08-29-96	<5.00	<5.00	<5.00	<200	9.70	78.0	75.0	96278	10.0
BST08	09-02-97	<5.00	E4.80	<5.00	<200	11.0	81.0	64.0	97323	10.0
BST16	08-23-96	<5.00	<5.00	<5.00	<200	5.60	66.0	83.0	96263	10.0
BST16	08-23-96	<5.00	<5.00	<5.00	<200	5.10	68.0	80.0	96263	10.0
BST03	08-20-96	<5.00	<5.00	<5.00	<200	3.00	72.0	85.0	96263	10.0
BST06	09-16-96	<5.00	E1.80	<5.00	<200	8.50	119	103	97127	10.0
BST06	09-16-96	<5.00	<5.00	<5.00	<200	6.20	82.0	88.0	98049	10.0
BST05	08-19-96	<5.00	<5.00	<5.00	<200	7.50	73.0	86.0	96263	10.0
BST15	09-25-96	<5.00	<5.00	<5.00	<200	8.20	126	79.0	97029	10.0
BST10	08-27-97	<5.00	<5.00	<5.00	<200	10.0	85.0	77.0	97300	10.0
BST02	08-06-97	<5.00	<5.00	<5.00	<200	8.50	88.0	75.0	97260	10.1
BST14	09-10-96	<5.00	<5.00	<5.00	<200	8.40	81.0	77.0	96278	10.0
BST09	09-23-96	<5.00	<5.00	<5.00	<200	13.5	107	73.0	97029	10.0
BST07	09-19-96	<5.00	<5.00	<5.00	<200	18.9	101	75.0	97029	10.0
BST07	09-19-96	<5.00	<5.00	<5.00	<200	19.7	84.0	70.0	97029	10.0

ANALYSES OF STREAMBED SEDIMENTS AND FISH TISSUE AT SPECIAL STUDY SITES

ALLEGHENY AND MONONGAHELA RIVER BASIN NAWQA PROJECT

FISH TISSUE--Continued

TRACE ELEMENTS IN FISH LIVERS, WATER YEARS OCTOBER 1995 TO SEPTEMBER 1997

REMARKS.--Explanation of column headings--BIO TIS: biota tissue; DRY WGT REC: dry weight recoverable; μG/G: micrograms per gram; CC: common carp; GR: golden redhorse; WS: white sucker.

As part of quality assurance protocols, duplicate field samples of carp livers were collected and analyzed at the laboratory for sites BST06 and BST07.

LOCAL ID	FISH TYPE	DATE	TIME	AGENCY COL-LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANALYZING SAMPLE (CODE NUMBER) (00028)	ALUMI-NUM, BIOTA, TISSUE, DRY WGT REC (μG/G) (49237)	ANTI-MONY, BIOTA, TISSUE, DRY WGT REC (μG/G) (49246)	ARSENIC, BIOTA, TISSUE, DRY WGT REC (μG/G) (49247)	BARIUM, BIOTA, TISSUE, DRY WGT REC (μG/G) (49238)	BERYL-LIUM, BIOTA, TISSUE, DRY WGT REC (μG/G) (49248)
BST11	GR	08-22-96	1230	1028	80020	1.7	<0.3	0.3	0.2	<0.3
BST13	CC	08-21-96	1710	1028	80020	24	<0.2	0.8	0.7	<0.2
BST04	WS	09-04-97	1400	1028	80020	31	<1.4	<1.4	0.8	<1.4
BST17	GR	08-28-96	1130	1028	80020	6.2	<0.3	0.7	0.1	<0.3
BST12	GR	08-29-96	1000	1028	80020	3.0	<0.3	0.4	<0.1	<0.3
BST08	GR	08-29-96	1530	1028	80020	6.6	<0.3	0.4	0.2	<0.3
BST08	CC	09-02-97	1400	1028	80020	15	<0.1	0.9	0.2	<0.1
BST16	CC	08-23-96	1200	1028	80020	350	<0.2	0.5	8.5	<0.2
BST03	WS	08-20-96	1400	1028	80020	<1.0	<0.4	<0.4	<0.1	<0.4
BST06	CC	09-16-96	1210	1028	80020	50	<0.2	0.3	<0.1	<0.2
BST06	CC	09-16-96	1200	1028	80020	40	<0.2	0.4	0.1	<0.2
BST05	WS	08-19-96	1500	1028	80020	<1.0	<0.3	<0.3	<0.1	<0.3
BST15	CC	09-25-96	1300	1028	80020	48	<0.2	0.4	0.4	<0.2
BST10	GR	08-27-97	1100	1028	80020	6.6	<0.1	<0.1	<0.1	<0.1
BST02	GR	08-06-97	1200	1028	80020	7.3	<0.2	0.3	<0.1	<0.2
BST14	WS	09-10-96	1500	1028	80020	<1.0	<0.3	<0.3	<0.1	<0.3
BST09	CC	09-23-96	1130	1028	80020	18	<0.2	<0.2	<0.1	<0.2
BST07	CC	09-19-96	1100	1028	80020	20	<0.3	<0.3	<0.1	<0.3
BST07	CC	09-19-96	1110	1028	80020	18	<0.2	<0.2	<0.1	<0.2

LOCAL ID	DATE	BORON, BIOTA, TISSUE, DRY WGT REC (μG/G) (49239)	CADMIUM, BIOTA, TISSUE, DRY WGT REC (μG/G) (49249)	CHROM-IUM, BIOTA, TISSUE, DRY WGT REC (μG/G) (49240)	COBALT, BIOTA, TISSUE, DRY WGT REC (μG/G) (49250)	COPPER, BIOTA, TISSUE, DRY WGT REC (μG/G) (49241)	IRON, BIOTA, TISSUE, DRY WGT REC (μG/G) (49242)	LEAD, BIOTA, TISSUE, DRY WGT REC (μG/G) (49251)	MANGAN-ESE, BIOTA, TISSUE, DRY WGT REC (μG/G) (49243)	MERCURY, BIOTA, TISSUE, DRY WGT REC (μG/G) (49258)
BST11	08-22-96	0.6	0.9	0.6	<0.3	19	780	<0.3	10	0.2
BST13	08-21-96	0.3	13	0.6	<0.2	200	290	0.2	11	0.4
BST04	09-04-97	4.2	2.0	1.5	<1.4	92	770	<1.4	14	0.4
BST17	08-28-96	0.7	0.9	0.6	<0.3	14	580	<0.3	8.6	0.2
BST12	08-29-96	0.4	2.3	0.5	<0.3	26	1000	<0.3	5.5	0.2
BST08	08-29-96	0.8	3.0	0.6	<0.3	30	460	<0.3	6.6	0.2
BST08	09-02-97	0.4	39	<0.5	0.2	340	180	0.3	9.9	0.7
BST16	08-23-96	<0.2	8.9	1.1	1.5	100	1300	2.0	110	0.1
BST03	08-20-96	0.6	0.7	0.5	<0.4	69	1200	<0.4	6.4	0.2
BST06	09-16-96	<0.2	56	0.8	0.8	120	1000	0.3	4.9	0.5
BST06	09-16-96	<0.2	28	0.8	0.6	76	940	0.3	3.8	0.5
BST05	08-19-96	0.9	0.4	0.5	0.3	37	440	<0.3	5.0	<0.1
BST15	09-25-96	<0.2	1.1	0.5	0.4	85	1200	0.2	8.6	0.2
BST10	08-27-97	<0.2	0.9	<0.5	0.2	7.9	440	<0.1	4.7	0.0
BST02	08-06-97	1	0.4	<0.5	0.3	12	490	<0.2	5.0	0.1
BST14	09-10-96	1.1	0.4	0.6	0.8	59	390	<0.3	6.6	<0.1
BST09	09-23-96	0.9	17	<0.5	0.5	57	950	0.2	3.6	0.2
BST07	09-19-96	<0.2	7.7	0.5	0.4	81	950	0.4	4.5	0.3
BST07	09-19-96	<0.2	4.7	<0.5	0.4	85	1100	0.4	2.8	0.3

ANALYSES OF STREAMBED SEDIMENTS AND FISH TISSUE AT SPECIAL STUDY SITES

ALLEGHENY AND MONONGAHELA RIVER BASIN NAWQA PROJECT

FISH TISSUE--Continued

TRACE ELEMENTS IN FISH LIVERS, WATER YEARS OCTOBER 1995 TO SEPTEMBER 1997

LOCAL ID	DATE	MOLYB- DENUM, BIOTA, TISSUE, DRY WGT REC ($\mu\text{G/G}$) (49252)	NICKEL, BIOTA, TISSUE, DRY WGT REC ($\mu\text{G/G}$) (49253)	SELEN- IUM, BIOTA, TISSUE, DRY WGT REC ($\mu\text{G/G}$) (49254)	SILVER, BIOTA, TISSUE, DRY WGT REC ($\mu\text{G/G}$) (49255)	STRON- TIUM, BIOTA, TISSUE, DRY WGT REC ($\mu\text{G/G}$) (49244)	URANIUM BIOTA, TISSUE, DRY WGT REC ($\mu\text{G/G}$) (49257)	VANA- DIUM BIO TIS LIVER DRY WGT REC ($\mu\text{G/G}$) (49465)	WATER, PRESENT BIO TIS DRY WGT REC ($\mu\text{G/G}$) (49273)	ZINC, BIOTA, TISSUE, DRY WGT REC ($\mu\text{G/G}$) (49245)
BST11	08-22-96	0.9	<0.3	7.7	<0.3	0.9	<0.3	<0.3	79	73
BST13	08-21-96	0.9	0.2	3.9	1.9	0.8	<0.2	0.3	72	790
BST04	09-04-97	<1.4	7.4	8.8	<1.4	1.1	<1.4	<1.4	82	140
BST17	08-28-96	0.7	<0.3	5.8	<0.3	0.3	<0.3	0.4	79	72
BST12	08-29-96	0.8	0.3	7.6	<0.3	0.1	<0.3	0.7	78	76
BST08	08-29-96	0.7	<0.3	7.6	<0.3	0.2	<0.3	0.4	80	81
BST08	09-02-97	0.9	1.0	4.5	0.9	0.2	<0.1	0.3	70	1200
BST16	08-23-96	0.9	1.8	8.4	1.7	3.4	<0.2	0.9	76	1500
BST03	08-20-96	0.9	<0.4	7.0	<0.4	0.4	<0.4	<0.4	79	110
BST06	09-16-96	1.7	<0.2	7.3	1.5	0.4	<0.2	1.9	78	720
BST06	09-16-96	1.3	<0.2	4.7	0.8	1.0	<0.2	1.8	74	530
BST05	08-19-96	0.6	<0.3	4.7	<0.3	0.8	<0.3	<0.3	76	83
BST15	09-25-96	1.0	5.7	8.8	0.5	0.5	<0.2	0.5	72	860
BST10	08-27-97	0.3	1.4	4.7	<0.1	<0.1	<0.1	<0.1	61	35
BST02	08-06-97	0.5	2.6	4.5	<0.2	0.6	<0.2	0.4	69	47
BST14	09-10-96	0.9	0.3	4.8	1.6	0.3	<0.3	<0.3	74	120
BST09	09-23-96	0.9	2.7	6.4	0.9	0.2	<0.2	0.6	76	420
BST07	09-19-96	1.5	2.4	6.7	1.6	0.4	<0.3	0.9	78	630
BST07	09-19-96	1.3	<0.2	5.9	1.6	0.4	<0.2	0.7	72	400

GROUND-WATER LEVELS

ALLEGHENY COUNTY

403734080063001. Local number, AG 700.

LOCATION.--Lat 40°37'34", long 80°06'30", Hydrologic Unit 05030101, at State Game Land Number 203, Bradford Woods. Owner: U.S. Geological Survey.

AQUIFER.--Sandstone and shale of Glenshaw Formation of Late Pennsylvanian age.

WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 6 in, depth 100 ft, cased to 24 ft, open hole.

INSTRUMENTATION.--Data collection platform with 60-minute recording interval. Satellite telemetry at station.

DATUM.--Elevation of land-surface datum is 1,035 ft above sea level, from topographic map. Measuring point: Top of casing, 3.45 ft above land-surface datum.

REMARKS.--In addition to the daily maximum water level table shown below, daily minimum and mean water levels, since October 1987, are available from the District Office.

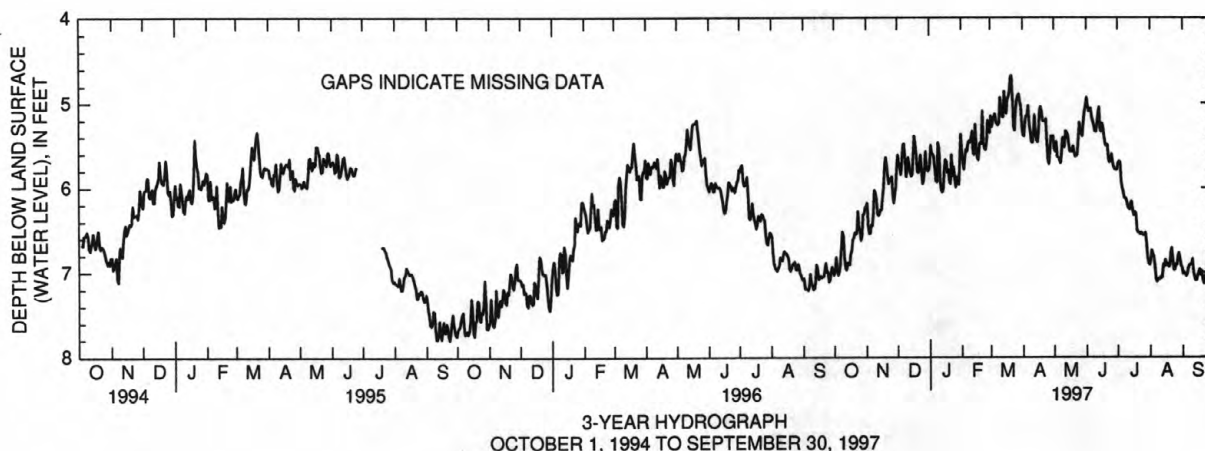
PERIOD OF RECORD.--November 1967 to current year.

EXTREMES FOR PERIOD OF RECORD.--The extremes shown are extremes of the daily maximum depth below land surface for the period of record indicated above. Highest water level, 4.67 ft below land-surface datum, Mar. 21, 1997; lowest, 8.94 ft below land-surface datum, Nov. 14, 1968.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.98	6.18	5.61	5.70	5.56	5.15	5.38	5.53	4.93	5.71	6.85	7.02
2	6.82	6.44	5.71	5.50	5.70	5.28	5.39	5.57	5.03	5.69	6.74	7.00
3	6.98	6.54	5.77	5.60	5.78	5.21	5.21	5.46	5.09	5.70	6.79	7.02
4	7.03	6.54	5.84	5.60	5.65	5.16	5.15	5.63	5.07	5.92	6.81	7.04
5	6.99	6.44	5.67	5.64	5.55	5.13	5.14	5.64	5.06	6.01	6.93	7.01
6	6.89	6.45	5.50	5.79	5.57	5.22	5.03	5.66	5.17	6.05	7.08	6.94
7	6.71	6.29	5.48	5.92	5.47	5.25	5.25	5.71	5.21	6.12	7.11	6.91
8	6.52	6.03	5.65	5.93	5.45	5.26	5.33	5.61	5.27	6.12	7.08	6.91
9	6.57	6.05	5.87	5.47	5.47	5.23	5.45	5.41	5.33	6.15	7.07	6.90
10	6.82	6.12	5.79	5.54	5.42	4.93	5.47	5.51	5.34	6.21	7.08	6.84
11	6.95	6.30	5.64	5.90	5.33	5.06	5.40	5.52	5.26	6.25	7.05	6.99
12	6.97	6.33	5.73	6.03	5.59	5.16	5.14	5.33	5.14	6.26	7.06	7.07
13	6.88	6.30	5.81	6.05	5.61	5.16	5.34	5.35	5.05	6.18	6.90	7.09
14	6.90	6.26	5.86	6.01	5.25	4.86	5.44	5.38	5.30	6.16	6.93	7.09
15	6.91	6.26	5.84	5.78	5.52	5.07	5.46	5.48	5.34	6.28	6.85	7.03
16	6.77	6.12	5.59	5.67	5.65	5.12	5.31	5.57	5.24	6.33	6.92	7.00
17	6.75	5.99	5.39	5.69	5.67	4.95	5.08	5.57	5.31	6.29	6.89	6.96
18	6.61	5.77	5.48	5.82	5.49	4.92	5.04	5.57	5.41	6.30	6.93	7.03
19	6.59	5.64	5.62	5.78	5.47	4.86	5.11	5.51	5.50	6.50	6.93	6.98
20	6.53	5.71	5.81	5.93	5.48	4.69	5.21	5.57	5.50	6.53	6.78	7.08
21	6.55	5.86	5.82	5.95	5.09	4.67	5.21	5.63	5.49	6.53	6.71	7.13
22	6.54	5.95	5.72	5.61	5.47	4.96	5.22	5.63	5.66	6.55	6.86	7.09
23	6.28	5.89	5.61	5.86	5.54	5.27	5.19	5.61	5.70	6.53	6.97	6.99
24	6.45	5.89	5.79	5.75	5.55	5.32	5.43	5.46	5.67	6.55	6.97	7.00
25	6.51	5.87	5.95	5.88	5.46	5.07	5.65	5.23	5.60	6.56	6.90	6.75
26	6.62	6.11	5.91	5.99	5.20	4.97	5.72	5.30	5.71	6.56	6.91	7.01
27	6.56	6.18	5.77	5.87	5.30	4.91	5.57	5.36	5.76	6.53	6.81	7.01
28	6.32	6.07	5.57	5.95	5.35	4.89	5.39	5.39	5.78	6.65	6.77	6.89
29	6.31	5.98	5.79	5.96	---	4.99	5.42	5.22	5.79	6.82	6.85	6.65
30	6.23	5.73	5.80	5.70	---	5.04	5.39	5.10	5.79	6.89	6.92	6.84
31	6.23	---	5.79	5.37	---	5.28	---	5.04	---	6.91	6.95	---
MEAN	6.67	6.11	5.72	5.78	5.49	5.07	5.32	5.47	5.38	6.32	6.92	6.98
MAX	7.03	6.54	5.95	6.05	5.78	5.32	5.72	5.71	5.79	6.91	7.11	7.13
MIN	6.23	5.64	5.39	5.37	5.09	4.67	5.03	5.04	4.93	5.69	6.71	6.65

WTR YR 1997: MEAN 5.94; HIGH 4.67, MAR 21; LOW 7.13, SEPT 21.



BEAVER COUNTY

403006080252301. Local number, BV 156.

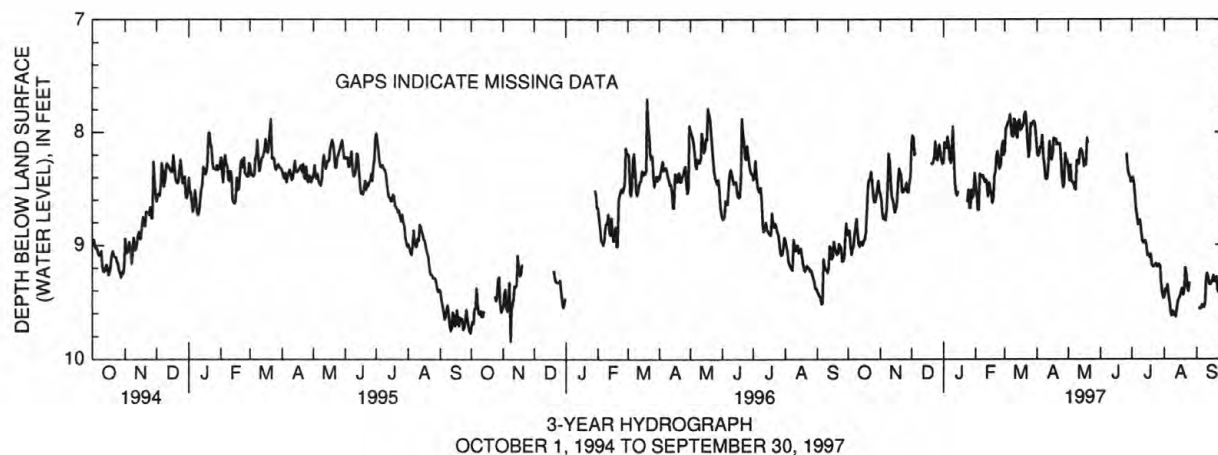
LOCATION.--Lat 40°30'06", long 80°25'23", Hydrologic Unit 05030101, at Raccoon State Park.

Owner: U.S. Geological Survey.

AQUIFER.--Shale of Glenshaw Formation of Late Pennsylvanian age.**WELL CHARACTERISTICS.**--Drilled observation artesian well, diameter 6 in, depth 101 ft, cased to 25 ft, open hole.**INSTRUMENTATION.**--Digital data logger recorder with 15-minute recording interval.**DATUM.**--Elevation of land-surface datum is 930 ft above sea level, from topographic map. Measuring point: Top of casing, 2.00 ft above land-surface datum.**REMARKS.**--Missing record Dec. 6-19, Jan. 16-23, May 21 to June 25, and Aug. 26 to Sept. 2. In addition to the daily maximum water level table shown below, daily minimum and mean water levels, since October 1991, are available from the District Office.**PERIOD OF RECORD.**--November 1967 to current year.**EXTREMES FOR PERIOD OF RECORD.**--The extremes shown are extremes of the daily maximum depth below land surface for the period of record indicated above. Highest water level, 7.47 ft below land-surface datum, Apr. 14, 1994: lowest, 13.72 ft below land-surface datum, June 5, 1968.DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.91	8.55	8.12	8.27	8.46	8.17	8.18	8.31	---	8.41	9.46	---
2	8.87	8.60	8.03	8.09	8.55	7.96	8.21	8.43	---	8.40	9.39	---
3	8.99	8.73	8.05	8.11	8.69	7.95	8.19	8.29	---	8.45	9.41	9.56
4	9.08	8.77	8.20	8.14	8.69	7.91	8.13	8.42	---	8.55	9.35	9.56
5	9.03	8.74	8.18	8.04	8.37	7.91	8.13	8.45	---	8.69	9.44	9.56
6	9.01	8.78	---	8.11	8.40	7.84	8.03	8.45	---	8.74	9.51	9.53
7	8.91	8.68	---	8.23	8.38	7.96	8.22	8.50	---	8.82	9.59	9.55
8	8.84	8.49	---	8.27	8.38	8.03	8.28	8.51	---	8.81	9.62	9.55
9	8.77	8.19	---	8.19	8.42	8.04	8.40	8.25	---	8.78	9.58	9.51
10	8.89	8.26	---	7.95	8.44	7.88	8.42	8.28	---	8.89	9.62	9.29
11	8.99	8.44	---	8.22	8.42	7.90	8.40	8.28	---	8.96	9.60	9.25
12	9.01	8.57	---	8.44	8.48	8.02	8.26	8.18	---	8.98	9.63	9.30
13	8.97	8.60	---	8.53	8.57	8.05	8.08	8.15	---	8.97	9.56	9.34
14	8.97	8.66	---	8.56	8.45	7.91	8.21	8.17	---	8.96	9.49	9.35
15	9.00	8.71	---	8.52	8.50	7.89	8.24	8.21	---	9.01	9.47	9.33
16	8.96	8.67	---	---	8.54	7.98	8.19	8.30	---	9.09	9.45	9.31
17	8.95	8.63	---	---	8.63	7.97	8.05	8.29	---	9.08	9.42	9.27
18	8.88	8.46	---	---	8.58	7.94	8.06	8.29	---	9.11	9.38	9.32
19	8.69	8.32	---	---	8.39	7.92	8.06	8.05	---	9.08	9.44	9.32
20	8.47	8.35	8.27	---	8.35	7.83	8.11	8.10	---	9.17	9.39	9.28
21	8.42	8.39	8.28	---	8.21	7.82	8.11	---	---	9.19	9.20	9.40
22	8.42	8.53	8.26	---	8.17	7.94	8.10	---	---	9.19	9.26	9.42
23	8.35	8.53	8.22	---	8.26	8.11	8.10	---	---	9.18	9.37	9.32
24	8.43	8.50	8.08	8.62	8.32	8.22	8.24	---	---	9.16	9.41	9.35
25	8.54	8.51	8.23	8.51	8.29	8.14	8.40	---	---	9.19	9.33	9.23
26	8.62	8.45	8.25	8.67	8.15	7.92	8.49	---	8.19	9.19	---	9.37
27	8.62	8.53	8.18	8.67	8.08	7.93	8.45	---	8.31	9.17	---	9.38
28	8.57	8.53	8.11	8.51	8.20	7.91	8.19	---	8.37	9.19	---	9.31
29	8.50	8.45	8.18	8.58	---	7.90	8.25	---	8.39	9.34	---	9.06
30	8.43	8.39	8.24	8.55	---	7.93	8.25	---	8.44	9.43	---	9.10
31	8.52	---	8.28	8.36	---	8.04	---	---	---	9.47	---	---
MEAN	8.76	8.53	8.19	8.35	8.41	7.97	8.21	8.30	8.34	8.99	9.45	9.36
MAX	9.08	8.78	8.28	8.67	8.69	8.22	8.49	8.51	8.44	9.47	9.63	9.56
MIN	8.35	8.19	8.03	7.95	8.08	7.82	8.03	8.05	8.19	8.40	9.20	9.06

WTR YR 1997: MEAN 8.60; HIGH 7.82, MAR 21; LOW 9.63, AUG 12.



BUTLER COUNTY

410501079524401. Local number, BT 311.

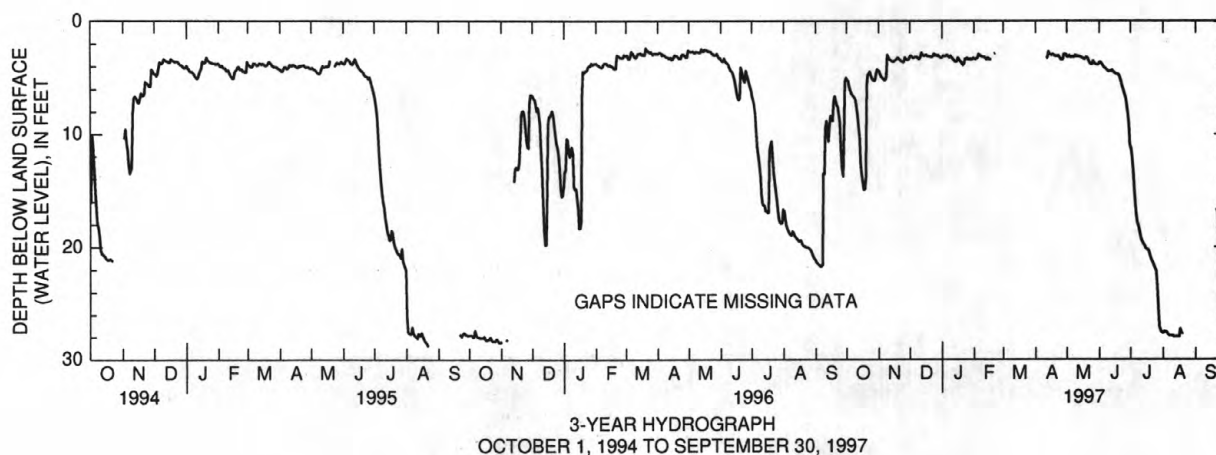
LOCATION.--Lat 41°05'01", long 79°52'44", Hydrologic Unit 05030105, at State Game Land Number 95.

Owner: U.S. Geological Survey.

AQUIFER.--Kittanning Formation of Middle Pennsylvanian age.**WELL CHARACTERISTICS.**--Drilled observation artesian well, diameter 6 in, depth 89 ft, cased to 12 ft, open hole.**INSTRUMENTATION.**--Continuous strip-chart recorder.**DATUM.**--Elevation of land-surface datum is 1,465 ft above sea level, from topographic map. Measuring point: Top of casing, 2.30 ft above land-surface datum.**REMARKS.**--Missing record Feb. 18-19, Feb. 22 to Apr. 10, and Aug. 21 to Sept. 20. Water levels are affected by pumping from local mines.**PERIOD OF RECORD.**--November 1970 to current year.**EXTREMES FOR PERIOD OF RECORD.**--Highest water level, 2.31 ft below land-surface datum, Apr. 12, 1994; lowest, 31.06 ft below land-surface datum, Oct. 16, 17, 18, 1983.DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.17	4.37	3.09	3.19	3.33	---	---	3.15	3.63	11.25	27.67	---
2	5.23	4.65	3.07	3.06	3.35	---	---	3.16	3.62	11.96	27.51	---
3	5.76	4.88	3.15	3.11	3.27	---	---	3.05	3.72	13.25	27.55	---
4	6.03	4.98	3.24	3.11	3.23	---	---	3.16	3.86	14.85	27.55	---
5	6.32	5.07	3.21	3.00	2.91	---	---	3.17	4.00	16.23	27.77	---
6	6.44	5.18	3.15	3.00	3.01	---	---	3.12	4.10	17.18	27.86	---
7	6.60	5.15	3.16	3.15	3.08	---	---	3.17	4.16	17.88	27.91	---
8	6.71	4.82	3.14	3.20	3.13	---	---	3.16	4.27	18.11	27.91	---
9	6.92	2.99	3.32	3.06	3.14	---	---	3.00	4.36	18.53	27.89	---
10	7.51	3.19	3.32	3.18	3.14	---	---	3.09	4.39	19.07	27.90	---
11	8.27	3.36	3.21	3.32	3.15	---	3.28	3.09	4.38	19.39	28.01	---
12	9.26	3.46	2.78	3.40	3.33	---	3.21	3.09	4.38	19.59	28.01	---
13	10.27	3.49	2.96	3.53	3.34	---	2.68	3.14	4.31	19.73	27.97	---
14	12.60	3.56	3.04	3.56	3.20	---	2.91	3.15	4.43	19.88	28.00	---
15	13.55	3.56	3.04	3.56	3.35	---	2.96	3.20	4.50	20.12	27.99	---
16	14.24	3.50	2.99	3.22	3.37	---	2.97	3.25	4.58	20.22	28.01	---
17	14.89	3.43	3.01	3.35	3.42	---	2.90	3.33	4.64	20.23	27.26	---
18	14.84	3.35	3.09	3.53	---	---	2.94	3.33	4.64	20.38	27.65	---
19	13.92	3.22	3.09	3.56	---	---	3.03	3.18	4.68	20.76	27.74	---
20	5.60	3.31	3.12	3.74	2.87	---	3.09	3.18	4.85	21.04	27.74	---
21	4.73	3.40	3.15	3.87	2.80	---	3.08	3.33	5.09	21.23	---	16.60
22	4.65	3.53	3.14	3.73	---	---	3.09	3.54	5.43	21.40	---	16.90
23	4.43	3.53	3.10	3.33	---	---	3.08	3.71	5.80	21.67	---	19.35
24	4.75	3.60	2.86	3.33	---	---	3.21	3.79	6.10	21.90	---	20.91
25	5.02	3.60	2.95	3.23	---	---	3.35	3.79	6.45	22.08	---	21.48
26	5.19	3.17	3.00	3.38	---	---	3.39	3.51	6.75	23.47	---	23.46
27	5.20	3.37	3.06	3.36	---	---	3.35	3.71	7.43	25.41	---	25.72
28	5.20	3.41	3.01	3.33	---	---	2.92	3.78	8.10	27.07	---	25.84
29	4.63	3.42	3.12	3.38	---	---	2.91	3.80	9.18	27.35	---	21.97
30	4.27	3.32	3.18	3.33	---	---	2.95	3.80	11.03	27.59	---	12.80
31	4.34	---	3.25	3.25	---	---	---	3.80	---	27.66	---	---
MEAN	7.50	3.80	3.10	3.33	3.18	---	3.07	3.35	5.23	20.21	27.80	20.50
MAX	14.89	5.18	3.32	3.87	3.42	---	3.39	3.80	11.03	27.66	28.01	25.84
MIN	4.27	2.99	2.78	3.00	2.80	---	2.68	3.00	3.62	11.25	27.26	12.80

WTR YR 1997: MEAN 8.15; HIGH 2.68, APR 13; LOW 28.01, AUG 11, 12, 16.



CRAWFORD COUNTY

413542080245002. Local number, CW 413.

LOCATION.--Lat 41°35'42", long 80°24'50", Hydrologic Unit 05030102, at State Game Land Number 214 near Hartstown.
 Owner: U.S. Geological Survey.

AQUIFER.--Sandstone of Cussewago Formation of Early Mississippian age.

WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 6 in, depth 100 ft, cased to 19 ft, open hole.

INSTRUMENTATION.--Continuous strip-chart recorder.

DATUM.--Elevation of land-surface datum is 1,110 ft above sea level, from topographic map. Measuring point: Top of casing, 2.70 ft above land-surface datum.

REMARKS.--Missing record Oct. 1-17, Oct. 22 to Nov. 9, Dec. 1-17, Dec. 23 to Jan. 3, Jan. 21 to Feb. 22, Apr. 19 to June 3, and Aug. 20 to Sept. 19. Since the June 9, 1981 well pumping and clean out, the monthly mean water levels have generally been from 12 to 24 feet lower. Water levels were also affected by intermittent pumping.

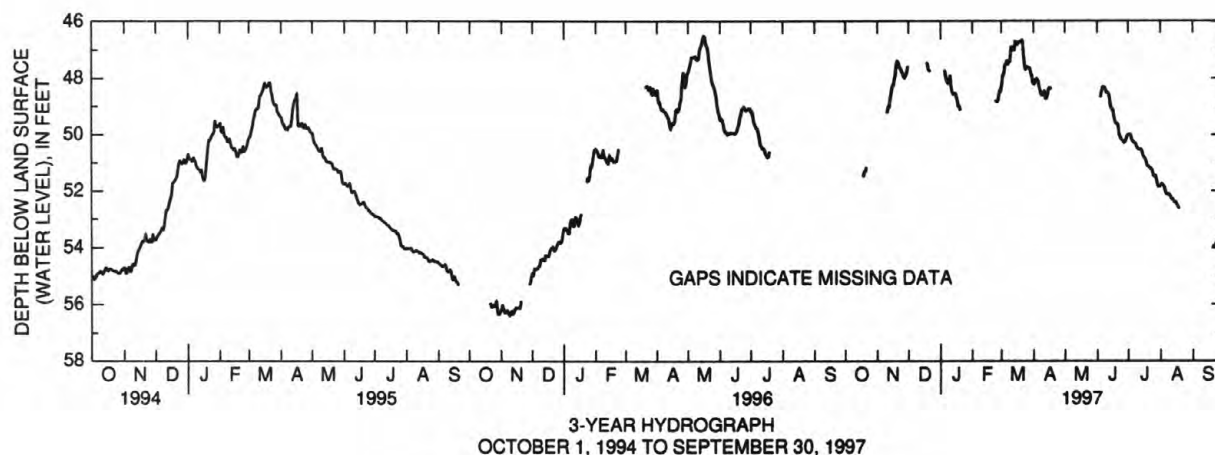
PERIOD OF RECORD.--July 1967 to current year. Prior to June 1981, water-level data stored with well identification number 413542080245001.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 20.02 ft below land-surface datum, Feb. 23, 1975; lowest, 56.39 ft below land-surface datum, Nov. 9, 1995.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
 MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	48.25	48.21	---	---	49.99	51.79	---
2	---	---	---	---	---	47.87	48.16	---	---	49.99	51.74	---
3	---	---	---	---	---	47.87	48.02	---	---	50.00	51.80	---
4	---	---	---	47.73	---	47.53	48.02	---	48.68	50.16	51.83	---
5	---	---	---	47.73	---	47.51	48.09	---	48.50	50.26	51.96	---
6	---	---	---	48.00	---	47.38	48.29	---	48.31	50.26	52.10	---
7	---	---	---	48.12	---	47.50	48.45	---	48.30	50.31	52.12	---
8	---	---	---	48.17	---	47.40	48.58	---	48.32	50.31	52.13	---
9	---	---	---	48.13	---	47.40	48.59	---	48.40	50.45	52.11	---
10	---	49.25	---	47.90	---	46.89	48.56	---	48.51	50.51	52.16	---
11	---	49.03	---	48.27	---	46.89	48.45	---	48.51	50.52	52.27	---
12	---	49.04	---	48.50	---	47.01	48.71	---	48.53	50.52	52.28	---
13	---	48.73	---	48.56	---	47.01	48.71	---	48.72	50.52	52.32	---
14	---	48.51	---	48.55	---	46.70	48.60	---	49.01	50.58	52.39	---
15	---	48.27	---	48.53	---	46.75	48.39	---	49.10	50.73	52.38	---
16	---	48.27	---	48.60	---	46.80	48.33	---	49.10	50.80	52.45	---
17	---	48.05	---	48.78	---	46.72	48.35	---	49.36	50.84	52.50	---
18	51.50	47.90	47.45	48.99	---	46.72	48.39	---	49.51	50.95	52.60	---
19	51.32	47.46	47.46	48.98	---	46.72	---	---	49.61	51.11	52.64	---
20	51.31	47.39	47.69	49.15	---	46.66	---	---	49.61	51.14	---	53.92
21	51.16	47.44	47.73	---	---	46.66	---	---	49.63	51.15	---	53.99
22	---	47.63	47.70	---	---	47.16	---	---	49.98	51.20	---	53.97
23	---	47.63	---	---	48.78	47.54	---	---	50.06	51.21	---	53.81
24	---	47.75	---	---	48.83	47.68	---	---	50.18	51.31	---	53.84
25	---	47.79	---	---	48.83	47.60	---	---	50.21	51.46	---	53.71
26	---	47.95	---	---	48.66	47.59	---	---	50.23	51.49	---	53.89
27	---	47.99	---	---	48.42	47.63	---	---	50.30	51.43	---	53.92
28	---	47.87	---	---	48.45	47.63	---	---	50.25	51.63	---	53.84
29	---	47.84	---	---	---	47.81	---	---	50.12	51.81	---	53.70
30	---	47.56	---	---	---	47.92	---	---	50.04	51.85	---	54.01
31	---	---	---	---	---	48.18	---	---	---	51.84	---	---
MEAN	51.32	48.06	47.61	48.39	48.66	47.32	48.38	---	49.30	50.85	52.19	53.87
MAX	51.50	49.25	47.73	49.15	48.83	48.25	48.71	---	50.30	51.85	52.64	54.01
MIN	51.16	47.39	47.45	47.73	48.42	46.66	48.02	---	48.30	49.99	51.74	53.70

WTR YR 1997: MEAN 49.46; HIGH 46.66, MAR 20, 21; LOW 54.01, SEPT 30.



ELK COUNTY

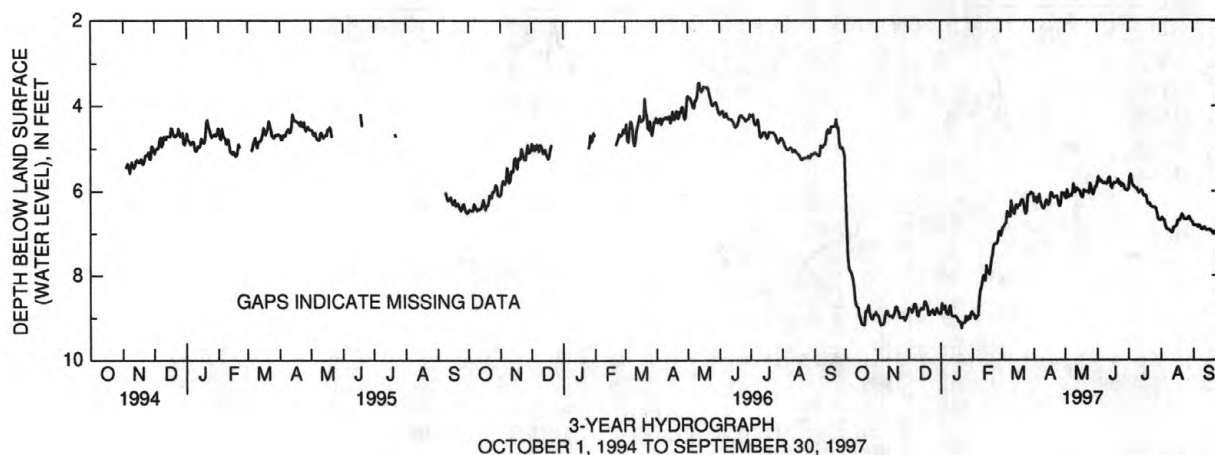
412458078324601. Local number, EK 108.

LOCATION.--Lat 41°24'58", long 78°32'46", Hydrologic Unit 05010005, at St. Marys.**Owner:** St. Marys Municipal Joint Water Authority.**AQUIFER.**--Pottsville Group of Middle Pennsylvanian age.**WELL CHARACTERISTICS.**--Drilled artesian well, diameter 12 in, depth 340 ft, cased to 40 ft, open hole.**INSTRUMENTATION.**--Continuous strip-chart recorder.**DATUM.**--Elevation of land-surface datum is 1,740 ft above sea level, from topographic map. Measuring point: Top of casing, 2.30 ft above land-surface datum.**REMARKS.**--Missing record Sept. 25-30. Installation of sanitary sewer affected water levels after October 1996.**PERIOD OF RECORD.**--October 1974 to current year.**EXTREMES FOR PERIOD OF RECORD.**--Highest water level, 1.95 ft below land-surface datum, Mar. 4, 1991; lowest, 9.24 ft below land-surface datum, Jan. 21, 1996.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.06	8.93	8.76	8.90	8.91	6.96	6.23	6.14	5.78	5.94	6.67	6.80
2	6.81	8.99	8.79	8.65	8.92	6.84	6.23	6.17	5.65	5.67	6.61	6.80
3	7.53	9.11	8.79	8.79	9.02	6.84	6.14	5.97	5.77	5.60	6.67	6.80
4	7.80	9.17	8.87	8.80	9.01	6.78	6.28	6.13	5.73	5.77	6.67	6.80
5	7.88	9.15	8.81	8.71	8.95	6.76	6.20	6.13	5.75	5.86	6.79	6.84
6	7.91	9.16	8.67	8.87	8.95	6.47	6.07	6.08	5.80	5.87	6.87	6.80
7	7.99	9.09	8.67	8.91	8.56	6.59	6.25	6.11	5.82	5.91	6.90	6.82
8	8.09	8.93	8.72	8.92	8.36	6.58	6.30	6.04	5.80	5.93	6.90	6.87
9	8.29	8.83	8.93	8.75	8.26	6.59	6.38	5.83	5.82	5.92	6.92	6.90
10	8.57	8.84	8.96	8.70	8.13	6.23	6.41	6.01	5.83	6.00	6.94	6.90
11	8.70	8.92	8.82	8.92	8.00	6.40	6.39	6.02	5.77	6.03	6.97	6.85
12	8.73	8.96	8.82	8.96	8.10	6.51	6.27	5.92	5.69	6.01	6.97	6.86
13	8.75	8.96	8.77	8.96	8.11	6.53	6.20	5.94	5.67	5.97	6.85	6.90
14	8.94	8.95	8.79	8.97	7.76	6.37	6.30	5.98	5.87	5.98	6.85	6.92
15	9.01	9.00	8.79	8.95	7.91	6.32	6.32	5.98	5.93	6.08	6.83	6.91
16	9.11	8.94	8.62	9.00	7.93	6.40	6.24	6.08	5.84	6.11	6.81	6.91
17	9.16	8.88	8.61	9.01	7.97	6.33	6.03	6.13	5.80	6.09	6.69	6.90
18	9.16	8.74	8.68	9.09	7.77	6.34	6.03	6.14	5.81	6.12	6.67	6.94
19	9.17	8.73	8.74	9.08	7.59	6.28	6.12	5.97	5.80	6.28	6.68	6.93
20	8.83	8.81	8.93	9.11	7.50	6.19	6.15	6.00	5.77	6.30	6.60	7.00
21	8.86	8.86	8.93	9.24	7.28	6.19	6.14	6.00	5.71	6.28	6.54	7.00
22	8.79	8.99	8.85	9.11	7.24	6.30	6.12	6.00	5.83	6.34	6.58	6.95
23	8.69	8.98	8.84	9.11	7.24	6.45	6.11	6.02	5.79	6.37	6.65	7.00
24	8.87	9.00	8.80	9.11	7.23	6.53	6.20	6.04	5.88	6.37	6.66	6.82
25	8.98	8.99	8.90	8.96	7.17	6.44	6.31	5.81	5.82	6.38	6.65	---
26	9.02	8.98	8.92	9.06	6.97	6.09	6.35	5.90	5.85	6.38	6.66	---
27	9.02	9.06	8.85	9.04	6.95	6.09	6.27	6.03	5.91	6.39	6.61	---
28	8.91	9.02	8.77	8.96	7.04	6.07	6.03	6.07	5.96	6.48	6.60	---
29	8.93	8.95	8.84	9.02	---	6.02	6.06	5.99	5.97	6.62	6.67	---
30	8.85	8.88	8.89	8.87	---	6.05	6.04	5.90	5.98	6.67	6.70	---
31	8.93	---	8.90	8.85	---	6.06	---	5.90	---	6.67	6.72	---
MEAN	8.53	8.96	8.81	8.95	7.96	6.41	6.21	6.01	5.81	6.14	6.74	6.88
MAX	9.17	9.17	8.96	9.24	9.02	6.96	6.41	6.17	5.98	6.67	6.97	7.00
MIN	6.06	8.73	8.61	8.65	6.95	6.02	6.03	5.81	5.65	5.60	6.54	6.80

WTR YR 1997: MEAN 7.29; HIGH 5.60, JULY 3; LOW 9.24, JAN 21.



ERIE COUNTY

415607080044601. Local number, ER 82.

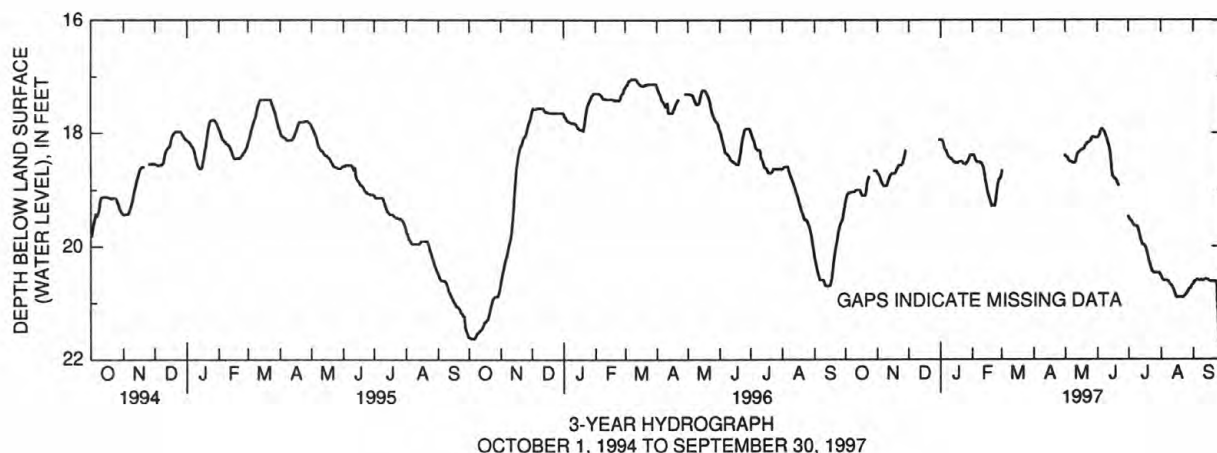
LOCATION.--Lat 41°56'07", long 80°04'46", Hydrologic Unit 05010004, near McLane.

Owner: U.S. Geological Survey.

AQUIFER.--Shale of Riceville Formation of Late Devonian age.**WELL CHARACTERISTICS.**--Drilled observation artesian well, diameter 6 in, depth 82 ft, cased to 56 ft, open hole.**INSTRUMENTATION.**--Continuous strip-chart recorder.**DATUM.**--Elevation of land-surface datum is 1,419 ft above sea level, from topographic map. Measuring point: Top of plywood cover, 3.50 ft above land-surface datum.**REMARKS.**--Missing record Oct. 25-27, Nov. 29 to Dec. 29, Mar. 2-20, Mar. 22 to Apr. 29, and June 23-29. Water levels of Sept. 24-30 affected by drilling of nearby well.**PERIOD OF RECORD.**--July 1966 to current year.**EXTREMES FOR PERIOD OF RECORD.**--Highest water level, 10.00 ft below land-surface datum, Mar. 17, 1973; lowest, 23.51 ft below land-surface datum, Oct. 4, 5, 1991.DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19.20	18.71	---	18.12	18.39	18.65	---	18.41	18.08	19.49	20.53	20.66
2	19.11	18.73	---	18.12	18.39	---	---	18.43	18.07	19.53	20.58	20.62
3	19.07	18.76	---	18.15	18.45	---	---	18.43	18.03	19.55	20.60	20.61
4	19.05	18.83	---	18.22	18.49	---	---	18.48	17.96	19.57	20.60	20.59
5	19.05	18.87	---	18.29	18.51	---	---	18.50	17.93	19.61	20.60	20.59
6	19.04	18.91	---	18.30	18.51	---	---	18.50	17.93	19.63	20.60	20.60
7	19.04	18.93	---	18.35	18.51	---	---	18.51	17.96	19.64	20.61	20.60
8	19.03	18.93	---	18.40	18.52	---	---	18.52	17.99	19.64	20.62	20.60
9	19.03	18.93	---	18.43	18.53	---	---	18.52	18.04	19.64	20.66	20.59
10	19.03	18.92	---	18.44	18.56	---	---	18.52	18.10	19.70	20.69	20.61
11	19.01	18.85	---	18.46	18.61	---	---	18.50	18.18	19.76	20.70	20.60
12	19.00	18.80	---	18.47	18.71	---	---	18.41	18.22	19.86	20.73	20.58
13	19.00	18.75	---	18.50	18.84	---	---	18.36	18.33	19.91	20.78	20.58
14	19.00	18.73	---	18.51	18.93	---	---	18.34	18.50	19.96	20.83	20.59
15	19.00	18.71	---	18.52	19.03	---	---	18.33	18.75	19.97	20.89	20.59
16	19.06	18.71	---	18.52	19.10	---	---	18.30	18.77	19.98	20.90	20.61
17	19.10	18.71	---	18.52	19.16	---	---	18.30	18.80	20.02	20.90	20.62
18	19.10	18.71	---	18.52	19.22	---	---	18.28	18.81	20.07	20.90	20.62
19	19.10	18.65	---	18.51	19.28	---	---	18.28	18.83	20.16	20.90	20.62
20	19.10	18.63	---	18.50	19.28	---	---	18.23	18.88	20.25	20.90	20.62
21	19.01	18.58	---	18.50	19.28	17.83	---	18.21	18.92	20.30	20.90	20.62
22	18.87	18.56	---	18.52	19.28	---	---	18.18	18.93	20.37	20.90	20.62
23	18.80	18.56	---	18.54	19.16	---	---	18.17	---	20.43	20.88	20.62
24	18.76	18.56	---	18.54	19.00	---	---	18.17	---	20.46	20.87	21.04
25	---	18.54	---	18.55	18.87	---	---	18.15	---	20.47	20.84	21.40
26	---	18.48	---	18.52	18.82	---	---	18.11	---	20.47	20.81	21.65
27	---	18.40	---	18.50	18.80	---	---	18.08	---	20.47	20.78	21.66
28	18.66	18.30	---	18.46	18.76	---	---	18.07	---	20.47	20.75	21.64
29	18.66	---	---	18.40	---	---	---	18.08	---	20.47	20.75	21.50
30	18.66	---	18.12	18.39	---	---	18.39	18.08	19.46	20.47	20.70	21.24
31	18.67	---	18.12	18.39	---	---	---	18.08	---	20.50	20.68	---
MEAN	18.97	18.71	18.12	18.42	18.82	18.24	18.39	18.31	18.41	20.03	20.75	20.80
MAX	19.20	18.93	18.12	18.55	19.28	18.65	18.39	18.52	19.46	20.50	20.90	21.66
MIN	18.66	18.30	18.12	18.12	18.39	17.83	18.39	18.07	17.93	19.49	20.53	20.58

WTR YR 1997: MEAN 19.26; HIGH 17.83, MAR 21; LOW 21.66, SEPT 27.



FAYETTE COUNTY

394843079351401. Local number, FA 17.

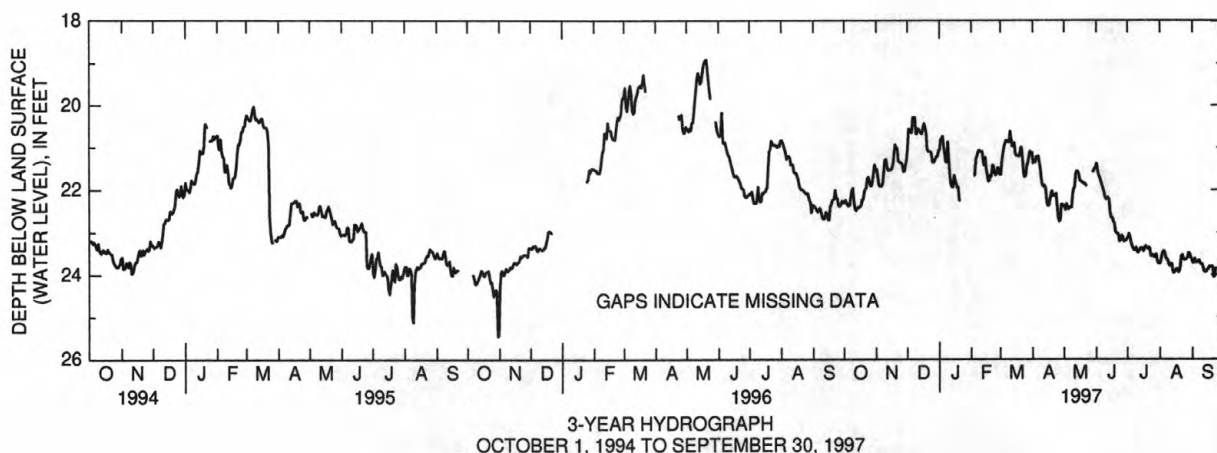
LOCATION.--Lat 39°48'43", long 79°35'14", Hydrologic unit 05020006, at Fort Necessity National Battlefield.

Owner: U.S. Geological Survey.

AQUIFER.--Shale and sandstone of Glenshaw Formation of Late Pennsylvanian age.**WELL CHARACTERISTICS.**--Drilled observation artesian well, diameter 6 in, depth 100 ft, cased to 19 ft, open hole.**INSTRUMENTATION.**--Continuous strip-chart recorder.**DATUM.**--Elevation of land-surface datum is 1,910 ft above sea level, from topographic map. Measuring point: Top of plywood cover 2.05 ft above land-surface datum.**REMARKS.**--Missing record Jan. 22 to Feb. 2, May 24-27, and Sept. 24-30. Water levels affected by intermittent pumping.**PERIOD OF RECORD.**--November 1967 to current year.**EXTREMES FOR PERIOD OF RECORD.**--Highest water level, 18.56 ft below land-surface datum, Apr. 1, 1992; lowest, 40.00 ft below land-surface datum, Nov. 8, 1967.DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22.30	21.50	21.01	21.06	---	21.64	21.36	22.40	21.37	23.12	23.73	23.72
2	22.24	21.64	20.56	20.80	---	21.30	21.32	22.47	21.52	23.03	23.60	23.72
3	22.31	21.86	20.57	20.81	21.65	21.15	21.35	22.33	21.65	23.12	23.49	23.62
4	22.36	21.91	20.65	20.73	21.65	20.98	21.22	22.42	21.70	23.23	23.44	23.71
5	22.37	21.90	20.65	20.96	21.27	20.90	21.25	22.45	21.78	23.32	23.45	23.71
6	22.36	21.91	20.28	21.14	21.21	20.82	21.20	22.40	21.87	23.37	23.58	23.70
7	22.17	21.82	20.28	21.34	21.11	20.84	21.36	22.42	21.95	23.42	23.63	23.66
8	22.03	21.54	20.28	21.34	21.06	20.87	21.50	22.41	22.03	23.42	23.64	23.72
9	21.96	21.30	20.67	20.86	21.10	20.87	21.75	22.13	22.15	23.35	23.75	23.75
10	22.25	21.27	20.67	21.32	21.10	20.62	21.90	21.98	22.22	23.46	23.79	23.75
11	22.44	21.43	20.55	21.68	21.09	20.80	21.92	21.96	22.22	23.47	23.74	23.83
12	22.48	21.53	20.57	21.87	21.31	20.97	21.89	21.65	22.17	23.43	23.74	23.92
13	22.44	21.53	20.63	21.93	21.42	20.97	21.96	21.56	22.25	23.37	23.92	23.93
14	22.40	21.52	20.67	21.93	21.23	20.88	22.28	21.56	22.51	23.37	23.95	23.92
15	22.42	21.52	20.67	21.65	21.50	21.15	22.37	21.62	22.65	23.37	23.93	23.87
16	22.38	21.48	20.53	21.77	21.65	21.19	22.36	21.77	22.65	23.44	23.87	23.86
17	22.37	21.37	20.43	21.86	21.80	21.18	22.24	21.80	22.75	23.37	23.86	23.80
18	22.23	21.14	20.52	21.94	21.76	21.20	22.13	21.83	22.78	23.32	23.93	23.81
19	22.23	20.93	20.64	21.94	21.65	21.20	22.03	21.82	22.98	23.36	23.93	23.80
20	22.05	20.99	21.03	22.25	21.68	21.00	22.14	21.85	23.02	23.38	23.81	23.80
21	21.98	21.02	21.09	22.24	21.41	20.99	22.14	21.86	23.02	23.35	23.57	24.05
22	21.95	21.32	21.09	---	21.44	21.32	22.11	21.90	23.06	23.39	23.53	24.03
23	21.75	21.34	21.09	---	21.61	21.63	22.09	21.92	23.21	23.56	23.63	23.83
24	21.70	21.35	21.14	---	21.65	21.69	22.36	---	23.19	23.56	23.65	---
25	21.81	21.36	21.34	---	21.62	21.67	22.63	---	23.07	23.53	23.64	---
26	21.90	21.41	21.35	---	21.47	21.42	22.74	---	23.10	23.58	23.63	---
27	21.90	21.56	21.32	---	21.50	21.35	22.71	---	23.21	23.57	23.59	---
28	21.78	21.55	21.26	---	21.64	21.22	22.34	21.58	23.21	23.51	23.48	---
29	21.61	21.40	21.20	---	---	21.08	22.36	21.56	23.19	23.66	23.50	---
30	21.40	21.27	21.21	---	---	21.14	22.35	21.50	23.16	23.73	23.59	---
31	21.51	---	21.07	---	---	21.12	---	21.48	---	23.73	23.63	---
MEAN	22.10	21.46	20.81	21.50	21.45	21.13	21.98	21.95	22.52	23.42	23.68	23.80
MAX	22.48	21.91	21.35	22.25	21.80	21.69	22.74	22.47	23.21	23.73	23.95	24.05
MIN	21.40	20.93	20.28	20.73	21.06	20.62	21.20	21.48	21.37	23.03	23.44	23.62

WTR YR 1997: MEAN 22.14; HIGH 20.28, DEC 6-8; LOW 24.05, SEPT 21.



FOREST COUNTY

412823079030601. Local number, FO 11.

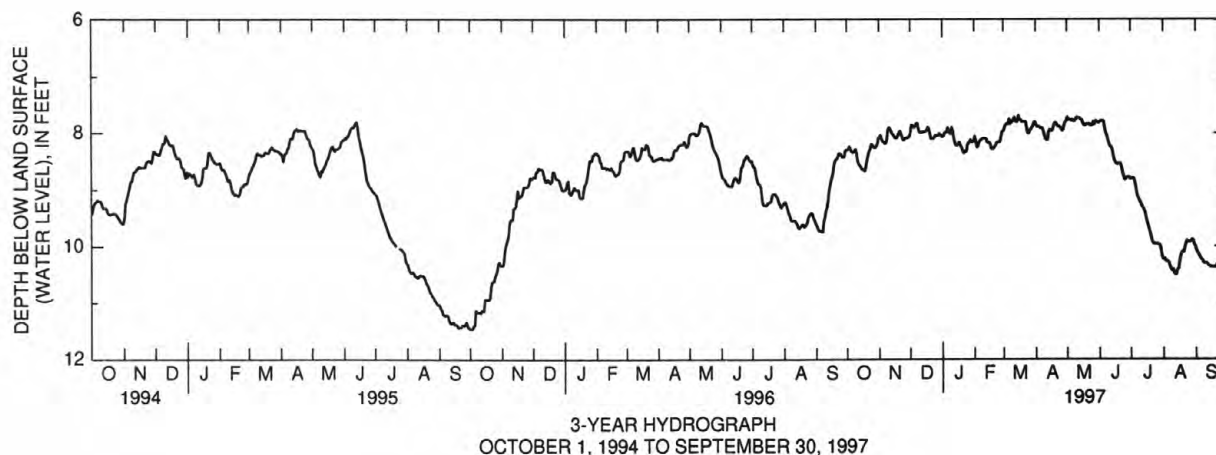
LOCATION.--Lat 41°28'23", long 79°03'06", Hydrologic Unit 05010005, in Allegheny National Forest.

Owner: U.S. Geological Survey.

AQUIFER.--Clarion Formation of Middle Pennsylvanian age.**WELL CHARACTERISTICS.**--Drilled observation artesian well, diameter 6 in, depth 110 ft, cased to 23 ft, open hole.**INSTRUMENTATION.**--Continuous strip-chart recorder.**DATUM.**--Elevation of land-surface datum is 1,780 ft above sea level, from topographic map. Measuring point: Top of casing, 1.40 ft above land-surface datum.**REMARKS.**--None.**PERIOD OF RECORD.**--August 1973 to current year.**EXTREMES FOR PERIOD OF RECORD.**--Highest water level, 7.44 ft below land-surface datum, Apr. 16-17, 1994; lowest, 12.07 ft below land-surface datum, Sept. 18, 19, 1982.DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.30	8.09	7.99	8.07	8.06	7.96	7.85	7.72	7.81	8.81	10.23	10.07
2	8.29	8.04	7.86	8.05	8.15	7.88	7.89	7.77	7.79	8.80	10.22	10.11
3	8.24	8.10	7.87	8.00	8.25	7.85	7.89	7.77	7.79	8.80	10.26	10.14
4	8.29	8.15	7.90	7.99	8.25	7.84	7.89	7.76	7.79	8.83	10.26	10.17
5	8.32	8.16	7.90	7.99	8.17	7.84	7.91	7.78	7.80	8.93	10.27	10.21
6	8.34	8.18	7.86	7.91	8.14	7.75	7.91	7.76	7.93	9.03	10.30	10.23
7	8.34	8.18	7.83	7.97	8.12	7.84	7.92	7.79	8.01	9.13	10.36	10.25
8	8.32	8.14	7.83	8.01	8.11	7.79	7.97	7.79	8.06	9.16	10.40	10.29
9	8.29	7.97	7.95	8.01	8.10	7.81	8.04	7.76	8.13	9.21	10.43	10.30
10	8.37	7.91	7.99	7.90	8.10	7.78	8.11	7.73	8.20	9.24	10.40	10.30
11	8.50	7.91	7.99	7.97	8.10	7.72	8.12	7.73	8.24	9.29	10.48	10.30
12	8.55	7.96	7.99	8.09	8.10	7.78	8.12	7.74	8.24	9.33	10.50	10.33
13	8.57	8.01	7.98	8.18	8.17	7.81	7.98	7.74	8.30	9.35	10.50	10.34
14	8.60	8.02	7.98	8.22	8.17	7.80	7.94	7.76	8.39	9.40	10.41	10.36
15	8.63	8.06	7.98	8.22	8.17	7.69	7.96	7.77	8.48	9.48	10.40	10.36
16	8.64	8.08	7.97	8.21	8.20	7.76	7.96	7.83	8.52	9.57	10.27	10.37
17	8.66	8.09	7.94	8.16	8.28	7.76	7.93	7.86	8.54	9.63	10.18	10.37
18	8.67	8.09	7.90	8.21	8.28	7.80	7.86	7.87	8.55	9.71	10.11	10.37
19	8.58	8.04	7.93	8.24	8.28	7.80	7.82	7.86	8.54	9.77	10.11	10.37
20	8.46	7.99	8.02	8.28	8.25	7.80	7.82	7.84	8.54	9.84	10.10	10.37
21	8.39	7.97	8.10	8.35	8.22	7.80	7.87	7.84	8.54	9.92	10.02	10.31
22	8.33	8.03	8.10	8.35	8.18	7.81	7.88	7.84	8.62	9.95	9.94	10.31
23	8.29	8.07	8.10	8.33	8.16	7.91	7.88	7.87	8.71	9.96	9.90	10.31
24	8.20	8.12	8.09	8.33	8.16	8.00	7.90	7.87	8.78	9.96	9.92	10.29
25	8.20	8.12	8.04	8.21	8.16	8.01	7.92	7.87	8.83	9.96	9.92	10.26
26	8.25	8.09	8.05	8.17	8.10	7.95	7.96	7.80	8.80	9.96	9.92	10.27
27	8.26	8.09	8.05	8.17	7.99	7.94	7.95	7.85	8.79	9.97	9.91	10.31
28	8.26	8.09	8.04	8.12	7.97	7.91	7.86	7.79	8.78	9.98	9.88	10.31
29	8.23	8.08	8.01	8.16	---	7.87	7.81	7.80	8.78	10.03	9.90	10.22
30	8.20	8.06	8.03	8.16	---	7.81	7.79	7.81	8.81	10.15	9.97	10.11
31	8.09	---	8.06	8.14	---	7.81	---	7.82	---	10.22	10.00	---
MEAN	8.38	8.06	7.98	8.13	8.16	7.83	7.92	7.80	8.37	9.53	10.18	10.28
MAX	8.67	8.18	8.10	8.35	8.28	8.01	8.12	7.87	8.83	10.22	10.50	10.37
MIN	8.09	7.91	7.83	7.90	7.97	7.69	7.79	7.72	7.79	8.80	9.88	10.07

WTR YR 1997: MEAN 8.55; HIGH 7.69, MAR 15; LOW 10.50, AUG 12, 13.



GREENE COUNTY

394655080014301. Local number, GR 118.

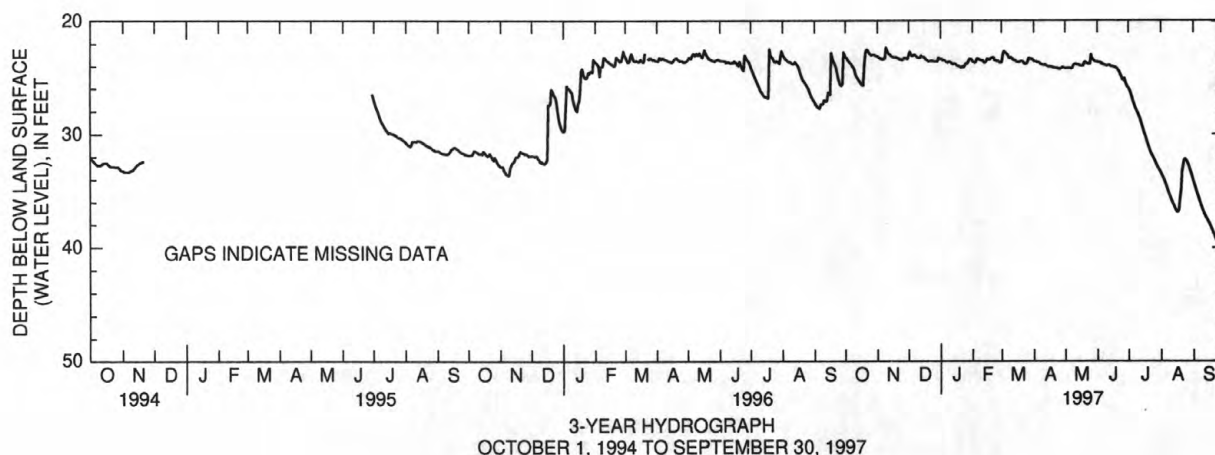
LOCATION.--Lat 39°46'55", long 80°01'43", Hydrologic Unit 05020005, at State Game Land Number 223.

Owner: U.S. Geological Survey.

AQUIFER.--Shale and sandstone of lower member of Waynesburg Formation of Late Pennsylvanian and Early Permian age.**WELL CHARACTERISTICS.**--Drilled observation artesian well, diameter 6 in, depth 104 ft, cased to 22 ft, open hole.**INSTRUMENTATION.**--Pressure transducer and digital data logger with 60-minute recording interval.**DATUM.**--Elevation of land-surface datum is 1,000 ft above sea level, from topographic map. Measuring point: Top of casing, 1.40 ft above land-surface datum.**REMARKS.**--Water levels affected by water cascading into the well. In addition to the daily maximum water level table shown below, daily minimum and mean water levels, since October 1987, are available from the District Office.**PERIOD OF RECORD.**--June 1973 to current year.**EXTREMES FOR PERIOD OF RECORD.**--The extremes shown are extremes of the daily maximum depth below land surface for the period of record indicated above. Highest water level, 22.33 ft below land-surface datum, Mar. 22, 1993, and Nov. 9, 1996; lowest, 48.18 ft below land-surface datum, Aug. 17, 1987.DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23.20	23.12	23.02	23.34	23.59	23.66	23.54	24.19	23.59	25.96	33.45	34.18
2	23.28	23.22	22.70	23.38	23.61	22.91	23.56	24.19	23.64	26.13	33.64	34.46
3	23.44	23.27	22.93	23.46	23.66	22.66	23.56	24.14	23.67	26.41	33.83	34.77
4	23.56	23.32	23.08	23.48	23.63	22.76	23.63	24.15	23.65	26.71	34.05	35.06
5	23.67	23.35	23.08	23.50	23.32	22.86	23.65	24.15	23.74	27.03	34.30	35.36
6	23.76	23.39	22.99	23.57	23.34	22.90	23.66	24.19	23.80	27.28	34.59	35.66
7	23.90	23.33	23.01	23.64	23.39	23.03	23.77	24.20	23.85	27.56	34.87	35.95
8	24.06	23.30	23.10	23.66	23.44	23.28	23.83	24.16	23.89	27.82	35.10	36.25
9	24.19	22.33	23.21	23.58	23.47	23.27	23.86	23.91	23.92	27.99	35.34	36.48
10	24.51	22.60	23.21	23.60	23.49	23.20	23.88	23.85	23.94	28.18	35.60	36.76
11	24.83	22.83	23.24	23.69	23.52	23.35	23.89	23.81	23.93	28.40	35.86	37.00
12	25.01	22.92	23.25	23.78	23.66	23.43	23.85	23.82	23.90	28.66	36.11	37.18
13	25.13	22.98	23.08	23.81	23.66	23.45	23.96	23.86	23.90	28.94	36.28	37.35
14	25.32	23.11	23.17	23.81	23.56	23.50	24.00	23.86	24.00	29.26	36.52	37.53
15	25.39	23.15	23.18	23.78	23.35	23.58	24.03	23.92	24.01	29.58	36.70	37.71
16	25.58	23.18	23.21	23.88	23.38	23.62	24.02	23.95	24.04	29.89	36.88	37.90
17	25.70	23.21	23.32	23.95	23.40	23.60	24.04	23.96	24.08	30.18	36.87	38.08
18	25.70	23.19	23.38	23.97	23.37	23.63	24.05	23.97	24.11	30.48	36.62	38.29
19	24.02	23.21	23.47	23.99	23.24	23.54	24.10	23.83	24.15	30.78	35.68	38.51
20	22.89	23.26	23.54	24.09	23.25	23.54	24.13	23.60	24.22	31.05	34.88	38.73
21	22.53	23.31	23.54	24.12	23.21	23.54	24.14	23.66	24.34	31.35	33.32	38.97
22	22.54	23.36	23.52	24.02	23.46	23.69	24.15	23.76	24.49	31.60	32.70	39.20
23	22.70	23.39	23.54	24.09	23.49	23.78	24.14	23.78	24.71	31.78	32.31	39.43
24	22.86	23.41	23.51	24.05	23.52	23.81	24.20	23.79	24.91	31.97	32.21	39.66
25	22.95	23.45	23.54	23.77	23.52	23.75	24.22	23.78	25.16	32.15	32.32	39.87
26	23.01	23.32	23.54	23.78	23.53	23.59	24.23	22.96	25.27	32.36	32.47	40.11
27	22.97	23.26	23.56	23.74	23.68	23.28	24.19	23.32	25.08	32.58	32.69	40.35
28	22.97	23.29	23.55	23.53	23.68	23.32	24.10	23.45	25.42	32.79	32.96	40.54
29	23.01	23.33	23.56	23.35	---	23.36	24.12	23.52	25.68	32.95	33.25	40.68
30	23.08	23.33	23.24	23.39	---	23.36	24.12	23.59	25.84	33.11	33.53	40.86
31	23.12	---	23.35	23.41	---	23.45	---	23.59	---	33.28	33.87	---
MEAN	23.83	23.19	23.28	23.72	23.48	23.38	23.95	23.84	24.30	29.81	34.48	37.76
MAX	25.70	23.45	23.56	24.12	23.68	23.81	24.23	24.20	25.84	33.28	36.88	40.86
MIN	22.53	22.33	22.70	23.34	23.21	22.66	23.54	22.96	23.59	25.96	32.21	34.18

WTR YR 1997: MEAN 26.26; HIGH 22.33, Nov. 9; LOW 40.86, SEPT 30.



LAWRENCE COUNTY

410538080280801. Local number, LA 1201.

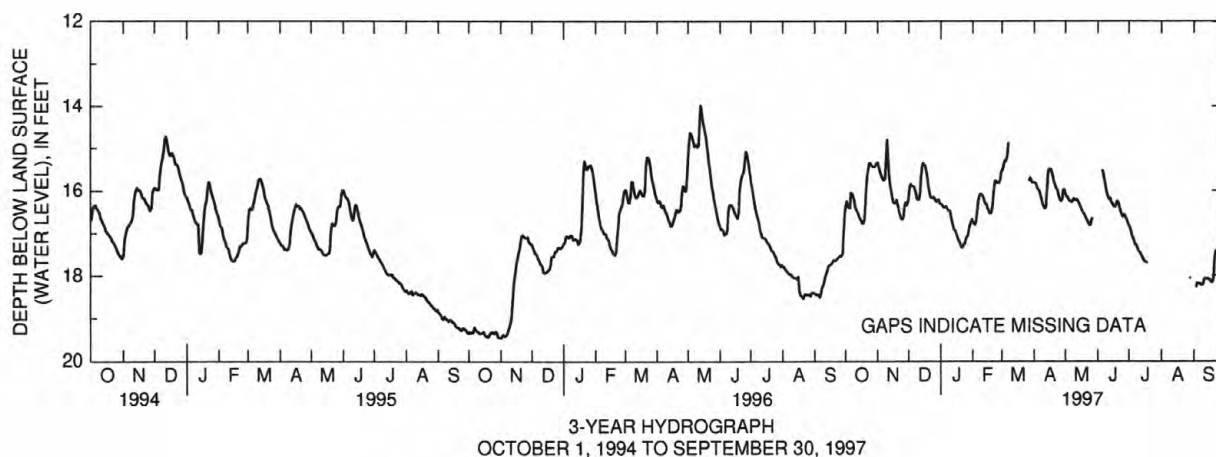
LOCATION.--Lat 41°05'38", long 80°28'08", Hydrologic Unit 05030102, at State Game Land 150, near Pulaski.

Owner: U.S. Geological Survey.

AQUIFER.--Shale and sandstone of Connoquenessing Formation of Early Pennsylvanian age.**WELL CHARACTERISTICS.**--Drilled observation artesian well, diameter 6 in, depth 150 ft, cased to 30 ft, open hole.**INSTRUMENTATION.**--Data collection platform with 60-minute recording interval. Satellite telemetry at station.**DATUM.**--Elevation of land-surface datum is 1,040 ft above sea level, from topographic map. Measuring point: Top of casing, 3.40 ft above land-surface datum.**REMARKS.**--Missing record Mar. 8-26, May 28 to June 4, July 20 to Aug. 18, Aug. 20-27, and Aug. 30 to Sept. 2. In addition to the daily maximum water level table shown below, daily minimum and mean water levels, since October 1987, are available from the District Office.**PERIOD OF RECORD.**--November 1967 to current year.**EXTREMES FOR PERIOD OF RECORD.**--The extremes shown are extremes of the daily maximum depth below land surface for the period of record indicated above. Highest water level, 12.25 ft below land-surface datum, May 19, 1978; lowest, 22.94 ft below land-surface datum, Apr. 15, 1986.DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16.35	15.34	16.17	16.32	16.74	15.54	15.81	16.08	---	16.83	---	---
2	16.25	15.44	15.91	16.32	16.79	15.47	15.83	16.15	---	16.88	---	---
3	16.36	15.55	15.84	16.37	16.80	15.34	15.86	16.15	---	16.97	---	18.29
4	16.40	15.61	15.89	16.39	16.72	15.29	15.95	16.20	---	17.08	---	18.18
5	16.41	15.69	15.89	16.39	16.46	15.29	15.98	16.25	15.53	17.13	---	18.19
6	16.05	15.74	15.90	16.37	16.25	15.15	16.02	16.24	15.54	17.20	---	18.19
7	16.07	15.75	15.97	16.42	16.13	14.86	16.13	16.27	15.68	17.28	---	18.20
8	16.12	15.73	16.06	16.46	16.08	---	16.21	16.24	15.81	17.29	---	18.23
9	16.22	15.24	16.20	16.47	16.09	---	16.31	16.19	15.96	17.35	---	18.23
10	16.36	14.80	16.21	16.48	16.12	---	16.38	16.22	16.08	17.43	---	18.19
11	16.44	15.27	16.21	16.64	16.16	---	16.42	16.23	16.16	17.45	---	18.10
12	16.49	15.69	16.06	16.74	16.26	---	16.41	16.21	16.20	17.48	---	18.06
13	16.54	15.88	15.68	16.85	16.31	---	16.05	16.25	16.17	17.54	---	18.08
14	16.63	16.03	15.42	16.92	16.32	---	15.63	16.29	16.27	17.56	---	18.07
15	16.66	16.17	15.35	16.95	16.42	---	15.50	16.35	16.31	17.64	---	18.09
16	16.71	16.27	15.41	17.01	16.46	---	15.50	16.42	16.36	17.68	---	18.09
17	16.77	16.29	15.42	17.09	16.54	---	15.50	16.47	16.38	17.68	---	18.13
18	16.77	16.28	15.53	17.18	16.54	---	15.57	16.52	16.37	17.70	---	18.16
19	16.69	16.22	15.67	17.19	16.47	---	15.66	16.55	16.27	17.71	18.13	18.16
20	16.28	16.31	15.90	17.29	16.30	---	15.78	16.61	16.25	---	---	18.03
21	15.87	16.41	16.02	17.34	16.00	---	15.86	16.66	16.30	---	---	17.59
22	15.62	16.54	16.15	17.33	15.78	---	15.93	16.71	16.41	---	---	17.45
23	15.46	16.60	16.17	17.26	15.77	---	15.97	16.77	16.48	---	---	17.40
24	15.35	16.67	16.17	17.27	15.82	---	16.05	16.81	16.56	---	---	17.40
25	15.37	16.68	16.15	17.15	15.80	---	16.15	16.81	16.62	---	---	17.39
26	15.42	16.62	16.19	17.10	15.82	---	16.23	16.70	16.57	---	---	17.49
27	15.44	16.36	16.24	17.07	15.76	15.78	16.25	16.64	16.58	---	---	17.49
28	15.44	16.28	16.26	16.93	15.58	15.70	16.20	---	16.65	---	18.05	17.49
29	15.44	16.34	16.21	16.81	---	15.76	15.99	---	16.70	---	18.08	17.32
30	15.40	16.28	16.22	16.75	---	15.81	15.97	---	16.78	---	---	17.08
31	15.35	---	16.30	16.67	---	15.81	---	---	---	---	---	---
MEAN	16.09	16.00	15.96	16.82	16.22	15.48	15.97	16.41	16.27	17.36	18.09	17.88
MAX	16.77	16.68	16.30	17.34	16.80	15.81	16.42	16.81	16.78	17.71	18.13	18.29
MIN	15.35	14.80	15.35	16.32	15.58	14.86	15.50	16.08	15.53	16.83	18.05	17.08

WTR YR 1997: MEAN 16.44; HIGH 14.80, NOV 10; LOW 18.29, SEPT 3.



MERCER COUNTY

412350080223701. Local number, MR 1364.

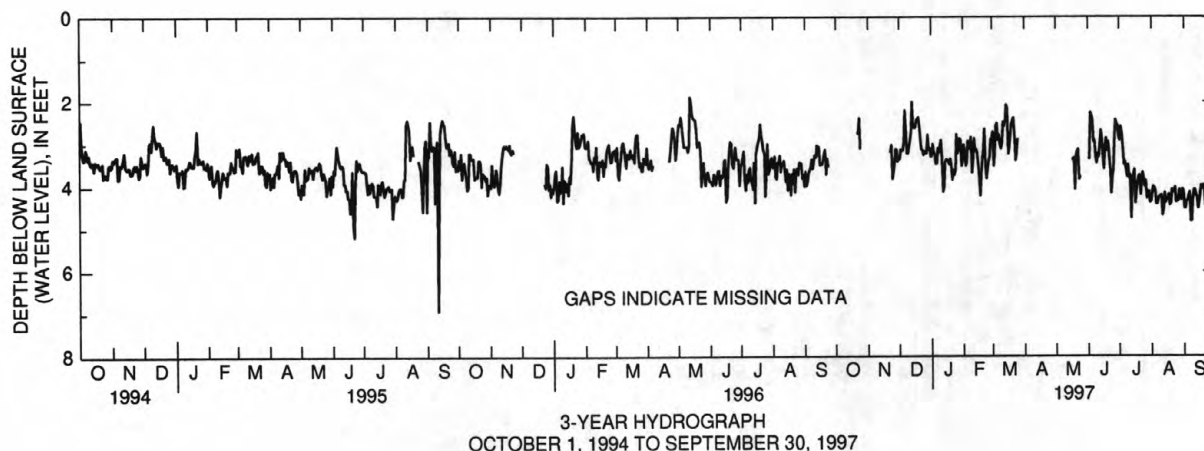
LOCATION.--Lat 41°23'50", long 80°22'37", Hydrologic Unit 05030102, at Greenville.

Owner: Borough of Greenville.

AQUIFER.--Sandstone of Cussewago Formation of Early Mississippian age.**WELL CHARACTERISTICS.**--Drilled artesian well, diameter 6 in, depth 235 ft, cased to 41 ft, open hole.**INSTRUMENTATION.**--Continuous strip-chart recorder.**DATUM.**--Elevation of land-surface datum is 965 ft above sea level, from topographic map. Measuring point: Top of plywood cover, 2.26 ft above land-surface datum.**REMARKS.**--Missing record Oct. 1-20, Oct. 25 to Nov. 21, Mar. 26 to May 15, and May 25-31. Water levels affected by intermittent pumping.**PERIOD OF RECORD.**--March 1964 to current year.**EXTREMES FOR PERIOD OF RECORD.**--Highest water level, 1.43 ft below land-surface datum, Dec. 25, 1968; lowest, 8.31 ft below land-surface datum, Feb. 12, 1967.DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	3.33	3.27	3.01	2.70	---	---	3.35	2.90	4.17	4.50
2	---	---	3.12	2.99	3.21	3.50	---	---	3.33	2.58	3.99	4.50
3	---	---	3.15	3.17	3.50	3.17	---	---	2.25	2.74	4.01	4.32
4	---	---	3.14	3.23	3.40	2.57	---	---	2.32	3.03	4.08	4.32
5	---	---	2.95	3.45	2.92	2.50	---	---	2.42	3.46	4.39	4.21
6	---	---	2.20	3.45	3.10	2.90	---	---	2.93	3.40	4.39	4.12
7	---	---	2.70	3.09	3.10	2.77	---	---	2.90	3.55	4.27	4.80
8	---	---	3.20	3.19	2.82	2.98	---	---	3.30	3.75	4.23	4.80
9	---	---	3.20	3.05	3.66	3.10	---	---	3.43	3.48	4.22	4.30
10	---	---	3.05	2.89	3.35	2.96	---	---	3.22	3.79	4.19	4.06
11	---	---	2.90	3.35	2.85	2.47	---	---	3.29	3.71	4.66	4.06
12	---	---	2.70	4.10	3.16	2.57	---	---	3.03	4.73	4.52	4.19
13	---	---	2.00	4.00	3.11	2.44	---	---	2.67	3.77	4.13	4.23
14	---	---	2.60	3.40	3.21	2.07	---	---	2.87	3.77	4.36	4.50
15	---	---	2.60	3.35	3.45	2.15	---	---	3.30	3.59	4.29	4.35
16	---	---	2.60	3.36	3.80	3.22	---	3.35	3.57	4.37	4.29	4.12
17	---	---	2.43	3.40	4.19	3.07	---	3.35	3.05	4.08	4.17	3.96
18	---	---	2.40	3.46	3.65	2.78	---	3.31	2.85	3.89	4.42	4.02
19	---	---	2.36	3.33	3.31	2.53	---	4.05	3.14	3.76	4.40	3.95
20	---	---	2.55	3.50	3.15	2.43	---	3.30	2.94	3.72	4.06	4.06
21	2.75	---	2.87	3.82	2.63	2.37	---	3.17	3.24	4.17	4.11	4.43
22	2.72	3.19	3.11	3.60	3.50	2.79	---	3.12	3.56	3.83	4.10	4.40
23	2.38	3.01	3.13	3.71	3.79	3.37	---	3.81	4.14	3.66	4.00	3.76
24	3.11	3.80	3.24	3.60	3.57	3.20	---	3.74	3.74	3.81	4.35	3.72
25	---	3.65	3.15	2.76	3.37	2.86	---	---	3.59	3.98	4.33	3.73
26	---	3.45	3.21	3.21	3.30	---	---	---	2.89	3.85	4.33	3.64
27	---	3.11	3.20	3.10	2.87	---	---	---	2.42	4.26	4.06	4.29
28	---	3.12	2.77	2.86	2.87	---	---	---	2.51	4.10	4.28	4.17
29	---	3.39	3.12	2.89	---	---	---	---	2.55	4.10	4.30	3.98
30	---	3.29	3.09	3.50	---	---	---	---	2.80	4.36	4.05	3.58
31	---	---	3.27	3.35	---	---	---	---	---	4.34	4.09	---
MEAN	2.74	3.33	2.88	3.34	3.28	2.78	---	3.47	3.05	3.76	4.23	4.17
MAX	3.11	3.80	3.33	4.10	4.19	3.50	---	4.05	4.14	4.73	4.66	4.80
MIN	2.38	3.01	2.00	2.76	2.63	2.07	---	3.12	2.25	2.58	3.99	3.58

WTR YR 1997: MEAN 3.44; HIGH 2.00, DEC. 13; LOW 4.80, SEPT. 7, 8.



SOMERSET COUNTY

400008079142801. Local number, SO 2.

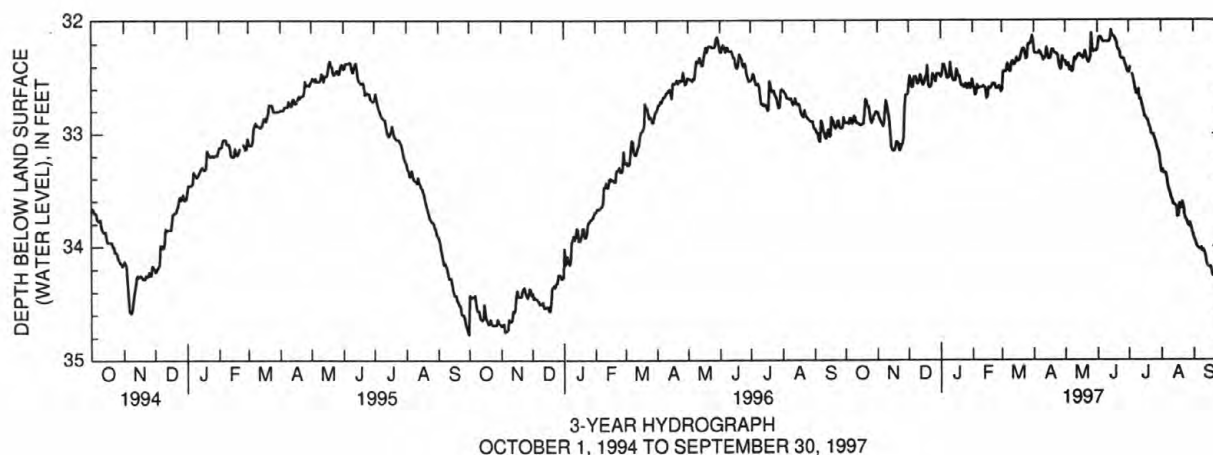
LOCATION.--Lat 40°00'08", long 79°14'28", Hydrologic Unit 05020006, at Laurel Hill State Park.

Owner: Commonwealth of Pennsylvania.

AQUIFER.--Shale and sandstone of Allegheny Group of Middle Pennsylvanian age.**WELL CHARACTERISTICS.**--Drilled artesian well, diameter 6 in to 4 in, depth 450 ft, cased to 311 ft, open hole.**INSTRUMENTATION.**--Continuous strip-chart recorder.**DATUM.**--Elevation of land-surface datum is 2,040 ft above sea level, from topographic map. Measuring point: Top of casing, 1.43 ft above land-surface datum.**REMARKS.**--Missing record July 3. Water levels affected by intermittent pumping.**PERIOD OF RECORD.**--April 1937 to current year.**EXTREMES FOR PERIOD OF RECORD.**--Highest water level, 27.42 ft below land-surface datum, Apr. 9, 1980; lowest, 50.33 ft below land-surface datum, May 31, 1987 (affected by pumping of nearby well).DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	32.90	32.81	32.56	32.49	32.56	32.60	32.27	32.35	32.23	32.45	33.34	33.93
2	32.90	32.84	32.48	32.46	32.59	32.44	32.28	32.39	32.15	32.40	33.32	33.94
3	32.90	32.87	32.53	32.38	32.65	32.44	32.28	32.38	32.14	---	33.35	33.98
4	32.91	32.89	32.58	32.38	32.64	32.44	32.28	32.37	32.14	32.46	33.35	34.00
5	32.86	32.91	32.58	32.41	32.56	32.44	32.28	32.43	32.16	32.51	33.35	34.01
6	32.86	32.93	32.49	32.45	32.59	32.37	32.26	32.40	32.18	32.55	33.40	34.02
7	32.91	32.91	32.49	32.50	32.59	32.39	32.27	32.44	32.18	32.60	33.47	34.02
8	32.90	32.80	32.49	32.50	32.58	32.44	32.30	32.44	32.18	32.64	33.50	34.01
9	32.84	32.70	32.55	32.49	32.58	32.44	32.31	32.37	32.18	32.64	33.53	34.04
10	32.85	32.75	32.55	32.36	32.58	32.37	32.34	32.32	32.18	32.60	33.57	34.03
11	32.90	32.80	32.53	32.44	32.57	32.35	32.33	32.34	32.18	32.69	33.59	34.05
12	32.90	32.86	32.47	32.49	32.58	32.38	32.31	32.32	32.18	32.68	33.63	34.09
13	32.91	32.97	32.49	32.52	32.59	32.38	32.23	32.30	32.16	32.72	33.63	34.15
14	32.91	33.11	32.55	32.52	32.68	32.36	32.29	32.29	32.08	32.76	33.64	34.17
15	32.92	33.14	32.56	32.52	32.67	32.32	32.33	32.29	32.13	32.80	33.65	34.18
16	32.92	33.15	32.54	32.42	32.58	32.35	32.33	32.31	32.13	32.85	33.74	34.18
17	32.91	33.15	32.49	32.45	32.59	32.35	32.31	32.31	32.14	32.85	33.73	34.18
18	32.91	33.13	32.49	32.48	32.59	32.34	32.25	32.33	32.16	32.87	33.62	34.22
19	32.83	33.07	32.39	32.48	32.57	32.30	32.25	32.30	32.18	32.88	33.66	34.26
20	32.69	33.07	32.56	32.54	32.55	32.26	32.27	32.26	32.24	32.93	33.66	34.25
21	32.70	33.08	32.58	32.57	32.55	32.24	32.28	32.31	32.25	32.94	33.61	34.26
22	32.75	33.15	32.58	32.56	32.55	32.24	32.28	32.34	32.26	33.00	33.65	34.30
23	32.75	33.14	32.56	32.58	32.59	32.28	32.29	32.36	32.32	33.00	33.73	34.30
24	32.80	33.09	32.46	32.58	32.59	32.33	32.31	32.35	32.33	33.00	33.76	34.33
25	32.87	33.09	32.48	32.55	32.59	32.32	32.38	32.31	32.33	33.03	33.77	34.32
26	32.90	33.03	32.51	32.59	32.57	32.20	32.42	32.11	32.33	33.06	33.80	34.34
27	32.88	32.77	32.53	32.59	32.59	32.20	32.42	32.24	32.37	33.09	33.82	34.36
28	32.84	32.65	32.46	32.55	32.62	32.20	32.31	32.27	32.39	33.14	33.79	34.36
29	32.83	32.65	32.47	32.59	---	32.17	32.35	32.26	32.43	33.15	33.82	34.24
30	32.80	32.64	32.46	32.59	---	32.13	32.35	32.26	32.45	33.21	33.86	34.25
31	32.81	---	32.47	32.51	---	32.17	---	32.26	---	33.29	33.89	---
MEAN	32.86	32.94	32.51	32.50	32.59	32.33	32.31	32.32	32.23	32.83	33.62	34.16
MAX	32.92	33.15	32.58	32.59	32.68	32.60	32.42	32.44	32.45	33.29	33.89	34.36
MIN	32.69	32.64	32.39	32.36	32.55	32.13	32.23	32.11	32.08	32.40	33.32	33.93

WTR YR 1997: MEAN 32.77; HIGH 32.08, JUNE 14; LOW 34.36, SEPT 27, 28.



WARREN COUNTY

414159079213601. Local number, WR 50.

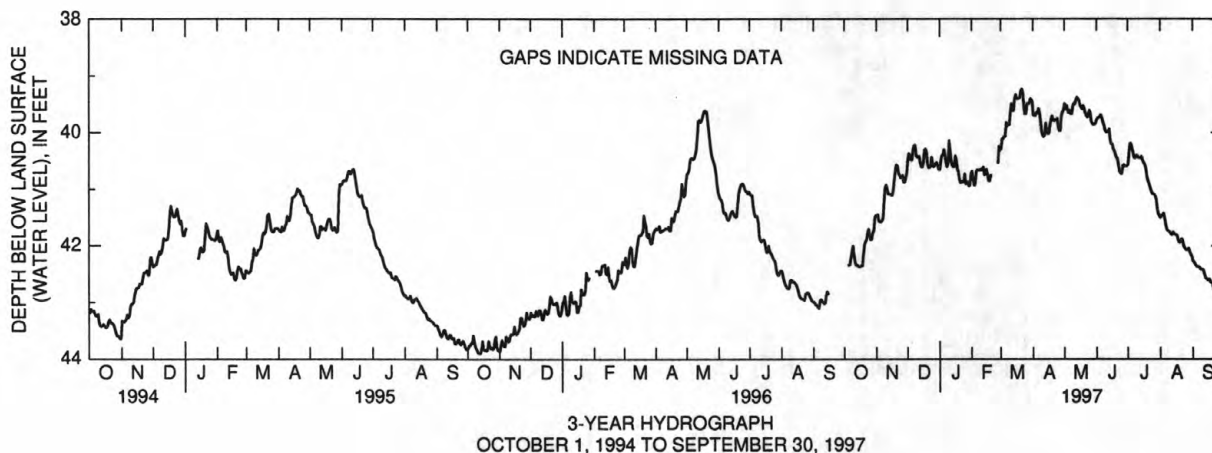
LOCATION.--Lat 41°41'59", long 79°21'36", Hydrologic Unit 05010003, at State Game Land Number 86.

Owner: U.S. Geological Survey.

AQUIFER.--Shale of Venango Formation of Late Devonian age.**WELL CHARACTERISTICS.**--Drilled observation artesian well, diameter 6 in, depth 105 ft, cased to 46 ft, open hole.**INSTRUMENTATION.**--Data collection platform with 60-minute recording interval. Satellite telemetry at station.**DATUM.**--Elevation of land-surface datum is 1,170 ft above sea level, from topographic map. Measuring point: Top of casing, 2.00 ft above land-surface datum.**REMARKS.**--Missing record Oct. 1-3, and Feb. 21-25. In addition to the daily maximum water level table shown below, daily minimum and mean water levels, since October 1987, are available from the District Office.**PERIOD OF RECORD.**--August 1972 to current year.**EXTREMES FOR PERIOD OF RECORD.**--The extremes shown are extremes of the daily maximum depth below land surface for the period of record indicated above. Highest water level, 39.23 ft below land-surface datum, Apr. 22, 1991, and Mar. 21, 1997; lowest, 45.42 ft below land-surface datum, Nov. 2, 1983.DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	41.46	40.46	40.65	40.68	40.29	39.69	39.49	39.78	40.57	41.50	42.27
2	---	41.44	40.37	40.48	40.80	40.11	39.70	39.58	39.74	40.36	41.46	42.29
3	---	41.56	40.39	40.40	40.92	40.11	39.70	39.52	39.74	40.19	41.45	42.32
4	42.34	41.57	40.48	40.40	40.92	40.07	39.64	39.60	39.72	40.20	41.42	42.35
5	42.34	41.57	40.48	40.30	40.69	40.07	39.66	39.65	39.69	40.29	41.50	42.37
6	42.33	41.55	40.30	40.40	40.66	39.82	39.58	39.60	39.74	40.36	41.62	42.37
7	42.21	41.50	40.23	40.54	40.66	39.88	39.65	39.67	39.81	40.44	41.70	42.38
8	42.10	41.20	40.22	40.60	40.66	39.85	39.79	39.67	39.87	40.45	41.73	42.41
9	42.00	40.97	40.41	40.53	40.65	39.86	39.96	39.53	39.95	40.40	41.74	42.42
10	42.17	40.92	40.43	40.14	40.66	39.64	40.05	39.48	39.99	40.41	41.76	42.42
11	42.30	40.99	40.42	40.34	40.63	39.49	40.07	39.50	39.99	40.44	41.79	42.43
12	42.34	41.08	40.42	40.49	40.61	39.61	40.04	39.42	39.98	40.44	41.80	42.50
13	42.34	41.08	40.53	40.58	40.74	39.61	39.83	39.38	39.94	40.44	41.76	42.56
14	42.36	41.09	40.61	40.60	40.73	39.41	39.98	39.40	40.12	40.42	41.79	42.58
15	42.37	41.10	40.61	40.60	40.65	39.33	40.02	39.42	40.20	40.49	41.80	42.60
16	42.37	41.10	40.52	40.41	40.74	39.40	40.02	39.52	40.20	40.53	41.80	42.60
17	42.35	41.00	40.31	40.50	40.85	39.40	39.87	39.55	40.30	40.56	41.82	42.59
18	42.35	40.82	40.29	40.65	40.85	39.39	39.78	39.58	40.32	40.61	41.90	42.64
19	42.16	40.65	40.34	40.68	40.75	39.39	39.71	39.52	40.39	40.76	41.94	42.64
20	41.97	40.57	40.55	40.82	40.77	39.27	39.77	39.57	40.44	40.84	41.93	42.67
21	41.93	40.59	40.62	40.88	---	39.23	39.79	39.64	40.46	40.89	41.88	42.78
22	41.90	40.71	40.62	40.86	---	39.30	39.78	39.69	40.58	40.96	41.89	42.78
23	41.78	40.75	40.60	40.87	---	39.54	39.78	39.73	40.69	41.01	41.99	42.77
24	41.70	40.79	40.43	40.87	---	39.67	39.75	39.71	40.72	41.07	42.03	42.80
25	41.81	40.78	40.58	40.73	---	39.67	39.89	39.61	40.72	41.08	42.06	42.71
26	41.89	40.75	40.60	40.90	40.55	39.49	39.97	39.66	40.59	41.09	42.07	42.77
27	41.88	40.87	40.59	40.90	40.24	39.49	39.97	39.80	40.57	41.11	42.07	42.80
28	41.77	40.87	40.54	40.87	40.31	39.49	39.71	39.85	40.59	41.18	42.04	42.80
29	41.73	40.79	40.53	40.94	---	39.40	39.64	39.86	40.59	41.33	42.11	42.55
30	41.50	40.70	40.59	40.93	---	39.42	39.60	39.85	40.59	41.43	42.15	42.38
31	41.46	---	40.65	40.72	---	39.46	---	39.84	---	41.47	42.19	---
MEAN	42.06	41.03	40.47	40.63	40.68	39.62	39.81	39.61	40.20	40.70	41.83	42.55
MAX	42.37	41.57	40.65	40.94	40.92	40.29	40.07	39.86	40.72	41.47	42.19	42.80
MIN	41.46	40.57	40.22	40.14	40.24	39.23	39.58	39.38	39.69	40.19	41.42	42.27

WTR YR 1997: MEAN 40.76; HIGH 39.23, MAR 21; LOW 42.80, SEPT 24, 27, 28.



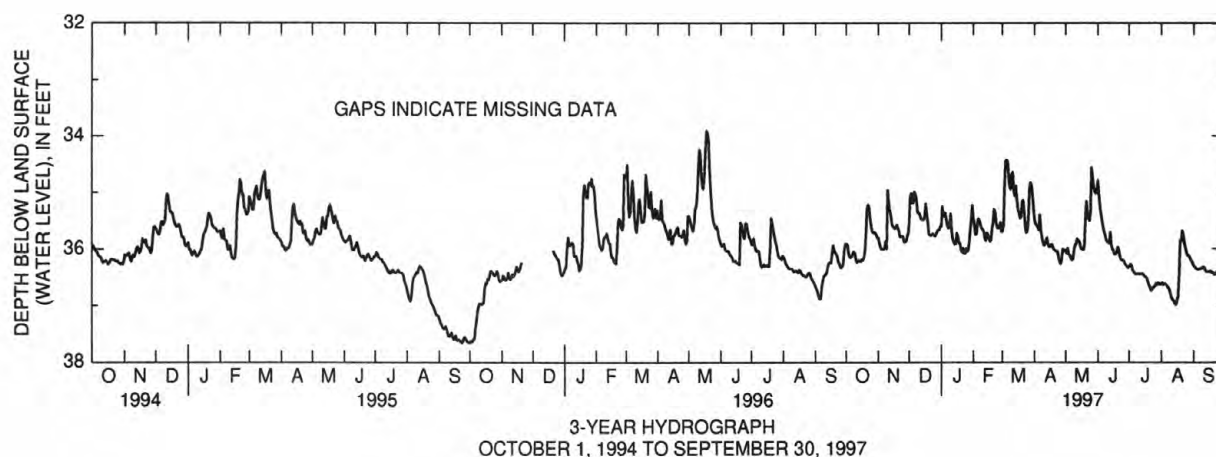
WASHINGTON COUNTY

400233080261301. Local number, WS 155.

LOCATION.--Lat 40°02'33", long 80°26'13", Hydrologic Unit 05030106, at State Game Land Number 245, near Good Intent.**Owner:** U.S. Geological Survey.**AQUIFER.**--Washington Formation of Early Permian age.**WELL CHARACTERISTICS.**--Drilled observation artesian well, diameter 6 in, depth 160 ft, cased to 19 ft, open hole.**INSTRUMENTATION.**--Digital data logger recorder with 15-minute recording interval.**DATUM.**--Elevation of land-surface datum is 1,110 ft above sea level, from topographic map. Measuring point: Top of casing, 2.00 ft above land-surface datum.**REMARKS.**--In addition to the daily maximum water level table shown below, daily minimum and mean water levels, since October 1987, are available from the District Office.**PERIOD OF RECORD.**--July 1971 to current year.**EXTREMES FOR PERIOD OF RECORD.**--The extremes shown are extremes of the daily maximum depth below land surface for the period of record indicated above. Highest water level, 32.25 ft below land-surface datum, Jan. 14, 1974; lowest, 39.01 ft below land-surface datum, July 11, 1971.DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	35.91	35.81	35.52	35.61	35.45	35.70	35.50	36.03	34.79	36.32	36.62	36.31
2	35.93	35.91	35.09	35.25	35.59	35.58	35.57	36.08	35.03	36.28	36.60	36.32
3	36.08	35.98	35.02	35.37	35.75	34.97	35.58	35.99	35.25	36.28	36.64	36.35
4	36.14	36.01	35.19	35.43	35.75	34.45	35.62	36.10	35.37	36.36	36.62	36.36
5	36.16	36.00	35.19	35.37	35.55	34.43	35.67	36.12	35.50	36.40	36.63	36.37
6	36.14	36.01	34.99	35.50	35.47	34.45	35.40	36.16	35.62	36.42	36.65	36.37
7	36.09	35.97	35.05	35.60	35.51	34.70	35.69	36.20	35.70	36.45	36.68	36.36
8	36.05	35.87	35.13	35.64	35.58	34.89	35.80	36.19	35.77	36.45	36.69	36.35
9	36.07	35.26	35.36	35.59	35.64	34.95	35.89	36.02	35.85	36.44	36.75	36.35
10	36.18	34.97	35.36	35.38	35.66	34.69	35.94	35.93	35.88	36.44	36.82	36.32
11	36.24	35.18	35.38	35.68	35.70	34.65	35.93	35.92	35.90	36.45	36.88	36.32
12	36.23	35.33	35.45	35.82	35.81	34.98	35.84	35.83	35.90	36.45	36.91	36.37
13	36.20	35.40	35.49	35.89	35.86	35.07	35.81	35.85	35.71	36.44	36.92	36.40
14	36.22	35.56	35.48	35.92	35.72	34.89	35.92	35.87	35.94	36.44	36.98	36.40
15	36.23	35.61	35.49	35.91	35.75	35.14	35.97	35.94	36.02	36.47	36.99	36.40
16	36.19	35.63	35.42	35.73	35.82	35.30	35.97	36.00	36.03	36.49	36.90	36.40
17	36.20	35.65	35.20	35.79	35.87	35.36	35.93	36.00	36.10	36.50	36.85	36.39
18	36.15	35.61	35.39	35.90	35.84	35.46	35.93	36.02	36.10	36.52	36.43	36.42
19	36.02	35.58	35.54	35.90	35.63	35.44	35.99	35.93	36.07	36.59	35.86	36.42
20	35.68	35.64	35.74	36.00	35.55	35.16	36.02	35.53	35.97	36.64	35.87	36.42
21	35.29	35.69	35.76	36.06	35.30	35.14	36.03	35.16	36.01	36.68	35.69	36.46
22	35.22	35.79	35.77	35.99	35.34	35.37	36.05	35.35	36.12	36.74	35.77	36.45
23	35.28	35.79	35.75	36.08	35.54	35.61	36.04	35.47	36.19	36.72	35.91	36.41
24	35.46	35.78	35.74	36.08	35.63	35.72	36.13	35.51	36.20	36.68	35.98	36.43
25	35.60	35.79	35.77	35.99	35.64	35.69	36.22	35.32	36.21	36.68	36.06	36.38
26	35.70	35.88	35.78	36.05	35.62	35.49	36.27	34.56	36.22	36.65	36.12	36.46
27	35.72	35.89	35.74	36.01	35.54	34.96	36.22	34.72	36.27	36.61	36.12	36.46
28	35.71	35.87	35.70	35.89	35.70	34.83	36.01	34.90	36.29	36.64	36.15	36.43
29	35.73	35.79	35.67	35.67	---	34.87	36.04	34.98	36.32	36.60	36.20	36.29
30	35.76	35.72	35.67	35.49	---	35.06	36.02	35.02	36.34	36.63	36.22	36.34
31	35.81	---	35.61	35.23	---	35.31	---	35.01	---	36.64	36.27	---
MEAN	35.92	35.70	35.47	35.74	35.64	35.11	35.90	35.67	35.89	36.52	36.44	36.38
MAX	36.24	36.01	35.78	36.08	35.87	35.72	36.27	36.20	36.34	36.74	36.99	36.46
MIN	35.22	34.97	34.99	35.23	35.30	34.43	35.40	34.56	34.79	36.28	35.69	36.29

WTR YR 1997: MEAN 35.86; HIGH 34.43, MAR 5; LOW 36.99, AUG 15.



WESTMORELAND COUNTY

402138079031802. Local number, WE 300.

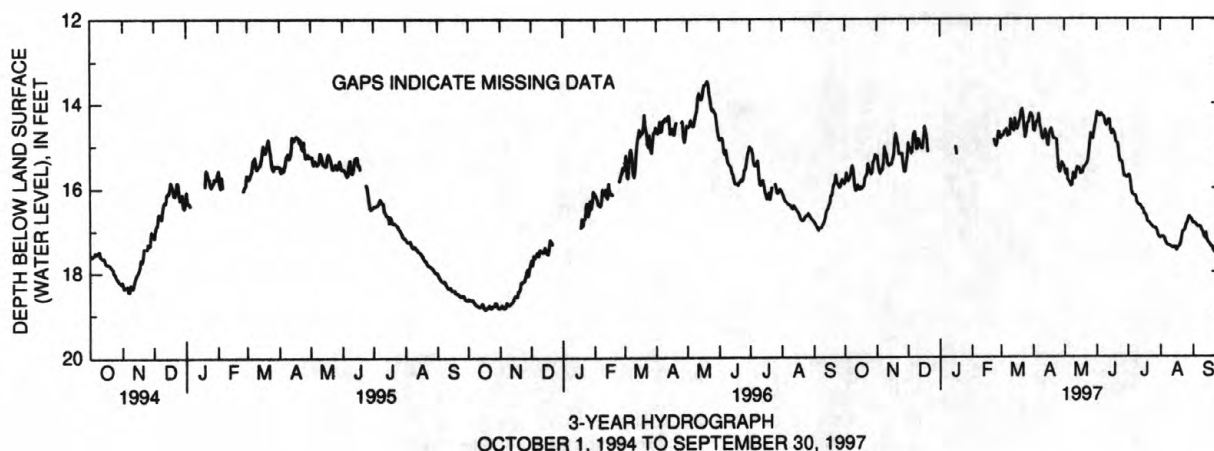
LOCATION.--Lat 40°21'38", long 79°03'18", Hydrologic Unit 05010007, at State Game Land Number 42.

Owner: U.S. Geological Survey.

AQUIFER.--Shale of Clarion Formation of Middle Pennsylvanian age.**WELL CHARACTERISTICS.**--Drilled observation artesian well, diameter 6 in, depth 110 ft, cased to 22 ft, open hole.**INSTRUMENTATION.**--Continuous strip-chart recorder.**DATUM.**--Elevation of land-surface datum is 1,270 ft above sea level, from topographic map. Measuring point: Top of plywood cover, 3.05 ft above land-surface datum.**REMARKS.**--Missing record Dec. 22 to Jan. 15, and Jan. 18 to Feb. 21.**PERIOD OF RECORD.**--February 1968 to current year.**EXTREMES FOR PERIOD OF RECORD.**--Highest water level, 13.46 ft below land-surface datum, May 20, 1996; lowest, 29.22 ft below land-surface datum, July 3, 1968.DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
MAXIMUM VALUES

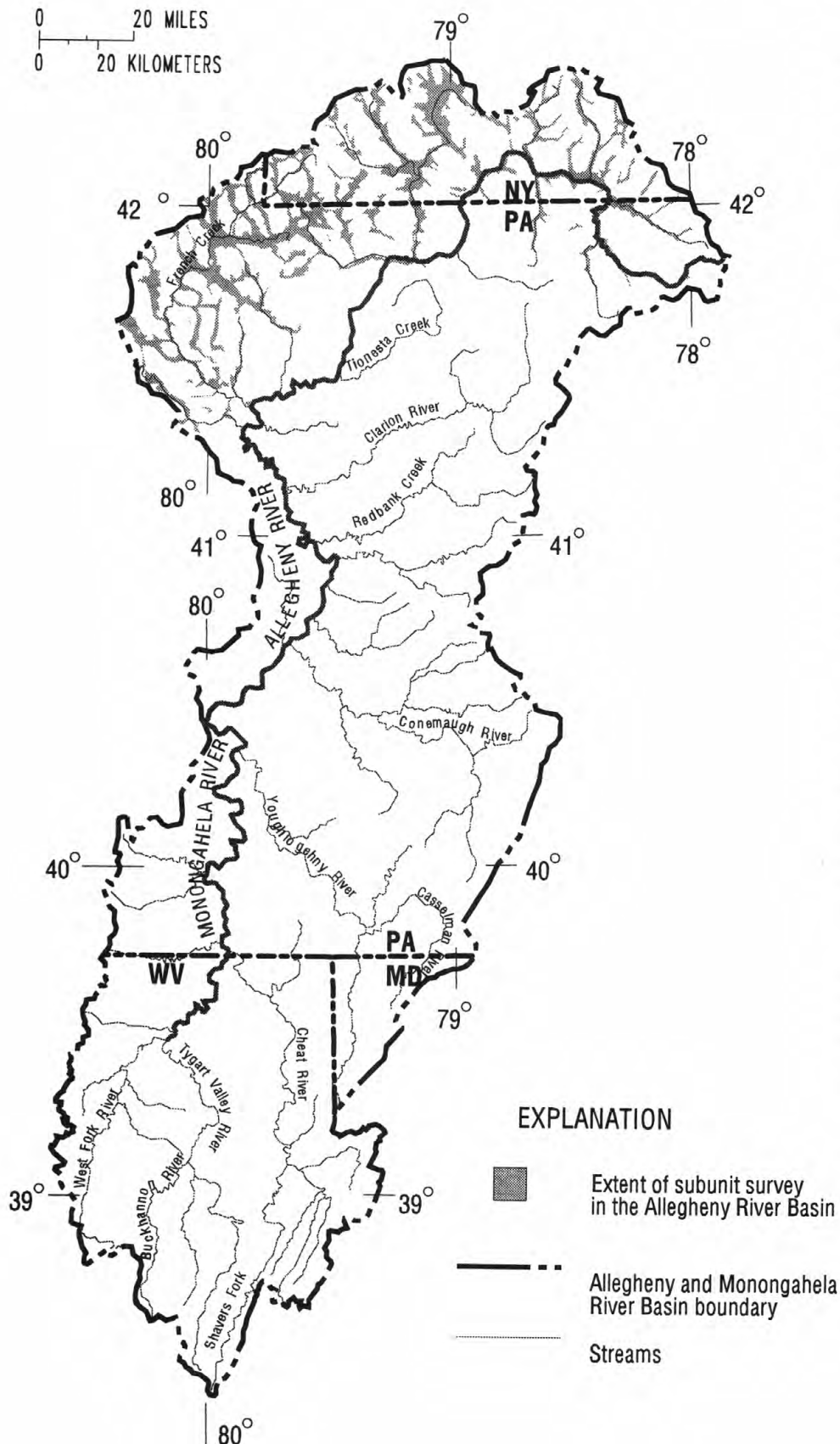
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15.83	15.23	14.93	---	---	14.80	14.63	15.58	14.20	15.70	17.18	16.83
2	15.63	15.44	15.03	---	---	14.75	14.65	15.67	14.25	15.70	17.15	16.82
3	15.76	15.60	15.04	---	---	14.75	14.52	15.56	14.29	15.84	17.16	16.84
4	15.82	15.65	15.17	---	---	14.66	14.42	15.80	14.29	16.08	17.17	16.88
5	15.75	15.55	15.13	---	---	14.64	14.43	15.84	14.24	16.14	17.24	16.92
6	15.70	15.57	14.72	---	---	14.60	14.25	15.87	14.28	16.16	17.31	16.91
7	15.52	15.38	14.67	---	---	14.76	14.51	15.94	14.30	16.18	17.35	16.92
8	15.46	15.02	14.71	---	---	14.74	14.60	15.92	14.35	16.18	17.36	16.92
9	15.62	15.14	15.07	---	---	14.74	14.78	15.64	14.46	16.33	17.37	17.00
10	15.92	15.20	15.07	---	---	14.37	14.84	15.76	14.52	16.38	17.38	17.03
11	16.05	15.39	14.83	---	---	14.46	14.80	15.77	14.47	16.40	17.40	17.14
12	16.03	15.46	14.88	---	---	14.61	14.62	15.59	14.38	16.40	17.42	17.19
13	15.92	15.46	14.99	---	---	14.64	14.69	15.51	14.38	16.44	17.40	17.06
14	15.99	15.41	15.06	---	---	14.36	14.94	15.55	14.63	16.50	17.42	17.24
15	16.02	15.43	15.06	---	---	14.50	14.99	15.52	14.72	16.50	17.40	17.29
16	15.96	15.31	14.82	15.00	---	14.60	14.71	15.65	14.63	16.61	17.48	17.31
17	16.00	15.20	14.54	15.20	---	14.54	14.63	15.64	14.68	16.62	17.41	17.35
18	15.96	14.86	14.67	---	---	14.42	14.59	15.63	14.74	16.66	17.40	17.39
19	15.94	14.71	14.77	---	---	14.37	14.71	15.51	14.90	16.78	17.37	17.39
20	15.73	14.83	15.12	---	---	14.17	14.82	15.49	14.93	16.80	17.27	17.48
21	15.71	14.96	15.14	---	---	14.12	14.82	15.46	14.94	16.82	17.11	17.53
22	15.66	15.19	---	---	14.84	14.32	14.84	15.43	15.22	16.86	17.02	17.52
23	15.42	15.17	---	---	14.96	14.60	14.86	15.36	15.36	16.88	17.02	17.53
24	15.50	15.18	---	---	15.00	14.80	15.22	15.18	15.36	16.92	16.98	17.55
25	15.61	15.18	---	---	14.91	14.68	15.54	14.90	15.38	16.94	16.86	17.51
26	15.66	15.44	---	---	14.66	14.46	15.62	14.71	15.58	16.94	16.82	17.61
27	15.62	15.60	---	---	14.68	14.45	15.56	14.81	15.71	16.95	16.73	17.61
28	15.39	15.60	---	---	14.82	14.34	15.39	14.84	15.71	17.00	16.67	17.61
29	15.32	15.42	---	---	---	14.23	15.43	14.68	15.74	17.10	16.71	17.55
30	15.20	15.22	---	---	---	14.26	15.47	14.52	15.74	17.16	16.73	17.61
31	15.25	---	---	---	---	14.33	---	14.40	---	17.18	16.79	---
MEAN	15.71	15.29	14.92	15.10	14.84	14.52	14.86	15.41	14.81	16.55	17.16	17.25
MAX	16.05	15.65	15.17	15.20	15.00	14.80	15.62	15.94	15.74	17.18	17.48	17.61
MIN	15.20	14.71	14.54	15.00	14.66	14.12	14.25	14.40	14.20	15.70	16.67	16.82

WTR YR 1997: MEAN 15.65; HIGH 14.12, MAR 21; LOW 17.61, SEPT 26-28.



GROUND-WATER DATA COLLECTED AT SPECIAL-STUDY SITES
ALLEGHENY AND MONONGAHELA RIVER BASIN NAWQA PROJECT
SUBUNIT OF GLACIOFLUVIAL SEDIMENTS OF THE APPALACHIAN PLATEAU
PHYSIOGRAPHIC PROVINCE

325



The following tables contain water-level and water-quality records from a network of 30 privately owned wells used to supply water to homes and businesses. The network was established as part of the National Water-Quality Assessment (NAWQA) project in the Allegheny and Monongahela River Basin.

The 30-site network was designed to represent a subarea of the Allegheny River Basin in the Appalachian Plateau Physiographic Province. The subarea is limited to the glaciofluvial sediments in the northern portion of the ALMN Basin. The network includes four counties in northwestern Pennsylvania and three counties in western New York. The wells were sampled to assess the ground-water quality across the region. This sampling is termed a Subunit Survey for the NAWQA program.

Field parameters were measured and water samples collected for laboratory analysis of nutrients, major ions, pesticides and Volatile Organic Compounds (VOC's). Many of the measured concentrations were below detection limits in the samples taken from the 30 wells. A listing all of the pesticides (table 1) and VOC's (table 2) and their detection levels precede the water-quality table. The concentrations of VOC's and pesticides detected in one or more of the samples are included in the water-quality table. Only those compounds with at least one detected concentration are listed in the table.

The shaded portion of figure 6 shows the sampling subarea in the glaciofluvial sediments of the Appalachian Plateau Physiographic Province.

Figure 9. Location and extent of the study-unit survey in the Glaciofluvial Sediments of the Appalachian Plateau Physiographic Province

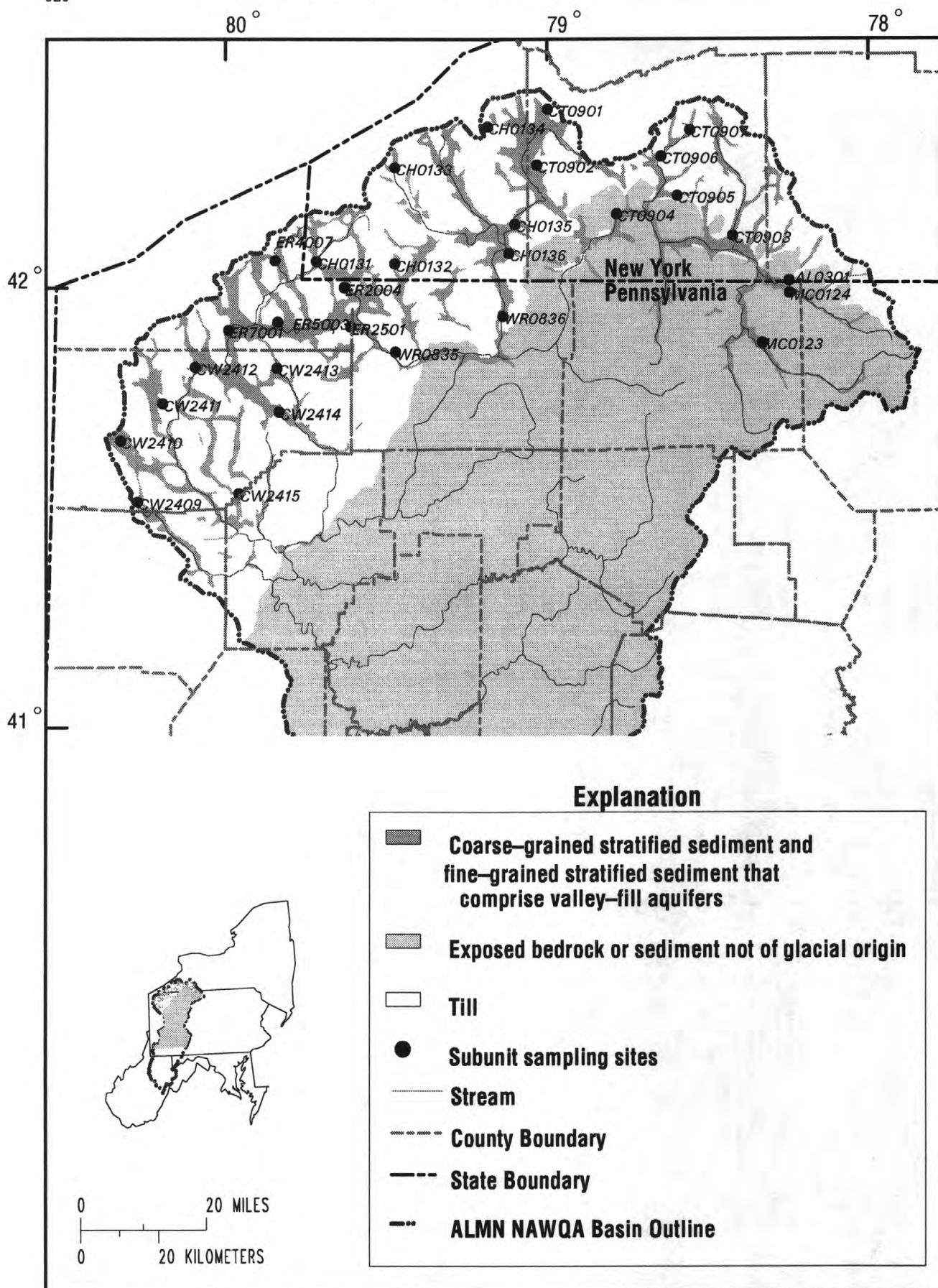


Figure 10. Location and local identification number of wells sampled in the subunit of Glaciofluvial Sediments of the Appalachian Plateau Physiographic Province.

GROUND-WATER DATA COLLECTED AT SPECIAL-STUDY SITES

ALLEGHENY AND MONONGAHELA RIVER BASIN NAWQA PROJECT

SUBUNIT OF GLACIOFLUVIAL SEDIMENTS OF THE APPALACHIAN PLATEAU PHYSIOGRAPHIC PROVINCE

This table contains water level records and well characteristics for a network of thirty privately-owned wells used to supply water for domestic use. The network of wells was established as part of the National Water-Quality Assessment (NAWQA) project in the Allegheny and Monongahela River Basin.

The wells were sampled to assess the status of ground-water quality in areas underlain by a subarea of the Appalachian Plateau Physiographic Province limited to the glaciofluvial sediments. This sampling is termed a Subunit Survey for the NAWQA program.

Explanation of column headings- SITE IDENTIFIER: 15 digit unique identifier based on site latitude (first six digits), longitude (digits 7-13), and a two digit sequence number suffix. LOCATION: Name of 1:24000 U.S. Geological Survey topographic quadrangle. ELEVATION OF LAND SURFACE: Land-surface at well site, in feet above sea level. SOURCE OF DEPTH DATA: D, Driller; O, Owner; M, Measured. WATER LEVEL METHOD: T, electric tape.

SITE IDENTIFIER	LOCAL ID	LOCATION	ELEV. OF LAND SURFACE DATUM (FT. 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
NEW YORK								
ALLEGANY COUNTY								
420015078143201	AL0301	Bolivar	1490	86.0	O	09-17-96	25.2	T
CATTARAUGUS COUNTY								
422404078594901	CT0901	Gowanda	1320	24.0	M	09-15-96	11.4	T
421623079015001	CT0902	Cherry Creek	1345	38.0	O	--	--	-
420631078245701	CT0903	Olean	1460	114.0	O	09-01-96	34.4	T
420937078464601	CT0904	Little Valley	1410	24.0	O	--	--	-
421202078352101	CT0905	Humphrey	1520	77.5	D	09-05-96	13.1	T
421728078382301	CT0906	Ellicottville	1570	47.0	O	--	--	-
422101078325501	CT0907	Ashford	1730	28.0	O	--	--	-
CHAUTAUQUA COUNTY								
420310079432301	CH0131	Clymer	1390	12.0	O	--	--	-
420253079283801	CH0132	Panama	1510	53.0	O	--	--	-
421604079284001	CH0133	Hartfield	1325	71.0	D	--	--	-
422139079111001	CH0134	Hamlet	1490	53.0	O	--	--	-
420819079055901	CH0135	Kennedy	1325	93.0	O	09-17-96	72.9	T
420418079070601	CH0136	Ivory	1300	110.0	D	--	--	-
PENNSYLVANIA								
CRAWFORD COUNTY								
413017080162101	CW2409	Conneaut Lake	1360	60.0	O	10-15-96	34.1	T
413837080193701	CW2410	Harmonsborg	1115	172.0	D	--	--	-
414343080115201	CW2411	Meadville	1350	110.0	O	--	--	-
414842080055101	CW2412	Cambridge Springs	1250	90.0	D	08-29-96	70.9	T
414837079503901	CW2413	Lake Canadohta	1425	75.0	O	--	--	-
414240079501201	CW2414	Centerville	1270	24.0	O	--	--	-
413131079573501	CW2415	Sugar Lake	1365	35.0	O	--	--	-
ERIE COUNTY								
415345079594201	ER7001	Waterford	1180	68.0	D	08-29-96	9.2	T
420315079510701	ER4007	Wattsburg	1335	130.0	O	--	--	-
415455079503301	ER5003	Union City	1480	87.0	D	09-03-96	29.7	T
415418079355401	ER2501	Columbus	1395	170.0	O	--	--	-
415938079380701	ER2004	Corry	1725	80.0	O	09-03-96	5.8	T
MCKEAN COUNTY								
415149078193901	MC0123	Port Allegany	1510	130.0	O	09-01-96	60.1	T
415834078142701	MC0124	Shinglehouse	1525	135.0	O	09-04-96	66.0	T
WARREN COUNTY								
415052079282901	WR0835	Pittsfield	1370	50.0	O	--	--	-
415544079081701	WR0836	Russell	1260	60.0	O	09-04-96	30.0	T

GROUND-WATER DATA COLLECTED AT SPECIAL-STUDY SITES
ALLEGHENY AND MONONGAHELA RIVER BASIN NAWQA PROJECT

SUBUNIT OF GLACIOFLUVIAL SEDIMENTS OF THE APPALACHIAN PLATEAU PHYSIOGRAPHIC PROVINCE--Continued

TABLE 1.--PESTICIDES ANALYZED IN GROUNDWATER.

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 method detection limit (MDL).

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. Samples are filtered through a glass-fiber membrane 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. Pesticide compounds measured at or above the MDL in one or more samples are listed in the water-quality table following the schedule list. The MDL provides an index to indicate where measurement uncertainty is increased. When an analyte is detected and all criteria for a positive result are met, the concentration is reported. If the concentration is less than the MDL, an 'E' code will be reported with the value.

If the analyte is qualitatively identified as present, but the quantitative determination is substantially more uncertain, the NWQL will identify the result with an 'E' code even though the measured value is greater than the MDL. A value reported with an 'E' code should be used with caution. When no analyte is detected in a sample, the default reporting value is the MDL preceded by a less-than sign (<).

ACETOCHLOR ($\mu\text{G/L}$) (49260)	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)
0.002	0.002	0.002	0.001	0.002	0.002
CARBARYL ($\mu\text{G/L}$) (82680)	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)
0.003	0.003	0.004	0.004	0.002	0.002
DIAZINON ($\mu\text{G/L}$) (39572)	DIELDRIN ($\mu\text{G/L}$) (39381)	DIETHYL- ANILINE-2,6 ($\mu\text{G/L}$) (82660)	DISULFOTON ($\mu\text{G/L}$) (82677)	EPTC ($\mu\text{G/L}$) (82668)	ETHAL- FLURALIN ($\mu\text{G/L}$) (82663)
0.002	0.001	0.003	0.017	0.002	0.004
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)
0.003	0.003	0.004	0.002	0.005	0.001
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)
0.006	0.002	0.004	0.004	0.003	0.006
ETHYL- PARATHION ($\mu\text{G/L}$) (39542)	PEBULATE ($\mu\text{G/L}$) (82669)	PENDI- METHALIN ($\mu\text{G/L}$) (82683)	CIS- PERMETHRIN ($\mu\text{G/L}$) (82687)	PHORATE ($\mu\text{G/L}$) (82664)	PROMETON ($\mu\text{G/L}$) (04037)
0.004	0.004	0.004	0.005	0.002	0.018
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)
0.003	0.007	0.004	0.013	0.005	0.010
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)	
0.007	0.013	0.002	0.001	0.002	

GROUND-WATER DATA COLLECTED AT SPECIAL-STUDY SITES
ALLEGHENY AND MONONGAHELA RIVER BASIN NAWQA PROJECT

SUBUNIT OF GLACIOFLUVIAL SEDIMENTS OF THE APPALACHIAN PLATEAU PHYSIOGRAPHIC PROVINCE--Continued

TABLE 2.--VOLATILE ORGANIC COMPOUNDS ANALYZED IN GROUNDWATER.

REMARKS.-- Water from each of the 30 wells in this study was tested for 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 method detection limit (MDL).

The volatile organic compounds in this schedule included selected (VOC's) that are thermally desorbed from a water sample by the purge and trap method and then analyzed by gas chromatography.

Each sample was analyzed for all of the compounds in this schedule. Volatile organic compounds measured at or above the MDL for one or more wells are listed in the water-quality table following the schedule lists. The MDL provides an index to indicate where measurement uncertainty is increased. When an analyte is detected and all criteria for a positive result are met, the concentration is reported. If the concentration is less than the MDL, an 'E' code will be reported with the value.

If the analyte is qualitatively identified as present, but the quantitative determination is substantially more uncertain, the NWQL will identify the result with an 'E' code even though the measured value is greater than the MDL. A value reported with an 'E' code should be used with caution. When no analyte is detected in a sample, the default reporting value is the MDL preceded by a less-than sign (<).

ACETATE VINYL ($\mu\text{G/L}$) (77057)	ACETONE ($\mu\text{G/L}$) (81552)	ACROLEIN ($\mu\text{G/L}$) (34210)	ACRYLO- NITRILE ($\mu\text{G/L}$) (34215)	BENZENE ($\mu\text{G/L}$) (34030)	BENZENE BROMO- ($\mu\text{G/L}$) (81555)
5.00	5.00	2.00	2.00	0.050	0.050
BENZENE CHLORO- ($\mu\text{G/L}$) (34301)	BENZENE O-DI- CHLORO- ($\mu\text{G/L}$) (34536)	BENZENE 1,3-DI- CHLORO- ($\mu\text{G/L}$) (34566)	BENZENE 1,4-DI- CHLORO- ($\mu\text{G/L}$) (34571)	BENZENE 1,2,3- TRICHLORO- ($\mu\text{G/L}$) (77613)	BENZENE 1,2,4- TRICHLORO- ($\mu\text{G/L}$) (34551)
0.050	0.050	0.050	0.050	0.200	0.200
BENZENE 1,2,3- TRIMETHYL- ($\mu\text{G/L}$) (77221)	BENZENE 1,2,4- TRIMETHYL- ($\mu\text{G/L}$) (77222)	BENZENE 1,3,5- TRIMETHYL- ($\mu\text{G/L}$) (77226)	BENZENE ETHYL- ($\mu\text{G/L}$) (34371)	BENZENE N-PROPYL- ($\mu\text{G/L}$) (77224)	BENZENE ISOPROPYL- ($\mu\text{G/L}$) (77223)
0.050	0.050	0.050	0.050	0.050	0.050
BENZENE N-BUTYL- ($\mu\text{G/L}$) (77342)	BENZENE SEC-BUTYL- ($\mu\text{G/L}$) (77350)	BENZENE TERT-BUTYL- ($\mu\text{G/L}$) (77353)	2-BUTENE TRANS-1,4- DICHLORO- ($\mu\text{G/L}$) (73547)	CARBON DISULFIDE ($\mu\text{G/L}$) (77041)	ETHANE 1,2- DIBROMO- ($\mu\text{G/L}$) (77651)
0.050	0.050	0.050	5.00	0.050	0.100
ETHANE CHLORO- ($\mu\text{G/L}$) (34311)	ETHANE 1,1- DICHLORO- ($\mu\text{G/L}$) (34496)	ETHANE 1,2- DICHLORO- ($\mu\text{G/L}$) (32103)	ETHANE 1,1,1- TRICHLORO- ($\mu\text{G/L}$) (34506)	ETHANE 1,1,2- TRICHLORO- ($\mu\text{G/L}$) (34511)	ETHANE, 1,1,1,2- TETRACHLORO- ($\mu\text{G/L}$) (77562)
0.100	0.050	0.050	0.050	0.100	0.050
ETHANE 1,1,2,2- TETRACHLORO- ($\mu\text{G/L}$) (34516)	ETHANE HEXACHLORO- ($\mu\text{G/L}$) (34396)	ETHENE BROMO- ($\mu\text{G/L}$) (50002)	ETHENE CHLORO- ($\mu\text{G/L}$) (34423)	ETHENE 1,1- DICHLORO- ($\mu\text{G/L}$) (34501)	ETHENE CIS-1,2- DICHLORO- ($\mu\text{G/L}$) (77093)
0.100	0.050	0.100	0.100	0.100	0.050
ETHENE TRANS-1,2- DICHLORO- ($\mu\text{G/L}$) (34546)	ETHENE TRICHLORO- ($\mu\text{G/L}$) (39180)	ETHENE TETRACHLORO- ($\mu\text{G/L}$) (34475)	ETHER DI- ISOPROPYL- ($\mu\text{G/L}$) (81577)	ETHER ETHYL- ($\mu\text{G/L}$) (81576)	ETHER METHYL- TERT-BUTYL- ($\mu\text{G/L}$) (78032)
0.050	0.050	0.050	0.100	0.100	0.100

GROUND-WATER DATA COLLECTED AT SPECIAL-STUDY SITES

ALLEGHENY AND MONONGAHELA RIVER BASIN NAWQA PROJECT

SUBUNIT OF GLACIOFLUVIAL SEDIMENTS OF THE APPALACHIAN PLATEAU PHYSIOGRAPHIC PROVINCE--Continued

TABLE 2.--VOLATILE ORGANIC COMPOUNDS ANALYZED IN GROUNDWATER--Continued

ETHER ETHYL- TERT-BUTYL- ($\mu\text{G/L}$) (50004)	ETHER TERT- PENTYL- METHYL- ($\mu\text{G/L}$) (50005)	FREON-113 ($\mu\text{G/L}$) (77652)	FURAN TETRAHYDRO- ($\mu\text{G/L}$) (81607)	HEXACHLORO- BUTADIENE ($\mu\text{G/L}$) (39702)	2-HEXANONE ($\mu\text{G/L}$) (77103)
0.100	0.100	0.050	5.00	0.200	5.00
ISODURENE ($\mu\text{G/L}$) (50000)	METHACRYLATE METHYL- ($\mu\text{G/L}$) (81597)	METHACRYLATE ETHYL- ($\mu\text{G/L}$) (73570)	METHANE BROMO- ($\mu\text{G/L}$) (34413)	METHANE CHLORO- ($\mu\text{G/L}$) (34418)	METHANE CHLORO- BROMO- ($\mu\text{G/L}$) (77297)
0.050	1.00	1.00	0.100	0.200	0.100
METHANE CHLORO- DIBROMO- ($\mu\text{G/L}$) (32105)	METHANE DIBROMO- ($\mu\text{G/L}$) (30217)	METHANE DICHLORO- BROMO- ($\mu\text{G/L}$) (32101)	METHANE DIFLUORO- DICHLORO- ($\mu\text{G/L}$) (34668)	METHANE IODO- ($\mu\text{G/L}$) (77424)	METHANE TETRACHLORO- ($\mu\text{G/L}$) (32102)
0.100	0.100	0.100	0.200	0.050	0.050
METHANE TRIBROMO- ($\mu\text{G/L}$) (32104)	METHANE TRICHLORO- ($\mu\text{G/L}$) (32106)	METHANE FLUORO- TRICHLORO- ($\mu\text{G/L}$) (34488)	METHYL ACRYLATE ($\mu\text{G/L}$) (49991)	METHACRYLO- NITRITE ($\mu\text{G/L}$) (81593)	METHYL- ETHYL- KETONE ($\mu\text{G/L}$) (81595)
0.200	0.050	0.100	2.00	2.00	5.00
METHYL- ISOBUTYL- KETONE ($\mu\text{G/L}$) (78133)	NAPHTHALENE ($\mu\text{G/L}$) (34696)	PREHNITENE ($\mu\text{G/L}$) (49999)	PROPANE 1,2- DICHLORO- ($\mu\text{G/L}$) (34541)	PROPANE 2,2- DICHLORO- ($\mu\text{G/L}$) (77170)	PROPANE 1,3- DICHLORO- ($\mu\text{G/L}$) (77173)
5.00	0.200	0.050	0.050	0.050	0.050
PROPANE 1,2,3- TRICHLORO- ($\mu\text{G/L}$) (77443)	PROPANE CHLORO- DIBROMO- ($\mu\text{G/L}$) (82625)	PROPENE 3-CHLORO- ($\mu\text{G/L}$) (78109)	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)
0.200	0.500	0.100	0.050	0.100	0.100
STYRENE ($\mu\text{G/L}$) (77128)	TOLUENE ($\mu\text{G/L}$) (34010)	TOLUENE O-CHLORO- ($\mu\text{G/L}$) (77275)	TOLUENE P-CHLORO- ($\mu\text{G/L}$) (77277)	TOLUENE O-ETHYL- ($\mu\text{G/L}$) (77220)	TOLUENE P-ISOPROPYL- ($\mu\text{G/L}$) (77356)
0.050	0.050	0.050	0.050	0.050	0.050
VINYL- CHLORIDE ($\mu\text{G/L}$) (39175)	XYLENE O- ($\mu\text{G/L}$) (77135)	XYLENE M- and P- ($\mu\text{G/L}$) (85795)			
0.100	0.050	0.050			

GROUND-WATER DATA COLLECTED AT SPECIAL-STUDY SITES

ALLEGHENY AND MONONGAHELA RIVER BASIN NAWQA PROJECT

SUBUNIT OF GLACIOFLUVIAL SEDIMENTS OF THE APPALACHIAN PLATEAU PHYSIOGRAPHIC PROVINCE--Continued

REMARKS.--Explanation of the 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; **DEG C**: degrees Celsius; **NTU**: nephelometric turbidity units; **µS/CM**: microsiemens per centimeter at 25 degrees Celsius; **mg/L**: milligrams per liter; **PCI/L**: Picocurie per liter; **µg/L**: micrograms per liter; **2 SIGMA**: counting statistics that represents error in the reported radon value caused by variation in sample counting, background radiation, volume of sample, and decay since sample was collected; **DISS**: dissolved; **REC**: recoverable; **WH TOT IT**: alkalinity, as determined by incremental titration of unfiltered water; **DIS TOT IT**: alkalinity as determined by incremental titration of filtered water.

WATER QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

SITE IDENTIFIER	LOCAL ID	DATE	TIME	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)	HARD NESS TOTAL (mg/L AS CaCO3) (00900)	CALCIUM DIS-SOLVED (mg/L AS Ca) (000915)
NEW YORK									
ALLEGANY COUNTY									
420015078143201	AL0301	10-09-96	0800	226	7.1	9.5	1.6	86	23
CATTARAUGUS COUNTY									
422404078594901	CT0901	10-07-96	1300	953	7.7	10.5	4.0	330	100
421623079015001	CT0902	10-07-96	0800	290	7.3	10.5	1.5	150	46
420631078245701	CT0903	09-18-96	0800	424	7.5	11.0	0.5	160	45
420937078464601	CT0904	09-17-96	1300	166	6.5	12.0	3.8	62	18
421202078352101	CT0905	09-18-96	1300	196	8.1	12.5	0.2	85	27
421728078382301	CT0906	09-19-96	0800	322	7.8	13.5	0.2	150	51
422101078325501	CT0907	09-19-96	1300	159	6.7	9.5	4.5	50	16
CHAUTAUQUA COUNTY									
420310079432301	CH0131	09-16-96	1300	420	7.8	14.0	5.7	140	46
420253079283801	CH0132	09-16-96	0800	219	8.0	12.0	5.7	140	43
421604079284001	CH0133	10-02-96	0800	214	8.4	11.5	0.2	83	24
422139079111001	CH0134	10-02-96	1300	972	6.8	11.5	0.1	270	87
420819079055901	CH0135	10-09-96	1300	718	7.5	12.0	3.0	310	91
420418079070601	CH0136	10-10-96	0800	373	7.9	12.0	0.1	140	39
PENNSYLVANIA									
CRAWFORD COUNTY									
413017080162101	CW2409	10-22-96	0800	444	7.6	11.5	0.2	220	65
413837080193701	CW2410	09-12-96	0800	1140	7.5	13.5	0.5	140	38
414343080115201	CW2411	09-25-96	0800	413	7.6	11.5	0.2	170	49
414842080055101	CW2412	09-24-96	0800	448	7.7	16.0	0.3	220	64
414837079503901	CW2413	09-10-96	0800	252	5.9	11.0	2.2	78	23
414240079501201	CW2414	09-09-96	0800	301	6.9	14.5	3.8	170	55
413131079573501	CW2415	09-26-96	0800	213	7.0	10.5	6.2	100	30
ERIE COUNTY									
415345079594201	ER7001	09-11-96	0800	375	7.8	12.5	0.2	170	54
420315079510701	ER4007	10-16-96	0800	247	7.9	11.5	0.3	110	31
415455079503301	ER5003	09-30-96	0800	1240	7.8	11.0	0.2	500	140
415418079355401	ER2501	10-03-96	0800	452	8.0	11.5	0.1	110	28
415938079380701	ER2004	10-03-96	1300	411	7.7	12.5	0.3	190	49
MCKEAN COUNTY									
415149078193901	MC0123	10-08-96	0800	306	8.0	10.5	0.2	130	33
415834078142701	MC0124	10-08-96	1300	120	6.6	11.0	3.0	51	12
WARREN COUNTY									
415052079282901	WR0835	10-01-96	0800	249	8.1	10.5	6.3	110	36
415544079081701	WR0836	09-17-96	0800	453	7.8	12.0	6.5	190	57

GROUND-WATER DATA COLLECTED AT SPECIAL-STUDY SITES
ALLEGHENY AND MONONGAHELA RIVER BASIN NAWQA PROJECT

SUBUNIT OF GLACIOFLUVIAL SEDIMENTS OF THE APPALACHIAN PLATEAU PHYSIOGRAPHIC PROVINCE--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

LOCAL ID	MAGNE- SIUM, DIS- SOLVED (mG/L AS MG) (00925)	SODIUM, DIS- SOLVED (mG/L AS NA) (00930)	POTAS- SIUM, DIS- SOLVED (mG/L AS K) (00935)	ALKA- LINITY WAT WH TOT IT FIELD mG/L AS CACO3 (00419)	ALKA- LINITY 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)	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)
NEW YORK										
ALLEGANY COUNTY										
AL0301	6.9	9.8	0.80	63	66	8.0	23	0.20	0.17	10
CATTARAUGUS COUNTY										
CT0901	20	50	3.9	223	214	33	140	<0.10	0.070	7.7
CT0902	7.5	6.3	0.90	103	116	22	13	<0.10	0.070	9.1
CT0903	12	23	1.5	145	149	17	33	0.20	0.030	11
CT0904	4.1	5.7	0.50	66	66	8.1	10	0.10	<0.010	11
CT0905	4.3	6.1	0.70	100	86	6.4	0.60	0.20	0.030	8.2
CT0906	5.1	6.3	1.0	131	128	12	14	<0.10	0.020	5.8
CT0907	2.5	11	0.90	45	45	10	12	<0.10	0.010	4.0
CHAUTAUQUA COUNTY										
CH0131	5.7	30	2.6	127	131	20	17	<0.10	0.030	5.1
CH0132	8.4	2.1	0.50	106	106	13	4.9	<0.10	<0.010	8.9
CH0133	5.5	12	0.60	102	101	0.20	8.5	0.20	0.070	10
CH0134	14	58	20	256	240	16	140	<0.10	0.60	7.4
CH0135	20	9.1	1.6	155	147	43	110	<0.10	0.050	8.6
CH0136	9.5	24	1.4	179	191	12	8.4	0.20	0.11	10
PENNSYLVANIA										
CRAWFORD COUNTY										
CW2409	14	3.8	0.80	142	139	48	27	0.10	0.040	12
CW2410	9.8	200	2.5	215	217	17	250	0.90	2.0	11
CW2411	12	13	3.4	148	143	11	36	0.20	0.16	18
CW2412	15	3.3	0.80	128	134	70	23	<0.10	0.040	10
CW2413	4.9	18	1.1	46	45	15	32	<0.10	0.040	11
CW2414	7.3	3.0	0.80	133	133	18	4.6	<0.10	0.030	9.9
CW2415	6.7	2.1	0.90	84	84	17	1.8	0.10	0.030	9.1
ERIE COUNTY										
ER7001	9.5	9.2	1.1	149	153	21	18	<0.10	0.16	9.3
ER4007	7.8	7.8	0.80	112	108	15	1.1	0.20	--	9.0
ER5003	36	13	4.9	104	104	6.4	310	0.10	0.17	15
ER2501	9.0	57	2.2	218	218	3.1	13	0.30	0.14	12
ER2004	16	9.2	2.0	159	160	11	33	0.20	0.050	14
MCKEAN COUNTY										
MC0123	11	16	1.3	132	136	20	2.4	0.20	0.040	13
MC0124	5.0	3.7	0.80	42	43	11	2.2	<0.10	0.030	8.9
WARREN COUNTY										
WR0835	5.6	4.8	0.70	101	101	14	7.1	<0.10	0.030	7.0
WR0836	11	16	1.0	151	146	14	30	<0.10	0.020	10

GROUND-WATER DATA COLLECTED AT SPECIAL-STUDY SITES
ALLEGHENY AND MONONGAHELA RIVER BASIN NAWQA PROJECT
SUBUNIT OF GLACIOFLUVIAL SEDIMENTS OF THE APPALACHIAN PLATEAU PHYSIOGRAPHIC PROVINCE--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997									
LOCAL ID	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (mG/L) (70300)	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 (mG/L) AS FE) (01046)	MANGA- NESE, DIS- SOLVED (mG/L) AS MN) (01056)
NEW YORK									
ALLEGANY COUNTY									
AL0301	126	<0.010	0.410	<0.015	<0.20	0.030	0.030	21	3.0
CATTARAUGUS COUNTY									
CT0901	530	<0.010	3.70	<0.015	<0.20	<0.010	<0.010	11	<1.0
CT0902	184	<0.010	0.670	0.020	<0.20	<0.010	<0.010	8.0	<1.0
CT0903	216	<0.010	<0.050	0.070	<0.20	<0.010	<0.010	84	290
CT0904	80	0.010	0.110	0.030	<0.20	<0.010	<0.010	420	2200
CT0905	94	<0.010	<0.050	0.030	<0.20	0.010	0.020	180	270
CT0906	166	0.030	0.330	0.030	<0.20	<0.010	0.030	4.0	1600
CT0907	72	<0.010	0.310	<0.015	<0.20	<0.010	0.020	47	1.0
CHAUTAUQUA COUNTY									
CH0131	232	<0.010	9.90	0.020	<0.20	<0.010	<0.010	5.0	<1.0
CH0132	150	<0.010	5.40	0.020	<0.20	<0.010	<0.010	<3.0	<1.0
CH0133	162	<0.010	<0.050	0.140	<0.20	<0.010	0.010	390	35
CH0134	516	<0.010	4.70	2.90	3.2	<0.010	<0.010	140	2900
CH0135	428	<0.010	3.40	<0.015	<0.20	<0.010	<0.010	8.0	11
CH0136	210	<0.010	<0.050	0.200	<0.20	0.010	0.010	450	120
PENNSYLVANIA									
CRAWFORD COUNTY									
CW2409	287	0.020	<0.050	0.050	<0.20	0.020	0.030	200	310
CW2410	666	0.010	0.070	0.350	0.30	<0.010	<0.010	27	19
CW2411	224	0.020	<0.050	0.790	0.70	<0.010	<0.010	500	31
CW2412	264	0.010	0.110	<0.015	<0.20	<0.010	<0.010	38	51
CW2413	138	<0.010	1.50	<0.015	<0.20	<0.010	<0.010	24	11
CW2414	196	<0.010	4.40	<0.015	<0.20	<0.010	<0.010	7.0	<1.0
CW2415	118	<0.010	0.520	<0.015	<0.20	<0.010	<0.010	28	1.0
ERIE COUNTY									
ER7001	206	<0.010	0.070	0.070	<0.20	<0.010	<0.010	350	140
ER4007	140	0.010	<0.050	0.090	<0.20	<0.010	<0.010	1400	170
ER5003	752	<0.010	<0.050	0.630	0.60	<0.010	<0.010	260	190
ER2501	262	<0.010	<0.050	0.300	0.30	0.020	0.030	260	25
ER2004	254	<0.010	<0.050	0.050	<0.20	0.030	0.010	200	290
MCKEAN COUNTY									
MC0123	182	<0.010	<0.050	0.120	<0.20	<0.010	<0.010	200	150
MC0124	82	<0.010	0.230	<0.015	<0.20	<0.010	0.020	<3.0	<1.0
WARREN COUNTY									
WR0835	176	<0.010	0.530	<0.015	<0.20	<0.010	<0.010	<3.0	1.0
WR0836	236	0.010	4.90	<0.015	<0.20	<0.010	<0.010	5.0	<1.0

GROUND-WATER DATA COLLECTED AT SPECIAL-STUDY SITES
ALLEGHENY AND MONONGAHELA RIVER BASIN NAWQA PROJECT
SUBUNIT OF GLACIOFLUVIAL SEDIMENTS OF THE APPALACHIAN PLATEAU PHYSIOGRAPHIC PROVINCE--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

LOCAL ID	RADON 222 TOTAL (PCI/L) (82303)	RN-222 2 SIGMA WATER, WHOLE, TOTAL, (PCI/L) (76002)	CARBON, ORGANIC DIS- SOLVED (mG/L AS C) (00681)	ATRA- ZINE, WATER, DISS, REC (μG/L) (39632)	DEETHYL ATRA- ZINE, WATER, DISS, REC (μG/L) (04040)	CARBO- FURAN WATER FLTRD 0.7 μ GF, REC (μG/L) (82674)	DI- AZINON, DIS- SOLVED (μG/L) (39572)	EPTC WATER FLTRD 0.7 μ GF, REC (μG/L) (82668)	METO- LACHLOR WATER DISSOLV (μG/L) (39415)
NEW YORK									
ALLEGANY COUNTY									
AL0301	2800	49	0.30	<0.001	<0.002	<0.003	<0.002	<0.002	<0.002
CATTARAUGUS COUNTY									
CT0901	510	26	0.60	<0.001	<0.002	<0.003	<0.002	<0.002	<0.002
CT0902	2600	50	1.0	0.008	E0.005	<0.003	<0.002	<0.002	<0.002
CT0903	190	17	0.30	<0.001	<0.002	<0.003	<0.002	<0.002	<0.002
CT0904	1300	35	--	<0.001	<0.002	<0.003	<0.002	<0.002	<0.002
CT0905	860	26	0.20	<0.001	<0.002	<0.003	<0.002	<0.002	<0.002
CT0906	680	28	0.40	<0.001	E0.006	<0.003	<0.002	<0.002	<0.002
CT0907	1500	37	0.70	0.005	E0.006	<0.003	E0.002	<0.002	<0.002
CHAUTAUQUA COUNTY									
CH0131	810	29	1.2	0.011	E0.145	<0.003	<0.002	<0.002	<0.002
CH0132	810	29	0.30	<0.001	E0.008	<0.003	<0.002	<0.002	<0.002
CH0133	340	21	0.40	<0.001	<0.002	<0.003	<0.002	<0.002	<0.002
CH0134	1200	32	2.5	0.012	E0.009	E0.015	<0.002	0.004	0.005
CH0135	1000	31	0.80	<0.001	<0.002	<0.003	<0.002	<0.002	<0.002
CH0136	460	23	0.40	<0.001	<0.002	<0.003	<0.002	<0.002	<0.002
PENNSYLVANIA									
CRAWFORD COUNTY									
CW2409	460	25	0.90	<0.001	<0.002	<0.003	<0.002	<0.002	<0.002
CW2410	200	19	0.40	<0.001	<0.002	<0.003	<0.002	<0.002	<0.002
CW2411	330	22	0.30	<0.001	<0.002	<0.003	<0.002	<0.002	<0.002
CW2412	630	29	0.60	<0.001	<0.002	<0.003	<0.002	<0.002	<0.002
CW2413	1600	38	3.8	<0.001	<0.002	<0.003	<0.002	<0.002	<0.002
CW2414	630	26	0.40	<0.001	E0.003	<0.003	<0.002	<0.002	<0.002
CW2415	1300	34	0.60	<0.001	<0.002	<0.003	<0.002	<0.002	<0.002
ERIE COUNTY									
ER7001	230	19	0.30	<0.001	<0.002	<0.003	<0.002	<0.002	<0.002
ER4007	220	19	<0.10	<0.001	<0.002	<0.003	<0.002	<0.002	<0.002
ER5003	180	18	0.20	<0.001	<0.002	<0.003	<0.002	<0.002	<0.002
ER2501	290	21	1.2	<0.001	<0.002	<0.003	<0.002	<0.002	<0.002
ER2004	650	26	1.5	<0.001	<0.002	<0.003	<0.002	<0.002	<0.002
MCKEAN COUNTY									
MC0123	180	18	0.5	<0.001	<0.002	<0.003	<0.002	<0.002	<0.002
MC0124	1800	39	0.80	<0.001	<0.002	<0.003	E0.002	<0.002	<0.002
WARREN COUNTY									
WR0835	710	27	0.20	<0.001	E0.003	<0.003	<0.002	<0.002	<0.002
WR0836	950	31	0.60	<0.001	E0.003	<0.003	<0.002	<0.002	<0.002

GROUND-WATER DATA COLLECTED AT SPECIAL-STUDY SITES
 ALLEGHENY AND MONONGAHELA RIVER BASIN NAWQA PROJECT
 SUBUNIT OF GLACIOFLUVIAL SEDIMENTS OF THE APPALACHIAN PLATEAU PHYSIOGRAPHIC PROVINCE--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

LOCAL ID	METRI- BUZIN SENCOR WATER DISSOLV ($\mu\text{G/L}$) (82630)	SI- MAZINE, WATER, DISS, REC ($\mu\text{G/L}$) (04035)	TEBU- THIURON WATER FLTRD 0.7 μ GF, REC ($\mu\text{G/L}$) (82670)	BENZENE 124-TRI METHYL UNFILT RECOVER ($\mu\text{G/L}$) (77222)	ETHYL- BENZENE TOTAL ($\mu\text{G/L}$) (34371)	CARBON DI. SULFIDE WATER WHOLE TOTAL ($\mu\text{G/L}$) (77041)	1,1,1- TRI- CHLORO- ETHANE TOTAL ($\mu\text{G/L}$) (34506)	FREON- 113 WATER UNFLTRD REC ($\mu\text{G/L}$) (77652)	METHYL- CHLO- RIDE TOTAL ($\mu\text{G/L}$) (34418)
NEW YORK									
ALLEGANY COUNTY									
AL0301	<0.004	<0.005	<0.010	E0.010	<0.050	<0.050	<0.050	<0.050	<0.200
CATTARAUGUS COUNTY									
CT0901	<0.004	<0.005	<0.010	<0.050	<0.050	<0.050	E0.090	<0.050	<0.200
CT0902	<0.004	<0.005	<0.010	E0.010	<0.050	<0.050	<0.050	<0.050	<0.200
CT0903	<0.004	<0.005	<0.010	<0.050	<0.050	E0.007	<0.050	<0.050	E0.010
CT0904	<0.004	<0.005	<0.010	<0.050	<0.050	<0.050	<0.050	<0.050	<0.200
CT0905	<0.004	<0.005	<0.010	E0.070	<0.050	E0.030	<0.050	<0.050	E0.010
CT0906	<0.004	<0.005	<0.010	<0.050	<0.050	<0.050	<0.050	<0.050	E0.010
CT0907	0.013	<0.005	<0.010	<0.050	<0.050	<0.050	<0.050	<0.050	E0.010
CHAUTAUQUA COUNTY									
CH0131	0.021	<0.005	<0.010	E0.010	<0.050	E0.020	<0.050	<0.050	<0.200
CH0132	0.021	<0.005	<0.010	E0.007	<0.050	E0.020	<0.050	<0.050	<0.200
CH0133	<0.004	<0.005	<0.010	<0.050	<0.050	<0.050	<0.050	<0.050	<0.200
CH0134	<0.004	<0.005	<0.010	<0.050	<0.050	<0.050	E0.006	<0.050	<0.200
CH0135	<0.004	<0.005	<0.010	<0.050	<0.050	<0.050	<0.050	<0.050	<0.200
CH0136	<0.004	<0.005	<0.010	E0.008	<0.050	E0.010	<0.050	<0.050	E0.010
PENNSYLVANIA									
CRAWFORD COUNTY									
CW2409	0.030	<0.005	<0.010	E0.010	<0.050	E0.005	<0.050	<0.050	<0.200
CW2410	<0.004	<0.005	<0.010	<0.050	<0.050	<0.050	<0.050	<0.050	<0.200
CW2411	<0.004	<0.005	<0.010	E0.010	<0.050	<0.050	<0.050	<0.050	<0.200
CW2412	<0.004	<0.005	<0.010	E0.010	<0.050	<0.050	<0.050	<0.050	<0.200
CW2413	<0.004	<0.005	<0.010	E0.040	<0.050	<0.050	E0.006	<0.050	E0.010
CW2414	<0.004	<0.005	<0.010	<0.050	E0.004	E0.007	<0.050	<0.050	<0.200
CW2415	<0.004	<0.005	E0.008	E0.004	<0.050	<0.050	<0.050	<0.050	<0.200
ERIE COUNTY									
ER7001	<0.004	<0.005	<0.010	<0.050	<0.050	E0.010	<0.050	<0.050	<0.200
ER4007	<0.004	<0.005	<0.010	<0.050	<0.050	E0.010	<0.050	<0.050	<0.200
ER5003	<0.004	<0.005	<0.010	<0.050	<0.050	<0.050	<0.050	<0.050	<0.200
ER2501	<0.004	<0.005	<0.010	<0.050	E0.003	<0.050	<0.050	<0.050	<0.200
ER2004	<0.004	<0.005	<0.010	<0.050	<0.050	<0.050	<0.050	<0.050	<0.200
MCKEAN COUNTY									
MC0123	<0.004	<0.005	<0.010	E0.010	<0.050	E0.030	<0.050	E0.005	<0.200
MC0124	<0.004	<0.005	<0.010	E0.010	<0.050	<0.050	<0.050	<0.050	<0.200
WARREN COUNTY									
WR0835	<0.004	<0.005	<0.010	<0.050	<0.050	<0.050	<0.050	<0.050	<0.200
WR0836	<0.004	0.011	<0.010	<0.050	<0.050	<0.050	E0.010	<0.050	<0.200

GROUND-WATER DATA COLLECTED AT SPECIAL-STUDY SITES
 ALLEGHENY AND MONONGAHELA RIVER BASIN NAWQA PROJECT
 SUBUNIT OF GLACIOFLUVIAL SEDIMENT OF THE APPALACHIAN PLATEAU PHYSIOGRAPHIC PROVINCE--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

LOCAL ID	DI- CHLORO- DI- FLUORO- METHANE TOTAL ($\mu\text{G/L}$) (34668)	CARBON- TETRA- CHLO- RIDE TOTAL ($\mu\text{G/L}$) (32102)	CHLORO- FORM TOTAL ($\mu\text{G/L}$) (32106)	METHYL- ETHYL- KETONE WATER WHOLE TOTAL ($\mu\text{G/L}$) (81595)	O- XYLENE WATER WHOLE TOTAL ($\mu\text{G/L}$) (77135)
NEW YORK					
ALLEGANY COUNTY					
AL0301	<0.200	<0.050	E0.050	<5.00	<0.050
CHAUTAUQUA COUNTY					
CT0901	<0.200	<0.050	<0.050	<5.00	<0.050
CT0902	<0.200	<0.050	<0.050	<5.00	<0.050
CT0903	<0.200	<0.050	<0.050	<5.00	<0.050
CT0904	<0.200	<0.050	E0.090	E1.30	<0.050
CT0905	<0.200	<0.050	<0.050	<5.00	<0.050
CT0906	<0.200	<0.050	<0.050	<5.00	<0.050
CT0907	<0.200	<0.050	<0.050	<5.00	<0.050
CHAUTAUQUA COUNTY					
CH0131	<0.200	E0.010	<0.050	<5.00	<0.050
CH0132	<0.200	<0.050	<0.050	<5.00	<0.050
CH0133	<0.200	<0.050	<0.050	<5.00	<0.050
CH0134	<0.200	<0.050	E0.006	<5.00	<0.050
CH0135	<0.200	<0.050	E0.007	<5.00	<0.050
CH0136	<0.200	<0.050	E0.002	<5.00	<0.050
PENNSYLVANIA					
CRAWFORD COUNTY					
CW2409	<0.200	<0.050	E0.006	<5.00	<0.050
CW2410	<0.200	<0.050	E0.008	<5.00	E0.005
CW2411	<0.200	<0.050	E0.007	<5.00	<0.050
CW2412	<0.200	<0.050	E0.020	<5.00	<0.050
CW2413	<0.200	<0.050	E0.080	<5.00	<0.050
CW2414	<0.200	<0.050	E0.020	<5.00	<0.050
CW2415	E0.410	<0.050	<0.050	<5.00	<0.050
ERIE COUNTY					
ER7001	<0.200	<0.050	<0.050	<5.00	<0.050
ER4007	<0.200	<0.050	<0.050	<5.00	<0.050
ER5003	<0.200	<0.050	<0.050	<5.00	<0.050
ER2501	<0.200	<0.050	<0.050	<5.00	<0.050
ER2004	<0.200	<0.050	E0.010	<5.00	<0.050
MCKEAN COUNTY					
MC0123	E0.200	<0.050	<0.050	<5.00	<0.050
MC0124	<0.200	<0.050	E0.020	<5.00	<0.050
WARREN COUNTY					
WR0835	<0.200	<0.050	<0.050	<5.00	<0.050
WR0836	<0.200	<0.050	1.70	<5.00	<0.050

INDEX

Page		Page
	ABBREVIATIONS, EXPLANATION OF	
19	PARAMETER CODE.....	
15	ACCESS TO USGS WATER DATA.....	
16	ACRE-FOOT, DEFINITION OF.....	
16	ADENOSINE TRIPHOSPHATE, DEFINITION OF.....	
xiv	ADDRESSES, OFFICE.....	
30	AGENCY CODES, EXPLANATION OF.....	
16	ALGAE, DEFINITION OF.....	
16	ALGAL GROWTH POTENTIAL, DEFINITION OF.....	
58	ALLEGHENY RESERVOIR.....	
34	ALLEGHENY RIVER, AT ELDRED.....	
74	AT FRANKLIN.....	
94	AT KITTANNING.....	
144	AT NATRONA.....	
146	AT NEW KENSINGTON.....	
86	AT PARKER.....	
32	AT PORT ALLEGANY.....	
38	AT SALAMANCA, NY.....	
270	AT WARREN.....	
56	AT WEST HICKORY.....	
58	ALLEGHENY RIVER BASIN, LAKES AND RESERVOIRS IN.....	
16	ANNUAL RUNOFF, DEFINITION OF.....	
17	ANNUAL 7-DAY MINIMUM, DEFINITION OF.....	
16	AQUIFER, DEFINITION OF.....	
16	ARTESIAN, DEFINITION OF.....	
21	ARTIFICIAL SUBSTRATE, DEFINITION OF.....	
16	ASH MASS, DEFINITION OF.....	
16	BACTERIA, DEFINITION OF.....	
17	BASE DISCHARGE, DEFINITION OF.....	
260	BEAVER RIVER, AT BEAVER FALLS.....	
252	AT WAMPUM.....	
262	BEAVER RIVER BASIN, LAKES AND RESERVOIRS IN.....	
20	BED LOAD, DEFINITION OF.....	
20	BED LOAD DISCHARGE (TONS PER DAY), DEFINITION OF.....	
16	BED MATERIAL, DEFINITION OF.....	
16	BIOCHEMICAL OXYGEN DEMAND, DEFINITION OF.....	
16	BIOMASS, DEFINITION OF.....	
130	BLACKLICK CREEK AT JOSEPHINE.....	
270	BLOOMING VALLEY, WOODCOCK CREEK AT.....	
19	BLUE-GREEN ALGAE, DEFINITION OF.....	
	BOTTOM MATERIAL: SEE BED MATERIAL	
234	BRADDOCK, MONONGAHELA RIVER AT.....	
272	BRADFORD, TUNUNGWANT CREEK AT.....	
268	BRANDY RUN NEAR GIRARD.....	
44	BROKENSTRAW CREEK AT YOUNGVILLE.....	
142	BUFFALO CREEK NEAR FREEPORT.....	
272	CALLENSBURG, CLARION RIVER AT.....	
242	CARNEGIE, CHARTIERS CREEK AT.....	
212	CASSELMAN RIVER, AT GRANTSVILLE, MD.....	
214	AT MARKLETON.....	
17	CELLS/VOLUME, DEFINITION OF.....	
17	CFS-DAY, DEFINITION OF.....	
242	CHARTIERS CREEK AT CARNEGIE.....	
58	CHAUTAUQUA LAKE.....	
180	CHEAT RIVER NEAR MOUNT NEBO, WV.....	
17	CHEMICAL OXYGEN DEMAND (COD), DEFINITION OF.....	
273	CHERRY HILL, CONNEAUT CREEK NEAR.....	
17	CHLOROPHYLL, DEFINITION OF.....	
272	CLARION RIVER, AT CALLENSBURG.....	
82	AT COOKSBURG.....	
271	AT JOHNSONBURG.....	
272	AT RIDGWAY.....	
84	NEAR PINEY.....	
80	WEST BRANCH, AT WILCOX.....	
78	CLARION RIVER BASIN, LAKES AND RESERVOIRS IN.....	
29	CODES, REMARK, EXPLANATION OF.....	
30	AGENCY, EXPLANATION OF.....	
17	COLOR UNIT, DEFINITION OF.....	
128	CONEMAUGH RIVER AT SEWARD.....	
42	CONEWANGO CREEK AT RUSSELL.....	
222	CONFLUENCE, YOUGHIOGHENY RIVER BELOW.....	
266	CONNEAUT CREEK, AT CONNEAUT, OH.....	
273	NEAR CHERRY HILL.....	
224	CONNELLSVILLE, YOUGHIOGHENY RIVER AT.....	
273	CONNOQUENESSING CREEK, AT RENFREW.....	
254	NEAR ZELIENOPLE.....	
31	CONSTITUENT DEFINITIONS.....	
17	CONTENTS, DEFINITION OF.....	
17	CONTINUOUS-RECORD STATION, DEFINITION OF.....	
17	CONTROL, DEFINITION OF.....	
17	CONTROL STRUCTURE, DEFINITION OF.....	
82	COOKSBURG, CLARION RIVER AT.....	
1	COOPERATION.....	
	CREST-STAGE PARTIAL-RECORD STATIONS, ANNUAL MAXIMUM DISCHARGE AT.....	270
	CROOKED CREEK AT IDAHO.....	112
	CUBIC FEET PER SECOND PER SQUARE MILE (CFSM), [(ft ³ /s)/mi ²], DEFINITION OF.....	17
	CUBIC FOOT PER SECOND (CFS), (ft ³ /s), DEFINITION OF.....	17
	DATA COLLECTION PLATFORM (DCP), DEFINITION OF.....	17
	DATA LOGGER, DEFINITION OF.....	17
	DEEP CREEK RESERVOIR.....	242
	DEER CREEK NEAR DORSEYVILLE.....	152
	DEFINITION OF TERMS.....	16
	DIATOMS, DEFINITION OF.....	19
	DISCHARGE, ANNUAL 7-DAY MINIMUM, DEFINITION OF AT MISCELLANEOUS SITES.....	272
	AT PARTIAL-RECORD STATIONS.....	271
	BASE, DEFINITION OF.....	17
	DEFINITION OF.....	17
	INSTANTANEOUS, DEFINITION OF.....	17
	MEAN, DEFINITION OF.....	17
	DISCONTINUED SURFACE-WATER DISCHARGE STATIONS.....	x
	DISCONTINUED SURFACE-WATER-QUALITY STATIONS.....	xiii
	DISSOLVED, DEFINITION OF.....	17
	DISSOLVED-SOLIDS CONCENTRATION, DEFINITION OF.....	17
	DORSEYVILLE, DEER CREEK NEAR.....	152
	DOWNSTREAM ORDER SYSTEM, EXPLANATION OF.....	6
	DRAINAGE AREA, DEFINITION OF.....	17
	DRAINAGE BASIN, DEFINITION OF.....	17
	DRY MASS, DEFINITION OF.....	16
	DUNKARD CREEK AT SHANNOPIN.....	192
	EAST CONEMAUGH, LITTLE CONEMAUGH RIVER AT.....	271
	EAST BRANCH CLARION RIVER LAKE.....	78
	EAST HICKORY CREEK NEAR QUEEN.....	46
	EDINBURG, MAHONING RIVER AT.....	273
	ELDRED, ALLEGHENY RIVER AT.....	34
	ELIZABETH, MONONGAHELA RIVER AT.....	208
	ERIE, MILL CREEK AT.....	271
	ESTIMATED (E) VALUES, DEFINITION OF.....	18
	ETNA, LITTLE PINE CREEK NEAR.....	176
	EXPLANATION OF:	
	GROUND-WATER LEVEL RECORDS.....	13
	GROUND-WATER-QUALITY RECORDS.....	14
	RECORDS.....	5
	STAGE AND WATER-DISCHARGE RECORDS.....	6
	SURFACE-WATER-QUALITY-RECORDS.....	10
	FECAL COLIFORM BACTERIA, DEFINITION OF.....	16
	FECAL STREPTOCOCCAL BACTERIA, DEFINITION OF.....	16
	FERNDALE, STONEYCREEK RIVER AT.....	116
	FIVE POINTS, SOUTH BRANCH PLUM CREEK AT.....	96
	FOOTNOTES.....	29
	FRANKLIN, ALLEGHENY RIVER AT.....	74
	FREEPORT, BUFFALO CREEK NEAR.....	142
	FRENCH CREEK, AT MEADVILLE.....	64
	AT UTICA.....	66
	AT VENANGO.....	272
	NEAR WATTSBURG.....	62
	FRENCH CREEK BASIN, LAKES AND RESERVOIRS IN.....	73
	FRIENDSVILLE, MD., YOUGHIOGHENY RIVER AT.....	210
	GAGE HEIGHT (G.H.), DEFINITION OF.....	18
	GAGING STATION, DEFINITION OF.....	18
	GAGING STATION, DISCONTINUED, LIST OF.....	x
	LIST OF, IN DOWNSTREAM ORDER.....	vii
	GIRARD, BRANDY RUN NEAR.....	268
	GRACETON, TWO LICK CREEK AT.....	136
	GRANTSVILLE, MD., CASSELMAN RIVER AT.....	212
	GREEN ALGAE, DEFINITION OF.....	19
	GREENVILLE, LITTLE SHENANGO RIVER AT.....	248
	GROUND-WATER RECORDS, LIST OF, BY COUNTY.....	310
	GUFFEY, KINZUA CREEK NEAR.....	40
	HARDNESS, DEFINITION OF.....	18
	HARMONY, LITTLE CONNOQUENESSING CREEK NEAR.....	273
	HOMER CITY, YELLOW CREEK NEAR.....	134
	HYDROLOGIC BENCH-MARK NETWORK, DEFINITION OF.....	5, 18
	HYDROLOGIC CONDITIONS, SUMMARY OF.....	2
	HYDROLOGIC UNIT, DEFINITION OF.....	18
	IDAHO, CROOKED CREEK AT.....	112
	INCHES (IN), DEFINITION OF.....	16
	INSTANTANEOUS DISCHARGE, DEFINITION OF.....	17
	INTRODUCTION.....	1

INDEX-Continued

	Page		Page
JOHNSONBURG, CLARION RIVER AT.....	271	ORGANISM COUNT/VOLUME, DEFINITION OF.....	19
JOSEPHINE, BLACKLICK CREEK AT.....	130	OSWAYO CREEK AT SHINGLEHOUSE.....	36
KINGSTON, LOYALHANNA CREEK AT.....	138	OTHER RECORDS AVAILABLE.....	10
KINZUA CREEK NEAR GUFFEY.....	40	PARAMETER CODE, DEFINITION OF.....	19
KISKIMINETAS RIVER AT VANDERGRIFT.....	140	ABBREVIATIONS, EXPLANATIONS OF.....	31
KISKIMINETAS RIVER BASIN, LAKES IN.....	132	PARKER, ALLEGHENY RIVER AT.....	86
KITTANNING, ALLEGHENY RIVER AT.....	94	PARTIAL-RECORD STATIONS, DEFINITION OF.....	19
LABORATORY MEASUREMENTS, EXPLANATION OF.....	12	DISCHARGE AT.....	270
LAKE ARTHUR.....	262	PARTICLE SIZE, DEFINITION OF.....	19
LAKES AND RESERVOIRS:		PARTICLE-SIZE CLASSIFICATION, DEFINITION OF.....	19
ALLEGHENY RESERVOIR.....	58	PERCENT COMPOSITION, DEFINITION OF.....	19
CHAUTAUQUA LAKE.....	58	PERIPHYTON, DEFINITION OF.....	19
DEEP CREEK RESERVOIR.....	241	PESTICIDES, DEFINITION OF.....	19
EAST BRANCH CLARION RIVER LAKE.....	78	PHYTOPLANKTON, DEFINITION OF.....	19
LAKE ARTHUR.....	262	PICOCURIE, DEFINITION OF.....	19
PYMATUNING RESERVOIR.....	262	PINEY, CLARION RIVER NEAR.....	84
TYGART LAKE.....	178	PLANKTON, DEFINITION OF.....	19
YELLOW CREEK LAKE.....	132	POLYCHLORINATED BIPHENYLS (PCBs),	
YOUGHIOGHENY RIVER LAKE.....	241	DEFINITION OF.....	20
UNION CITY RESERVOIR.....	73	PORT ALLEGANY, ALLEGHENY RIVER AT.....	32
WOODCOCK CREEK LAKE.....	73	PORTERSVILLE, MUDDY CREEK NEAR.....	256
LAND-SURFACE DATUM (LSD), DEFINITION OF.....	18	POTATO CREEK AT SMETHPORT.....	270
LATITUDE-LONGITUDE SYSTEM, EXPLANATION OF.....	6	PRIMARY PRODUCTIVITY, DEFINITION OF.....	19
LAUREL HILL CREEK AT URSINA.....	216	PUBLICATIONS ON TECHNIQUES OF WATER-	
LITTLE CONEMAUGH RIVER AT EAST CONEMAUGH.....	271	RESOURCES INVESTIGATIONS.....	23
LITTLE CONNOQUENESSING CREEK AT HARMONY.....	273	PUNKSUTAWNEY, MAHONING CREEK AT.....	90
LITTLE MAHONING CREEK AT McCORMICK.....	92	PYMATUNING DAM, SHENANGO RIVER AT.....	246
LITTLE PINE CREEK NEAR ETNA.....	176	PYMATUNING RESERVOIR.....	262
LITTLE SHENANGO RIVER AT GREENVILLE.....	248		
LOGGER, DATA, DEFINITION OF.....	17	Q7-10, DEFINITION OF.....	17, 20
LOYALHANNA CREEK AT KINGSTON.....	138	QUEEN, EAST HICKORY CREEK NEAR.....	46
LYNCH, TIONESTA CREEK AT.....	272		
MAHONING CREEK AT PUNKSUTAWNEY.....	90	RACCOON CREEK AT MOFFATTS MILL.....	264
MAHONING RIVER AT EDINBURG.....	273	RADIOCHEMICAL PROGRAM, DEFINITION OF.....	20
MARKLETON, CASSELMAN RIVER AT.....	214	RASSELAS, SEVENMILE RUN NEAR.....	76
MASONTOWN, MONONGAHELA RIVER NEAR.....	204	RECORDS OF STAGE AND WATER DISCHARGE,	
McCORMICK, LITTLE MAHONING CREEK AT.....	92	EXPLANATION OF.....	5
MEADVILLE, FRENCH CREEK AT.....	64	RECOVERABLE FROM BOTTOM MATERIAL,	
MEAN CONCENTRATION, DEFINITION OF.....	20	DEFINITION OF.....	20
MEAN DISCHARGE (MEAN), DEFINITION OF.....	17	RECURRENCE INTERVAL, DEFINITION OF.....	20
MEASURING POINT (MP), DEFINITION OF.....	18	REDBANK CREEK AT ST. CHARLES.....	88
METAMORPHIC STAGE, DEFINITION OF.....	18	REDSTONE CREEK AT WALTERSBURG.....	206
METHYLENE BLUE ACTIVE SUBSTANCE (MBAS),		REMARK CODES.....	29
DEFINITION OF.....	18	RENFREW, CONNOQUENESSING CREEK AT.....	273
MICROGRAMS PER GRAM ($\mu\text{g/g}$), DEFINITION OF.....	18	RESERVOIRS, SEE LAKES AND RESERVOIRS	
MICROGRAMS PER LITER ($\mu\text{g/L}$, $\mu\text{g/L}$),		RIDGWAY, CLARION RIVER AT.....	272
DEFINITION OF.....	18	ROUSEVILLE, OIL CREEK AT.....	60
MILL CREEK AT ERIE.....	271	RUNOFF IN INCHES (IN, in), DEFINITION OF.....	20
MILLIGRAMS PER LITER (MG/L, mg/L),		RUSSELL, CONEWANGO CREEK AT.....	42
DEFINITION OF.....	18		
MISCELLANEOUS RECORD SITE, DEFINITION OF.....	18	ST. CHARLES, REDBANK CREEK AT.....	88
DISCHARGE AT.....	270	SALAMANCA, NY., ALLEGHENY RIVER AT.....	38
MOFFATTS MILL, RACCOON CREEK AT.....	264	SEA LEVEL (also see NATIONAL GEODETIC VERTICAL	
MONONGAHELA RIVER, AT BRADDOCK.....	234	DATUM OF 1929).....	20
AT ELIZABETH.....	208	SEDIMENT, DEFINITION OF.....	20
NEAR MASONTOWN.....	204	7-DAY 10-YEAR LOW FLOW (Q7,10), DEFINITION OF.....	17, 20
MONONGAHELA RIVER BASIN, LAKES AND		SEVENMILE RUN AT RASSELAS.....	76
RESERVOIRS IN.....	214	SEWARD, CONEMAUGH RIVER AT.....	128
MOOREHEADVILLE, TWELVEMILE CREEK AT.....	273	SEWICKLEY, OHIO RIVER AT.....	244
MOUNT NEBO, WV., CHEAT RIVER NEAR.....	180	SHANNOPIN, DUNKARD CREEK AT.....	192
MUDDY CREEK NEAR PORTERSVILLE.....	256	SHENANGO RIVER, AT NEW CASTLE.....	273
		AT PYMATUNING DAM.....	246
NATIONAL ATMOSPHERIC DEPOSITION PROGRAM.....	5	NEAR TRANSFER.....	250
NATIONAL GEODETIC VERTICAL DATUM OF 1929		SHINGLEHOUSE, OSWAYO CREEK AT.....	36
(NGVD), DEFINITION OF.....	18	SLIPPERY ROCK CREEK AT WURTEMBURG.....	258
NATIONAL STREAM QUALITY ACCOUNTING NETWORK		SMETHPORT, POTATO CREEK AT.....	270
(NASQAN), DEFINITION OF.....	5	SODIUM-ADSORPTION-RATIO (SAR), DEFINITION OF.....	20
NATIONAL TRENDS NETWORK, DEFINITION OF.....	5	SOLUTE, DEFINITION OF.....	20
NATIONAL WATER-QUALITY ASSESSMENT PROGRAM		SOUTH BRANCH PLUM CREEK AT FIVE POINTS.....	96
(NAWQA), DEFINITION OF.....	5, 18	SPECIAL NETWORKS AND PROGRAMS.....	5
NATRONA, ALLEGHENY RIVER AT.....	144	SPECIAL NOTES, REMARK CODES.....	29
NATURAL SUBSTRATE, DEFINITION OF.....	21	SPECIFIC CONDUCTANCE, DEFINITION OF.....	20
NEW CASTLE, SHENANGO RIVER AT.....	273	STAGE-DISCHARGE RELATION, DEFINITION OF.....	21
NEW KENSINGTON, ALLEGHENY RIVER AT.....	146	STAGE AND WATER-DISCHARGE RECORDS,	
NORTH FORK BENS CREEK AT NORTH FORK		EXPLANATION OF.....	6
RESERVOIR.....	114	STATION IDENTIFICATION NUMBERS.....	5
NUMBERING SYSTEM FOR WELLS AND MISCELLANEOUS		STONYCREEK RIVER AT FERNDALE.....	116
SITES.....	6	STREAMFLOW, DEFINITION OF.....	21
OFFICE ADDRESSES.....	xiv	SUBSTRATE, DEFINITION OF.....	21
OHIO RIVER AT SEWICKLEY.....	244	SUGAR CREEK AT SUGARCREEK.....	272
OIL CREEK AT ROUSEVILLE.....	60	SUMMARY OF HYDROLOGIC CONDITIONS.....	2
ON SITE MEASUREMENT AND SAMPLE COLLECTION.....	11	SURFACE AREA, DEFINITION OF.....	21
ORGANIC MASS, DEFINITION OF.....	16	SURFICIAL BED MATERIAL, DEFINITION OF.....	21
ORGANISM, DEFINITION OF.....	18	SURROGATE, DEFINITION OF.....	21
ORGANISM COUNT/AREA, DEFINITION OF.....	18	SUSPENDED, DEFINITION OF.....	21
		SUSPENDED, RECOVERABLE, DEFINITION OF.....	21
		SUSPENDED, TOTAL, DEFINITION OF.....	21
		SUSPENDED-SEDIMENT, DEFINITION OF.....	20

INDEX--CONTINUED

	Page		Page
SUSPENDED-SEDIMENT CONCENTRATION, DEFINITION OF.....	20	VANDERGRIFT, KISKIMINETAS RIVER AT.....	140
SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), DEFINITION OF.....	20	VENANGO, FRENCH CREEK AT.....	272
SUSPENDED-SEDIMENT LOAD, DEFINITION OF.....	20	WALTERSBURG, REDSTONE CREEK AT.....	206
SUTERSVILLE, YOUGHIOGHENY RIVER AT.....	226	WAMPUM, BEAVER RIVER AT.....	252
TAXONOMY, DEFINITION OF.....	21	WARREN, ALLEGHENY RIVER AT.....	270
TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS, PUBLICATIONS ON.....	23	WATER YEAR, DEFINITION OF.....	22
THERMOGRAPH, DEFINITION OF.....	21	WATER-QUALITY RECORDS, EXPLANATION OF.....	10
TIME-WEIGHTED AVERAGE, DEFINITION OF.....	21	WATER-QUALITY STATIONS, DISCONTINUED, LIST OF.....	x11
TIONESTA CREEK AT LYNCH.....	272	WATTSBURG, FRENCH CREEK NEAR.....	62
TONS PER ACRE-FOOT, DEFINITION OF.....	21	WDR (WATER DATA REPORTS), DEFINITION OF.....	22
TONS PER DAY (T/DAY), DEFINITION OF.....	21	WEIGHTED AVERAGE, DEFINITION OF.....	22
TOTAL, DEFINITION OF.....	22	WEST BRANCH CLARION RIVER AT WILCOX.....	80
TOTAL COLIFORM BACTERIA, DEFINITION OF.....	16	WEST HICKORY, ALLEGHENY RIVER AT.....	56
TOTAL DISCHARGE, DEFINITION OF.....	22	WET MASS, DEFINITION OF.....	16
TOTAL ORGANISM COUNT, DEFINITION OF.....	19	WILCOX, WEST BRANCH CLARION RIVER AT.....	80
TOTAL, RECOVERABLE, DEFINITION OF.....	22	WOODCOCK CREEK AT BLOOMING VALLEY.....	270
TOTAL SEDIMENT DISCHARGE (TONS/DAY), DEFINITION OF.....	20	WOODCOCK CREEK LAKE.....	73
TOTAL SEDIMENT LOAD, DEFINITION OF.....	20	WSP ((WATER-SUPPLY PAPER), DEFINITION OF.....	22
TRANSFER, SHENANGO RIVER NEAR.....	250	WURTEMBERG, SLIPPERY ROCK CREEK AT.....	258
TUNUNGWANT CREEK AT BRADFORD.....	272	YELLOW CREEK NEAR HOMER CITY.....	134
TWELVEMILE CREEK AT MOOREHEADVILLE.....	273	YELLOW CREEK LAKE.....	132
TWO LICK CREEK AT GRACETON.....	136	YOUGHIOGHENY RIVER, AT CONNELLSVILLE.....	224
TYGART LAKE.....	178	AT FRIENDSVILLE, MD.....	210
UNION CITY RESERVOIR.....	73	AT SUTERSVILLE.....	226
URSINA, LAUREL HILL CREEK AT.....	216	BELOW CONFLUENCE.....	222
UTICA, FRENCH CREEK AT.....	66	YOUGHIOGHENY RIVER LAKE.....	241
		YOUNGSVILLE, BROKENSTRAW CREEK AT.....	44
		ZELIENOPLE, CONNOQUENESSING CREEK NEAR.....	254
		ZOOPLANKTON, DEFINITION OF.....	19

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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