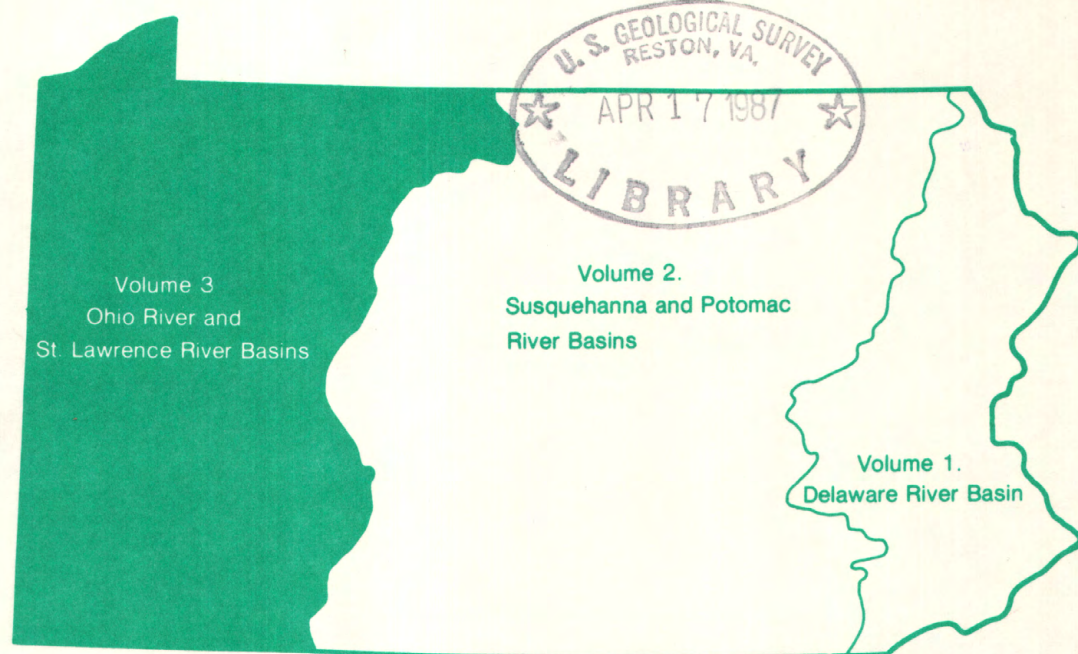


Water Resources Data Pennsylvania Water Year 1985

Volume 3. Ohio River and St. Lawrence
River Basins



U.S. GEOLOGICAL SURVEY WATER-DATA REPORT PA-85-3
Prepared in cooperation with the Pennsylvania Department of
Environmental Resources, the U.S. Army Corps of Engineers,
Pittsburgh District, and with other State, municipal
and Federal agencies

CALENDAR FOR WATER YEAR 1985

1984

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

1985

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

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

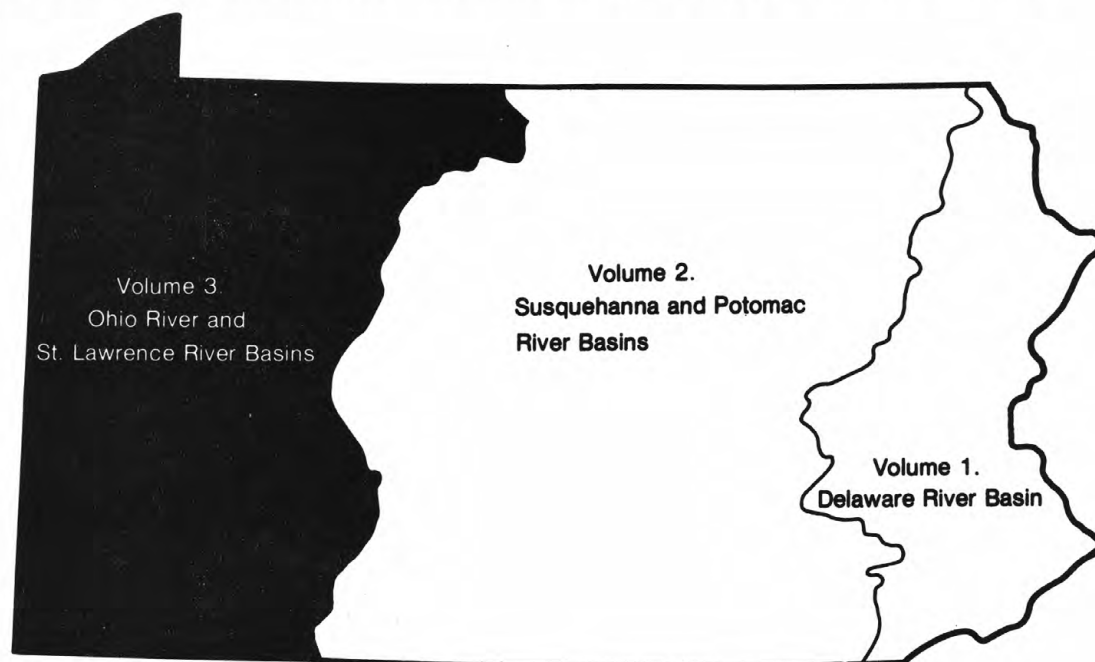
JULY							AUGUST							SEPTEMBER						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
	1	2	3	4	5	6					1	2	3	1	2	3	4	5	6	7
7	8	9	10	11	12	13	4	5	6	7	8	9	10	8	9	10	11	12	13	14
14	15	16	17	18	19	20	11	12	13	14	15	16	17	15	16	17	18	19	20	21
21	22	23	24	25	26	27	18	19	20	21	22	23	24	22	23	24	25	26	27	28
28	29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



Water Resources Data Pennsylvania Water Year 1985

Volume 3. Ohio River and St. Lawrence River Basins

by Joseph B. Lescinsky, Martin B. Coll, Jr., Raymond W. Siwicki



U.S. GEOLOGICAL SURVEY WATER-DATA REPORT PA-85-3
Prepared in cooperation with the Pennsylvania Department of
Environmental Resources, the U.S. Army Corps of Engineers,
Pittsburgh District, and with other State, municipal
and Federal agencies

UNITED STATES DEPARTMENT OF THE INTERIOR

DONALD PAUL HODEL, Secretary

GEOLOGICAL SURVEY

Dallas L. Peck, Director

For additional information write to
District Chief, Water Resources Division
U.S. Geological Survey
P.O. Box 1107
Harrisburg, Pennsylvania 17108
1986

PREFACE

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

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

This report is the culmination of a concerted effort by dedicated personnel of the U.S. Geological Survey who collected, compiled, analyzed, verified, and organized the data, and who typed, edited, and assembled the report. In addition to the authors, who had primary responsibility for assuring that the information contained herein is accurate, complete, and adheres to Geological Survey policy and established guidelines, the following individuals contributed significantly to the collection, processing, and tabulation of the data:

Donald R. Williams	Kenn L. Pattison	John K. Felbinger
Theodore F. Buckwalter	Emitt C. Witt	Thomas M. Noonan
Richard W. McMillan	Thomas M. Mastrilli	Dayne M. Crowley
James I. Sams III	Steven R. Frum	Henry J. Oswick Jr.

Rose M. Drazinski typed the text of the report.

This report was prepared in cooperation with the State of Pennsylvania and with other agencies under the general supervision of David E. Click, District Chief.

50272-101

REPORT DOCUMENTATION PAGE	1. REPORT NO. USGS/WRD/HD-86/251	2.	3. Recipient's Accession No.
4. Title and Subtitle Water Resources Data for Pennsylvania, Water Year 1985 Volume 3, Ohio River and St. Lawrence River Basins			5. Report Date August 1986
7. Author(s) Joseph B. Lescinsky, Martin B. Coll, Jr., and Raymond W. Siwicki			6.
9. Performing Organization Name and Address U.S. Geological Survey Water Resources Division P.O. Box 1107 Harrisburg, Pennsylvania 17108			8. Performing Organization Rept. No. USGS-WDR-85-3
12. Sponsoring Organization Name and Address U.S. Geological Survey Water Resources Division P.O. Box 1107 Harrisburg, Pennsylvania 17108			10. Project/Task/Work Unit No.
			11. Contract(C) or Grant(G) No. (C) (G)
15. Supplementary Notes Prepared in cooperation with the State of Pennsylvania and with other agencies.			13. Type of Report & Period Covered Annual Oct. 1, 1984, to Sept. 30, 1985
			14.
16. Abstract (Limit: 200 words) Water resources data for the 1985 water year for Pennsylvania consists of records discharge and water quality of streams; elevation and contents of lakes and reservoirs; and water levels of ground-water wells. This volume contains records for water discharge at 82 gaging stations; elevations and contents at 3 lakes and reservoirs; and water levels at 39 observation wells. Also included are data for 3 crest-stage, 5 low-flow stations, 43 water quality and 10 ground water-quality partial record stations. Locations of these sites are shown on figures 4 and 5. Additional water data were collected at various sites not involved in the systematic data-collection program and are published as miscellaneous measurements and analysis. 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, local and Federal agencies in Pennsylvania.			
17. Document Analysis a. Descriptors *Pennsylvania, *Hydrologic data, *Ground water, *Surface water, *Water Quality, Gaging Stations, Streamflow, Flow rates, Lakes, Reservoirs, Chemical analysis, Sediments, Water Temperature, Water analysis, Water levels, Water wells, Data collection, Sites. b. Identifiers/Open-Ended Terms c. COSATI Field/Group			
18. Availability Statement: No restriction on distribution. This report may be purchased from: National Technical Information Service, Springfield, VA 22161		19. Security Class (This Report) UNCLASSIFIED	21. No. of Pages 191
		20. Security Class (This Page) UNCLASSIFIED	22. Price

(See ANSI-Z39.18)

See Instructions on Reverse

OPTIONAL FORM 272 (4-77)
(Formerly NTIS-35)
Department of Commerce

CONTENTS

	Page
Preface	III
List of gaging stations, in downstream order, for which records are published	VI
List of ground-water wells, by county, for which records are published.....	VIII
Introduction	1
Cooperation	1
Summary of hydrologic conditions	2
Streamflow	2
Ground-water	3
Water quality	3
Definition of terms	5
Special networks and programs.....	10
Explanation of records.....	11
Downstream order and station numbers.....	11
Numbering system for wells and miscellaneous sites.....	11
Records of stage and water discharge.....	11
Data collection and computation.....	12
Data presentation.....	13
Identifying estimated daily discharge.....	14
Accuracy of the records.....	14
Other records available.....	15
Records of surface-water quality.....	15
Classification of records.....	15
Arrangement of records.....	15
On-site measurements and sample collection.....	15
Water temperature.....	16
Sediment.....	16
Laboratory measurements.....	16
Data presentation.....	17
Remark codes.....	17
Records of ground-water levels.....	18
Data collection and computation.....	18
Data presentation.....	18
Records of ground-water quality.....	19
Data collection and computation.....	19
Data presentation.....	19
Access to WATSTORE Data	19
Publications on Techniques of Water-Resources Investigations	20
Station records, surface water.....	23
Discharge at partial-record stations and miscellaneous sites	135
Low-flow partial-record stations	135
Crest-stage partial-record stations	136
Miscellaneous sites	137
Analysis of samples collected at water-quality partial-record stations and miscellaneous sites.....	140
Station records, ground water.....	146
Ground water levels.....	146
Quality of ground water.....	185
Index.....	189

ILLUSTRATIONS

Figure 1.--Comparison of discharge at Oil Creek at Rouseville during 1985 water year with median discharge for period 1951-80	2
2.--Relation between mean 1985 seasonal water levels and long-term water levels.....	4
3.--System for numbering wells and miscellaneous sites	11
4-5.--Maps showing:	
4.--Location of data-collection stations and observation wells	21
5.--Location of partial-record data-collection stations	22

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

(Letter after station name designates type of data: (d) discharge, (c) chemical, (b) biological, (t) water temperature, (s) sediment, (r) radiochemical)

	Page
<u>OHIO RIVER BASIN</u>	
Allegheny River (head of Ohio River) at Port Allegheny (d)	23
POTATO CREEK BASIN	
Potato Creek at Smethport (d)	24
Allegheny River at Eldred (d)	25
OSWAYO CREEK BASIN	
Oswayo Creek at Shinglehouse (d)	26
Allegheny River at Salamanca, NY (d)	27
KINZUA CREEK BASIN	
Kinzua Creek near Guffey (d)	28
Allegheny River at Kinzua Dam (d)	29
CONEWANGO CREEK BASIN	
Conewango Creek at Russell (d)	30
BROKENSTRAW CREEK BASIN	
Brokenstraw Creek at Youngsville (d)	31
Allegheny River at West Hickory (d)	32
TIONESTA CREEK BASIN	
Tionesta Creek at Tionesta Dam (d)	33
OIL CREEK BASIN	
Oil Creek at Rouseville (d)	34
FRENCH CREEK BASIN	
French Creek near Wattsburg (d)	35
West Branch French Creek near Lowville (d)	36
French Creek near Union City (d)	37
Woodcock Creek at Blooming Valley (d)	38
Woodcock Creek at Woodcock Creek Dam (d)	39
French Creek at Utica (d)	40
Allegheny River at Franklin (d)	41
CLARION RIVER BASIN	
East Branch Clarion River:	
Sevenmile Run near Rasselas (d)	42
East Branch Clarion River at East Branch Clarion River Dam (d)	43
West Branch Clarion River at Wilcox (d)	44
Clarion River at Johnsonburg (d)	45
Clarion River at Cooksburg (d)	46
Clarion River near Piney (d)	47
Allegheny River at Parker (d)	48
REDBANK CREEK BASIN	
Redbank Creek at St. Charles (d)	49
MAHONING CREEK BASIN	
Mahoning Creek at Punxsutawney (d)	50
Little Mahoning Creek at McCormick (d)	51
Mahoning Creek at Mahoning Creek Dam (d)	52
Allegheny River at Kittanning (d)	53
CROOKED CREEK BASIN	
Crooked Creek at Idaho (d)	54
Crooked Creek at Crooked Creek Dam (d)	55
KISKIMINETAS RIVER BASIN	
Stonycreek River (head of Kiskiminetas River):	
Quemahoning Creek:	
North Branch Quemahoning Creek at Roytown (c)	56
Bens Creek:	
North Fork Bens Creek at North Fork Reservoir (dc).....	57
South Fork Bens Creek near Thomasdale (dc)	59
Stonycreek River at Ferndale (d)	61
Little Conemaugh River at East Conemaugh (d)	62
Conemaugh River (continuation of Stonycreek River) at Seward (d)	63
Blacklick Creek at Josephine (d)	64
Lake in Kiskiminetas River Basin	65
Two Lick Creek:	
Yellow Creek near Homer City (d)	66
Two Lick Creek at Graceton (d)	67
Conemaugh River at Tunnelton (d)	68
Loyalhanna Creek at Kingston (d)	69
Loyalhanna Creek at Loyalhanna Dam (d)	70
Kiskiminetas River at Vandergrift (d)	71
BUFFALO CREEK BASIN	
Buffalo Creek near Freeport (d)	72
Allegheny River at Natrona (d)	73
Allegheny River at New Kensington (cbtsr)	74
PINE CREEK BASIN	
Pine Creek:	
Little Pine Creek near Etna (d)	76

OHIO RIVER BASIN--Continued

	Page
MONONGAHELA RIVER BASIN	
Cheat River:	
Big Sandy Creek:	
Stony Fork near Farmington (c)	77
Stony Fork Tributary near Gibbon Glade (ds).....	78
Stony Fork at Bethel Chapel, near Elliotttsville (c)	82
Stony Fork Tributary No. 4 near Elliotttsville (c)	83
Stony Fork near Elliotttsville (ds).....	84
Dunkard Creek at Shannopin (d)	88
Monongahela River at Greensboro (d)	89
Tenmile Creek:	
Daniels Run near West Zollarsville (dc)	90
South Fork Tenmile Creek at Jefferson (d)	92
Redstone Creek at Waltersburg (d)	93
Monongahela River at Elizabeth (d)	94
Youghiogheny River at Friendsville, MD (d)	95
Youghiogheny River at Youghiogheny River Dam (d)	96
Casselman River at Grantsville, MD (d)	97
Casselman River at Markleton (d)	98
Laurel Hill Creek:	
Fall Creek:	
Blue Hole Creek:	
Garys Run near Barronvale (c)	99
Cole run near Barronvale (c)	100
Laurel Hill Creek at Ursina (d)	101
Youghiogheny River below Confluence (d)	102
Youghiogheny River at Connellsville (d)	103
Youghiogheny River at Sutersville (d)	104
Turtle Creek:	
Abers Creek near Murrys ville (d)	105
Monongahela River at Braddock (dcbts)	106
Ohio River:	
CHARTIERS CREEK BASIN	
Chartiers Creek at Lagonda (dc)	108
Unnamed Tributary No. 2b to Chartiers Creek at Lagonda (dc)	110
Unnamed Tributary No. 1 to Chartiers Creek at Lagonda (c).....	112
Chartiers Creek at Carnegie (d)	113
Ohio River at Sewickley (d)	114
BEAVER RIVER BASIN	
Mahoning River (head of Beaver River):	
Shenango River at Pymatuning Dam (d)	115
Little Shenango River at Greenville (d)	116
Shenango River near Transfer (d)	117
Shenango River at Sharpsville (d)	118
Beaver River at Wampum (d)	119
Connoquenessing Creek near Zelienople (d)	120
Slippery Rock Creek:	
Muddy Creek near Portersville (d)	121
Slippery Rock Creek at Wurtemburg (d)	122
Beaver River at Beaver Falls (dcbts)	123
Lakes and reservoirs in Beaver River Basin	125
RACCOON CREEK BASIN	
Raccoon Creek at Moffatts Mill (d)	126
BUFFALO CREEK BASIN	
Buffalo Creek:	
Brush Run near Buffalo (dc).....	127
WHEELING CREEK BASIN	
Wheeling Creek:	
Enlow Fork near West Finley (dcts)	129
STREAMS TRIBUTARY TO LAKE ERIE	
Conneaut Creek at Conneaut, OH (d)	133
Raccoon Creek near West Springfield (d)	134

VIII

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

GROUND-WATER LEVELS

Page

ALLEGHENY COUNTY

Well 403734080063001 Local number AG:700..... 146

ARMSTRONG COUNTY

Well 404626079344001 Local number AR:77..... 147

BEAVER COUNTY

Well 403006080252301 Local number BV:156..... 148

BUTLER COUNTY

Well 410501079524401 Local number BT:311..... 149

CAMBERIA COUNTY

Well 401935078550601 Local number CA:1..... 150

CRAWFORD COUNTY

Well 413542080245001 Local number CW:413..... 151

ELK COUNTY

Well 412458078324601 Local number EK:108..... 152

ERIE COUNTY

Well 415607080044601 Local number ER:82..... 153

FAYETTE COUNTY

Well 394843079351401 Local number FA:17..... 154

FOREST COUNTY

Well 412823079030601 Local number FO:11..... 155

GREENE COUNTY

Well 394655080014301 Local number GR:118..... 156

Well 394343080195201 Local number GR:543..... 166

Well 395259080270601 Local number GR:801..... 167

Well 395812080264902 Local number GR:803..... 168

Well 395807080265201 Local number GR:804..... 169

Well 394908080211002 Local number GR:806..... 170

Well 394755080102602 Local number GR:808..... 171

Well 394903080021501 Local number GR:810..... 172

Well 394902080021304 Local number GR:811..... 173

Well 395403080110002 Local number GR:813..... 174

Well 395841080042101 Local number GR:814..... 175

Well 395609080135301 Local number GR:815..... 176

INDIANA COUNTY

Well 403702079093301 Local number IN:1..... 157

JEFFERSON COUNTY

Well 410650078575801 Local number JE:23..... 158

LAWRENCE COUNTY

Well 410538080280801 Local number LA:1201..... 159

McKEAN COUNTY

Well 413852078341401 Local number MC:110..... 160

MERCER COUNTY

Well 412350080223701 Local number MR:1364..... 161

SOMERSET COUNTY

Well 400008079142801 Local number SO:2..... 162

WARREN COUNTY

Well 414159079213601 Local number WR:50..... 163

WASHINGTON COUNTY

Well 400233080261301 Local number WS:155..... 164

Well 401312080195801 Local number WS:182..... 177

Well 401323080231901 Local number WS:205..... 178

Well 401744080185001 Local number WS:265..... 179

Well 401849080194501 Local number WS:271..... 180

Well 401806080181001 Local number WS:277..... 181

Well 400348080055902 Local number WS:303..... 182

Well 400627080175201 Local number WS:322..... 183

Well 402419080250301 Local number WS:324..... 184

WESTMORELAND COUNTY

Well 402138079031802 Local number WE:300..... 165

QUALITY OF GROUND WATER

WASHINGTON COUNTY

Well 401328080213801 Local number WS:219..... 185

Well 402419080250301 Local number WS:324..... 185

Well 401246080114901 Local number WS:879..... 185

Well 401439080041601 Local number WS:886..... 185

Well 402742080291601 Local number WS:950..... 185

Well 402212080281901 Local number WS:952..... 185

Well 402653080095401 Local number WS:955..... 185

Well 400816080042701 Local number WS:966..... 185

Well 400658080564001 Local number WS:972..... 185

Spring 400331079550501 Local number WSSP:72..... 187

WATER RESOURCES DATA - PENNSYLVANIA, 1985

INTRODUCTION

The Water Resources Division of the U.S. Geological Survey, in cooperation with State and federal agencies, obtains 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, Volume 1, 2, and 3."

This report, Volume 3, includes records on both surface and ground water in the Ohio and St. Lawrence River Basins. Specifically, it contains: (1) Discharge records for 82 streamflow-gaging stations, for 7 partial-record or miscellaneous streamflow stations, and for 4 crest-stage, partial-record streamflow stations; (2) elevation and content records for 3 lakes and reservoirs; (3) water-quality records for 10 streamflow-gaging stations, for 33 ungaged streamsites, and for 11 wells or springs; and (4) water-level records for 39 observation wells.

This series of annual reports for Pennsylvania began with the 1961 water year report that contained only data relating to the quantities of surface water. For the 1964 water year, a similar report was introduced that contained only data relating to water quality. Beginning with the 1975 water year, the report format was changed to present, in one volume, 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 through 1970 water years, the data were published in two 5-year reports. Data prior to 1961 are included in two reports: "Compilation of Records of Surface Waters of the United States through 1950," and "Compilation of Records of Surface Waters of the United States, October 1950 to September 1960." Data for Pennsylvania are published in Parts 1, 3, 4. Data on chemical quality, temperature, and suspended sediment for the 1941 through 1970 water years were published annually under the title "Quality of Surface Waters of the United States," and water levels for the 1935 through 1974 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 Distribution Branch, Text Products Section, U.S. Geological Survey, 604 South Pickett Street, Alexandria, VA 22304.

Publications similar to this report are published annually by the Geological Survey for all States. These official Survey 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-85-3." For archiving and general distribution, the reports for 1971-74 water years also are identified as water-data reports. These water-data reports are for sale in paper copy or in microfiche by the National Technical Information Service, U.S. Department of Commerce, Springfield, VA 22161.

Additional information, including current prices, for ordering specific reports may be obtained from the District Chief at the address given on the back of title page or by contacting the Information Specialist, telephone (717) 782-3851.

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 descriptions. Organizations that assisted in collecting data through cooperative agreement with the Survey are:

The Pennsylvania State Department of Environmental Resources, Nicholas DeBenedictis, Secretary through the following:

- Office of Resources Management, Patrick J. Solano, Deputy Secretary;
- Bureau of Water Resources Management, John E. McSparran, Director;
- Bureau of Topographic and Geologic Survey, Arthur A. Socolow, Director;
- Office of Environmental Protection, R. Harry Bittle, Deputy Secretary;
- Bureau of Water Quality Management, Louis W. Bercheni, Director;
- Bureau of Mining and Reclamation, Ernest F. Giovannitti, Director.

New York State Department of Environmental Conservation, Henry G. Williams, commissioner.

Washington County Planning Commission, William P. Sember, Executive Director.

Assistance in the form of funds or services was given by: Corps of Engineers, U.S. Army, in collecting records for 60 gaging stations. Assistance was also furnished by the National Weather Service, NOAA, U.S. Department of Commerce, and the Washington County Conservation District.

The following organizations aided in collecting records:

Allegheny Power Service Corp.; Greater Johnstown Water Authority; Latrobe Municipal Authority; Manufactures Water Co.; Municipal Authority of Westmoreland County; and Pennsylvania Electric Co.

Streamflow

Streamflow in western Pennsylvania in the Upper Ohio and St. Lawrence River basins was normal. At the index station for the Ohio River basin--Oil Creek at Rouseville--the mean discharge for the 1985 water year was 92 percent of the median discharge for the 1951-80 reference period. The monthly mean streamflow was in the normal range for the months of October through February, April, June, August and September, whereas the monthly mean streamflow was excessive for the months of March and July. May was the only month for which the monthly mean streamflow was deficient.

A comparison of the monthly and yearly mean discharge for the 1985 water year with that of the 1951-80 reference period for Oil Creek at Rouseville is shown in figure 1.

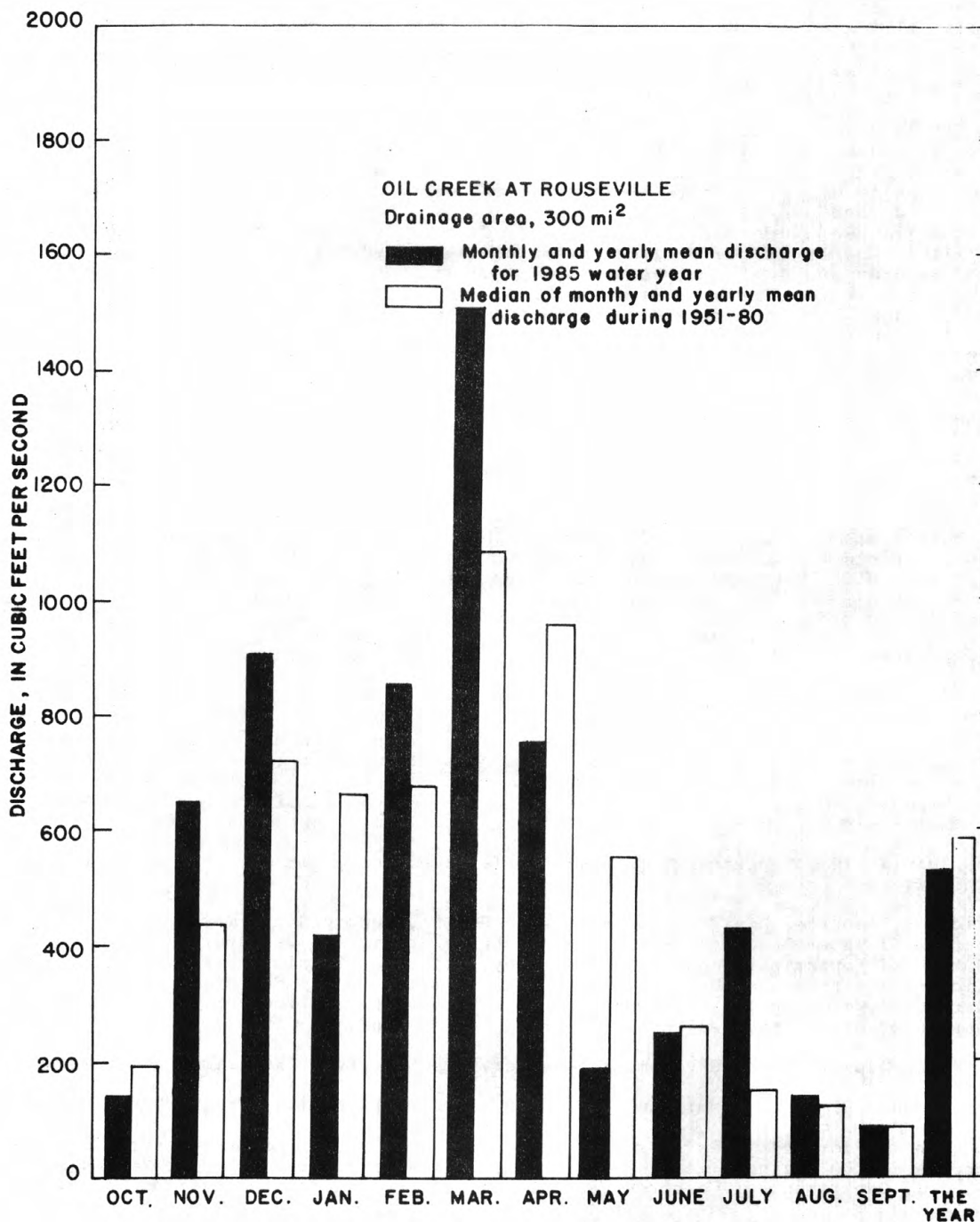


Figure 1.--Comparison of discharge at Oil Creek at Rouseville during the 1985 water year with median discharge for period 1951-80.

Ground Water

3

During the 1985 water year, ground-water levels reached annual highs at most observation wells from late March through early June. Ground-water levels generally declined during the summer and fall because trees and other plants consumed and transpired large quantities of water from the soil and shallow bedrock. Increased rates of evaporation during the summer decreased the amount of precipitation that infiltrated soils. At most observation wells, ground-water levels reached annual lows during October of 1984 and September of 1985. Most wells in the observation well network tap bedrock which consists mostly of sandstone and shale.

Figure 2 shows the seasonal distribution of normal, below-normal, and above-normal water levels. These maps are based on water-level fluctuations in 16 key wells. The water levels of the 1985 water year are averaged by season and compared to the long-term means for these seasons. Water levels during the fall were normal in the southwest and northeast and above normal in the central portion of the Ohio River basin. During the winter and spring the same general conditions prevailed. In the summer, water levels declined to the normal or below normal range in 12 of the 16 wells in the basin.

Water-Quality

The highest dissolved-solids concentrations generally occurred during periods of low flow at all three NASQAN (National Stream Quality Accounting Network) sites. The ratios of dissolved solids to specific conductance for the Allegheny River at New Kensington, the Monongahela River at Braddock, and the Beaver River at Beaver Falls averaged 0.60, 0.68 and 0.62, respectively. The dissolved-oxygen saturation levels were generally the highest on the Allegheny River at New Kensington, with a range between 89 and 106 percent saturation and an average 95 percent saturation. The dissolved-oxygen saturation levels were lowest on the Beaver River at Beaver Falls with a range of 66 to 104 percent saturation and an average 84 percent saturation. The saturation levels on the Monongahela River at Braddock ranged from 72 to 101 percent saturation with an average 97 percent saturation.

Trace-element analyses of samples collected at the three NASQAN sites indicated that all concentrations of arsenic, barium, cadmium, chromium, lead, mercury, selenium and silver were considerably less than U.S. Environmental Protection Agency recommended limits for domestic water supply. Dissolved-manganese concentrations exceeded the recommended limit of 50 ug/L in all samples collected at all three sites.

The following table gives the range and median pH values and the range and mean values for specific conductance and dissolved-solids concentrations at the three NASQAN sites.

	<u>pH</u>			<u>Specific conductance (microsiemens per centimeter at 25° C)</u>			<u>Dissolved solids (milligrams per liter)</u>		
	Max	Min	Median	Max	Min	Mean	Max	Min	Mean
Allegheny River at New Kensington	7.5	6.7	7.1	340	165	262	197	95	157
Monongahela River at Braddock	7.9	6.7	7.2	460	240	310	173	132	157
Beaver River at Beaver Falls	7.9	7.0	7.3	450	280	381	299	172	236

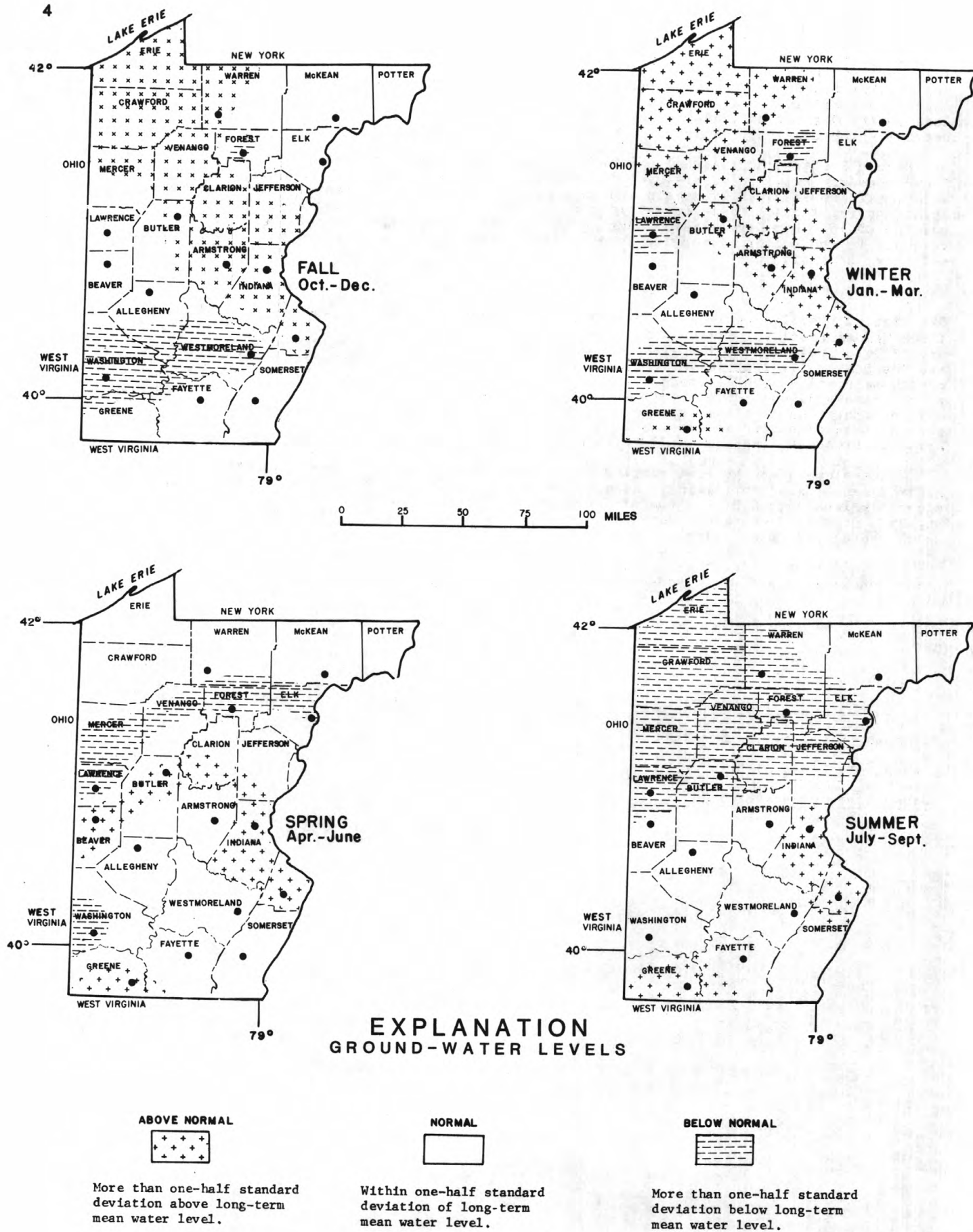


Figure 2.--Relation between mean 1985 seasonal water levels and long-term water levels.

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 of units (SI) on the inside of the back cover.

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

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

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

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

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

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

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 which produce colonies within 24 hours when incubated at 35°C + 1.0°C on M-Endo medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample.

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 which produce blue colonies within 24 hours when incubated at 44.5°C + 0.2°C on M-FC medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample.

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°C + 1.0°C on M-enterococcus 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 60°C for zooplankton and 105°C for periphyton, until the mass remains unchanged. This mass represents the total organic matter, ash, and sediment in the sample. Dry mass values are expressed in the same units as ash mass.

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

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

Bottom material: See Bed material.

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

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

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

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

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 (CFSM) 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, ft³/s) is the rate of discharge representing a volume of 1 cubic foot passing a given point during 1 second and is equivalent to approximately 7.48 gallons per second or 448.8 gallons per minute or 0.02832 cubic meters per second.

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.

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

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

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

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

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

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

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

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

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

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

Hardness of water is a physical-chemical characteristic that is commonly recognized by the increased quantity of soap required to produce lather. It is attributable to the presence of alkaline earths (principally calcium and magnesium) and is expressed as equivalent calcium carbonate (CaCO₃).

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.

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 detergent compounds.

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

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

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

National Geodetic Vertical Datum of 1929 (NGVD) 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.

Organism is any living entity, such as an insect, phytoplankter, or zooplankter.

Organism count/area refers to the number of organisms collected and enumerated in a sample and adjusted to the number per area habitat, usually square meters (m²), acres, or hectares. Periphyton benthic organisms, and macrophytes are expressed in these terms.

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

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

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 suspended sediment or bed material 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:

Classification	Size (mm)	Method of analysis
Clay	0.00024 - 0.004	Sedimentation.
Silt	0.004 - 0.062	Sedimentation.
Sand	0.062 - 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.

Pesticides are chemical compounds used to control undesirable plants and animals. Major categories of pesticides include insecticides, miticides, fungicides, herbicides, and rodenticides. Insecticides and herbicides, which control insects and plants respectively, are the two categories reported.

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

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

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

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

Diatoms are the unicellular or colonial algae having a siliceous shell. Their concentrations are expressed as number of cells/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/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.

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.

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.

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

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

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).

Suspended-sediment discharge (tons/day) is the rate at which dry weight of sediment passes a section of a stream or is the quantity of sediment, as measured by dry weight or volume, that passes a section in a given time. It is computed by multiplying discharge times mg/L times 0.0027.

Suspended-sediment load is quantity of suspended sediment passing a section in a specified period.

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 weight or volume, that passes a section during a given time.

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

Solute is any substance derived from the atmosphere, vegetation, soil, or rocks 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 micromhos per centimeter at 25°C (UMHOS). In the future specific conductance will be expressed in microsiemens per centimeter at 25°C (uS/cm). 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 micromhos). This relation is not constant from stream to stream, and it may vary in the same source with changes in the composition of the water.

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

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

Substrate is the physical surface upon which an organism lived.

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

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

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

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

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

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

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 um membrane filter. This term is used only when the analytical procedure assures measurement of at least 95 percent of the constituent determined. A knowledge of the expected form of the constituent in the sample, as well as the analytical methodology used, is required to determine when the results should be reported as "suspended, total."

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

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

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

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 is the quantity of substance in solution or suspension that passes a stream section during a 24-hour period.

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

Total 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.

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

Total load (tons) is the total quantity of any individual constituent, as measured by dry mass or volume, that is dissolved in a specific amount of water (discharge) during a given time. It is computed by multiplying the total discharge, times the mg/L of the constituent, times the factor 0.0027, times the number of days.

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.

WRD is used as an abbreviation for "Water-Resources Data" in the REVISED RECORDS paragraph to refer to State annual basic-data reports published before 1971.

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

SPECIAL NETWORKS AND PROGRAMS

Hydrologic bench-mark station is one that provides hydrologic data for a basin in which the hydrologic regimen will likely be governed solely by natural conditions. Data collected at a bench-mark station may be used to separate effects of natural from manmade changes in other basins which have been developed and in which the physiography, climate, and geology are similar to those in the undeveloped bench-mark basin.

National stream-quality accounting network (NASQAN) is a data-collection network designed by the U.S. Geological Survey to meet many of the information demands of agencies or groups involved in national or regional water-quality planning and management. Both accounting and broad-scale monitoring objectives have been incorporated into the network design. Areal configuration of the network is based on river-basin accounting units (identified by 8-digit hydrologic-unit numbers) designated by the Office of Water Data Coordination in consultation with the Water Resources Council. Primary objectives of the network are (1) to depict areal variability of streamflow and water-quality conditions nationwide on a year-by-year basis and (2) to detect and assess long-term changes in streamflow and stream quality.

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.

EXPLANATION OF RECORDS

Downstream order and station number

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 and system of indentation show which stations are on tributaries between any two stations and the rank of the tributary on which each station is situated.

The station-identification number is assigned in downstream order. In assigning station numbers, no distinction is made between partial-record stations and other stations; therefore, the station number for a partial-record station indicates downstream-order position in a list made up of both types of stations. Gaps are left in the series of numbers to allow for new stations that may be established; hence, the numbers are not consecutive. A station number can be from 8 to 15 digits and normally appears to the left of the station name. For example, an 8-digit number for a station such as 03041000, includes a 2-digit part number "03" plus a 6-digit downstream order number "410000". The part number designates the major river basin; for example, part "03" is the Ohio River basin.

Numbering system for wells and miscellaneous sites

The 8-digit downstream order station numbers are not assigned to wells and some miscellaneous sites where only random water-quality samples or discharge measurements are taken.

The well and miscellaneous site numbering system of the U.S. Geological Survey is 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 6 digits denote the degrees, minutes, and seconds of latitude, the next 7 digits denote the degrees, minutes, and seconds of longitude, and the last 2 digits (assigned sequentially) identify the wells or other sites with a 1-second grid. See figure 3 below.

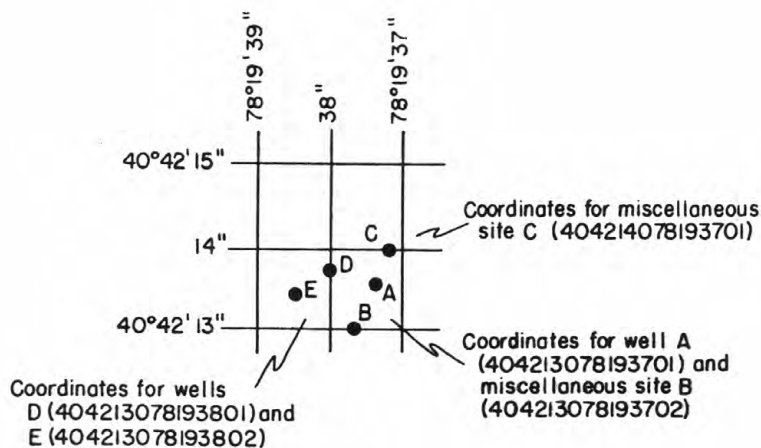


Figure 3.--System for numbering wells and miscellaneous sites (latitude and longitude).

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 or mean daily discharges may be computed for any time, or any period of time, during the period of record. Because daily mean discharges and end-of-day contents commonly are published for such stations, they are referred to as "daily stations" or "continuous record stations."

By contrast, partial records are obtained through discrete measurements without using a continuous stage-recording device and pertain only to a few flow characteristics, or perhaps only one. The nature of the partial record is indicated by table titles such as "Crest-stage partial records," or "Low-flow partial records." 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.

Data Collection and Computation

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

Continuous records of stage are obtained with analog recorders that trace continuous graphs of stage or with digital recorders that punch stage values on paper tapes at selected time intervals. Measurements of discharge are made with current meters using methods adapted by the Geological Survey as a result of experience accumulated since 1880. These methods are described in standard textbooks, in Water-Supply Paper 2175, and in U.S. Geological Survey Techniques of Water-Resources Investigations, Book 3, Chapter A6.

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

Daily mean discharges are computed by applying the daily mean stages (gage heights) 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 in computing discharge.

In computing records of lake or reservoir contents, it is necessary to have available from surveys, curves or tables defining the relationship of 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 relationship changes because of deposition of sediment in the lake or reservoir, periodic resurveys may be necessary to redefine the relationship. Even when this is done, the contents computed may become increasingly in error as time since the last survey increases. Discharges over lake or reservoir spillways are computed from stage-discharge relationships much as other stream discharges are computed.

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

Data Presentation

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

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

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

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

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

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

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

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

AVERAGE DISCHARGE.--The discharge value given is the arithmetic mean of the water-year mean discharges. It is computed only for stations having at least 5 water years of complete record, and only water years of complete record are included in the computation. It is not computed for stations where diversions, storage, or other water-use practices cause the value to be meaningless. If water developments significantly altering flow at a station are put into use after the station has been in operation for a period of years, a new average is computed as soon as 5 water years of record have accumulated following the development. The median of yearly mean discharges also is given under this heading for stations having 10 or more water years of record, if the median differs from the average given by more than 10 percent.

EXTREMES FOR PERIOD OF RECORD.--Extremes may include maximum and minimum stages and maximum and minimum discharges or content. Unless otherwise qualified, the maximum discharge or content is the instantaneous maximum corresponding to the highest stage that occurred. The highest stage may have been obtained from a graphic or digital recorder, a crest-stage gage, or by direct observation of a nonrecording gage. If the maximum stage did not occur on the same day as the maximum discharge or content, it is given separately. Similarly, the minimum is the instantaneous minimum discharge, unless otherwise qualified, and was determined and is reported in the same manner as the maximum.

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

EXTREMES FOR CURRENT YEAR.--Extremes given here are similar to those for the period of record, except the peak discharge listing may include secondary peaks. For stations meeting certain criteria, all peak discharges and stages occurring during the water year and greater than a selected base discharge 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 canals, ditches, drains, or streams for which the peaks are subject to substantial control by man. The time of occurrence for peaks is expressed in 24-hour local standard time. For example, 12:30 a.m. is 0030, and 1:30 p.m. is 1330. The minimum for the current water year appears below the table of peak data.

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

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

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

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

Identifying Estimated Daily Discharge

Estimated daily-discharge values published in the water-discharge tables of annual State data reports are identified either by flagging individual daily values with the letter symbol "e" and printing a table footnote, "e Estimated," or by listing the dates of the estimated record in the REMARKS paragraph of the station description.

Accuracy of the Records

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

The accuracy attributed to the records is indicated under "REMARKS." "Excellent" means that about 95 percent of the daily discharges are within 5 percent of the true; "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; to the nearest tenth between 1.0 and 10 ft³/s; to whole numbers between 10 and 1,000 ft³/s; and to 3 significant figures for more than 1,000 ft³/s. The number of significant figures used is based solely on the magnitude of the discharge value. The same rounding rules apply to discharges listed for partial-record stations and miscellaneous sites.

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

Other Records Available

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

Information on the availability of unpublished data or statistical analyses may be obtained from the district office (telephone number: 717-782-3851).

Records of Surface-Water Quality

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

Classification of records

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

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

Arrangement of Records

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

On-site Measurements and Sample Collection

In obtaining water-quality data, a major concern needs to be assuring that the data obtained represent the in situ quality of the water. To assure this, certain measurements, such as water temperature, pH, and dissolved oxygen, need to be made onsite when the samples are taken. To assure that measurements made in the laboratory also represent the in situ water, carefully prescribed procedures need to be followed in collecting the samples, in treating the samples to prevent changes in quality pending analysis, and in shipping the samples to the laboratory. Procedures for onsite measurements and for collecting, treating, and shipping samples are given in publications on "Techniques of Water-Resources Investigations,.." Book 1, Chap. D2; Book 3, Chap. C2; Book 5, Chap. A1, A3, and A4. All of these references are listed on a following page in this report. Also, detailed information on collecting, treating, and shipping samples may be obtained from the 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 obtained for the National Stream Quality Accounting Network (see definitions) are obtained from at least several verticals. Whether samples are obtained from the centroid of flow or from several verticals, depends on flow conditions and other factors which 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 recorded at 15, 30, or 60 minute intervals for each day. More detailed records (hourly values) may be obtained from the U.S.G.S. District Office whose address is given on the back of the title page of this report.

Water temperature

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

Sediment

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

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

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

Laboratory Measurements

Sediment samples, samples for biochemical-oxygen demand (BOD), samples for indicator bacteria, and daily samples for specific conductance are analyzed locally. All other samples are analyzed in the Geological Survey laboratories in Arvada, Colo., or Doraville, Ga. Methods used in analyzing sediment samples and computing sediment records are given in TWRI, Book 5, Chap. C1. Methods used by the Geological Survey laboratories are given in TWRI, Book 1, Chap. D2; Book 3, Chap. C2; Book 5, Chap. A1, A3, and A4.

Data Presentation

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

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

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

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

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

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

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

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

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

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

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

Remark Codes

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

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

Records of Ground-Water Levels

Ground-water level data from a basic network of observation wells and from ground-water projects are published herein. Location of observation wells in the basic network and observation wells for projects are shown in figure 4.

Data Collection and Computation

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

Tables of water-level data are presented by counties arranged in alphabetical order. The prime identification number for a given well is the 15-digit number that appears in the upper left corner of the table. 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 or from the graph or punched tape of a water-stage recorder. The water-level measurements in this report are given in feet with reference to land-surface datum (lsd). Land-surface datum is a datum plane that is approximately at land surface at each well. If known, the elevation of the land-surface datum is given in the well description. The height of the measuring point (MP) above or below land-surface datum is given in each well description. Water levels in wells equipped with recording gages are reported for each day.

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

Data Presentation

Each well record consists of two parts, the station description and the data table of water levels observed during the water year. The description of the well is presented first through use of descriptive headings preceding the tabular data. The comments to follow clarify information presented under the various headings.

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

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

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

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

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

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

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

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

A table of water levels follows the station description for each well. Water levels are reported in feet below land-surface datum. Wells equipped with recording gages have water levels reported for each day. Missing records are indicated by dashes in place of the water level.

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.

Data Collection and Computation

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

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

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

Data Presentation

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

ACCESS TO WATSTORE DATA

The National Water Data Storage and Retrieval system (WATSTORE) was established for handling water data collected through the activities of the U.S. Geological Survey and to provide for more effective and efficient means of releasing the data to the public. The system is operated and maintained on the central computer facilities of the Survey at its National Center in Reston, Virginia.

WATSTORE can provide a variety of useful products ranging from simple data tables to complex statistical analyses. A minimal fee, plus the actual computer cost incurred in producing a desired product, is charged to the requester. Information about the availability of specific types of data, the acquisition of data or products, and user charges can be obtained locally from each of the Water Resources Division's District offices (see address given on the back of the title page).

General inquiries about WATSTORE may be directed to:

Chief Hydrologist
U.S. Geological Survey
437 National Center
Reston, Virginia 22092

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

The reports listed below are for sale by the U.S. Geological Survey, Branch of Distribution, 604 South Pickett St., Alexandria, VA 22304 (authorized agent of the Superintendent of Documents, Government Printing Office). Prepayment is required. Remittance should be sent by check or money order payable to the U.S. Geological Survey. Prices are not included because they are subject to change. Current prices can be obtained by writing to the above address. When ordering or inquiring about prices for any of these publications, please give the title, book number, chapter number, and "U.S. Geological Survey Techniques of Water-Resources Investigations."

- 1-D1. *Water temperature--influential factors, field measurement, and data presentation*, by H. H. Stevens, Jr., J. F. Ficke, and G. F. Smoot: USGS--TWRI Book 1, Chapter D1. 1975. 65 pages.
- 1-D2. *Guidelines for collection and field analysis of ground-water samples for selected unstable constituents*, by W. W. Wood: USGS--TWRI Book 1, Chapter D2. 1976. 24 pages.
- 2-D1. *Application of surface geophysics to ground-water investigations*, by A. A. R. Zohdy, G. P. Eaton, and D. R. Mabey: USGS--TWRI Book 2, Chapter D1. 1974. 116 pages.
- 2-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.
- 3-A1. *General field and office procedures for indirect discharge measurements*, by M. A. Benson and Tate Dalrymple: USGS--TWRI Book 3, Chapter A1. 1967. 30 pages.
- 3-A2. *Measurement of peak discharge by the slope-area method*, by Tate Dalrymple and M. A. Benson: USGS--TWRI Book 3, Chapter A2. 1967. 12 pages.
- 3-A3. *Measurement of peak discharge at culverts by indirect methods*, by G. L. Bodhaine: USGS--TWRI Book 3, Chapter A3. 1968. 60 pages.
- 3-A4. *Measurement of peak discharge at width contractions by indirect methods*, by H. F. Matthai: USGS--TWRI Book 3, Chapter A4. 1967. 44 pages.
- 3-A5. *Measurement of peak discharge at dams by indirect methods*, by Harry Hulsing: USGS--TWRI Book 3, Chapter A5. 1967. 29 pages.
- 3-A6. *General procedure for gaging streams*, by R. W. Carter and Jacob Davidian: USGS--TWRI Book 3, Chapter A6. 1968. 13 pages.
- 3-A7. *Stage measurements at gaging stations*, by T. J. Buchanan and W. P. Somers: USGS--TWRI Book 3, Chapter A7. 1968. 28 pages.
- 3-A8. *Discharge measurements at gaging stations*, by T. J. Buchanan and W. P. Somers: USGS--TWRI Book 3, Chapter A8. 1969. 65 pages.
- 3-A9. *Measurement of time of travel and dispersion in streams by dye tracing*, by E. F. Hubbard, F. A. Kilpatrick, L. A. Martens, and J. F. Wilson, Jr.: USGS--TWRI Book 3, Chapter A9. 1982. 44 pages.
- 3-A10. *Discharge ratings at gaging stations*, by E. J. Kennedy: USGS--TWRI Book 3, Chapter A10. 1984. 59 pages.
- 3-A11. *Measurement of discharge by moving-boat method*, by G. F. Smoot and C. E. Novak: USGS--TWRI Book 3, Chapter A11. 1969. 22 pages.
- 3-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-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-C1. *Fluvial sediment concepts*, by H. P. Guy: USGS--TWRI Book 3, Chapter C1. 1970. 55 pages.
- 3-C2. *Field methods for measurement of fluvial sediment*, by H. P. Guy and V. W. Norman: USGS--TWRI Book 3, Chapter C2. 1970. 59 pages.
- 3-C3. *Computation of fluvial-sediment discharge*, by George Porterfield: USGS--TWRI Book 3, Chapter C3. 1972. 66 pages.
- 4-A1. *Some statistical tools in hydrology*, by H. C. Riggs: USGS--TWRI Book 4, Chapter A1. 1968. 39 pages.
- 4-A2. *Frequency curves*, by H. C. Riggs: USGS--TWRI Book 4, Chapter A2. 1968. 15 pages.
- 4-B1. *Low-flow investigations*, by H. C. Riggs: USGS--TWRI Book 4, Chapter B1. 1972. 18 pages.
- 4-B2. *Storage analyses for water supply*, by H. C. Riggs and C. H. Hardison: USGS--TWRI Book 4, Chapter B2. 1973. 20 pages.
- 4-B3. *Regional analyses of streamflow characteristics*, by H. C. Riggs: USGS--TWRI Book 4, Chapter B3. 1973. 15 pages.
- 4-D1. *Computation of rate and volume of stream depletion by wells*, by C. T. Jenkins: USGS--TWRI Book 4, Chapter D1. 1970. 17 pages.
- 5-A1. *Methods for determination of inorganic substances in water and fluvial sediments*, by M. W. Skougstad and others, editors: USGS--TWRI Book 5, Chapter A1. 1979. 626 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 analysis of organic substances in water*, by D. F. Goerlitz and Eugene Brown: USGS--TWRI Book 5, Chapter A3. 1972. 40 pages.
- 5-A4. *Methods for collection and analysis of aquatic biological and microbiological samples*, edited by P. E. Greeson, T. A. Ehlike, G. A. Irwin, B. W. Lium, and K. V. Slack: USGS--TWRI Book 5, Chapter A4. 1977. 332 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.
- 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.

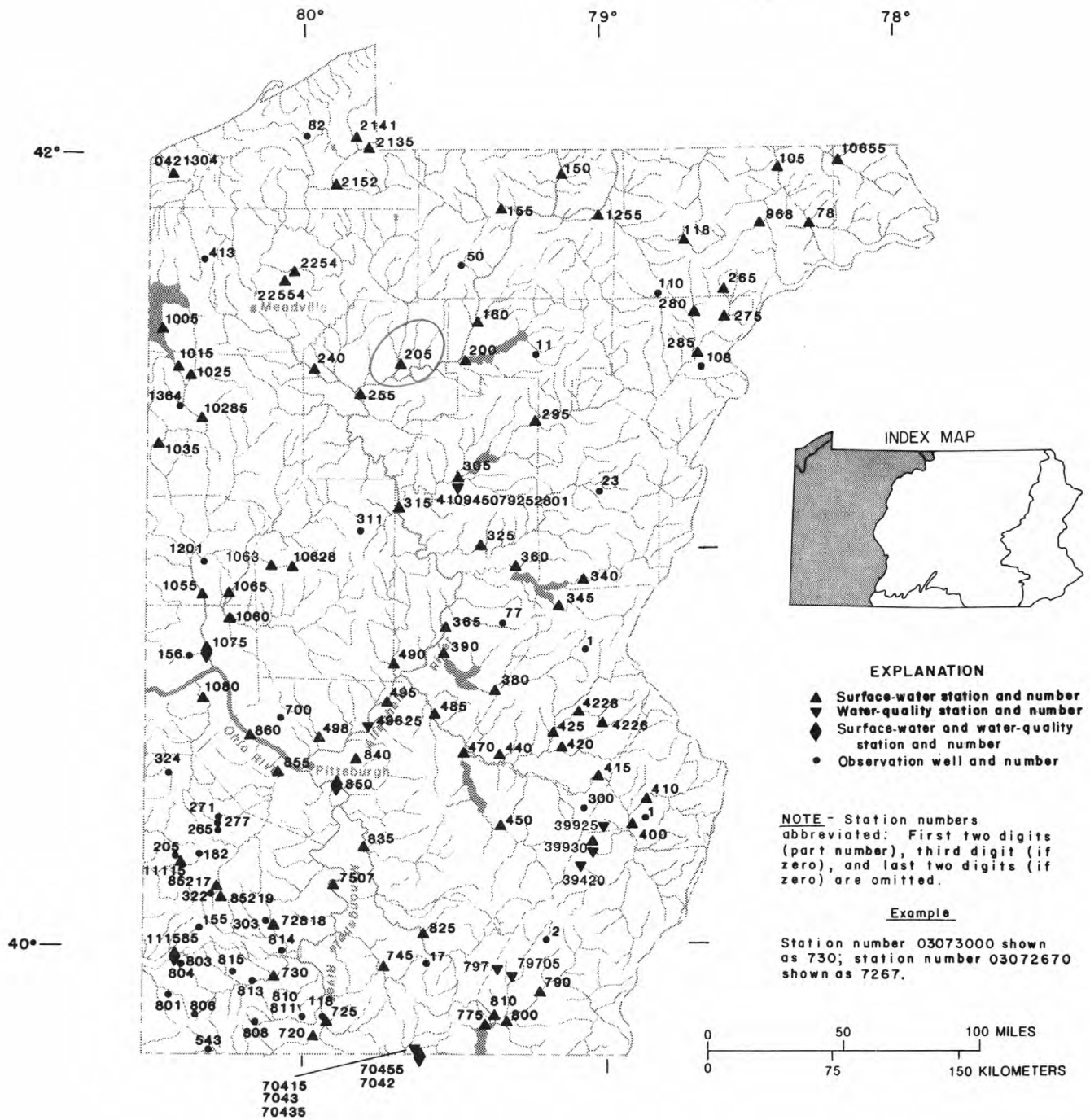


Figure 4.--Location of data-collection stations and observation wells.

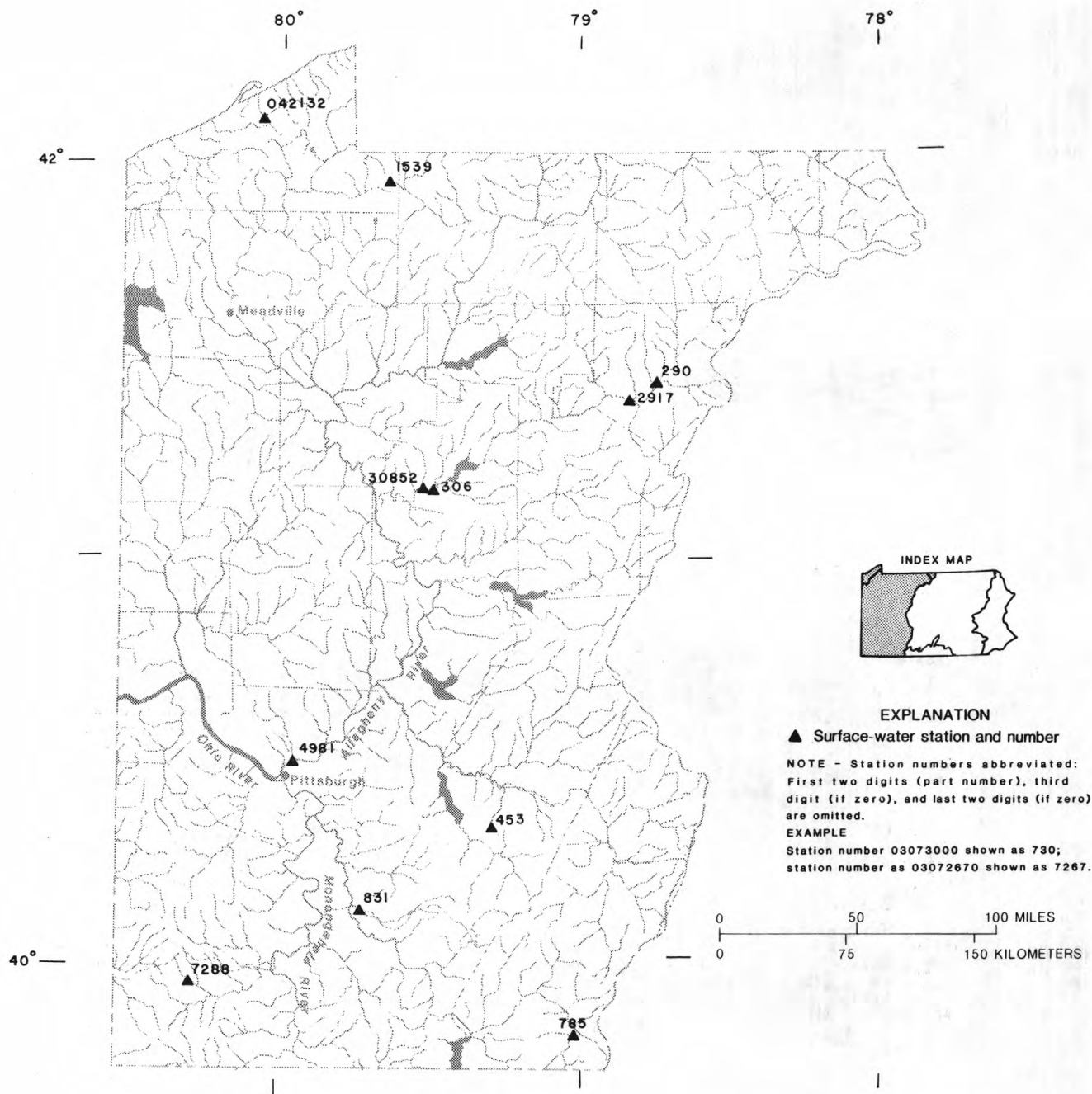


Figure 5.--Location of partial-record data-collection stations.

OHIO RIVER MAIN STEM

23

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, and at mile 285.5.

DRAINAGE AREA.--248 mi².

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

GAGE.--Water-stage recorder. Datum of gage is 1,454.88 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except for estimated daily discharges, Jan.11 to Feb. 24, which are fair. Several observations of water temperature were made during the year. Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--11 years, 476 ft³/s, 26.07 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,900 ft³/s, Feb. 14, 1984, gage height, 12.93 ft; minimum, 16 ft³/s, Sept. 13, 14, 1982, gage height, 1.49 ft.

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 Corps of Engineers discharge measurement.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than 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. 25	0830	*3810	*9.26	Mar. 12	1530	3340	8.67

Minimum discharge, 41 ft³/s, Oct.19, 20, 21, gage height, 1.68 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	65	102	577	1580	100	946	1560	168	997	122	95	82
2	82	110	518	1300	98	815	1490	163	530	113	80	76
3	65	104	667	1070	96	658	1350	175	424	109	71	74
4	59	105	697	944	94	552	1180	152	340	113	65	66
5	55	304	623	828	94	753	1010	143	287	94	61	61
6	51	262	622	673	88	620	914	149	253	89	57	57
7	48	240	534	576	86	534	845	202	208	106	406	56
8	47	220	459	493	84	771	781	158	189	215	532	196
9	48	207	405	381	82	805	689	139	185	304	311	223
10	50	460	380	322	82	756	587	130	161	262	247	225
11	48	607	536	290	80	752	546	124	137	227	207	207
12	46	600	520	260	100	2660	488	122	331	196	174	169
13	43	547	821	240	140	2810	443	130	296	178	150	152
14	42	471	989	220	130	2130	416	111	255	168	142	134
15	42	415	1080	210	120	1530	394	104	216	185	123	118
16	42	384	1000	190	115	1150	374	110	260	218	167	107
17	42	331	911	180	105	979	340	147	291	155	132	98
18	42	295	784	170	98	804	312	254	285	135	103	90
19	42	273	715	160	90	645	301	181	261	121	92	83
20	41	244	676	150	84	587	331	155	303	111	85	77
21	42	222	559	145	80	490	288	142	289	118	80	72
22	55	189	763	140	130	425	270	131	255	292	76	68
23	78	190	692	135	500	515	258	116	264	184	70	65
24	62	186	655	130	1750	856	248	108	231	163	66	67
25	52	176	630	125	3640	913	240	99	199	145	102	69
26	53	165	509	130	2560	871	230	93	176	141	94	59
27	61	156	489	130	1690	849	215	94	160	143	87	82
28	59	204	934	125	1160	856	201	172	148	112	71	89
29	181	595	1870	110	---	1050	191	147	143	98	64	66
30	144	490	2040	105	---	1020	175	106	147	90	89	57
31	116	---	1660	105	---	1150	---	184	---	88	121	---
TOTAL	1903	8854	24315	11617	13476	30252	16667	4409	8221	4795	4220	3045
MEAN	61.4	295	784	375	481	976	556	142	274	155	136	102
MAX	181	607	2040	1580	3640	2810	1560	254	997	304	532	225
MIN	41	102	380	105	80	425	175	93	137	88	57	56
CFSM	.25	1.19	3.16	1.51	1.94	3.94	2.24	.57	1.10	.62	.55	.41
IN.	.29	1.33	3.65	1.74	2.02	4.54	2.50	.66	1.23	.72	.63	.46

CAL YR 1984 TOTAL 215018 MEAN 587 MAX 6890 MIN 41 CFMS 2.37 IN. 32.25
WTR YR 1985 TOTAL 131774 MEAN 361 MAX 3640 MIN 41 CFMS 1.46 IN. 19.77

POTATO CREEK BASIN

03009680 POTATO CREEK AT SMETHPORT, PA

LOCATION.--Lat 41°48'35", long 78°25'50", McKean County, Hydrologic Unit 05010001, on left bank 30 ft upstream from U.S. Highway 6 at east borough limits of Smethport, and 500 ft downstream from Marvin Creek.

DRAINAGE AREA.--160 mi².

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

GAGE.--Water-stage recorder. Datum of gage is 1,454.84 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except for estimated daily discharges, Dec. 8-10, 25-27, Jan. 10 to Feb. 24, which are fair. Several observations of water temperature were made during the year. Gage-height telemeter at station.

AVERAGE DISCHARGE.--11 years, 309 ft³/s, 26.23 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,350 ft³/s, Feb. 14, 1984, gage height, 11.29 ft; minimum, 12 ft³/s, Sept. 7, 1982, gage height, 1.87 ft.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 22, 1972, reached a stage of 15.54 ft, discharge 12,800 ft³/s on basis of contracted-opening measurement of peak flow.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than 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)
Dec. 29	0145	2810	9.01	Mar. 12	1515	*3340	*9.54
Feb. 25	0145	2930	9.13	June 1	0615	2590	8.74

Minimum discharge, 20 ft³/s, Aug. 6, 7, gage height, 1.91 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	43	69	248	1140	65	542	1190	96	1450	86	38	65
2	61	71	218	918	64	489	939	96	477	80	30	61
3	42	74	394	690	62	405	849	107	374	80	26	58
4	36	74	421	578	60	349	779	91	303	76	23	45
5	34	431	338	509	58	605	661	85	241	66	21	37
6	30	224	348	421	58	442	582	96	207	64	20	42
7	28	158	313	369	56	370	552	154	160	79	889	41
8	29	132	290	328	54	798	513	101	142	152	648	132
9	30	123	260	266	53	716	449	87	160	192	237	282
10	30	682	220	230	52	601	391	81	129	119	158	241
11	30	716	354	200	50	575	376	76	105	89	127	178
12	28	563	341	170	60	2550	336	74	637	73	106	129
13	26	451	692	150	80	1790	299	74	443	69	91	112
14	26	372	639	140	105	1280	280	65	339	71	86	100
15	25	320	634	130	98	925	263	62	257	106	81	89
16	25	306	535	120	94	700	246	69	312	109	150	82
17	28	249	482	115	86	589	218	90	318	72	94	75
18	28	215	416	110	80	342	199	176	314	60	73	68
19	26	195	418	105	74	385	204	93	252	53	64	63
20	25	170	426	98	70	385	215	76	295	48	58	58
21	26	151	347	96	64	329	180	72	263	53	55	53
22	49	135	653	90	240	277	163	68	203	99	52	50
23	70	136	497	86	660	404	150	61	231	58	49	47
24	51	127	443	84	1800	782	143	55	173	46	45	50
25	39	120	400	80	2380	707	138	51	141	41	79	56
26	41	114	360	78	1330	583	130	48	125	46	66	45
27	58	108	320	76	960	539	122	50	112	52	69	76
28	52	129	1120	74	668	550	115	162	103	38	50	67
29	156	297	2030	72	---	922	109	107	100	33	47	49
30	107	183	1840	70	---	769	101	73	95	30	84	43
31	75	---	1170	66	---	893	---	155	---	32	105	---
TOTAL	1354	7095	17167	7659	9481	21593	10892	2751	8461	2272	3721	2494
MEAN	43.7	237	554	247	339	697	363	88.7	282	73.3	120	83.1
MAX	156	716	2030	1140	2380	2550	1190	176	1450	192	889	282
MIN	25	69	218	66	50	277	101	48	95	30	20	37
CFSM	.27	1.48	3.46	1.54	2.12	4.36	2.27	.55	1.76	.46	.75	.52
IN.	.31	1.65	3.99	1.78	2.20	5.02	2.53	.64	1.97	.53	.87	.58

CAL YR 1984 TOTAL 139215 MEAN 380 MAX 4090 MIN 25 CFSM 2.37 IN. 32.37
WTR YR 1985 TOTAL 94940 MEAN 260 MAX 2550 MIN 20 CFSM 1.62 IN. 22.07

OHIO RIVER MAIN STEM

25

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, and 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 National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except for estimated discharge, Jan. 11 to Feb. 25, which are fair. Several observations of water temperature were made during the year. Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--46 years, 951 ft³/s, 23.48 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 65,400 ft³/s, June 23, 1972, gage height, 29.05 ft from flood-mark, from rating curve extended above 21,000 ft³/s on basis of slope-area measurement at gage height 27.6 ft; minimum, 22 ft³/s, Sept. 29, 30, 1959, gage height, 1.27 ft.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than 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. 26	0800	*6080	*14.07	No other peak greater than base discharge.			

Minimum discharge, 85 ft³/s, Oct. 20, 21, gage height, 1.97 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	130	287	911	3740	220	2050	3090	353	1390	299	209	253
2	168	268	953	3310	220	1620	3210	340	1440	268	175	188
3	172	272	1040	2540	210	1370	2880	352	875	252	143	181
4	137	260	1550	2000	210	1110	2690	342	753	253	125	165
5	123	703	1250	1730	200	1490	2310	311	599	233	116	142
6	113	851	1200	1450	200	1550	1970	308	536	207	108	126
7	106	618	1110	1240	190	1190	1810	397	445	215	171	126
8	102	516	961	1100	190	1740	1630	382	396	282	1510	129
9	104	461	886	813	190	2380	1510	317	383	573	762	477
10	110	838	827	711	180	1920	1290	291	386	500	491	545
11	106	1670	1110	660	180	1710	1180	274	322	394	399	498
12	101	1700	1210	600	190	2940	1090	264	763	340	348	390
13	96	1370	1670	540	280	4240	963	264	977	314	302	338
14	92	1140	2040	490	390	4710	882	250	810	294	280	306
15	88	954	2130	460	320	4220	839	227	631	362	265	276
16	88	909	1940	420	280	3030	793	227	590	543	364	250
17	89	801	1720	400	250	2080	740	243	828	375	366	230
18	92	696	1510	380	230	1630	668	437	690	296	259	212
19	92	633	1330	360	220	1300	635	384	685	259	214	192
20	87	567	1410	340	210	1190	710	314	649	232	186	176
21	87	502	1170	320	190	1060	650	284	808	221	178	162
22	105	430	1720	310	230	874	577	274	620	450	168	150
23	168	412	1740	290	1200	916	537	246	649	388	160	140
24	189	428	1470	280	2900	1790	509	224	595	295	150	137
25	142	403	1400	280	4500	2260	487	207	488	260	166	148
26	145	382	1110	270	5960	1960	464	192	415	238	246	145
27	160	364	1080	260	4920	1820	438	189	376	253	219	150
28	171	365	1580	250	3420	1840	414	239	345	227	191	225
29	381	806	3580	240	---	2180	397	398	327	187	153	182
30	485	845	4090	240	---	2370	371	271	317	165	162	139
31	345	---	4160	230	---	2310	---	237	---	174	302	---
TOTAL	4574	20451	49858	26254	27880	62850	35734	9038	19088	9349	8888	6778
MEAN	148	682	1608	847	996	2027	1191	292	636	302	287	226
MAX	485	1700	4160	3740	5960	4710	3210	437	1440	573	1510	545
MIN	87	260	827	230	180	874	371	189	317	165	108	126
CFSM	.27	1.24	2.92	1.54	1.81	3.69	2.17	.53	1.16	.55	.52	.41
IN.	.31	1.38	3.37	1.78	1.89	4.25	2.42	.61	1.29	.63	.60	.46

CAL YR 1984 TOTAL 443074 MEAN 1211 MAX 11600 MIN 87 CFSM 2.20 IN. 29.97
WTR YR 1985 TOTAL 280742 MEAN 769 MAX 5960 MIN 87 CFSM 1.40 IN. 18.99

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 National Geodetic Vertical Datum of 1929 (Corps of Engineers bench mark).

REMARKS.--Records good except for estimated daily discharges, Dec. 6-10, 24-27, Jan. 9 to Feb. 24, and Aug. 7-9, 21-24, which are fair. Several observations of water temperature were made during the year. Gage-height tele-meter at station.

AVERAGE DISCHARGE.--11 years, 164 ft³/s, 22.56 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,300 ft³/s, Oct. 28, 1981, gage height, 11.05 ft; maximum gage height, 11.44 ft Feb. 14, 1984 (backwater from ice); minimum, 5.1 ft³/s, Oct. 10, 1980, gage height, 3.12 ft.

EXTREMES 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)
Feb. 24	---	ice jam	*10.10	Feb. 25	0645	*1650	8.69

Minimum daily discharge, 10 ft³/s, Aug. 13, 14.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24	73	259	505	54	353	451	50	179	57	29	16
2	25	76	241	436	52	299	453	48	159	51	21	15
3	21	64	284	379	50	248	435	52	153	49	19	14
4	20	63	277	337	49	218	391	45	132	44	19	12
5	19	140	263	297	48	270	340	42	111	40	17	12
6	18	124	230	250	46	235	315	46	97	37	16	11
7	17	125	210	221	45	214	295	53	80	41	190	11
8	17	115	190	197	44	317	275	43	73	75	100	26
9	17	108	165	180	43	329	248	39	65	65	40	33
10	17	186	150	150	42	327	219	37	56	51	17	37
11	17	232	223	130	41	321	204	36	48	47	12	28
12	16	249	224	120	70	705	182	36	119	42	11	21
13	15	246	296	110	100	775	164	39	107	40	10	19
14	15	218	358	96	96	637	152	33	96	41	10	17
15	14	193	385	90	84	504	141	32	88	63	14	15
16	14	177	355	86	76	411	132	35	116	73	36	15
17	14	152	318	82	68	355	117	69	252	50	17	14
18	14	132	276	80	62	294	106	187	238	44	12	13
19	14	119	258	78	56	247	104	165	213	40	12	12
20	13	104	236	76	50	231	102	133	218	36	14	12
21	14	92	208	74	74	195	90	116	187	34	13	12
22	20	81	251	72	110	171	83	96	153	66	13	11
23	25	77	222	70	260	199	78	80	153	39	12	11
24	18	75	190	68	780	313	74	69	137	34	12	11
25	16	71	170	66	1490	367	73	60	111	30	24	13
26	25	65	155	64	912	368	70	54	96	31	23	11
27	27	60	150	62	596	351	64	53	85	31	20	15
28	24	79	302	60	433	361	60	92	75	25	15	17
29	122	221	504	58	---	368	57	72	76	23	13	12
30	88	204	588	58	---	353	52	58	69	21	21	11
31	80	---	514	54	---	386	---	60	---	31	26	---
TOTAL	800	3921	8452	4606	5831	10722	5527	2030	3742	1351	808	477
MEAN	25.8	131	273	149	208	346	184	65.5	125	43.6	26.1	15.9
MAX	122	249	588	505	1490	775	453	187	252	75	190	37
MIN	13	60	150	54	41	171	52	32	48	21	10	11
CFSM	.26	1.33	2.77	1.51	2.11	3.51	1.86	.66	1.27	.44	.26	.16
IN.	.30	1.48	3.19	1.74	2.20	4.04	2.08	.77	1.41	.51	.30	.18

CAL YR 1984 TOTAL 78869 MEAN 215 MAX 2870 MIN 13 CFSM 2.18 IN. 29.73
WTR YR 1985 TOTAL 48267 MEAN 132 MAX 1490 MIN 10 CFSM 1.34 IN. 18.19

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, 1090-12, 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 National Geodetic Vertical Datum of 1929 (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 for estimated daily discharges, Jan. 10 to Feb. 24, which are fair.

AVERAGE DISCHARGE.--82 years, 2,784 ft³/s, 23.51 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 73,000 ft³/s, June 23, 1972, gage height, 24.01 ft from floodmarks; minimum daily, 79 ft³/s, Sept. 10, 11, 1971.

EXTREMES 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)
Feb. 25	0500	*22300	*11.61	No other peak greater than base discharge.			

Minimum discharge, 251 ft³/s, Sept. 23, 24, 25, 26, gage height, 2.83 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	446	1260	2380	9590	1100	6550	10300	945	1040	685	446	497
2	497	1120	2850	9190	1100	5220	9700	898	2640	630	446	423
3	504	1020	3020	7120	1100	4440	8160	873	1680	589	380	355
4	493	944	4470	5630	1100	3590	7580	868	1310	613	338	332
5	439	2200	3800	4840	1100	4880	6920	828	1120	580	309	321
6	412	3000	3410	4130	1100	5440	5990	822	947	563	287	297
7	391	2400	3140	3550	1100	4280	5470	978	850	519	289	273
8	377	1930	2600	3160	1100	6160	4840	1020	766	668	736	268
9	371	1640	2380	2480	1100	9900	4370	887	713	977	1570	320
10	366	2680	2410	1850	1100	7730	3780	804	697	1050	825	706
11	366	4970	3440	1700	1100	6560	3410	778	640	863	641	716
12	358	5240	3970	1700	1000	10200	3180	766	953	708	534	647
13	346	4260	5880	1600	1000	12700	2840	758	2090	629	483	528
14	331	3530	6330	1600	980	11600	2610	764	1850	603	450	468
15	324	3000	6220	1500	960	10300	2430	744	1400	762	427	429
16	324	2940	5530	1500	960	8160	2260	717	1240	1500	738	397
17	320	2650	4840	1400	960	6370	2060	716	1670	1190	684	370
18	316	2230	4220	1400	960	5110	1840	742	1770	816	559	348
19	316	2000	3750	1400	940	4180	1740	1090	1530	665	430	328
20	314	1780	3940	1400	920	3800	1960	933	1460	591	379	309
21	313	1540	3460	1300	1100	3590	1980	876	1770	543	342	293
22	379	1320	5150	1300	1300	3080	1690	849	1480	623	320	273
23	535	1200	5390	1300	3800	2980	1520	741	1580	831	305	262
24	741	1200	4440	1300	13000	5860	1430	668	1540	657	294	254
25	653	1170	3990	1200	21500	8060	1360	615	1310	538	315	263
26	734	1080	3220	1200	16600	6570	1300	582	1040	501	338	253
27	1020	1010	3000	1200	12700	5730	1220	556	894	518	507	281
28	809	991	4600	1200	9160	8680	1130	636	807	496	423	287
29	2330	1660	12700	1200	---	9300	1070	839	745	441	361	334
30	2410	2280	13000	1200	---	8030	1010	771	713	394	338	306
31	1700	---	10700	1100	---	7320	---	626	---	376	459	---
TOTAL	19235	64245	148230	80240	99940	206370	105150	24690	38245	21119	14953	11138
MEAN	620	2142	4782	2588	3569	6657	3505	796	1275	681	482	371
MAX	2410	5240	13000	9590	21500	12700	10300	1090	2640	1500	1570	716
MIN	313	944	2380	1100	920	2980	1010	556	640	376	287	253
CFSM	.39	1.33	2.97	1.61	2.22	4.14	2.18	.50	.79	.42	.30	.23
IN.	0.44	1.49	3.43	1.86	2.31	4.77	2.43	0.57	0.88	0.49	0.35	0.26

CAL YR 1984	TOTAL	1296447	MEAN	3542	MAX	27200	MIN	313	CFSM	2.20	IN.	29.99
WTR YR 1985	TOTAL	833555	MEAN	2284	MAX	21500	MIN	253	CFSM	1.42	IN.	19.28

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 National Geodetic Vertical Datum of 1929, from topographic map

REMARKS.--Records good except for estimated daily discharges, Dec. 7-9, 25, 26, Jan. 8 to Feb. 24, which are fair. Several observations of water temperature were made during the year. Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--20 years, 78.6 ft³/s, 23.01 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,220, ft³/s, June 22, 1972, gage height, 8.99 ft, from rating curve extended above 1,300 ft³/s on basis of slope-area measurement at gage height 8.33 ft; minimum, 2.0 ft³/s, July 29, 1978, minimum gage height, 1.82 ft, Sept. 11, 12, 13, 14, 1982.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than 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)
Dec. 28	2030	770	4.84	May 31	2300	632	4.56
Feb. 24	2330	*1090	*5.38	Aug. 7	1430	530	4.35
Mar. 12	0830	865	5.00				

Minimum daily discharge, 6.5 ft³/s, Oct. 14, 15, 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	26	54	235	28	144	306	26	172	26	15	16
2	16	29	50	185	28	133	230	26	58	24	12	15
3	13	26	83	134	27	111	207	27	47	24	9.9	14
4	12	38	86	112	27	95	203	24	41	23	9.4	12
5	11	125	64	100	26	166	195	23	36	20	8.8	11
6	11	76	66	86	26	116	165	31	32	25	8.7	11
7	10	55	50	78	25	98	146	38	28	21	188	11
8	10	46	54	70	25	272	132	27	26	42	64	26
9	10	45	56	66	25	235	114	24	31	53	35	33
10	7.0	175	62	60	24	189	99	22	28	34	26	34
11	7.0	183	65	56	24	185	96	21	23	25	23	28
12	7.0	135	70	52	32	634	85	20	81	21	21	20
13	7.0	104	185	50	52	373	75	19	74	18	19	17
14	6.5	88	153	48	47	293	72	18	57	24	18	15
15	6.5	81	148	46	40	223	67	18	43	47	23	14
16	7.0	82	119	43	34	168	63	19	56	73	40	13
17	7.5	70	105	41	30	149	56	23	84	33	26	12
18	7.0	60	93	39	29	119	51	25	62	25	19	11
19	7.0	54	95	38	28	99	55	19	50	21	16	11
20	6.5	48	94	37	26	99	53	17	81	19	15	11
21	8.0	44	81	35	28	89	46	18	70	21	14	10
22	18	42	187	34	70	78	41	17	55	24	13	9.8
23	18	42	118	33	150	122	39	16	90	18	13	9.5
24	13	39	99	33	390	219	37	15	59	16	12	11
25	10	38	80	32	651	189	36	14	45	14	19	11
26	15	35	62	31	337	152	34	13	39	20	16	9.7
27	17	35	81	31	252	139	32	15	35	19	14	12
28	16	46	349	30	179	159	31	35	32	14	12	11
29	53	55	410	30	---	254	29	23	31	13	12	9.6
30	44	44	349	29	---	186	27	18	28	12	22	8.6
31	32	---	222	28	---	236	---	86	---	14	22	---
TOTAL	429.0	1966	3790	1922	2660	5724	2822	737	1594	783	765.8	437.2
MEAN	13.8	65.5	122	62.0	95.0	185	94.1	23.8	53.1	25.3	24.7	14.6
MAX	53	183	410	235	651	634	306	86	172	73	188	34
MIN	6.5	26	50	28	24	78	27	13	23	12	8.7	8.6
CFSM	.30	1.41	2.63	1.34	2.05	3.99	2.03	.51	1.14	.55	.53	.31
IN.	.34	1.58	3.04	1.54	2.13	4.59	2.26	.59	1.28	.63	.61	.35

CAL YR 1984 TOTAL 34909.4 MEAN 95.4 MAX 1570 MIN 6.5 CFSM 2.06 IN. 27.99
WTR YR 1985 TOTAL 23630.0 MEAN 64.7 MAX 651 MIN 6.5 CFSM 1.39 IN. 18.94

OHIO RIVER MAIN STEM

29

03012550 ALLEGHENY RIVER AT KINZUA DAM, PA

LOCATION.--Lat 41°50'29", long 79°00'44", Warren County, Hydrologic Unit 05010001, in Allegheny National Forest on left bank 0.5 mi downstream from Kinzua Dam, 2.5 mi east of Hemlock, and at mile 197.6.

DRAINAGE AREA.--2,180 mi².

PERIOD OF RECORD.--October 1935 to current year. Published as "near Kinzua" (station 03012500) prior to October 1968 and as "at Warren" (station 03012600) October 1968 to September 1972.

REVISED RECORDS.--WSP 1275: 1936-37. WDR PA-73-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,192.55 ft above National Geodetic Vertical Datum of 1929 (Corps of Engineers bench mark). Prior to Nov. 1, 1964, water-stage recorder at site 1.0 mi upstream at different datum. Nov. 1, 1964, to Aug. 4, 1966, non-recording gage, and Aug. 5, 1966, to Sept. 30, 1972, water-stage recorder at site 6.4 mi downstream at different datum.

REMARKS.--Estimated daily discharges: July 16 to Sept. 17. Records good. Flow regulated since October 1965 by Allegheny Reservoir (station 03012520), 0.5 mi upstream. Several observations of water temperature were made during the year. Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--50 years, 3,826 ft³/s, 23.83 in/yr, adjusted for storage since October 1965.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 60,500 ft³/s, Mar. 8, 1956, gage height, 19.95 ft, site and datum then in use; minimum not determined.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 17,300 ft³/s, Mar. 1, gage height, 12.83 ft; minimum daily, 600 ft³/s, Aug. 27, 28, 29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2520	3380	4600	4860	3480	16000	5260	602	671	683	640	840
2	2850	3710	4650	4280	3450	17100	3770	667	670	685	640	840
3	2820	3960	4700	5340	3460	16900	3540	666	673	1220	640	952
4	2780	3960	4580	7090	3510	16600	3580	665	679	1590	640	1020
5	2730	4170	4160	7320	3470	16500	4200	660	671	2150	640	1020
6	2690	4520	4700	5720	3550	16500	5690	666	686	2490	640	1020
7	2610	4820	4760	4660	3800	16200	5680	664	688	2450	640	1020
8	2590	4770	4720	4700	4080	16000	4570	654	706	2470	640	1160
9	2240	4770	4620	4650	4040	14700	4150	660	685	2470	640	1300
10	1990	4860	4110	4000	3980	13300	3970	677	702	2330	640	1280
11	1970	4740	3990	4480	4100	13100	3860	671	653	2390	640	1280
12	1730	4860	3930	5780	4060	12100	4040	665	702	2360	760	1280
13	1480	4810	3780	5150	4220	11300	4100	655	701	2300	1010	1270
14	1450	4760	4920	4200	4100	11400	3450	650	711	1580	1280	1280
15	1260	4810	4620	4180	4070	11500	3450	642	975	840	1420	1270
16	877	4750	4780	4040	3980	11400	3810	643	1470	2080	1650	1380
17	1240	4790	3880	4140	3940	11400	3930	643	2060	2400	1880	1500
18	1680	4750	3880	3260	3980	11400	4330	643	2560	2400	1880	1520
19	2080	4820	4610	652	4310	11300	4270	643	2580	2380	2030	1520
20	2090	4860	3960	737	4680	10400	4890	643	2770	2360	2100	1860
21	2080	4850	4130	677	4730	8490	3530	643	2970	2340	2090	2460
22	2070	4760	4660	676	4670	7460	1410	643	2940	2320	2070	2370
23	2080	4730	4690	690	4620	6860	1050	643	2500	2040	2050	2580
24	2070	4020	4700	665	4840	6260	976	643	1300	962	1690	3220
25	2050	2550	4690	699	4830	6270	973	643	995	1030	1220	3460
26	2070	2060	4810	730	5660	6310	1010	643	2220	1490	908	3400
27	2050	2000	4290	719	8070	6340	966	643	2600	1490	600	3350
28	2060	2660	4210	735	11900	6350	976	644	2580	1480	600	3230
29	2310	4080	4070	1130	---	6380	821	643	2560	1360	600	3160
30	3100	4590	4130	2760	---	6410	650	646	1840	1460	720	3070
31	3370	---	4850	3480	---	6440	---	660	---	945	840	---
TOTAL	66987	127170	137180	102200	127580	348670	96902	20173	44518	56545	34438	54912
MEAN	2161	4239	4425	3297	4556	11250	3230	651	1484	1824	1111	1830
MAX	3370	4860	4920	7320	11900	17100	5690	677	2970	2490	2100	3460
MIN	877	2000	3780	652	3450	6260	650	602	653	683	600	840
†	-1130	-1050	+2060	-78.1	+641	-1670	+1460	+494	+412	-764	-407	-1310
MEAN†	1031	3189	6485	3219	5197	9580	4690	1145	1896	1060	704	520
CFSM†	.47	1.46	2.97	1.48	2.38	4.39	2.15	.52	.87	.49	.32	.24
IN.†	.54	1.63	3.42	1.71	2.48	5.06	2.40	.60	.97	.56	.37	.27
TOTAL	66987	127170	137180	102200	127580	348670	96902	20173	44518	56545	34438	54912
MEAN	2161	4239	4425	3297	4556	11250	3230	651	1484	1824	1111	1830
MAX	3370	4860	4920	7320	11900	17100	5690	677	2970	2490	2100	3460
MIN	877	2000	3780	652	3450	6260	650	602	653	683	600	840

CAL YR 1984 TOTAL 1742895 MEAN 4762 MAX 18100 MIN 488 ADJ +184 MEAN† 4946 CFSM† 2.27 IN.† 31.01
WTR YR 1985 TOTAL 1217275 MEAN 3335 MAX 17100 MIN 600 ADJ -117 MEAN† 3218 CFSM† 1.48 IN.† 20.01

† Change in contents, equivalent in cubic feet per second, in Allegheny Reservoir.

‡ Adjusted for change in reservoir contents.

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 in 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 RECORDS.--WSP 1083: 1936 (M).

GAGE.--Water-stage recorder. Datum of gage is 1,221.77 ft above National Geodetic Vertical Datum of 1929. Prior to Apr. 10, 1941, nonrecording gage at same site and datum.

REMARKS.--Records good except for estimated daily discharges, Jan. 10 to Feb. 4, Feb. 15-23 and May 11-13, which are fair. Flow regulated by Chautauqua Lake. Several observations of water temperature were made during the year. Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--46 years, 1,518 ft³/s, 25.26 in/yr, adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14,400 ft³/s, Apr. 7, 1947, gage height, 10.69 ft; minimum not determined; minimum daily, 57 ft³/s, Oct. 17, 1960.

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 8,860 ft³/s, Feb. 27, gage height, 8.82 ft; minimum daily, 129 ft³/s, Sept. 7.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	465	1250	1360	5060	720	7290	4880	404	578	229	192	185
2	495	1180	1560	5170	720	6270	4960	380	432	219	177	174
3	519	1300	1640	5000	720	5400	4980	380	356	218	161	169
4	467	1350	1890	4760	860	4630	5000	364	336	213	166	155
5	425	2290	1780	4180	1030	4370	4780	342	278	211	169	156
6	377	2520	1600	3410	813	4120	4420	336	264	263	155	150
7	339	2400	1470	2550	826	3880	4030	358	245	319	161	129
8	326	2120	1310	2040	859	4580	3530	364	230	485	186	145
9	325	1810	1320	1700	805	4900	2940	336	261	828	187	177
10	330	2510	1350	1400	789	4840	2410	310	315	855	163	199
11	333	3700	1810	1350	788	4880	2080	305	295	608	158	215
12	321	3830	2280	1300	808	5230	1940	300	429	428	157	217
13	303	3720	3410	1200	970	5420	1830	295	922	336	151	212
14	302	3480	3370	1150	1110	5610	1750	290	1220	349	156	204
15	300	3030	3310	1100	900	5610	1670	275	1140	704	163	194
16	283	2700	3030	1050	800	5270	1360	266	982	991	232	186
17	275	2490	2580	1000	740	4830	988	248	1020	854	268	183
18	394	2280	2260	940	700	4240	879	239	917	710	235	177
19	462	2010	2210	920	660	3550	858	239	742	435	200	170
20	479	1800	1760	860	620	2930	916	234	569	310	177	165
21	552	1640	1680	840	760	2500	988	266	453	275	162	162
22	674	1480	2280	800	980	2210	924	295	374	343	154	156
23	732	1360	2470	780	3000	2150	767	281	440	291	148	152
24	758	1290	2220	780	5420	2890	620	250	559	251	142	152
25	679	1210	1820	760	6620	3550	566	224	513	231	167	150
26	877	1150	1470	740	8010	3480	530	211	426	227	192	150
27	1260	1110	1310	740	8790	3340	506	207	350	225	189	160
28	1270	1090	1870	730	8300	3280	476	242	297	214	182	161
29	2860	1290	4430	730	---	3810	446	278	267	205	177	153
30	2250	1280	4840	720	---	4080	428	260	245	195	182	150
31	1570	---	5010	720	---	4370	---	404	---	187	199	---
TOTAL	21002	60670	70700	54480	58118	133510	62452	9183	15455	12209	5508	5108
MEAN	677	2022	2281	1757	2076	4307	2082	296	515	394	178	170
MAX	2860	3830	5010	5170	8790	7290	5000	404	1220	991	268	217
MIN	275	1090	1310	720	620	2150	428	207	230	187	142	129
†	+2.2	-160	+221	-246	+366	+47.8	+208	+15.2	-4.5	-19.5	-63.1	-83.2
MEAN‡	679	1862	2502	1511	2442	4355	2290	311	510	374	115	86.8
CFSM‡	.83	2.28	3.07	1.85	2.99	5.34	2.81	.38	.62	.46	.14	.11
IN.‡	.96	2.54	3.54	2.13	3.11	6.16	3.14	.44	.69	.53	.16	.12

CAL YR 1984 TOTAL 705942 MEAN 1929 MAX 7900 MIN 245 ADJ +11.6 MEAN‡ 1941 CFSM‡ 2.38 IN.‡ 32.36
WTR YR 1985 TOTAL 508395 MEAN 1393 MAX 8790 MIN 129 ADJ -12.9 MEAN‡ 1380 CFSM‡ 1.69 IN.‡ 23.52

† Change in contents, equivalent in cubic feet per second, in Chautauqua Lake.

‡ Adjusted for change in reservoir contents.

BROKENSTRAW CREEK BASIN

31

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 National Geodetic Vertical Datum, adjustment of 1907. 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, Jan. 10 to Feb. 24, which are fair. Several observations of water temperature were made during the year. Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--76 years, 584 ft³/s, 24.71 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, about 18,000 ft³/s, Mar. 25, 1913, gage height, 14.2 ft present datum; minimum observed, 19 ft³/s, Oct. 14, 1934.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than 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)
Dec. 28	2200	5980	7.96	Feb. 25	0230	*10500	*10.71
Dec. 30	0430	6100	8.04	Mar. 8	1500	4680	7.09

Minimum discharge, 70 ft³/s, Sept. 23, 24, gage height, 1.59 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	130	465	512	2230	220	1030	2890	199	1120	121	123	133
2	166	483	608	1900	220	1010	2630	190	554	116	117	115
3	166	569	670	1430	220	962	1760	193	398	113	103	104
4	140	542	874	919	210	828	1660	186	421	111	95	94
5	124	1540	638	741	210	2210	1780	179	294	133	90	88
6	115	1520	531	614	210	2030	1490	207	218	196	86	85
7	109	1190	449	562	210	1600	1120	302	175	286	192	85
8	104	797	421	507	210	4020	933	253	154	553	234	133
9	103	574	436	430	200	4050	855	206	149	1080	161	667
10	104	1720	445	410	200	2740	742	183	142	1360	124	309
11	101	2590	591	380	200	1660	708	167	132	1270	110	215
12	97	2260	890	370	200	3610	696	160	373	725	97	156
13	96	1600	2090	350	260	3010	621	153	636	330	91	133
14	93	957	2200	330	350	2440	580	145	679	462	103	117
15	91	763	1720	320	330	1890	531	138	416	1080	119	106
16	93	809	1080	310	310	1360	487	138	323	1100	195	99
17	94	735	788	300	290	1090	420	138	328	628	176	93
18	95	576	630	290	270	918	376	144	307	385	133	88
19	95	498	576	280	260	756	361	134	256	282	105	85
20	94	433	668	270	240	742	375	124	294	229	93	82
21	98	379	603	270	220	771	354	200	288	196	87	79
22	160	335	1320	260	500	666	319	224	264	184	84	76
23	157	316	1290	250	1300	874	295	167	606	223	80	74
24	145	304	830	250	6600	1690	303	139	411	167	86	75
25	152	296	619	240	9320	1930	278	124	362	143	146	79
26	281	281	460	240	5270	1390	259	117	259	134	129	78
27	520	263	504	240	2390	909	239	120	194	140	101	88
28	416	310	2830	230	1310	1010	225	165	158	124	89	85
29	1200	489	4890	230	---	2270	217	195	143	112	115	79
30	1720	451	5240	220	---	1990	208	157	131	106	163	75
31	1170	---	3130	220	---	2000	---	390	---	114	175	---
TOTAL	8229	24045	38533	15593	31730	53456	23712	5537	10185	12203	3802	3775
MEAN	265	802	1243	503	1133	1724	790	179	340	394	123	126
MAX	1720	2590	5240	2230	9320	4050	2890	390	1120	1360	234	667
MIN	91	263	421	220	200	666	208	117	131	106	80	74
CFSM	.83	2.50	3.87	1.57	3.53	5.37	2.46	.56	1.06	1.23	.38	.39
IN.	.95	2.79	4.47	1.81	3.68	6.19	2.75	.64	1.18	1.41	.44	.44

CAL YR 1984 TOTAL 269941 MEAN 738 MAX 8000 MIN 91 CFSM 2.30 IN. 31.28
WTR YR 1985 TOTAL 230800 MEAN 632 MAX 9320 MIN 74 CFSM 1.97 IN. 26.75

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, and at mile 158.9.

DRAINAGE AREA.--3,660 mi².

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

GAGE.--Water-stage recorder. Datum of gage is 1,059.90 ft above National Geodetic Vertical Datum of 1929. Prior to Dec. 12, 1941, nonrecording gage at same site and datum.

REMARKS.--Records good except for estimated daily discharges, Jan. 15 to Feb. 24, which are fair. Flow regulated by Allegheny Reservoir 39 mi upstream since October 1965 and since 1949 by Chautauqua Lake. Several observations of water temperature were made during the year. Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--44 years, 6,640 ft³/s, 24.63 in/yr, adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 101,000 ft³/s, Mar. 8, 1956, gage height, 17.20 ft; maximum gage height, 17.83 ft, Jan. 25, 1964 (backwater from ice); minimum discharge not determined.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 31,600 ft³/s, Mar. 8, gage height, 9.66 ft; minimum daily, 943 ft³/s, Aug. 5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2440	5560	7130	14700	4640	25600	17300	1450	4030	1740	1260	1360
2	3590	5320	7530	13800	4600	26500	13800	1360	2530	1160	1030	1310
3	3610	6160	7860	12500	4600	25300	12300	1410	1850	1140	995	1260
4	3540	6300	8450	14500	4800	24200	11800	1390	1830	1910	953	1510
5	3410	9830	7660	13800	4900	26400	12100	1370	1610	2060	943	1540
6	3290	10000	7640	12400	4800	25300	13300	1410	1410	3510	944	1500
7	3170	9900	7510	9380	5000	24100	12600	1630	1290	3320	2250	1440
8	3100	9010	7200	8370	5400	29400	11100	1550	1230	4150	1850	1610
9	3060	8260	7030	7730	5200	28800	9570	1470	1220	5210	1320	2360
10	2490	11000	6880	7020	5200	24100	8340	1420	1230	5720	1160	2300
11	2470	14600	6870	6710	5300	22400	7850	1420	1250	5120	1280	2020
12	2420	13900	7900	7540	5300	27400	7390	1420	1580	4370	1090	1900
13	2040	12300	11000	7900	5700	23800	7490	1400	2220	3630	1220	1850
14	1920	10800	11900	6860	5900	22700	6500	1380	2760	3740	1530	1830
15	1900	10100	12200	5900	5800	21700	6240	1360	2690	3600	1900	1770
16	1600	9740	10500	5700	5600	20400	5820	1340	2900	5700	2450	1740
17	1330	9290	9180	5700	5300	19300	6260	1320	3160	4950	2660	1880
18	1770	8780	8040	4800	5300	18200	5710	1280	4040	4240	2640	1930
19	2510	8430	7680	2130	5000	17100	5890	1230	3910	3810	2520	1920
20	2660	7970	7660	2140	5200	16000	6340	1180	3920	3420	2740	1920
21	2730	7740	7320	2100	5600	13800	6530	1270	4270	3220	2670	2610
22	2960	7300	9570	2000	6000	11400	3690	1360	4090	3160	2650	2860
23	2970	7100	10100	2000	11000	11400	2580	1270	5140	3160	2620	2760
24	2980	6860	9300	1900	22000	12300	2300	1190	3520	2420	2630	3340
25	2940	5110	8520	1900	28000	14300	2110	1120	2390	1380	2150	3910
26	3160	3780	7690	2000	22100	13200	2030	1070	2480	1770	1740	3870
27	3850	3690	7380	1900	21200	12300	1990	1060	3430	2040	1250	3900
28	3930	3680	10100	1900	22500	12000	1880	1290	3300	1990	985	3740
29	6020	5540	18900	2300	---	15600	1840	1240	3200	1930	1010	3620
30	7490	7000	18500	3900	---	15000	1490	1190	3110	1810	1090	3520
31	7060	---	15600	4600	---	15100	---	1480	---	1930	1410	---
TOTAL	98410	245050	290800	196080	241940	615100	214140	41330	81590	97310	52940	69080
MEAN	3175	8168	9381	6325	8641	19840	7138	1333	2720	3139	1708	2303
MAX	7490	14600	18900	14700	28000	29400	17300	1630	5140	5720	2740	3910
MIN	1330	3680	6870	1900	4600	11400	1490	1060	1220	1140	943	1260
†	-1130	-1210	+2280	-324	+1010	-1620	+1670	+509	+408	-784	-470	-1390
MEAN†	2045	6958	11661	6001	9651	18220	8808	1842	3128	2355	1238	913
CFSM†	.56	1.90	3.19	1.64	2.64	4.98	2.41	.50	.85	.64	.34	.25
IN.†	.56	2.12	3.68	1.89	2.75	5.74	2.69	.58	.95	.74	.39	.28

CAL YR 1984 TOTAL 3101300 MEAN 8473 MAX 28500 MIN 980 ADJ +196 MEAN† 8669 CFSM† 2.37 IN.† 32.23
WTR YR 1985 TOTAL 2243770 MEAN 6147 MAX 29400 MIN 943 ADJ -130 MEAN† 6017 CFSM† 1.64 IN.† 22.46

† Change in contents, equivalent in cubic feet per second, in Allegheny Reservoir and Chautauqua Lake.

‡ Adjusted for change in reservoir contents.

TIONESTA CREEK BASIN

03020000 TIONESTA CREEK AT TIONESTA DAM, PA

LOCATION.--Lat 41°28'44", long 79°26'26", Forest County, Hydrologic Unit 05010003, on left bank 100 ft downstream from outlet tunnel at Tionesta Dam, 1.5 mi southeast of Tionesta, and 1.2 mi upstream from mouth.

DRAINAGE AREA.--479 mi².

PERIOD OF RECORD.--June 1940 to current year. Prior to October 1970, published as "at Tionesta Creek Dam."

GAGE.--Water-stage recorder. Datum of gage is 1,043.43 ft above National Geodetic Vertical Datum of 1929, unadjusted. July 1, 1954, to Dec. 6, 1960, water-stage recorder at present site and at datum 1.5 ft higher. See WSP 1305 or 1725 for history of changes prior to July 1, 1954.

REMARKS.--No estimated daily discharges. Records good. Flow completely regulated since 1941 by Tionesta Lake 0.2 mi upstream. Several observations of water temperature were made during the year. Corps of Engineers satellite telemeter at station

COOPERATION.--One discharge measurement furnished by Corps of Engineers.

AVERAGE DISCHARGE.--45 years, 885 ft³/s, 25.09 in/yr, adjusted for storage since January 1941.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, about 13,500 ft³/s, Mar. 12, 1964; maximum gage height, 11.31 ft Mar. 13, 1964 (backwater from Allegheny River); minimum daily discharge, 0.4 ft³/s, Feb. 28, 29, May 22 to June 16, 1968.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,060 ft³/s, Feb. 28, gage height, 6.58 ft; minimum daily, 98 ft³/s, Oct. 24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	116	854	553	1780	245	4940	2230	237	392	240	133	130
2	116	840	557	2800	245	4760	2760	237	675	240	132	130
3	117	702	563	3940	245	4580	3790	391	823	240	132	131
4	117	550	574	4240	245	4380	4390	520	806	240	132	128
5	117	567	581	4080	245	4230	4240	514	625	240	132	126
6	117	755	588	3870	245	4050	4100	393	380	240	132	126
7	117	889	732	3600	244	3320	3630	241	250	240	133	126
8	118	1190	867	2550	244	2820	2530	243	202	240	559	126
9	117	1370	858	971	243	2990	1830	242	124	370	881	189
10	117	1430	851	490	243	2980	1800	242	124	514	871	440
11	118	1570	846	490	243	2940	1480	242	124	514	858	697
12	118	2400	845	493	243	2530	785	241	124	519	628	835
13	118	3500	855	494	244	2970	795	240	180	519	542	820
14	118	3400	1410	494	246	4330	801	240	263	387	535	669
15	118	3270	1960	494	249	4670	805	240	261	259	528	520
16	118	3130	1940	491	394	4530	805	240	262	432	529	383
17	118	2950	1920	487	532	4390	802	218	264	540	535	186
18	118	2120	1870	362	528	4200	794	164	381	538	535	122
19	118	1010	1810	237	523	3930	786	132	542	533	530	122
20	118	806	1290	238	519	2810	781	132	537	527	524	122
21	117	593	809	238	515	1240	771	132	535	394	352	123
22	118	551	842	238	515	785	674	133	532	261	248	124
23	118	551	1140	239	527	795	369	132	661	264	248	124
24	98	551	1420	240	593	828	229	132	837	264	248	124
25	116	550	1430	241	746	1470	231	133	832	264	248	124
26	118	548	1410	243	1240	2010	233	132	820	263	248	124
27	119	545	1400	243	2760	1990	234	130	806	261	248	124
28	120	448	1400	243	4380	2490	235	132	473	183	246	124
29	186	546	1510	244	---	2450	236	185	238	134	175	126
30	458	550	1650	245	---	2110	236	252	240	134	128	126
31	712	---	1740	245	---	2150	---	252	---	134	129	---
TOTAL	4629	38736	36221	35260	17441	94668	43382	7094	13313	10128	11499	7371
MEAN	149	1291	1168	1137	623	3054	1446	229	444	327	371	246
MAX	712	3500	1960	4240	4380	4940	4390	520	837	540	881	835
MIN	98	448	553	237	243	785	229	130	124	134	128	122
†	+42.0	-47.9	+346	-324	+571	-335	-180	-6.5	-15.1	-1.0	+7.5	+10.1
MEAN†	191	1243	1514	813	1194	2719	1266	222	429	326	378	256
CFSM†	.40	2.59	3.16	1.70	2.49	5.68	2.64	.46	.90	.68	.79	.53
IN.†	.46	2.89	3.64	1.96	2.59	6.55	2.95	.53	1.00	.78	.91	.59

CAL YR 1984 TOTAL 442529 MEAN 1209 MAX 6500 MIN 57 ADJ + 27.6 MEAN† 1237 CFSM† 2.58 IN.† 35.12
WTR YR 1985 TOTAL 319742 MEAN 876 MAX 4940 MIN 98 ADJ + 1.6 MEAN† 878 CFSM† 1.83 IN.† 24.85

† Change in contents, equivalent in cubic feet per second, in Tionesta Lake.

‡ Adjusted for change in reservoir contents.

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 National Geodetic Vertical Datum of 1929. Prior to June 9, 1941, nonrecording gage at same site and datum.

REMARKS.--Records good except those for estimated daily discharges, Jan. 11 to Feb. 24, which are fair. Several observations of water temperature were made during the year. Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--53 years, 536 ft³/s, 24.26 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 21,000 ft³/s, Jan. 22, 1959, gage height, 11.97 ft; minimum observed, 22 ft³/s, July 29, Sept. 5, 7, 1934; minimum gage height, 1.48 ft, Aug. 20, 1971.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than 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. 25	0500	*7700	*8.56	No other peak greater than base discharge.			

Minimum discharge, 55 ft³/s, Sept. 22, 23, gage height, 1.68 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	94	206	371	1590	200	920	2970	221	1320	101	96	99
2	113	236	429	1610	200	922	1710	214	523	94	94	79
3	100	267	427	1000	200	877	1390	210	253	225	86	73
4	89	275	616	790	200	784	1760	196	190	123	80	70
5	82	1520	411	683	195	2880	1580	189	157	121	77	66
6	78	949	381	573	195	1840	1160	203	141	257	75	63
7	74	678	333	523	190	1120	1010	277	123	399	707	62
8	75	475	320	487	190	3390	902	263	109	963	479	90
9	97	370	322	352	190	2770	896	210	106	1770	204	110
10	139	1900	359	291	190	1500	740	193	102	891	134	313
11	115	2560	374	300	190	1190	744	184	94	606	136	143
12	91	1830	557	280	190	3910	731	177	243	328	130	100
13	90	1070	1840	280	260	2750	627	168	302	233	104	84
14	90	807	1420	270	370	2040	574	156	327	358	96	76
15	81	659	1240	260	350	1620	526	144	190	1930	92	71
16	78	801	860	250	320	1110	484	142	174	1860	191	69
17	76	635	689	250	300	960	429	141	185	719	158	67
18	74	512	566	240	280	802	390	219	184	434	110	64
19	72	441	503	240	260	681	417	180	168	308	93	62
20	71	370	567	230	240	694	434	142	171	245	84	61
21	70	320	490	230	220	708	378	175	215	213	78	59
22	95	278	1450	220	260	587	344	250	189	195	76	56
23	131	263	973	220	2200	709	318	175	801	169	74	56
24	106	249	682	220	5200	1190	303	147	432	146	73	61
25	92	238	569	215	6340	1330	300	128	235	133	114	64
26	112	224	399	215	2460	851	298	116	171	125	97	61
27	229	213	505	210	1620	723	281	113	140	124	81	67
28	160	238	1690	210	1070	777	251	368	122	113	72	65
29	831	438	3620	205	---	3330	241	243	114	105	68	61
30	495	340	3410	205	---	2040	229	163	108	100	79	57
31	276	---	1780	200	---	1780	---	179	---	96	115	---
TOTAL	4376	19362	28153	12849	24080	46785	22417	5886	7589	13484	4153	2429
MEAN	141	645	908	414	860	1509	747	190	253	435	134	81.0
MAX	831	2560	3620	1610	6340	3910	2970	368	1320	1930	707	313
MIN	70	206	320	200	190	587	229	113	94	94	68	56
CFSM	.47	2.15	3.03	1.38	2.87	5.03	2.49	.63	.84	1.45	.45	.27
IN.	.54	2.40	3.49	1.59	2.99	5.80	2.78	.73	.94	1.67	.51	.30

CAL YR 1984 TOTAL 223843 MEAN 612 MAX 7340 MIN 70 CFSM 2.04 IN. 27.76
WTR YR 1985 TOTAL 191563 MEAN 525 MAX 6340 MIN 56 CFSM 1.75 IN. 23.75

FRENCH CREEK BASIN

35

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 northwest 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 National Geodetic Vertical Datum of 1929 (Corps of Engineers bench mark).

REMARKS.--Records good except for estimated daily discharges, Dec. 8, 9, Jan. 16 to Feb. 24, which are fair. Several observations of water temperature were made during the year. Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--11 years, 229 ft³/s, 30.80 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,350 ft³/s Sept. 14, 1979, gage height, 11.95 ft; minimum, 6.0 ft³/s July 24, 1979, gage height, 2.95 ft.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than 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)
Dec. 29	0030	2640	8.03	Feb. 24	2100	*4850	a*10.53

(a) Ice jam.

Minimum discharge, 10 ft³/s, Sept. 23, gage height, 3.25 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	49	130	159	761	92	253	1770	43	327	18	44	25
2	76	312	189	639	92	357	583	42	112	18	32	21
3	61	224	308	283	90	264	428	45	104	17	26	20
4	52	268	343	177	88	220	659	41	86	20	23	18
5	42	963	186	143	86	1110	724	38	51	50	21	19
6	37	656	150	120	84	563	398	48	40	200	20	17
7	33	430	114	112	84	317	289	54	33	292	27	16
8	33	245	120	92	80	1620	241	44	28	335	32	18
9	34	190	110	90	78	1170	234	38	31	935	26	26
10	33	1060	168	91	78	485	185	34	38	486	20	34
11	32	1230	351	90	94	415	213	32	29	205	20	36
12	30	665	467	77	140	1360	219	31	211	96	20	27
13	28	335	1230	99	170	688	175	30	360	64	19	22
14	24	280	556	114	160	536	201	27	262	227	20	20
15	22	301	391	86	150	473	154	24	117	671	22	18
16	23	490	237	88	140	268	125	24	118	407	42	16
17	26	298	171	100	130	304	102	25	113	148	31	15
18	25	214	132	105	120	209	91	26	85	86	21	14
19	23	177	129	105	115	164	92	23	70	60	18	13
20	30	150	168	88	110	206	112	21	53	48	16	13
21	33	125	136	110	105	244	98	45	50	82	15	12
22	44	109	640	130	200	165	80	42	38	245	14	11
23	58	102	294	100	460	314	70	31	45	80	13	11
24	49	100	164	92	3300	761	75	25	46	55	13	14
25	39	98	123	92	2870	575	68	21	38	43	25	14
26	320	96	94	92	685	292	64	20	30	37	23	15
27	415	88	98	90	436	273	58	20	26	36	19	15
28	300	96	1210	90	279	649	52	44	23	31	18	16
29	998	148	1970	90	---	918	50	41	21	27	30	15
30	332	120	1340	92	---	490	47	29	20	26	32	13
31	175	---	449	92	---	943	---	175	---	36	30	---
TOTAL	3476	9700	12197	4530	10516	16606	7657	1183	2605	5081	732	544
MEAN	112	323	393	146	376	536	255	38.2	86.8	164	23.6	18.1
MAX	998	1230	1970	761	3300	1620	1770	175	360	935	44	36
MIN	22	88	94	77	78	164	47	20	20	17	13	11
CFSM	1.22	3.51	4.27	1.59	4.09	5.83	2.77	.42	.94	1.78	.26	.20
IN.	1.41	3.92	4.93	1.83	4.25	6.71	3.10	.48	1.05	2.05	.30	.22

CAL YR 1984 TOTAL 91284 MEAN 249 MAX 3800 MIN 10 CFSM 2.71 IN. 36.91
WTR YR 1985 TOTAL 74827 MEAN 205 MAX 3300 MIN 11 CFSM 2.23 IN. 30.26

FRENCH CREEK BASIN

03021410 WEST BRANCH FRENCH CREEK NEAR LOWVILLE, PA

LOCATION.--Lat 42°04'54", long 79°51'02", Erie County, Hydrologic Unit 05010004, on left bank on upstream side of highway bridge on Knoyle Road, 1,000 ft downstream from Townley Run, 2.5 mi southwest of Hornby, and 4.2 mi northwest of Lowville.

DRAINAGE AREA.--52.3 mi².

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

GAGE.--Water-stage recorder. Elevation of gage is 1,300 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good except for estimated daily discharges, Dec. 6-9, 26, Jan. 12 to Feb. 23, which are fair. Several observations of water temperature were made during the year. Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--11 years, 130 ft³/s, 33.76 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,390 ft³/s, Mar. 21, 1978, Aug. 5, 1983, gage height, 10.81 ft; minimum observed, 2.4 ft³/s, June 27, 1979, gage height, 2.96 ft.

EXTREMES 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. 28	1830	1190	9.84	Mar. 8	1700	1060	9.60
Feb. 23	---	ice jam	*10.57	Mar. 12	0745	1020	9.55
Feb. 24	0715	*3190	10.51	Apr. 1	0015	1130	9.69
Mar. 5	0330	1090	9.64				

Minimum discharge, 3.7 ft³/s, Sept. 22, 23, gage height, 3.19 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25	61	86	433	48	189	840	15	87	5.4	14	9.1
2	36	102	98	378	47	259	339	14	35	5.4	10	7.9
3	29	75	172	178	47	194	240	15	35	6.4	8.3	8.5
4	26	124	156	104	46	147	329	14	30	5.4	7.4	7.0
5	22	397	78	85	46	872	309	13	18	4.9	6.6	6.1
6	20	355	66	71	45	411	208	17	13	78	6.1	5.7
7	19	247	62	67	45	237	144	20	10	42	6.6	5.9
8	19	136	60	77	44	825	122	15	9.0	60	7.4	6.3
9	19	88	58	128	44	622	153	13	9.7	207	6.6	12
10	19	375	94	111	43	300	110	11	9.7	244	6.1	11
11	18	559	200	103	43	240	149	10	9.1	64	6.1	11
12	19	386	249	94	50	755	147	9.9	124	29	7.2	10
13	19	232	494	88	62	468	97	9.7	169	19	6.8	8.4
14	18	179	331	84	78	344	92	8.9	110	121	6.7	7.5
15	18	209	229	80	76	305	74	8.6	39	416	6.4	6.7
16	37	302	140	76	72	187	52	8.9	44	273	6.7	6.3
17	39	187	96	72	66	170	55	9.7	50	67	7.1	5.8
18	36	130	85	70	62	119	39	10	44	34	6.0	5.0
19	35	102	86	66	58	97	38	8.8	31	24	5.3	4.8
20	37	80	107	64	54	120	48	8.4	19	19	4.9	5.1
21	35	64	84	60	49	130	41	18	15	18	4.8	5.0
22	33	56	292	58	220	90	30	17	13	25	4.4	4.0
23	32	52	171	56	1200	169	27	12	13	17	4.4	4.9
24	50	50	98	54	2760	352	24	9.5	12	14	4.6	5.5
25	45	47	78	52	1450	314	23	7.5	10	12	6.5	5.2
26	217	45	74	50	511	154	22	7.2	8.3	10	7.6	5.2
27	218	43	74	50	301	112	19	7.1	6.9	10	7.5	5.5
28	95	46	617	50	227	252	17	17	6.4	9.3	11	6.3
29	220	65	994	49	---	406	16	18	6.3	8.4	14	5.8
30	132	51	805	49	---	268	16	12	6.0	7.5	15	5.4
31	81	---	318	48	---	465	---	27	---	12	12	---
TOTAL	1668	4845	6552	3005	7794	9573	3820	392.2	992.4	1867.7	234.1	202.9
MEAN	53.8	162	211	96.9	278	309	127	12.7	33.1	60.2	7.55	6.76
MAX	220	559	994	433	2760	872	840	27	169	416	15	12
MIN	18	43	58	48	43	90	16	7.1	6.0	4.9	4.4	4.0
CFSM	1.03	3.10	4.03	1.85	5.32	5.91	2.43	.24	.63	1.15	.14	.13
IN.	1.19	3.45	4.66	2.14	5.54	6.81	2.72	.28	.71	1.33	.17	.14

CAL YR 1984 TOTAL 46611.6 MEAN 127 MAX 1660 MIN 7.3 CFSM 2.43 IN. 33.15
WTR YR 1985 TOTAL 40946.3 MEAN 112 MAX 2760 MIN 4.0 CFSM 2.14 IN. 29.12

FRENCH CREEK BASIN

37

03021520 FRENCH CREEK NEAR UNION CITY, PA

LOCATION.--Lat 41°54'28", long 79°53'49", Erie County, Hydrologic Unit 05010004, on left bank at upstream side of bridge on State Highway 97, 0.4 mi upstream from mouth of South Branch French Creek, 0.9 mi downstream from Union City Dam, and 3.2 mi west of Union City.

DRAINAGE AREA.--221 mi².

PERIOD OF RECORD.--October 1909 to current year. Published as North Branch French Creek at Kimmeytown May 1910 to September 1914, as "at Kimmeytown" October 1915 to September 1932, and as "at Carters Corners" (station 03021500) October 1932 to September 1971. Monthly discharge only for some periods published in WSP 1305.

REVISED RECORDS.--WSP 743: Drainage area. WSP 1275: 1934, 1936-37 (M), 1939 (M), 1942 (M), WSP 1305: 1910-11, 1913, 1914 (M), 1915-16, 1925. 1928, WDR PA-79-3: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,191.16 ft above National Geodetic Vertical Datum of 1929 (Corps of Engineers bench mark). Prior to Dec. 22, 1948, nonrecording gage at site 4.5 mi upstream at datum 43.4 ft higher. Dec. 22, 1948, to Sept. 30, 1971, water-stage recorder at site 4.6 mi upstream at datum 43.4 ft higher. Prior to Oct. 11, 1974, at site 0.7 mi downstream at different datum. Oct. 11, 1974 to Nov. 4, 1977 at site 0.7 mi upstream at different datum.

REMARKS.--Records good except for estimated daily discharges, Dec. 6-10, Jan. 13 to Feb. 24, and Aug. 20 to Sept. 30, which are fair. Flood flow regulated beginning October 1971 by Union City Reservoir 0.2 mi upstream, serving as a retarding basin. Several observations of water temperature were made during the year. Corps of Engineers satellite telemeter at station.

COOPERATION.--One discharge measurement furnished by Corps of Engineers.

AVERAGE DISCHARGE.--76 years, 435 ft³/s, 26.73 in/yr, adjusted for storage since 1971.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 20,000 ft³/s, Apr. 5, 1947, gage height, 13.50 ft, site and datum then in use, by slope-area measurement of peak flow; maximum gage height observed, 16.0 ft, Feb. 20, 1918 (backwater from ice), site and datum then in use; minimum discharge observed, 3.9 ft³/s, Aug. 15, 18-21, 1930.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,540 ft³/s, Feb. 25, gage height, 7.69 ft; minimum daily, 36 ft³/s, Sept. 24, 29, 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	83	756	348	1440	220	2190	1300	114	501	47	101	67
2	122	597	474	1500	220	1920	1390	111	440	43	74	55
3	127	601	513	1450	210	1720	1380	119	247	42	58	45
4	101	520	677	1360	210	1540	1370	115	266	42	52	39
5	84	892	632	1310	205	1650	1380	110	150	79	48	39
6	72	1100	440	1280	200	1720	1350	130	99	445	45	39
7	64	1140	310	1240	200	1630	1280	159	79	534	67	39
8	64	1110	300	1190	190	1770	1250	135	67	624	83	39
9	64	1030	320	1130	190	2040	1230	112	63	835	57	39
10	65	1030	340	1050	180	1990	1200	101	71	1020	48	64
11	63	1190	548	948	190	1820	1160	93	62	990	45	74
12	60	1270	754	768	210	1850	1120	88	270	829	42	43
13	58	1270	1020	470	340	1950	1070	83	540	504	41	38
14	57	1250	1160	280	410	1890	1020	74	646	423	42	38
15	55	1210	1170	240	400	1780	946	66	549	870	41	40
16	56	1190	1140	230	380	1620	843	64	365	1060	41	41
17	85	1170	1100	240	350	1440	644	64	315	1030	68	44
18	87	1120	1010	240	320	1310	436	65	243	897	74	38
19	81	1030	871	250	300	1230	266	60	197	626	55	38
20	81	899	684	200	280	1200	281	55	146	263	40	38
21	91	655	598	280	270	1180	266	97	115	125	40	38
22	97	462	778	210	400	1150	219	105	94	350	40	38
23	118	319	965	215	950	1110	187	78	96	237	40	38
24	118	282	905	220	1700	1120	177	62	95	130	40	36
25	125	263	721	220	3420	1140	175	54	85	102	40	38
26	210	248	555	210	3340	1150	162	59	68	90	40	38
27	695	228	415	215	2960	1140	145	60	58	85	40	39
28	711	218	758	220	2530	1120	130	88	52	76	40	38
29	1010	342	1360	220	---	1160	122	101	50	67	40	36
30	1060	346	1420	220	---	1170	117	77	48	59	65	36
31	969	---	1420	220	---	1210	---	146	---	83	97	---
TOTAL	6733	23738	23706	19266	20775	46910	22616	2845	6077	12607	1644	1272
MEAN	217	791	765	621	742	1513	754	91.8	203	407	53.0	42.4
MAX	1060	1270	1420	1500	3420	2190	1390	159	646	1060	101	74
MIN	55	218	300	200	180	1110	117	54	48	42	40	36
†	+20.5	-19.7	+224	-225	+415	-229	-151	+2.5	-2.8	+0.3	-0.2	-0.1
MEAN†	238	771	989	396	1157	1284	603	94.3	200	407	52.8	42.3
CFSM†	1.08	3.49	4.48	1.79	5.24	5.81	2.73	.43	.90	1.84	.24	.19
IN.†	1.25	3.89	5.16	2.06	5.46	6.70	3.05	.50	1.00	2.12	.28	.21

CAL YR 1984 TOTAL 209277 MEAN 572 MAX 2470 MIN 26 ADJ +18.8 MEAN† 591 CFSM† 2.67 IN.† 36.39
WTR YR 1985 TOTAL 188189 MEAN 516 MAX 3420 MIN 36 ADJ 0 MEAN† 516 CFSM† 2.33 IN.† 31.68

† Change in contents, equivalent in cubic feet per second, in Union City Reservoir.

‡ Adjusted for change in reservoir contents.

FRENCH CREEK BASIN

03022540 WOODCOCK CREEK AT BLOOMING VALLEY, PA

LOCATION.--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.--31.1 mi².

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

GAGE.--Water-stage recorder. Elevation of gage is 1,200 ft, above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good except for estimated daily discharges, Dec. 6-10, 26, Jan. 7 to Feb. 22, and May 22, 23, which are fair. Several observations of water temperature were made during the year. Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--11 years, 57.8 ft³/s, 25.24 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,980 ft³/s, Feb. 17, 1976, gage height, 11.48 ft from rating curve extended above 600 ft³/s on basis of slope-area measurement of peak flow; maximum gage height, 12.27 ft, Feb. 25, 1977 (backwater from ice); minimum daily discharge, 2.4 ft³/s, Aug. 27, 1983.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 800 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Feb. 24	2200	*966	*8.66	No other peak greater than base discharge.			

Minimum discharge, 5.0 ft³/s, Aug. 21, gage height, 5.69 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	18	44	228	21	83	412	17	50	7.6	9.0	9.5
2	13	45	35	160	21	91	188	17	18	7.4	8.0	8.1
3	11	31	68	94	21	71	136	16	13	8.1	7.3	7.5
4	7.6	67	57	68	21	100	244	16	11	9.0	7.0	7.1
5	6.8	178	36	58	20	491	162	15	9.7	20	6.6	6.9
6	6.6	119	33	49	20	159	105	34	9.0	119	6.8	6.6
7	6.1	65	32	44	20	103	83	21	8.3	78	55	6.7
8	6.6	42	31	40	20	462	74	16	7.9	110	66	29
9	7.3	33	31	36	20	217	86	14	8.0	197	23	35
10	7.0	230	34	34	20	119	71	13	7.9	98	13	26
11	7.2	274	63	32	19	102	95	12	7.8	52	13	31
12	7.0	154	143	30	35	518	79	11	41	28	11	11
13	6.7	121	293	29	90	250	61	10	62	19	9.0	9.3
14	6.6	94	181	28	210	208	59	9.9	36	60	7.9	8.3
15	6.7	156	133	27	200	137	49	9.6	19	116	7.6	7.6
16	6.5	232	77	26	140	88	43	9.6	22	387	28	7.2
17	7.0	107	56	25	90	78	37	12	18	71	18	6.9
18	7.6	64	47	25	64	62	35	15	27	40	10	6.6
19	7.4	54	45	24	45	53	40	13	20	29	8.4	6.5
20	7.3	44	47	24	32	69	36	11	15	23	7.9	6.4
21	7.2	37	45	23	27	54	32	28	13	16	7.4	6.2
22	15	33	172	23	160	45	29	14	15	14	7.2	6.2
23	15	29	67	23	534	63	26	11	38	15	6.8	6.0
24	13	27	48	22	840	119	28	9.4	25	12	6.8	8.0
25	10	26	42	22	509	92	33	8.6	19	10	11	7.6
26	17	24	38	22	183	62	27	8.1	12	10	9.0	6.6
27	18	23	85	22	138	51	22	7.8	9.6	13	7.8	7.1
28	24	27	366	22	93	50	20	40	8.7	9.8	7.2	7.0
29	115	37	333	21	---	380	19	22	8.3	8.7	6.8	6.8
30	33	29	407	21	---	349	18	12	8.2	8.5	13	6.4
31	22	---	171	21	---	172	---	21	---	8.6	15	---
TOTAL	442.2	2420	3260	1323	3613	4898	2349	474.0	567.4	1604.7	420.5	311.1
MEAN	14.3	80.7	105	42.7	129	158	78.3	15.3	18.9	51.8	13.6	10.4
MAX	115	274	407	228	840	518	412	40	62	387	66	35
MIN	6.1	18	31	21	19	45	18	7.8	7.8	7.4	6.6	6.0
CFSM	.46	2.59	3.38	1.37	4.15	5.08	2.52	.49	.61	1.67	.44	.33
IN.	.53	2.89	3.90	1.58	4.32	5.86	2.81	.57	.68	1.92	.50	.37

CAL YR 1984 TOTAL 23049.5 MEAN 63.0 MAX 572 MIN 4.6 CFSM 2.03 IN. 27.57
WTR YR 1985 TOTAL 21682.9 MEAN 59.4 MAX 840 MIN 6.0 CFSM 1.91 IN. 25.94

FRENCH CREEK BASIN

39

03022554 WOODCOCK CREEK AT WOODCOCK CREEK DAM, PA

LOCATION.--Lat 41°41'45", long 80°06'30", Crawford County, Hydrologic Unit 05010004, on left bank 0.5 mi downstream from Woodcock Creek Dam, 2.6 mi southeast of Saegertown, and 3.0 mi upstream from mouth.

DRAINAGE AREA.--45.6 mi².

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

GAGE.--Water-stage recorder. Datum of gage is 1,126.92 ft above National Geodetic Vertical Datum of 1929 (Corps of Engineers bench mark). Prior to Nov. 4, 1976, water-stage recorder at site 0.5 mi downstream at datum 10.08 ft lower.

REMARKS.--Records good except for estimated daily discharges, Jan. 20, 21, Sept. 5-14, 27-30, which are fair. Flow completely regulated by Woodcock Creek Lake 0.5 mi upstream. Several observations of water temperature were made during the year. Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--11 years, 87.2 ft³/s, 25.97 in/yr, adjusted for storage.

COOPERATION.--One discharge measurement furnished by Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 888 ft³/s, Feb. 24, 1976, gage height, 6.17 ft; minimum daily, 4.2 ft³/s, Apr. 21, 1976.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 547 ft³/s, Feb. 27, gage height, 4.39 ft; minimum daily, 7.2 ft³/s, May 3, 4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	59	8.3	46	143	45	516	59	11	8.5	17	13	15
2	58	9.1	65	224	45	501	298	7.5	8.5	17	14	15
3	59	8.7	88	312	45	482	502	7.2	8.3	17	14	15
4	57	11	87	305	45	477	493	7.2	7.9	17	13	15
5	54	143	86	297	45	275	482	7.5	8.0	18	13	15
6	54	268	65	288	45	274	472	7.8	7.9	71	13	15
7	53	194	45	279	45	468	457	7.5	8.1	128	14	15
8	53	64	45	269	45	474	372	7.4	8.0	129	14	15
9	52	38	45	190	45	468	281	7.5	8.2	158	14	34
10	52	85	28	73	44	457	192	7.5	8.6	174	14	59
11	52	200	11	46	44	443	75	7.5	9.2	172	14	59
12	52	358	12	45	44	460	53	7.5	9.8	170	14	59
13	52	385	72	45	46	457	53	7.5	11	168	14	59
14	51	195	227	34	46	451	53	7.5	43	110	14	35
15	51	120	284	23	46	438	41	7.5	65	71	14	15
16	51	216	276	23	46	420	28	7.5	65	132	37	14
17	49	274	198	23	46	400	19	7.6	65	171	63	14
18	49	212	117	23	66	244	13	7.5	63	170	40	14
19	48	100	116	23	86	76	13	7.5	37	169	14	14
20	30	63	114	23	86	45	13	7.5	17	167	14	14
21	9.8	47	113	23	84	45	13	8.0	17	119	14	15
22	10	46	116	23	91	45	14	7.8	17	43	14	14
23	10	46	116	23	105	46	14	7.7	17	16	14	14
24	10	36	114	23	115	47	14	7.6	17	15	14	15
25	11	24	58	23	116	47	14	7.7	17	13	14	15
26	11	24	23	23	231	48	14	7.8	17	14	14	15
27	57	34	23	23	443	48	14	7.9	17	14	14	15
28	103	46	78	33	532	50	14	8.3	17	14	14	15
29	178	46	135	45	---	60	14	8.0	17	14	15	15
30	260	46	140	45	---	56	14	8.0	17	14	16	15
31	112	---	141	45	---	60	---	8.6	---	14	15	---
TOTAL	1807.8	3347.1	3084	3017	2722	8378	4108	240.6	637.0	2536	532	658
MEAN	58.3	112	99.5	97.3	97.2	270	137	7.76	21.2	81.8	17.2	21.9
MAX	260	385	284	312	532	516	502	11	65	174	63	59
MIN	9.8	8.3	11	23	44	45	13	7.2	7.9	13	13	14
†	-36.3	+4.92	+43.6	-32.0	+79.9	-12.4	-26.2	+12.7	+7.23	-2.60	-0.33	-7.39
MEAN†	22.0	117	143	65.3	177	258	111	20.5	28.4	79.2	16.9	14.5
CFSM†	.48	2.57	3.14	1.43	3.88	5.66	2.43	.45	.62	1.74	.37	.32
IN.†	.55	2.87	3.62	1.65	4.04	6.53	2.71	.52	.69	2.01	.43	.36

CAL YR 1984 TOTAL 34398.9 MEAN 94.0 MAX 507 MIN 8.3 ADJ +2.70 MEAN† 96.7 CFSM† 2.12 IN.† 28.88

WTR YR 1985 TOTAL 31067.5 MEAN 85.1 MAX 532 MIN 7.2 ADJ +2.04 MEAN† 87.1 CFSM† 1.91 IN.† 25.98

† Change in contents, equivalent in cubic feet per second, in Woodcock Creek Lake.

‡ Adjusted for change in reservoir contents.

FRENCH CREEK BASIN

03024000 FRENCH CREEK AT UTICA, PA

LOCATION.--Lat 41°21'15", long 79°57'22", Venango County, Hydrologic Unit 05010004, on right bank at upstream side of bridge on Legislative Route 60019 at Utica, and 2,000 ft upstream from Mill Creek.

DRAINAGE AREA.--1,028 mi².

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 National Geodetic Vertical Datum of 1929. Prior to Nov. 27, 1933, nonrecording gage at same site and datum.

REMARKS.--Records good except for estimated daily discharges, Jan. 17 to Feb. 23, 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 observations of water temperature were made during the year.

AVERAGE DISCHARGE.--53 years, 1,823 ft³/s, 24.08 in/yr, adjusted for storage since 1971.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 23,800 ft³/s, Mar. 7, 1964, gage height, 13.2 ft, from floodmark in gage well; minimum, 43 ft³/s, July 30, 1934, gage height, 1.03 ft.

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 17,100 ft³/s, Feb. 26, gage height, 11.22 ft; minimum daily, 159 ft³/s, Sept. 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	446	2020	1280	6900	1050	7050	8120	610	995	302	298	363
2	450	1670	1440	6410	1000	5630	8600	571	1610	282	366	348
3	469	1600	1700	5400	1000	4940	7390	546	1160	277	351	278
4	489	1590	2050	4440	980	4470	6910	523	847	262	294	239
5	442	2890	2090	3690	940	7810	6100	511	804	255	253	212
6	396	3910	1860	3160	960	8260	5240	507	633	558	229	195
7	361	4110	1600	2920	920	7350	4440	599	489	1230	537	193
8	341	3620	1310	2770	900	7720	3860	657	413	1480	763	276
9	329	3070	1340	2550	880	8310	3630	590	368	2740	602	587
10	315	3840	1500	2460	860	7780	3420	510	332	2660	439	1230
11	304	5000	1600	2290	840	6250	3140	453	304	2360	354	987
12	299	5510	2160	2000	880	7930	3030	416	526	1940	303	712
13	294	5070	4040	1760	1000	8070	2820	388	1080	1560	270	531
14	283	4500	4670	1550	1200	7840	2620	357	1830	1360	248	424
15	272	3990	4490	1240	1550	6870	2460	327	1720	2980	251	347
16	265	4670	3910	978	1500	5650	2250	323	1430	4230	371	295
17	258	4060	3270	940	1450	4600	2010	323	1300	3470	550	267
18	252	3620	2690	960	1400	3930	1750	340	1220	2680	509	246
19	263	3160	2380	840	1350	3250	1490	347	995	2140	370	225
20	270	2620	2270	800	1300	3020	1330	333	807	1580	291	210
21	259	2190	2100	720	1250	2930	1240	372	687	1160	256	193
22	285	1840	2850	700	1400	2730	1150	471	630	797	232	176
23	298	1550	3310	800	2400	2630	1040	517	1150	704	211	159
24	309	1320	2870	880	10800	3080	921	416	863	710	200	161
25	325	1180	2430	1000	15900	3690	999	343	725	557	241	175
26	360	1090	1900	1050	16500	3310	954	302	560	470	259	164
27	420	1030	1800	1000	13700	2850	882	278	471	416	259	167
28	783	1010	3120	1050	9940	2770	792	650	410	379	242	173
29	2300	1080	6700	1050	---	6600	716	530	366	345	221	176
30	3160	1190	9320	1050	---	6390	656	464	329	311	224	166
31	2520	---	8770	1050	---	5860	---	435	---	287	324	---
TOTAL	17817	84000	92820	64408	93850	169570	89960	14009	25054	40482	10318	9875
MEAN	575	2800	2994	2078	3352	5470	2999	452	835	1306	333	329
MAX	3160	5510	9320	6900	16500	8310	8600	657	1830	4230	763	1230
MIN	252	1010	1280	700	840	2630	656	278	304	255	200	159
†	-15.8	-14.8	+268	-257	+495	-241	-177	+15.2	+4.41	-2.27	-.51	-7.51
MEAN†	559	2785	3262	1821	3847	5229	2822	467	839	1304	332	321
CFSM†	.54	2.71	3.17	1.77	3.74	5.09	2.75	.45	.82	1.27	.32	.31
IN.†	.62	3.02	3.65	2.04	3.89	5.87	3.07	.52	.91	1.46	.37	.35

CAL YR 1984 TOTAL 813553 MEAN 2223 MAX 12700 MIN 172 ADJ +21.5 MEAN† 2244 CFSM† 2.18 IN.† 29.72
WTR YR 1985 TOTAL 712163 MEAN 1951 MAX 16500 MIN 159 ADJ +2.04 MEAN† 1953 CFSM† 1.90 IN.† 25.77

† Change in contents, equivalent in cubic feet per second, in Union City Reservoir and Woodcock Creek Lake.

‡ Adjusted for change in reservoir contents.

OHIO RIVER MAIN STEM

41

03025500 ALLEGHENY RIVER AT FRANKLIN, PA

LOCATION.--Lat 41°23'22", long 79°49'14", Venango County, Hydrologic Unit 05010003, on right bank at downstream side of Eighth Street Bridge on U.S. Highway 322 at Franklin, 1,000 ft downstream from French Creek, and 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 National Geodetic Vertical Datum of 1929. 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, Jan. 21 to Feb. 23, and Apr. 18 to Sept. 30, which are fair. Flow regulated by Allegheny Reservoir 74 mi upstream since 1965, by Chautauqua Lake since 1949, by Tionesta Lake since 1940, by Union City Reservoir since 1971, and by Woodcock Creek Lake since January 1974. Several observations of water temperature were made during the year. Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--71 years, 10,510 ft³/s, 23.86 in/yr, adjusted for storage 1940-75.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 138,000 ft³/s, Mar. 13, 1920; maximum gage height observed, 26.0 ft, Feb. 27, 1917 (backwater from ice) and Feb. 26, 1926 (backwater from ice); minimum discharge, 334 ft³/s, July 30, 1934, gage height, 1.63 ft.

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.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 65,500 ft³/s, Feb. 25, gage height, 13.83 ft; minimum daily, 1,510 ft³/s, Aug. 6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2980	9720	9930	26900	7400	38200	33800	2890	8990	2560	1950	2120
2	4180	8620	10500	26500	7600	38600	30300	2750	6230	1940	1780	2000
3	4660	8980	11000	24100	7800	36200	27600	2910	4520	2260	1710	1870
4	4650	9150	12200	23400	8000	34000	27500	2960	3990	2740	1600	2500
5	4470	15100	12000	23200	8200	43700	25800	2720	3460	2880	1540	2500
6	4290	16500	11000	21500	8000	41900	24500	2860	2840	5000	1510	2450
7	4140	16300	10900	18000	8400	37500	23400	3220	2360	5870	4830	2400
8	4010	14800	10400	15600	8800	44600	20800	3160	2140	8470	4460	2700
9	3970	13800	10300	13000	8800	47400	17700	3870	2000	13100	3350	3430
10	3740	21300	10400	11200	8800	39100	15900	2690	1960	11300	2830	4820
11	3330	26800	10300	10300	8800	34000	14500	2610	1930	9630	2860	4090
12	3280	26000	11900	10500	8800	48400	13100	2560	2890	7720	2370	3720
13	3090	23600	17900	12000	9000	43200	12700	2480	4300	6340	2310	3430
14	2750	21000	20300	11000	9600	39900	12000	2400	5730	6450	2570	3120
15	2690	19100	21600	9210	9800	36900	11100	2320	5180	12000	2930	2830
16	2630	19500	18900	8400	9600	33300	10600	2290	5060	15400	3870	2600
17	2180	17800	16900	8200	9200	30500	10400	2240	5220	10900	4170	2510
18	2190	16200	14200	8700	9000	28200	9310	2380	6140	8630	3980	2470
19	2720	14000	13100	7160	8800	25800	9290	2190	5900	7320	3670	2430
20	3390	12700	13400	3740	8800	24200	9620	2030	5730	6190	3780	2420
21	3440	11700	11600	3500	9200	20600	9560	2250	6070	5340	3490	3080
22	3690	10900	15600	3400	10000	17100	6440	2640	5760	4740	3340	3310
23	3940	10200	17000	3400	21000	16500	4850	2390	9110	4580	3280	3100
24	3850	9750	15700	3400	43000	18300	4270	2140	6390	3790	3280	3790
25	3810	8490	14200	3400	62100	21800	4150	1940	4580	2560	2950	4380
26	4130	6840	12600	3300	48800	21000	4020	1820	4320	2840	2510	4320
27	4920	6210	12500	3300	42100	19200	3860	1770	5080	3050	1980	4370
28	5480	6090	15500	3300	38600	18800	3580	3070	4510	2860	1670	4210
29	8340	7620	32100	3800	---	33300	3440	2610	4110	2690	1600	4090
30	11900	9370	37200	4500	---	29800	3000	2350	3970	2520	1660	3970
31	11400	---	30800	6000	---	27300	---	2650	---	2610	2170	---
TOTAL	134240	418140	481930	333910	448000	989300	407090	79160	140470	184280	86000	95030
MEAN	4330	13940	15550	10770	16000	31910	13570	2554	4682	5945	2774	3168
MAX	11900	26800	37200	26900	62100	48400	33800	3870	9110	15400	4830	4820
MIN	2180	6090	9930	3300	7400	16500	3000	1770	1930	1940	1510	1870

CAL YR 1984 TOTAL 4880380 MEAN 13330 MAX 54700 MIN 2130
WTR YR 1985 TOTAL 3797550 MEAN 10400 MAX 62100 MIN 1510

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 National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except for estimated daily discharges, Dec. 6-9, 24-26, Jan. 5 to Feb. 10, and Feb. 15-24, which are fair. Several observations of water temperature were made during the year. Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--34 years, 14.5 ft³/s, 25.11 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,620 ft³/s, Sept. 28, 1967, from rating curve extended above 200 ft³/s on basis of slope-area measurement at gage height 4.60 ft; maximum gage height, 4.98 ft, Aug. 8, 1979; minimum discharge, 0.07 ft³/s, Sept. 21, 1955.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than 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)
Dec. 28	1900	244	3.92	June 1	0100	260	4.00
Feb. 24	2400	224	3.82	Aug. 7	1600	263	4.01
Mar. 12	0630	*584	*4.58				

Minimum discharge, 0.70 ft³/s, Oct. 15, gage height, 1.69 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.2	5.2	9.7	45	3.1	28	70	3.7	96	4.4	1.2	3.5
2	2.1	7.0	10	19	3.0	27	50	3.8	28	3.7	.95	2.9
3	1.5	5.7	19	12	3.0	24	41	3.9	19	3.7	.85	2.4
4	1.4	8.5	21	9.6	3.3	21	40	3.4	14	3.4	.82	2.0
5	1.2	45	17	8.2	4.5	35	37	3.2	14	3.0	.81	1.8
6	1.1	26	14	7.6	4.2	27	32	3.6	11	3.1	.80	1.8
7	1.1	19	12	7.0	3.7	23	29	7.1	8.9	3.0	93	1.8
8	1.1	16	10	6.6	3.2	49	26	4.2	7.8	5.4	36	5.2
9	1.2	14	9.6	6.2	2.9	48	23	3.4	7.8	5.0	13	17
10	2.0	70	11	5.8	2.6	42	20	3.1	6.3	4.6	8.6	17
11	1.4	68	12	5.6	3.1	44	20	2.9	5.3	3.3	6.8	13
12	1.2	49	13	5.4	4.9	266	17	2.8	52	2.7	5.4	8.9
13	1.0	37	38	5.2	10	106	16	2.6	36	2.4	4.6	7.4
14	.81	29	37	5.0	6.1	69	14	2.3	25	2.7	4.1	6.3
15	.75	24	34	4.8	4.7	50	13	2.3	19	3.3	3.9	5.3
16	.87	22	28	4.7	4.3	38	12	2.8	22	2.6	9.5	4.6
17	.87	18	24	4.5	3.8	34	11	4.8	18	2.1	5.2	4.0
18	.87	15	20	4.3	3.5	27	9.9	8.2	25	1.9	3.7	3.5
19	.81	13	21	4.2	3.3	23	9.9	4.3	19	1.7	3.1	3.1
20	.81	12	21	4.1	3.1	22	9.5	3.2	19	1.6	2.8	2.8
21	.87	10	18	4.0	2.9	20	8.3	3.0	16	1.7	2.6	2.5
22	2.4	9.1	33	3.9	8.0	17	7.6	2.8	14	2.7	2.5	2.4
23	3.6	8.4	20	3.8	20	28	7.0	2.4	14	1.7	2.8	2.3
24	2.3	7.9	16	3.7	70	48	6.7	2.2	11	1.4	3.4	2.7
25	1.9	7.1	14	3.6	125	43	6.4	2.1	9.0	1.3	6.0	2.5
26	2.9	6.2	12	3.5	64	35	5.7	1.9	7.7	1.5	5.3	2.0
27	4.0	5.9	18	3.4	48	31	5.2	2.2	6.7	1.5	4.5	2.7
28	3.0	7.5	79	3.3	35	31	4.9	9.9	6.0	1.2	3.8	2.3
29	13	12	103	3.2	---	61	4.6	5.7	5.3	1.0	4.1	1.9
30	8.1	8.2	99	3.2	---	46	4.1	3.6	4.9	1.0	6.3	1.7
31	6.0	---	48	3.2	---	55	---	14	---	1.1	5.5	---
TOTAL	72.36	585.7	841.3	213.6	453.2	1418	560.8	125.4	547.7	79.7	251.93	137.3
MEAN	2.33	19.5	27.1	6.89	16.2	45.7	18.7	4.05	18.3	2.57	8.13	4.58
MAX	13	70	103	45	125	266	70	14	96	5.4	93	17
MIN	.75	5.2	9.6	3.2	2.6	17	4.1	1.9	4.9	1.0	.80	1.7
CFSM	.30	2.49	3.46	.88	2.07	5.83	2.39	.52	2.33	.33	1.04	.58
IN.	.34	2.78	3.99	1.01	2.15	6.73	2.66	.60	2.60	.38	1.20	.65

CAL YR 1984 TOTAL 7803.46 MEAN 21.3 MAX 335 MIN .75 CFSM 2.72 IN. 37.03
WTR YR 1985 TOTAL 5286.99 MEAN 14.5 MAX 266 MIN .75 CFSM 1.85 IN. 25.09

CLARION RIVER BASIN

43

03027500 EAST BRANCH CLARION RIVER AT EAST BRANCH CLARION RIVER DAM, PA

LOCATION.--Lat 41°33'11", long 78°35'47", Elk County, Hydrologic Unit 05010005, on left bank 700 ft upstream from Middle Fork, 0.5 mi downstream from East Branch Clarion River Dam, and 1.2 mi northeast of Glen Hazel.

DRAINAGE AREA.--73.2 mi².

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

REVISED RECORDS.--WSP 1235: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,517.58 ft above National Geodetic Vertical Datum of 1929 (Corps of Engineers bench mark).

REMARKS.--No estimated daily discharges. Records fair. Flow completely regulated since June 1952 by East Branch Clarion River Lake 0.5 mi upstream. Several observations of water temperature were made during the year. Corps of Engineers satellite telemeter at station.

COOPERATION.--Two discharge measurements furnished by Corps of Engineers.

AVERAGE DISCHARGE.--37 years, 137 ft³/s, 25.41 in/yr, adjusted for storage since 1952.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,590 ft³/s, May 10, 1957, gage height, 7.25 ft; minimum, 0.20 ft³/s, July 25, 1969, gage height, 1.06 ft; minimum daily, 0.40 ft³/s, July 24-27, 1969.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of May 28, 1946, reached a stage of 8.3 ft from graph based on gage readings at site 1,000 ft downstream and at different datum, discharge, 4,000 ft³/s.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 255 ft³/s, Jan. 8, gage height, 2.88 ft; maximum gage height, 3.05 ft, Sept. 9, (backwater from Middle Fork); minimum daily discharge, 30 ft³/s, June 6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	135	126	66	248	168	62	67	38	37	126	122	243
2	134	117	66	248	116	62	69	38	37	125	154	243
3	134	110	66	248	116	62	69	38	37	125	189	241
4	134	110	67	248	116	62	69	37	37	124	189	240
5	134	81	67	248	116	63	69	37	33	124	188	240
6	134	66	67	250	116	63	69	37	30	124	188	240
7	134	66	67	249	86	63	69	37	45	124	188	238
8	134	66	66	251	60	63	69	37	63	124	188	240
9	133	65	66	251	60	63	69	37	63	124	188	240
10	133	65	65	248	60	63	67	51	63	124	188	240
11	132	65	89	248	60	65	67	65	63	124	188	240
12	132	65	113	248	60	65	67	65	63	125	219	240
13	132	65	113	248	58	66	67	65	63	124	250	240
14	132	65	113	248	58	66	67	65	63	125	249	240
15	132	93	113	248	58	66	67	65	63	124	249	240
16	130	113	113	248	60	66	66	65	63	117	249	240
17	128	113	168	245	60	66	66	65	63	124	249	239
18	128	113	243	245	60	66	66	65	63	124	248	238
19	128	89	243	245	60	66	66	65	63	124	247	237
20	128	66	246	243	60	66	66	65	63	123	245	236
21	128	66	246	243	60	66	66	55	63	124	245	235
22	128	66	245	240	60	66	66	63	63	123	245	235
23	128	66	245	240	60	66	66	62	63	123	245	235
24	128	66	245	238	61	67	66	62	63	122	245	235
25	128	66	245	238	61	67	66	62	63	122	245	234
26	128	66	245	238	61	67	141	62	93	123	245	233
27	128	66	245	238	61	67	192	62	126	122	243	233
28	126	66	245	238	62	67	74	48	126	122	243	231
29	126	66	245	235	---	67	56	37	126	122	243	230
30	126	66	248	235	---	67	38	49	126	122	243	230
31	126	---	248	235	---	67	---	50	---	122	243	---
TOTAL	4041	2379	4919	7573	2094	2018	2182	1649	1987	3825	6860	7126
MEAN	130	79.3	159	244	74.8	65.1	72.7	53.2	66.2	123	221	238
MAX	135	126	248	251	168	67	192	65	126	126	250	243
MIN	126	65	65	235	58	62	38	37	30	117	122	230
†	+112	+60.5	+92.7	+127	+75.6	+285	+103	-1.6	+42.0	-96.0	-161	-176
MEAN†	242	140	252	371	150	350	176	51.6	108	27.0	60.0	62.0
CFSM†	3.31	1.91	3.44	5.07	2.05	4.78	2.40	.70	1.48	.37	.82	.85
IN.†	3.82	2.13	3.97	5.85	2.13	5.51	2.68	.81	1.65	.43	.95	.95

CAL YR 1984 TOTAL 70509 MEAN 193 MAX 915 MIN 60 ADJ +8.3 MEAN† 201 CFSM† 2.75 IN.† 40.89
WTR YR 1985 TOTAL 46653 MEAN 128 MAX 251 MIN 30 ADJ -2.1 MEAN† 126 CFSM† 1.72 IN.† 30.88

† Change in contents, equivalent in cubic feet per second, in East Branch Clarion River Lake.

‡ Adjusted for change in reservoir contents.

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 National Geodetic Vertical Datum of 1929. 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, Dec. 6-11, 24-27, Jan. 11 to Feb. 24, which are fair. Several observations of water temperature were made during the year. Corps of Engineers satellite tele-meter at station.

AVERAGE DISCHARGE.--32 years, 126 ft³/s, 27.16 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,490 ft³/s, Sept. 28, 1967, gage height, 10.01 ft, from rating curve extended above 3,000 ft³/s; minimum, 4.2 ft³/s, Sept. 21, 1955, gage height, 1.27 ft.

EXTREMES 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. 28	1930	1150	4.69	Mar. 12	0900	*2500	*7.02
Dec. 29	2300	1080	4.53	Aug. 7	1800	1830	6.04
Feb. 25	0100	1300	4.99				

Minimum discharge, 13 ft³/s, Oct. 20, gage height, 1.38 ft; minimum gage height, 1.34 ft, Aug. 7.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	31	49	97	508	42	237	556	51	361	42	19	28
2	26	61	106	380	42	213	442	52	131	39	16	26
3	22	50	103	304	41	190	381	54	103	37	15	24
4	21	145	213	260	41	192	345	47	80	35	15	23
5	19	297	165	221	40	312	304	45	82	31	15	22
6	19	194	140	182	40	243	283	49	66	43	15	22
7	19	161	125	158	39	213	258	60	53	34	753	22
8	19	133	115	130	38	435	236	45	54	67	266	42
9	19	129	105	107	37	412	206	37	64	63	147	185
10	19	593	98	90	36	366	182	36	49	50	101	146
11	16	572	94	84	35	362	172	36	40	37	78	105
12	15	439	125	80	36	1500	154	36	312	32	62	83
13	15	339	198	74	64	912	142	35	235	29	52	71
14	15	258	285	68	52	633	140	29	190	37	46	61
15	15	212	309	64	47	455	134	29	160	41	46	53
16	15	183	274	62	42	356	132	34	173	36	105	47
17	16	147	246	60	41	303	104	48	146	28	50	43
18	15	126	216	58	40	249	100	62	168	25	40	38
19	14	112	186	54	33	216	103	37	131	23	36	37
20	14	97	169	54	32	207	87	32	136	22	34	32
21	15	86	160	66	33	185	79	31	122	26	31	31
22	30	75	312	64	35	165	75	27	106	41	30	29
23	25	73	234	60	120	243	70	25	116	24	27	26
24	20	69	190	58	400	359	69	24	88	22	26	29
25	19	80	160	54	799	359	69	23	74	20	40	26
26	37	74	140	52	535	297	66	22	66	21	31	24
27	30	70	130	50	380	271	58	25	59	22	27	27
28	49	68	580	49	285	277	59	89	53	18	24	24
29	100	110	728	48	---	477	57	41	51	17	26	22
30	59	88	770	45	---	369	54	30	46	17	50	21
31	52	---	536	44	---	452	---	78	---	18	40	---
TOTAL	800	5090	7309	3588	3405	11460	5117	1269	3515	997	2263	1369
MEAN	25.8	170	236	116	122	370	171	40.9	117	32.2	73.0	45.6
MAX	100	593	770	508	799	1500	556	89	361	67	753	185
MIN	14	49	94	44	32	165	54	22	40	17	15	21
CFSM	.41	2.70	3.75	1.84	1.94	5.87	2.71	.65	1.86	.51	1.16	.72
IN.	.47	3.01	4.32	2.12	2.01	6.77	3.02	.75	2.08	.59	1.34	.81

CAL YR 1984 TOTAL 64205 MEAN 175 MAX 1650 MIN 14 CFSM 2.78 IN. 37.91
WTR YR 1985 TOTAL 46182 MEAN 127 MAX 1500 MIN 14 CFSM 2.02 IN. 27.27

CLARION RIVER BASIN

45

03028500 CLARION RIVER AT JOHNSONBURG, PA

LOCATION.--Lat 41°29'10", long 78°40'43", Elk County, Hydrologic Unit 05010005, on left bank at downstream side of highway bridge in Johnsonburg, 0.1 mi downstream from Johnson Run; and 0.4 mi downstream from confluence of East and West Branches.

DRAINAGE AREA.--204 mi².

PERIOD OF RECORD.--October 1945 to current year.

REVISED RECORDS.--WSP 1235: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,423.03 ft above National Geodetic Vertical Datum of 1929. Prior to Nov. 8, 1951, nonrecording gage at same site and datum.

REMARKS.--Records good except for estimated daily discharges, Feb. 16-24, which are fair. Flow regulated since June 1952 by East Branch Clarion River Lake 7.9 mi upstream and at low flow by industrial plants above station. Several observations of water temperature were made during the year. Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--40 years, 384 ft³/s, 25.56 in/yr, adjusted for storage since 1952.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,700 ft³/s, May 28, 1946, gage height, 9.2 ft, from graph based on gage readings; maximum gage height, 9.94 ft, June 22, 1972; minimum discharge, 6 ft³/s, Sept. 18, 1952, gage height, 0.68 ft, result of regulation above station; minimum daily, 20 ft³/s, Oct. 5, 1948, Nov. 6, 1951.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in July 1942 reached a stage of 16.7 ft from floodmark.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,240 ft³/s, Mar. 12, gage height, 6.73 ft; minimum daily, 96 ft³/s, May 9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	175	195	279	1160	269	535	1160	114	469	187	152	292
2	174	218	245	988	189	485	958	116	224	182	166	286
3	160	189	360	827	184	422	847	122	187	185	203	280
4	158	231	369	754	177	380	783	107	163	182	202	276
5	155	715	340	682	181	640	683	104	156	172	200	273
6	154	406	352	598	182	484	621	107	136	205	201	271
7	152	332	313	550	165	432	573	119	125	190	1000	269
8	155	283	286	514	122	838	520	104	145	281	643	293
9	156	260	258	445	125	789	458	96	175	292	390	594
10	154	1090	254	410	125	706	400	100	146	252	325	564
11	154	1040	294	450	122	673	370	114	131	213	296	453
12	152	853	333	440	138	2820	330	112	492	194	294	401
13	151	679	518	415	200	1560	301	111	410	186	317	373
14	151	530	471	410	176	1180	286	106	350	195	315	351
15	150	465	491	380	163	892	268	107	295	217	312	332
16	153	449	341	385	150	704	251	118	347	206	430	317
17	150	386	337	392	140	602	230	136	309	183	335	305
18	149	346	366	393	130	492	214	186	314	174	307	297
19	149	305	494	379	125	414	220	127	264	170	299	290
20	149	238	453	345	120	404	214	117	260	167	294	284
21	148	216	352	359	115	358	194	110	244	172	288	278
22	168	194	855	368	150	313	182	110	219	215	287	275
23	175	189	719	356	400	444	175	104	247	171	283	270
24	159	183	688	349	1160	701	169	102	203	163	282	276
25	154	175	606	343	1910	697	166	101	175	160	301	271
26	171	167	352	344	1170	623	202	99	179	163	294	265
27	185	162	359	337	881	567	300	100	213	164	285	275
28	168	197	929	336	655	554	157	291	205	155	277	265
29	346	244	1240	330	---	1040	143	144	201	152	280	257
30	236	195	1500	320	---	836	118	117	193	151	353	254
31	205	---	1270	312	---	943	---	228	---	151	331	---
TOTAL	5216	11132	16024	14671	9624	22528	11493	3829	7177	5850	9942	9487
MEAN	168	371	517	473	344	727	383	124	239	189	321	316
MAX	346	1090	1500	1160	1910	2820	1160	291	492	292	1000	594
MIN	148	162	245	312	115	313	118	96	125	151	152	254
†	+112	+60.5	+92.7	+127	+75.6	+285	+103	-1.6	+42.0	-96.0	-161	-176
MEAN†	280	432	610	600	420	1012	486	122	281	93.0	160	140
CFSM†	1.37	2.12	2.99	2.94	2.06	4.96	2.38	.60	1.38	.46	.78	.69
IN.†	1.58	2.37	3.45	3.39	2.15	5.72	2.66	.69	1.54	.53	.90	.77

CAL YR 1984 TOTAL 188910 MEAN 516 MAX 3630 MIN 95 ADJ +8.3 MEAN† 524 CFSM† 2.57 IN.† 36.28
WTR YR 1985 TOTAL 126973 MEAN 348 MAX 2820 MIN 96 ADJ -2.1 MEAN† 346 CFSM† 1.70 IN.† 25.75

† Change in contents, equivalent in cubic feet per second, in East Branch Clarion River Lake.

‡ Adjusted for change in reservoir contents.

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 Stage 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).

GAGE.--Water-stage recorder. Datum of gage is 1,147.00 ft above National Geodetic Vertical Datum of 1929. Prior to May 17, 1939, nonrecording gage at same site and datum.

REMARKS.--Records good except for estimated daily discharges, Dec. 6-10, 25, 26, Jan. 20 to Feb. 24, which are fair. Flow regulated by East Branch Clarion River Lake since June 1952 and at low flow by industrial plants above station. Several observations of water temperature were made during the year. Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--47 years, 1,458 ft³/s, 24.54 in/yr, adjusted for storage since 1952.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 53,300 ft³/s, June 23, 1972, gage height, 18.84 ft; minimum, 41 ft³/s, Aug. 30, 1939, gage height, 1.22 ft.

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

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than 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)
Feb. 23	---	ice jam	*11.05	Mar. 12	2000	*16500	11.04
Feb. 25	0700	13100	9.97				

Minimum discharge, 269 ft³/s, Aug. 3, gage height, 2.07 ft.

REVISIONS.--The maximum discharge for the 1979 water year has been revised to 33,700 ft³/s, Mar 6, 1979, gage height, 14.87 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	332	782	1190	4240	800	2750	6800	557	1220	460	291	649
2	374	768	1570	4130	760	2390	5400	575	1180	433	291	491
3	407	786	1360	3140	720	2120	4380	712	762	434	277	449
4	340	715	2040	2680	680	1820	4370	693	651	436	310	426
5	316	2390	1710	2430	640	2680	3770	571	606	409	314	414
6	303	2720	1400	2140	700	2960	3210	549	580	392	312	412
7	295	1900	1200	1900	680	2230	2980	704	517	462	347	398
8	292	1490	1100	1760	640	3050	2830	744	444	602	1700	412
9	297	1270	940	1460	600	4120	2620	618	452	1130	929	637
10	306	4720	1050	1200	500	3160	2260	562	533	1110	622	1240
11	301	6370	1210	1270	500	2760	2080	533	468	853	517	1330
12	295	5140	1450	1250	490	10100	1930	528	730	637	473	799
13	290	3610	2090	1130	800	10200	1720	518	1460	526	436	653
14	284	2800	2930	1100	1300	6460	1570	536	1140	499	463	584
15	282	2300	2890	1100	1150	6640	1490	485	894	590	500	536
16	283	2130	2550	933	1000	3590	1360	455	832	625	505	504
17	290	1850	2300	909	960	2980	1230	477	1150	586	727	482
18	297	1560	2120	993	920	2520	1110	752	999	459	539	462
19	293	1390	2000	988	880	2080	1080	755	922	409	463	446
20	313	1210	2590	900	840	1900	1150	550	778	382	437	434
21	332	1040	2190	900	820	1770	1030	479	778	368	421	421
22	357	939	3470	900	840	1510	932	443	736	509	413	409
23	485	852	3470	880	2200	1590	872	409	860	601	404	401
24	517	825	2800	880	6100	2900	831	381	844	420	402	397
25	410	783	2300	860	11600	3530	803	355	658	363	430	410
26	612	732	1800	860	6820	2860	769	339	556	349	482	413
27	1130	689	2070	860	4720	2530	765	326	500	379	489	422
28	825	696	3250	850	3470	2360	817	514	515	384	433	438
29	878	1140	5660	840	---	6010	662	1230	490	322	398	413
30	1400	1130	6650	820	---	5610	619	667	480	301	445	384
31	950	---	5150	820	---	4680	---	528	---	293	820	---
TOTAL	14086	54727	74500	45123	52130	111860	61440	17545	22735	15723	15590	15866
MEAN	454	1824	2403	1456	1862	3608	2048	566	758	507	503	529
MAX	1400	6370	6650	4240	11600	10200	6800	1230	1460	1130	1700	1330
MIN	282	689	940	820	490	1510	619	326	444	293	277	384
†	+112	+60.5	+92.7	+127	+75.6	+285	+103	-1.6	+42.0	-96.0	-161	-176
MEAN‡	566	1884	2496	1583	1938	3893	2151	564	800	411	342	353
CFSM‡	.70	2.33	3.09	1.96	2.40	4.82	2.67	.70	.99	.51	.42	.44
IN.‡	.81	2.60	3.56	2.26	2.50	5.56	2.98	.81	1.10	.59	.48	.49

CAL YR 1984 TOTAL 727823 MEAN 1989 MAX 16000 MIN 282 ADJ +8.3 MEAN‡ 1997 CFSM‡ 2.47 IN.‡ 33.98
WTR YR 1985 TOTAL 501325 MEAN 1373 MAX 11600 MIN 277 ADJ -2.1 MEAN‡ 1371 CFSM‡ 1.70 IN.‡ 23.74

† Change in contents, equivalent in cubic feet per second, in East Branch Clarion River Lake.

‡ Adjusted for change in reservoir contents.

CLARION RIVER BASIN

47

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 National Geodetic Vertical Datum of 1929 (Pennsylvania Electric Co. bench mark). Prior to Dec. 23, 1947, records from hydroelectric plant 0.2 mi upstream.

REMARKS.--Estimated daily discharges: May 22 to July 25. Records 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 observations of water temperature were made during the year. Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--41 years, 1,778 ft³/s, 25.39 in/yr, adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 74,500 ft³/s, June 23, 1972, gage height, 28.24 ft, from flood-mark, from rating curve extended above 17,000 ft³/s on basis of slope-area measurement at gage height 20.70 ft, in gage well, 21.8 ft, from outside high-water profile; minimum not determined.

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.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 21,100 ft³/s, Mar. 12, gage height, 14.01 ft; minimum daily, 40 ft³/s, June 9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	568	832	966	5330	1110	4270	8310	808	1380	844	281	864
2	556	829	2080	5120	55	1980	6680	1160	2020	630	361	346
3	587	628	1960	4310	61	1870	5730	1570	896	442	108	1090
4	570	1390	1900	3040	1260	3080	5700	421	834	62	108	559
5	578	2510	2180	3000	1120	2930	5300	52	839	824	404	837
6	52	3600	1960	2670	996	3980	4490	799	863	196	357	627
7	52	2870	1770	1900	43	2870	3130	791	315	431	907	54
8	537	2000	1290	2170	791	3650	2940	993	442	1210	1110	51
9	552	1520	1320	1860	43	4170	3440	987	40	1440	1370	1310
10	577	5560	1840	1480	89	3700	3190	984	888	1240	55	1780
11	565	8440	1770	1140	900	3370	2710	82	878	1220	291	1240
12	556	6630	1550	944	779	12000	2720	51	1060	839	751	937
13	52	3950	2370	423	876	11300	1750	1010	1630	456	707	840
14	52	3820	3950	1320	814	7640	814	789	1630	280	458	548
15	334	3390	3520	1340	1500	5720	2010	431	1040	816	945	663
16	494	3070	2730	1130	1290	4530	1880	821	846	844	747	527
17	299	2610	2210	1160	416	4090	1600	808	1220	610	161	615
18	309	1570	2690	1110	1180	2960	1550	55	1800	596	618	467
19	305	1470	2970	764	868	2450	1920	992	500	650	696	701
20	53	1050	2750	820	1320	2600	1200	812	643	137	428	833
21	346	1770	2710	1440	852	2430	448	833	1580	138	508	54
22	1140	999	4020	267	1080	1990	1550	827	946	851	497	313
23	339	1390	4200	425	2170	1850	1240	834	555	818	689	798
24	700	1250	3520	1190	8360	3440	1530	402	1310	312	121	699
25	772	774	2550	1610	14000	3370	1590	170	829	364	319	709
26	779	971	3330	1060	8020	3130	801	160	541	564	584	564
27	1160	973	2290	1450	5680	3100	419	62	1000	109	841	559
28	993	990	3720	1230	5040	3200	53	823	429	108	417	52
29	1140	990	5600	1210	---	7200	1160	1410	839	587	435	52
30	1630	1230	8140	1150	---	7260	801	988	87	624	601	837
31	1470	---	6360	1160	---	5890	---	770	---	327	877	---
TOTAL	18117	69076	90216	53223	60713	132020	76656	21695	27880	18569	16752	19526
MEAN	584	2303	2910	1717	2168	4259	2555	700	929	599	540	651
MAX	1630	8440	8140	5330	14000	12000	8310	1570	2020	1440	1370	1780
MIN	52	628	966	267	43	1850	53	51	40	62	55	51
†	+110	+63.0	+118	+52.8	+117	+320	+61.1	+11.8	+50.7	-108	-146	-189
MEAN†	694	2366	3028	1775	2285	4579	2616	712	980	491	394	462
CFSM†	.73	2.49	3.18	1.87	2.40	4.81	2.75	.75	1.03	.52	.41	.49
IN.†	.84	2.78	3.67	2.16	2.50	5.55	3.07	.86	1.15	.60	.47	.55

CAL YR 1984 TOTAL 875589 MEAN 2392 MAX 20100 MIN 45 ADJ +10.5 MEAN† 2402 CFSM† 2.53 IN.† 34.65
WTR YR 1985 TOTAL 604443 MEAN 1656 MAX 14000 MIN 40 ADJ -2.1 MEAN† 1654 CFSM† 1.74 IN.† 24.20

† 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.

† Adjusted for change in reservoir contents.

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, and 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 National Geodetic Vertical Datum, adjustment of 1907. 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, Jan. 19 to Feb. 25, 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 observations of water temperature were made during the year. Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--53 years, 13,520 ft³/s, 23.93 in/yr, adjusted for storage from October 1940 to September 1975.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, about 175,000 ft³/s, Jan. 22, 1959; maximum gage height, 29.60 ft, Jan. 21, 1959 (backwater from ice); minimum discharge, 409 ft³/s, July 30, 1934, gage height, 0.67 ft.

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.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 84,700 ft³/s, Feb. 25, gage height, 14.96 ft, maximum gage height, 20.62 ft, Feb. 23, (backwater from ice); minimum, 2,000 ft³/s, Aug. 6, gage height, 1.50 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3750	12400	11800	37700	9400	44800	47400	4590	4400	4980	3430	3400
2	4470	10500	13200	35900	9600	42700	43900	5020	10100	4100	3050	3320
3	5630	10300	13600	32500	10000	41200	38900	4990	7260	2990	2440	3140
4	5670	10800	14900	29700	10000	40400	38800	4680	5400	2870	2200	3060
5	5560	18800	15600	29200	10500	46800	36000	3830	5350	3410	2120	2870
6	5080	23700	14400	27200	10000	50100	32900	3910	4920	3910	2280	3240
7	4690	21900	14200	23800	11000	43600	30700	4860	4100	5910	2260	2880
8	4790	19100	13000	20800	11000	48800	27900	4680	3340	7820	6260	2500
9	4950	17300	12600	16900	11000	55100	25100	4650	2970	10900	5570	3170
10	4960	30600	12800	14100	11000	47600	22400	4080	2890	13100	4660	7750
11	4430	43300	13200	13200	11000	41400	20400	3760	3270	12000	3460	6540
12	4280	40100	14400	12500	11000	64400	18300	3170	4590	10300	3840	6030
13	4000	33700	19900	12800	12000	64900	16500	3590	5300	8430	3540	5090
14	3470	29500	27700	12900	12000	52900	15300	3850	6660	6990	3310	4730
15	3230	26200	29000	12000	12500	47500	14100	3340	6790	9490	3490	4210
16	3510	26100	25800	10900	12000	42300	13400	3470	6520	13100	5220	4120
17	3570	24400	23000	10500	11500	38700	13400	3560	6640	13200	5110	3540
18	2910	21200	19400	12200	11500	34400	12400	3110	7040	10800	4670	3600
19	3100	18600	18200	8000	11000	31600	12000	3480	7650	9170	5130	3430
20	3700	16300	18900	4700	11000	29500	11900	3400	6600	7680	4660	3360
21	3960	14700	16300	4400	12000	26300	11400	3280	7730	6470	4640	3560
22	4640	13800	23300	4300	12000	22200	11100	3390	7630	6190	4370	3210
23	5600	12400	25200	4200	34000	19800	8200	3620	9320	6040	4120	4080
24	4920	12200	22900	4200	52000	23100	7390	3230	10200	5460	4170	4430
25	4920	11200	20700	4200	79700	27700	6880	2730	7450	4710	3980	4780
26	5260	9500	17700	4200	64200	26600	6260	2390	5890	3770	4210	5370
27	6090	8100	17600	4200	52500	25000	5210	2320	5280	3680	3510	5390
28	7090	7980	20400	4100	47300	24200	4790	3920	6320	3570	3370	5180
29	8100	9040	37800	4800	---	50800	4960	5280	5420	3580	2550	4640
30	13900	10900	51700	6000	---	46300	4940	4630	5170	3480	2950	4630
31	13800	---	45200	7600	---	39500	---	4140	---	3560	3350	---
TOTAL	164030	564620	644400	429700	572700	1240200	562830	118950	182200	211660	117920	125250
MEAN	5291	18820	20790	13860	20450	40010	18760	3837	6073	6828	3804	4175
MAX	13900	43300	51700	37700	79700	64900	47400	5280	10200	13200	6260	7750
MIN	2910	7980	11800	4100	9400	19800	4790	2320	2890	2870	2120	2500

CAL YR 1984 TOTAL 6510970 MEAN 17790 MAX 80200 MIN 2910
WTR YR 1985 TOTAL 4934460 MEAN 13520 MAX 79700 MIN 2120

REDBANK CREEK BASIN

49

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 Legislative Route 03117 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 National Geodetic Vertical Datum of 1912. Prior to July 10, 1940, nonrecording gage at site 500 ft upstream at datum 3.10 ft higher.

REMARKS.--Estimated daily discharges: Dec. 6-9, 25, 26, Jan. 11 to Feb. 23, Mar. 27 to Apr. 16, May 6, 19, July 17, and Aug. 3-6. Records fair. Several observations of water temperature were made during the year. Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--67 years, 869 ft³/s, 22.35 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 50,000 ft³/s, Mar. 18, 1936, gage height, 18.60 ft, from flood-marks, site and datum then in use; minimum observed, 19 ft³/s, Oct. 1, 1918.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than 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)
Feb. 25	0600	8480	10.59	Mar. 12	1400	*10700	*11.65

Minimum discharge, 84 ft³/s, Aug. 23, 24, gage height, 2.41 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	164	239	1180	2530	330	1850	6600	348	805	117	90	486
2	185	217	1290	2170	330	1680	5000	467	721	117	87	271
3	187	204	1130	1640	330	1590	2600	1190	469	119	84	185
4	174	203	1350	1380	320	1440	4200	1030	370	153	82	148
5	159	857	1130	1240	320	2280	3500	795	325	137	78	131
6	151	1180	940	1080	320	2170	2800	600	310	138	76	118
7	145	712	860	964	320	1560	2200	705	267	151	87	149
8	143	493	640	900	320	2090	1900	705	233	263	104	151
9	144	401	560	658	320	2490	1700	630	216	584	130	326
10	142	2740	796	500	320	1930	1600	545	212	471	113	1400
11	140	3480	1300	480	310	1650	1400	470	192	359	92	1330
12	135	2710	1490	460	310	7150	1300	460	343	247	88	704
13	131	1880	1940	450	500	6070	1200	425	522	193	88	429
14	128	1450	2100	420	940	4130	1100	339	425	214	98	326
15	129	1200	1900	410	840	3070	1000	364	317	304	129	255
16	124	1200	1890	400	780	2370	900	324	272	255	625	207
17	128	1030	1320	400	700	1990	891	328	282	200	535	178
18	178	877	1140	390	620	1630	766	485	306	189	279	159
19	159	778	1170	380	560	1370	697	420	258	148	180	145
20	159	681	1970	380	490	1300	751	376	222	129	133	134
21	151	602	1630	370	480	1200	740	336	225	124	117	126
22	168	527	3440	370	500	1070	671	280	213	149	92	118
23	234	479	2720	360	2800	1330	618	253	222	148	88	111
24	263	477	2030	360	6490	2670	582	232	208	130	85	113
25	230	450	1500	350	7090	2880	557	207	175	115	119	118
26	207	423	960	350	4350	2340	505	191	151	110	130	116
27	245	398	1280	340	3190	1700	483	181	137	168	121	143
28	243	452	2450	340	2400	1300	435	562	130	158	113	149
29	278	956	3020	340	---	7200	402	696	124	126	102	135
30	392	913	4140	340	---	5000	386	444	121	107	194	112
31	316	---	3150	330	---	3200	---	401	---	95	768	---
TOTAL	5732	28209	52416	21082	36580	79700	47484	14789	8773	5918	5107	8473
MEAN	185	940	1691	680	1306	2571	1583	477	292	191	165	282
MAX	392	3480	4140	2530	7090	7200	6600	1190	805	584	768	1400
MIN	124	203	560	330	310	1070	386	181	121	95	76	111
CFSM	.35	1.78	3.20	1.29	2.47	4.87	3.00	.90	.55	.36	.31	.53
IN.	.40	1.99	3.69	1.49	2.58	5.62	3.35	1.04	.62	.42	.36	.60

CAL YR 1984 TOTAL 423808 MEAN 1158 MAX 8660 MIN 124 CFSM 2.19 IN. 29.86
WTR YR 1985 TOTAL 314263 MEAN 861 MAX 7200 MIN 76 CFSM 1.63 IN. 22.14

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.

GAGE.--Water-stage recorder. Datum of gage is 1,206.14 ft above National Geodetic Vertical Datum of 1929 (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, Oct. 11-23, Dec. 6-10, and Jan. 10 to Feb. 23, which are fair. Diurnal fluctuations at low flow by mine pumpage into stream above station. Several observations of water temperature were made during the year. Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--47 years, 275 ft³/s, 23.64 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 17,300 ft³/s, June 23, 1972, gage height, 15.94 ft, from floodmark in gage well, from rating curve extended above 4,300 ft³/s on basis of slope-area measurement at gage height 13.01 ft; maximum gage height, 16.22 ft, July 20, 1977; minimum discharge, 2.6 ft³/s, Sept. 26, 1939.

EXTREMES FOR 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.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than 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. 29	0900	*3260	8.04	No other peak greater than base discharge.			

Minimum discharge, 28 ft³/s, Aug. 13, 14, gage height, 0.93 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	65	61	492	682	72	480	1520	115	270	44	45	141
2	72	60	403	570	70	426	1060	194	168	45	40	99
3	54	57	436	463	68	365	866	338	142	63	36	80
4	49	66	438	408	74	333	800	218	123	76	34	68
5	47	349	358	369	84	449	651	189	196	54	33	60
6	45	225	310	318	76	362	563	179	170	50	32	54
7	43	165	220	293	70	314	497	203	129	62	34	52
8	45	130	240	272	68	420	485	169	113	131	46	147
9	49	116	220	212	68	425	452	147	111	194	36	583
10	49	627	210	190	68	374	400	134	101	164	33	495
11	44	566	386	180	66	362	380	124	87	112	32	356
12	42	427	416	160	100	1590	351	115	102	83	30	213
13	40	355	629	150	300	1300	322	107	106	72	28	164
14	40	303	591	140	760	874	305	98	93	109	41	132
15	39	276	527	130	450	658	285	92	82	154	65	111
16	38	314	452	120	260	523	267	97	99	98	149	98
17	56	261	402	115	170	454	245	109	105	77	100	88
18	80	233	352	110	150	383	222	159	88	65	54	80
19	64	215	461	105	130	329	217	111	77	59	43	72
20	54	189	584	100	120	314	214	93	72	54	39	68
21	52	170	512	98	100	274	194	84	75	55	36	63
22	70	148	828	96	200	249	180	80	68	64	35	59
23	115	146	645	94	1000	447	171	76	73	53	33	56
24	73	139	538	90	1880	705	163	73	63	45	33	58
25	59	131	469	88	1780	679	160	68	55	42	58	58
26	57	124	372	86	1050	552	152	63	51	83	71	54
27	81	118	426	84	767	465	143	61	48	136	77	57
28	63	161	639	80	575	523	135	261	47	69	50	52
29	80	347	645	78	---	2290	128	195	46	53	40	47
30	95	250	1050	76	---	1450	119	128	45	47	269	45
31	70	---	830	74	---	1200	---	181	---	46	290	---
TOTAL	1830	6729	15081	6031	10576	19569	11647	4261	3005	2459	1942	3710
MEAN	59.0	224	486	195	378	631	388	137	100	79.3	62.6	124
MAX	115	627	1050	682	1880	2290	1520	338	270	194	290	583
MIN	38	57	210	74	66	249	119	61	45	42	28	45
CFSM	.37	1.42	3.08	1.23	2.39	3.99	2.46	.87	.63	.50	.40	.78
IN.	.43	1.58	3.55	1.42	2.49	4.61	2.74	1.00	.71	.58	.46	.87

CAL YR 1984 TOTAL 118860 MEAN 325 MAX 3180 MIN 38 CFSM 2.06 IN. 27.98
WTR YR 1985 TOTAL 86840 MEAN 238 MAX 2290 MIN 28 CFSM 1.51 IN. 20.45

MAHONING CREEK BASIN

51

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 National Geodetic Vertical Datum of 1929 (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, Jan. 10 to Feb. 23, and Sept. 8-30, which are fair. Several observations of water temperature were made during the year. Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--46 years, 153 ft³/s, 23.77 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,200 ft³/s, June 23, 1972, maximum gage height, 14.03 ft, Feb 25, 1977 (backwater from ice); minimum discharge, 0.3 ft³/s, Sept. 28, 1959.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than 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)
Feb. 23	---	---	ice jam	Mar. 29	1400	*3590	*10.49

Minimum daily discharge, 4.5 ft³/s, Aug. 13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20	26	368	352	48	213	1090	34	208	20	12	42
2	26	27	275	271	47	186	623	75	104	20	8.9	27
3	20	27	295	206	46	156	510	244	90	24	7.0	20
4	18	28	277	174	46	140	534	105	67	32	6.0	16
5	17	359	213	158	45	207	368	81	302	36	5.7	13
6	15	180	197	133	45	161	289	70	176	32	5.8	11
7	14	107	157	123	45	134	223	73	103	32	5.5	9.3
8	14	81	146	113	44	181	232	59	82	61	6.7	60
9	18	73	136	101	44	181	215	50	72	110	6.9	200
10	19	516	130	96	44	153	169	45	59	170	6.0	150
11	16	400	234	90	44	152	160	42	46	113	5.1	96
12	14	286	254	86	60	1020	144	39	62	76	4.8	60
13	14	229	384	82	140	678	125	37	66	63	4.5	43
14	12	195	343	76	330	437	116	34	65	59	6.1	35
15	13	170	305	72	260	311	106	31	48	98	13	28
16	12	216	244	70	210	234	95	33	92	77	30	24
17	13	166	205	68	170	198	83	36	110	59	35	20
18	18	143	171	66	140	162	73	74	68	50	18	18
19	21	129	372	64	110	136	69	44	54	43	12	16
20	20	112	480	62	90	134	73	35	46	38	10	15
21	23	98	363	60	70	112	61	31	44	36	9.0	14
22	29	85	709	58	120	99	55	30	37	34	7.5	13
23	67	88	409	56	970	264	51	28	37	31	6.4	12
24	31	86	299	56	1420	448	49	29	32	27	6.4	11
25	25	76	247	54	1130	384	48	26	28	23	19	10
26	24	71	176	54	556	274	45	23	25	24	28	10
27	22	68	228	52	385	223	42	22	23	50	17	9.6
28	19	97	361	52	266	202	40	283	22	26	10	9.4
29	32	265	298	50	---	2270	38	170	22	16	7.0	9.0
30	46	164	707	49	---	992	36	81	21	12	94	8.6
31	30	---	468	48	---	844	---	98	---	12	110	---
TOTAL	682	4568	9451	3052	6925	11286	5762	2062	2211	1504	523.3	1009.9
MEAN	22.0	152	305	98.5	247	364	192	66.5	73.7	48.5	16.9	33.7
MAX	67	516	709	352	1420	2270	1090	283	302	170	110	200
MIN	12	26	130	48	44	99	36	22	21	12	4.5	8.6
CFSM	.25	1.74	3.49	1.13	2.83	4.16	2.20	.76	.84	.55	.19	.39
IN.	.29	1.94	4.02	1.30	2.95	4.80	2.45	.88	.94	.64	.22	.43

CAL YR 1984 TOTAL 74374 MEAN 203 MAX 2550 MIN 12 CFSM 2.32 IN. 31.66
WTR YR 1985 TOTAL 49036.2 MEAN 134 MAX 2270 MIN 4.5 CFSM 1.53 IN. 20.87

MAHONING CREEK BASIN

03036000 MAHONING CREEK AT MAHONING CREEK DAM, PA

LOCATION.--Lat 40°55'39", long 79°17'29", Armstrong County, Hydrologic Unit 05010006, on left bank at downstream side of highway bridge at McCrea Furnace, 700 ft downstream from Camp Run, 0.9 mi downstream from Mahoning Creek Dam, 1 mi southwest of Eddyville, and 2.1 upstream from Pine Run.

DRAINAGE AREA.--344 mi².

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

REVISED RECORDS.--WSP 1305: 1941 (adjusted monthly runoff).

GAGE.--Water-stage recorder. Datum of gage is 1,003.39 ft above National Geodetic Vertical Datum of 1929 (Corps of Engineers bench mark). Prior to Feb. 1, 1940, nonrecording gage at same site and datum.

REMARKS.--Records good except for estimated daily discharges, Jan. 19-23, 25, 26, Feb. 3-5, 8-10, 20, 21, which are fair. Flow completely regulated since 1941 by Mahoning Creek Lake 0.9 mi upstream. Several observations of water temperature were made during the year. Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--47 years, 596 ft³/s, 23.53 in/yr, adjusted for storage since June 1941.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,400 ft³/s, Mar. 8, 1942, gage height, 8.10 ft; minimum daily, 4.6 ft³/s, July 26, 1978.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,860 ft³/s, Apr. 2, gage height, 6.28 ft; minimum daily, 33 ft³/s, Aug. 22, 23, 26, 27, Sept. 29, 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	81	213	673	1520	173	2780	1410	309	602	85	79	584
2	81	115	1070	1670	173	2730	2530	315	600	83	79	577
3	81	68	1340	1740	182	2670	3790	642	434	84	79	398
4	81	72	1310	1700	182	2600	3730	852	328	82	79	146
5	80	299	1280	1640	182	2500	3650	546	334	81	79	81
6	79	524	1010	1220	173	2380	3550	148	337	81	79	81
7	79	524	743	783	175	1930	3410	74	343	80	79	81
8	81	518	621	767	179	1180	2860	87	344	82	79	87
9	81	509	495	640	182	770	1600	87	345	155	79	139
10	81	545	499	368	179	770	874	185	345	267	79	269
11	185	881	509	273	173	771	865	301	346	471	80	444
12	305	1390	531	273	174	874	703	301	346	448	60	590
13	304	1360	679	273	180	1360	584	301	289	257	34	587
14	301	1320	1300	273	363	2280	587	301	224	207	34	457
15	298	1050	1620	273	681	2520	584	301	223	205	35	193
16	294	764	1590	273	794	2440	584	299	163	333	113	83
17	292	755	1180	274	776	2310	581	248	91	256	200	83
18	289	634	768	273	760	1620	462	213	298	79	200	83
19	285	403	769	285	743	768	313	213	418	79	128	83
20	232	281	808	285	455	754	313	213	211	79	75	83
21	183	283	845	285	265	742	313	216	210	79	51	83
22	185	285	896	285	389	465	313	216	212	78	33	83
23	183	282	1190	285	592	281	314	217	213	77	33	82
24	238	281	1500	270	696	533	316	141	213	77	34	55
25	275	281	1490	262	717	965	314	92	140	77	34	34
26	152	281	1460	269	716	1120	313	94	87	81	33	34
27	70	279	1440	259	1200	1130	313	97	87	79	33	122
28	70	284	1420	216	2390	1120	312	275	87	79	52	215
29	157	291	1430	170	---	1340	309	675	86	79	77	33
30	267	409	1470	170	---	1360	309	891	85	79	143	33
31	265	---	1500	172	---	1390	---	758	---	79	381	---
TOTAL	5635	15181	33436	17446	13844	46453	36106	9608	8041	4358	2653	5903
MEAN	182	506	1079	563	494	1498	1204	310	268	141	85.6	197
MAX	305	1390	1620	1740	2390	2780	3790	891	602	471	381	590
MIN	70	68	495	170	173	281	309	74	85	77	33	33
†	-80.2	+35.1	+104	-135	+484	-25.9	-345	+2.28	+5.38	+4.55	+18.2	-24.5
MEAN†	102	541	1183	428	978	1472	859	312	273	146	104	172
CFSM†	.30	1.57	3.44	1.24	2.84	4.28	2.50	.91	.79	.42	.30	.50
IN.†	.35	1.75	3.96	1.43	2.96	4.93	2.79	1.05	.88	.48	.35	.56

CAL YR 1984 TOTAL 275732 MEAN 753 MAX 3750 MIN 36 ADJ +11.0 MEAN† 764 CFSM† 2.22 IN.† 30.24
WTR YR 1985 TOTAL 198664 MEAN 544 MAX 3790 MIN 33 ADJ +0.21 MEAN† 544 CFSM† 1.58 IN.† 21.49

† Change in contents, equivalent in cubic feet per second, in Mahoning Creek Lake.

‡ Adjusted for change in reservoir contents.

OHIO RIVER MAIN STEM

53

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, and 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 771.32 ft above National Geodetic Vertical Datum, adjustment of 1912. 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 at present site and datum.

REMARKS.--No estimated daily discharges. Records good. 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, since 1924 by Piney Reservoir, and since 1941 by Mahoning Creek Lake. Several observations of water temperature were made during the year. Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--75 years (1904-28, 1934-85), 15,770 ft³/s, 23.87 in/yr, adjusted for storage 1940-75.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 269,000 ft³/s, Mar. 26, 1913, gage height, 30.7 ft from flood-mark, site and datum then in use; minimum observed, 570 ft³/s, Sept. 15-17, 1913.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 94,100 ft³/s, Feb. 25, gage height, 19.51 ft; minimum, 1,970 ft³/s, Aug. 5, gage height, 11.58 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3660	13500	14100	43300	7810	50000	55600	5750	6940	5040	3640	4740
2	4270	11200	15200	40100	9600	47900	53800	5870	10800	5310	3480	4500
3	5320	10300	16500	36900	8540	45400	48100	7360	10000	3830	2870	3750
4	5740	10800	17500	32800	7970	44500	47700	7620	7380	3460	2320	3970
5	5700	16900	18300	32500	8800	48400	43900	6220	6680	3050	2180	3110
6	5460	25400	17200	30200	9230	55200	40200	5010	6310	4680	2380	3430
7	4790	22900	16000	26600	9180	47800	37400	5750	5450	5590	2380	3260
8	4660	20400	15000	22700	8470	49600	34400	5750	4380	7240	4240	2840
9	5010	18700	13900	19700	8620	58500	30600	5700	4120	10700	6690	3130
10	5010	29400	14000	15800	9010	51700	26300	5290	3530	14400	5640	7230
11	4790	46600	15500	14500	8580	44600	24000	5120	3960	13500	3870	9310
12	4530	45900	16500	13100	9580	68600	21800	4200	5710	12100	3660	7910
13	4480	38200	20900	12400	10700	77000	19700	3950	6400	9900	4160	6490
14	3910	33200	30500	13000	12700	60700	18300	4680	7330	8260	3620	5860
15	3510	29000	32200	13100	13900	54700	16500	4410	8440	8920	3640	5020
16	3650	28000	30100	10900	14400	48400	16300	4000	7820	12600	5590	4600
17	3970	26700	26400	10800	13900	43700	15600	4410	7220	15100	6510	4110
18	3520	23000	22400	10800	12900	38600	14800	4460	7710	12000	5300	3820
19	3180	20400	20700	11000	13200	34300	13500	3850	9150	10000	5570	3720
20	3670	17700	21700	9200	12500	32000	14100	4410	7890	8830	5250	3780
21	4110	15700	20400	5780	12700	29100	13000	4000	7960	7210	4850	3870
22	4560	15200	26900	4230	13000	25100	12500	3950	8740	6780	4740	3200
23	5950	13400	30200	4200	27600	21900	10700	4200	9140	6640	4410	4000
24	5330	13200	27500	5260	69100	25700	8710	4200	11300	6240	4480	4740
25	5440	12500	25100	6640	89700	31400	8300	3450	9440	5410	4330	4750
26	5500	10500	21000	7280	73500	30600	7960	2860	7070	4530	4460	5480
27	5890	9140	20400	6500	58400	28700	6850	2680	5740	4070	4090	5750
28	7300	8930	23300	5930	52900	27000	6220	5060	6700	3880	3870	5850
29	7740	10000	37500	6830	---	59800	5580	7240	6260	3770	2970	5030
30	13000	11700	55900	6910	---	59500	6220	6860	5820	4030	3220	4710
31	14500	---	52800	6920	---	48700	---	7060	---	3850	4620	---
TOTAL	168150	608470	735600	485880	606490	1389100	678640	155370	215390	230920	129030	141960
MEAN	5424	20280	23730	15670	21660	44810	22620	5012	7180	7449	4162	4732
MAX	14500	46600	55900	43300	89700	77000	55600	7620	11300	15100	6690	9310
MIN	3180	8930	13900	4200	7810	21900	5580	2680	3530	3050	2180	2840

CAL YR 1984 TOTAL 7428220 MEAN 20300 MAX 93500 MIN 3180

WTR YR 1985 TOTAL 5545000 MEAN 15190 MAX 89700 MIN 2180

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 National Geodetic Vertical Datum of 1929 (Baltimore and Ohio Railroad bench mark).

REMARKS.--Records good except for estimated daily discharges, Jan. 11 to Feb. 23, 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 steamelectric plant 0.4 mi upstream, which began during July 1967, can amount to as much as 30 ft³/s. Several observations of water temperature were made during the year. Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--48 years, 293 ft³/s, 20.83 in/yr, adjusted for storage since March 1968.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,200 ft³/s, June 23, 1972, gage height, 15.93 ft; minimum daily, 1.0 ft³/s, Oct. 22, 1966, result of abnormal regulation.

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

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than 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. 24	0230	3560	7.58	Apr. 1	0500	2970	6.84
Mar. 29	1630	*6350	*11.10	June 1	0500	2860	6.70

Minimum discharge, 12 ft³/s, Sept. 27, gage height, 2.07 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	43	51	744	861	72	390	2550	44	1790	30	32	34
2	45	47	593	668	80	320	1450	410	722	29	23	25
3	33	46	598	478	72	258	1150	914	419	37	27	30
4	33	53	554	373	66	230	1060	447	264	38	17	23
5	31	554	388	341	64	303	823	290	264	37	24	22
6	35	288	377	267	90	254	673	231	225	35	24	28
7	36	176	305	235	78	207	552	219	160	51	35	24
8	33	124	254	224	68	286	607	167	130	40	28	25
9	35	108	224	158	66	286	590	131	109	270	27	69
10	37	972	244	139	68	257	517	109	94	533	21	27
11	34	780	454	125	70	258	486	95	70	272	36	29
12	34	553	601	110	90	1410	405	83	129	135	29	24
13	36	383	689	115	400	1260	362	82	125	106	29	25
14	38	308	676	120	350	911	338	73	105	92	28	23
15	38	262	677	100	270	686	305	64	74	302	26	32
16	37	305	576	86	220	502	266	63	93	120	73	24
17	30	233	458	82	180	399	217	75	107	84	30	24
18	79	202	357	78	160	313	184	147	69	65	22	22
19	81	184	734	74	150	243	165	79	65	42	20	23
20	76	144	1080	72	140	235	154	53	51	32	27	27
21	43	118	883	70	150	190	135	59	78	26	26	27
22	105	101	1560	68	650	168	120	43	48	30	27	26
23	148	92	1010	68	1900	380	108	45	56	42	24	27
24	58	89	767	68	2970	556	101	46	37	24	31	28
25	48	74	618	68	1780	569	102	36	35	25	65	18
26	50	63	392	66	985	427	90	38	29	47	47	27
27	47	69	512	66	731	363	89	40	25	118	20	27
28	44	182	743	66	526	359	81	654	28	45	30	32
29	97	552	671	66	---	5190	76	447	31	22	24	27
30	106	330	1430	68	---	3060	56	228	31	24	35	24
31	56	---	1110	70	---	2150	---	569	---	34	69	---
TOTAL	1646	7443	20279	5450	12446	22420	13812	5981	5463	2787	976	823
MEAN	53.1	248	654	176	445	723	460	193	182	89.9	31.5	27.4
MAX	148	972	1560	861	2970	5190	2550	914	1790	533	73	69
MIN	30	46	224	66	64	168	56	36	25	22	17	18

CAL YR 1984 TOTAL 147643 MEAN 403 MAX 4480 MIN 30
WTR YR 1985 TOTAL 99526 MEAN 273 MAX 5190 MIN 17

CROOKED CREEK BASIN

55

03039000 CROOKED CREEK AT CROOKED CREEK DAM, PA

LOCATION.--Lat 40°43'13", long 79°30'42", Armstrong County, Hydrologic Unit 05010006, on right bank 0.4 mi downstream from Crooked Creek Dam, 3.5 mi south of Ford City, and 6.7 mi upstream from mouth.

DRAINAGE AREA.--278 mi².

PERIOD OF RECORD.--October 1909 to current year. Published as "at Hileman's Farm" 1910-29 and as "near Ford City" 1930-39. Monthly discharge only for some periods, published in WSP 1305.

REVISED RECORDS.--WSP 743: Drainage area. WSP 1305: 1910-12, 1915-16, 1917 (M), 1918, 1922-27, 1928 (M), 1930 (M). WSP 1435: 1919-21, 1932-33, 1935.

GAGE.--Water-stage recorder. Datum of gage is 799.51 ft above National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). Prior to Aug. 1, 1933, nonrecording gage at site 2 mi downstream at different datum. July 31, 1933, to Dec. 5, 1939, nonrecording gage at site 1.5 mi downstream at different datum.

REMARKS.--No estimated daily discharges. Records good. Flow completely regulated since 1940 by Crooked Creek Lake 0.4 mi upstream and since 1968 by Keystone Lake, combined capacity, 115,910 acre-ft. Several observations of water temperature were made during the year. Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--76 years, 421 ft³/s, 20.57 in/yr, adjusted for storage from May 1940 to September 1968.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 21,000 ft³/s, Mar. 18, 1936, gage height, 17.86 ft, from flood-mark, site and datum then in use, from rating curve extended above 8,000 ft³/s on basis of contracted-opening measurement of peak flow; minimum observed, 0.1 ft³/s, Sept. 8, 11, 20, 25, 26, 1932.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,980 ft³/s, Apr. 2, gage height, 7.48 ft; minimum daily, 24 ft³/s, Oct. 1-3.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24	59	532	1100	102	2020	845	58	656	63	62	163
2	24	61	823	1090	105	1920	1840	60	888	63	62	75
3	24	61	1030	1070	105	1800	2320	426	1100	63	61	30
4	25	61	848	768	105	1220	2300	879	1070	63	61	30
5	25	358	536	438	105	636	2250	1040	836	63	60	30
6	25	671	429	437	105	627	2220	697	519	63	60	30
7	25	355	430	434	105	518	2160	411	303	63	60	30
8	25	105	426	432	105	409	2090	271	196	63	46	30
9	25	107	294	427	105	410	2020	164	196	95	30	31
10	26	112	181	273	105	408	1940	159	197	196	30	31
11	26	316	184	181	105	406	1850	110	196	484	30	31
12	40	709	190	181	105	424	1510	110	130	537	30	31
13	54	700	354	132	107	725	796	112	60	317	30	31
14	54	689	554	102	253	1130	641	112	60	198	30	31
15	53	675	670	102	454	1120	636	112	61	322	30	31
16	53	663	675	102	454	1090	630	112	62	560	70	31
17	52	646	674	102	450	1060	619	84	63	426	112	31
18	52	537	669	102	446	1030	605	141	166	196	86	31
19	53	312	665	102	442	550	343	218	214	131	57	33
20	54	153	684	103	438	185	193	162	121	60	41	33
21	54	104	697	102	430	187	193	67	62	60	30	33
22	54	105	721	102	430	187	179	25	62	60	30	33
23	78	105	969	102	466	189	132	25	62	60	30	31
24	167	105	1640	102	522	313	110	25	62	62	31	31
25	202	103	1840	102	546	538	110	25	63	63	31	29
26	130	102	1730	102	891	632	110	26	63	63	31	29
27	57	102	1100	102	1680	624	110	26	63	63	31	29
28	57	103	728	102	2090	614	110	235	63	63	30	29
29	59	295	1020	103	---	701	83	820	63	63	30	29
30	59	450	1040	104	---	796	58	810	63	62	71	29
31	59	---	1090	103	---	822	---	616	---	62	161	---
TOTAL	1715	8924	23423	8804	11356	23291	29003	8138	7720	4707	1554	1096
MEAN	55.3	297	756	284	406	751	967	263	257	152	50.1	36.5
MAX	202	709	1840	1100	2090	2020	2320	1040	1100	560	161	163
MIN	24	59	181	102	102	185	58	25	60	60	30	29

CAL YR 1984 TOTAL 185162 MEAN 506 MAX 2640 MIN 24
WTR YR 1985 TOTAL 129731 MEAN 355 MAX 2320 MIN 24

KISKIMINETAS RIVER BASIN

03039420 NORTH BRANCH QUEMAHONING CREEK AT ROYTOWN, PA

LOCATION.--Lat 40°06'38", long 79°08'41", Somerset County, Hydrologic Unit 05010007 at one lane bridge on gravel road 0.9 mi northwest of Roytown.

DRAINAGE AREA.--2.66 mi².

PERIOD OF RECORD.--October 1983 to September 1985 (discontinued).

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	ACIDITY (MG/L AS H)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)
OCT												
26...	0845	1.9	36	4.6	11.0	.1	1.7	.70	.50	.51	<1.0	8.8
NOV												
29...	0900	2.5	40	4.4	5.0	<.1	1.9	.60	.40	.40	<1.0	10
DEC												
17...	1345	7.8	35	4.6	8.0	<.1	2.0	.68	.40	.40	<1.0	10
JAN												
24...	0830	4.5	43	4.7	1.0	.1	1.7	.70	.50	.41	1.0	9.3
MAR												
01...	0930	2.7	44	4.6	2.5	.1	1.7	.60	.40	.37	1.0	7.4
27...	1335	8.5	40	4.7	7.0	.0	1.9	.69	.44	.42	.500	10
APR												
25...	0830	4.1	38	4.6	10.5	.0	1.5	.60	.40	.40	<.500	9.4
MAY												
30...	0900	5.8	36	4.6	11.0	.0	1.4	.50	.35	.29	.500	9.0
JUN												
27...	0835	1.1	37	4.6	12.0	.0	1.4	.50	.63	.24	.500	8.7
JUL												
25...	0950	--	40	4.6	15.0	.0	1.4	.60	.40	.22	<.500	8.7
AUG												
22...	0820	.38	35	4.6	15.0	.0	1.4	.65	.45	.31	<.500	9.6
SEP												
17...	1415	.18	34	4.5	12.5	.0	2.6	1.6	.46	.35	<.500	20

DATE	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	BROMIDE DIS- SOLVED (MG/L AS BR)	SILICA, DIS- SOLVED (MG/L AS SiO2)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N)
OCT											
26..	1.1	.04	.02	4.7	<.005	<.002	280	20	280	1.5	.10
NOV											
29...	.99	.01	.02	3.9	<.005	<.002	650	24	260	1.8	.41
DEC											
17...	.96	.03	.02	4.2	<.005	<.010	530	14	200	1.3	.44
JAN											
24...	.90	.02	.02	4.7	.010	.002	450	16	160	1.1	.33
MAR											
01...	1.0	.03	.02	3.3	.008	.010	610	14	190	.80	.51
27...	.95	.05	.02	3.9	.004	.001	590	12	180	.80	.40
APR											
25...	1.0	.05	.02	3.6	.011	.004	400	13	170	1.7	.30
MAY											
30...	.89	.05	.02	3.6	.011	.002	330	12	160	1.0	.24
JUN											
27...	1.3	.04	.02	3.7	.015	.001	250	14	170	.80	.22
JUL											
25...	.92	.05	.02	3.9	.010	<.001	270	16	210	1.9	.19
AUG											
22...	.93	.05	.03	4.3	.016	<.001	250	28	310	1.1	.17
SEP											
17...	.98	.04	.03	4.3	.005	<.001	390	67	580	1.2	.17

KISKIMINETAS RIVER BASIN

57

03039925 NORTH FORK BENS CREEK AT NORTH FORK RESERVOIR

LOCATION.--Lat 40°15'58", long 79°01'01", Somerset County, Hydrologic Unit 05010007, at old concrete bridge, 1800 feet upstream from North Fork Reservoir, 3.2 mi northwest on LR 55102 from Thomas Mills.

DRAINAGE AREA.--3.45 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1984 to September 1985 (discontinued).

GAGE.--Water-stage recorder. Elevation of gage is 1,600 ft above National Geodetic Vertical datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records good.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 92 ft³/s, Mar. 31, 1985, gage height, 4.26 ft; minimum daily, 0.57 ft³/s, Sept. 18, 1985.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 92 ft³/s, Mar. 31, gage height, 4.26 ft; minimum daily, 0.57 ft³/s, Sept. 18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.9	2.4	12	14	2.7	14	66	2.8	3.0	.92	2.9	.98
2	1.0	3.9	12	12	2.8	12	35	13	2.8	.92	2.6	.91
3	1.1	3.8	12	10	2.5	11	20	34	2.6	2.3	2.4	.84
4	1.1	5.5	11	9.2	2.5	9.6	15	16	2.5	1.8	2.2	.83
5	1.0	11	10	8.4	2.7	11	12	12	2.7	1.2	2.1	.74
6	1.0	11	9.7	7.4	2.8	9.4	11	9.7	2.4	1.1	2.0	.74
7	1.0	9.4	8.5	6.9	2.4	8.9	9.5	8.1	2.3	1.0	1.9	.89
8	1.0	8.3	7.7	6.2	2.6	9.4	8.9	6.8	2.2	1.4	1.9	1.0
9	1.0	7.8	7.0	5.8	2.4	8.9	8.2	6.0	2.0	7.0	1.8	.88
10	1.0	7.8	6.6	5.3	2.4	8.5	7.5	5.5	1.9	4.1	1.6	.74
11	1.0	7.5	6.9	5.2	2.4	8.5	9.1	5.1	1.7	3.3	1.5	.74
12	1.0	7.3	7.3	4.9	5.2	15	9.2	4.7	1.9	2.9	1.4	.73
13	1.0	7.0	10	4.9	5.8	13	9.5	4.4	2.0	2.9	1.3	.65
14	1.0	6.7	11	4.8	4.9	13	9.5	4.3	1.8	4.2	1.3	.65
15	1.0	6.7	12	4.5	4.6	12	8.9	3.9	1.6	5.1	1.3	.65
16	.74	7.7	11	3.6	4.3	11	8.2	3.7	1.7	4.4	1.7	.65
17	1.1	7.5	11	3.8	4.3	9.7	7.2	4.3	1.7	4.0	1.4	.63
18	1.8	7.5	11	4.0	4.0	8.8	6.3	4.9	1.6	3.7	1.1	.57
19	1.1	7.2	10	3.7	3.9	7.8	5.9	4.2	1.5	3.4	1.1	.57
20	1.1	6.5	11	2.9	3.5	8.0	5.6	4.0	1.4	3.2	1.1	.57
21	1.0	5.9	16	2.9	3.7	7.3	5.2	4.0	1.4	3.3	1.1	.57
22	1.7	5.4	20	2.9	5.9	6.9	4.9	3.7	1.3	6.2	1.0	.57
23	1.9	5.2	16	3.1	17	12	4.6	3.7	1.6	4.6	.99	.57
24	1.9	5.0	13	3.1	46	15	4.3	3.4	1.1	4.2	1.2	.65
25	1.7	4.8	12	3.1	64	16	4.2	3.3	.98	4.0	1.8	.72
26	1.9	4.6	10	3.0	36	13	3.8	3.1	.92	4.3	1.3	.65
27	1.9	4.3	9.8	2.8	23	11	3.6	2.9	.92	4.2	.99	.65
28	1.9	7.4	9.5	2.8	17	10	3.4	4.0	.92	3.6	.92	.65
29	2.5	11	9.0	2.8	---	17	3.1	3.1	.92	3.4	.92	.65
30	2.6	11	18	2.7	---	30	3.0	2.6	.89	3.1	1.0	.57
31	2.4	---	17	2.7	---	65	---	3.7	---	3.0	1.2	---
TOTAL	43.34	207.1	348.0	159.4	281.3	412.7	312.6	194.9	52.25	102.74	47.02	21.21
MEAN	1.40	6.90	11.2	5.14	10.0	13.3	10.4	6.29	1.74	3.31	1.52	.71
MAX	2.6	11	20	14	64	65	66	34	3.0	7.0	2.9	1.0
MIN	.74	2.4	6.6	2.7	2.4	6.9	3.0	2.6	.89	.92	.92	.57
CFSM	.41	2.00	3.25	1.49	2.90	3.86	3.01	1.82	.50	.96	.44	.21
IN.	.47	2.23	3.75	1.72	3.03	4.45	3.37	2.10	.56	1.11	.51	.23

WTR YR 1985 TOTAL 2182.56 MEAN 5.98 MAX 66 MIN .57 CFSM 1.73 IN. 23.53

KISKIMINETAS RIVER BASIN

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

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1983 to September 1985 (discontinued).

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	ACIDITY (MG/L AS H)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)
OCT 25...	1425	1.6	43	6.3	12.0	<.1	3.8	1.1	1.8	.83	2.0	9.2
NOV 27...	1430	4.3	42	5.9	4.5	<.1	3.7	1.0	1.8	.61	1.0	9.3
DEC 17...	1000	11	41	5.7	8.5	<.1	3.6	1.0	1.4	.68	1.0	10
JAN 22...	1500	3.1	41	5.8	.0	.1	3.6	1.0	1.8	.58	1.0	9.0
MAR 26...	1300	13	43	5.7	6.0	.0	3.3	1.0	1.2	.61	.500	10
APR 23...	1400	4.6	44	5.8	13.0	.0	3.3	.90	1.7	.72	<.500	9.3
MAY 29...	1330	1.3	44	6.1	12.5	.0	2.9	.79	.79	.55	.700	9.0
JUL 23...	1325	4.5	40	6.2	14.5	.0	3.1	.80	1.3	.34	.800	9.3
AUG 20...	1340	1.1	46	6.5	16.0	.0	3.2	.79	2.0	.48	1.4	7.9
SEP 19...	0830	--	44	6.5	12.0	.0	2.9	.75	1.8	.39	1.7	7.7

DATE	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	BROMIDE DIS- SOLVED (MG/L AS BR)	SILICA, DIS- SOLVED (MG/L AS SIO2)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N)
OCT 25...	3.4	.00	.00	4.2	<.005	<.002	20	6	6	1.0	.30
NOV 27...	3.7	.04	.02	3.9	<.005	<.002	20	6	11	.50	.75
DEC 17...	2.6	.05	.02	4.2	<.005	<.010	70	9	36	.90	.67
JAN 22...	3.3	.05	.02	4.4	.005	.750	40	3	14	1.2	.75
MAR 26...	2.5	.06	.02	3.6	.017	.001	90	4	37	.40	.76
APR 23...	3.5	.07	.02	3.6	.022	.004	50	5	18	1.4	.76
MAY 29...	3.5	.06	.03	3.3	.006	.001	30	2	8	.80	.67
JUL 23...	3.2	.05	.02	3.2	.007	<.001	30	3	12	1.6	.58
AUG 20...	4.9	.07	.03	3.4	.005	<.001	20	<2	4	1.9	.55
SEP 19...	4.6	.06	.02	3.1	.009	<.001	30	7	6	.60	.57

KISKIMINETAS RIVER BASIN

59

03039930 SOUTH FORK BENS CREEK NEAR THOMASDALE, PA

LOCATION.--Lat 40°13'41", long 79°02'49", Somerset County, Hydrologic Unit 05010007, on left bank adjacent to the Greater Ferndale Sportsmens Club fish nursery, 3.5 mi southwest of Thomasdale, 7.8 mi northwest of Jennerstown.

DRAINAGE AREA.--3.28 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1983 to September 1985 (discontinued).

GAGE.--Water-stage recorder. Elevation of gage is 1,650 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good except those for estimated daily discharges, Jan. 16-23, Feb. 5-12, and those above 100 ft³/s, which are fair. Flow regulated and diversion from two dams owned by the Conemaugh Township Municipal Authority 0.7 mi and 1.4 mi upstream, having a combined capacity of 8.7 mil gal.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 184 ft³/s, Apr. 4, 1984, gage height, 3.51 ft; minimum daily, 0.03 ft³/s, Nov. 3, 1983.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 98 ft³/s, Mar. 31, gage height, 2.93 ft; minimum daily, 0.25 ft³/s, Sept. 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.70	1.1	14	19	2.3	18	65	2.3	2.5	1.1	3.3	.51
2	.70	1.5	14	19	2.5	15	37	8.0	2.3	1.1	2.5	.51
3	.70	1.8	14	16	2.5	11	26	24	2.0	1.4	2.1	.51
4	.60	3.0	13	14	9.3	10	20	19	1.8	1.1	1.9	.51
5	.51	7.7	11	12	7.0	12	16	15	1.8	1.1	1.9	.51
6	.98	8.7	11	11	1.9	10	14	12	1.8	1.1	1.8	.51
7	.98	9.4	8.8	8.4	1.7	10	12	10	1.8	1.1	1.8	.62
8	1.1	9.2	7.2	7.6	1.9	11	11	8.4	1.8	1.1	1.8	.69
9	1.2	9.2	6.0	6.4	2.0	11	11	6.1	1.6	1.6	1.6	.58
10	1.1	8.8	5.2	5.9	2.2	10	9.2	4.5	1.6	1.8	1.6	.51
11	1.2	8.7	8.0	5.2	2.5	9.6	9.9	4.8	1.6	1.5	1.6	.51
12	1.3	8.2	9.2	4.6	2.9	13	10	4.8	1.6	1.5	1.6	.49
13	1.1	7.6	13	4.3	6.4	13	10	4.5	1.8	1.5	1.2	.44
14	1.1	6.0	13	4.0	5.2	13	9.8	4.3	1.8	1.5	1.2	.44
15	1.1	6.4	14	3.5	4.0	13	11	3.5	1.8	1.5	1.2	.37
16	1.1	8.0	14	2.9	3.1	12	10	4.0	1.6	1.5	1.3	.37
17	1.1	7.6	13	2.9	3.2	11	9.5	4.4	1.5	1.4	1.2	.37
18	.83	7.6	11	2.9	2.6	9.8	8.2	5.5	1.5	1.3	1.1	.37
19	.78	7.6	16	2.8	2.5	8.8	7.5	4.3	1.5	1.3	1.1	.37
20	.85	6.4	14	2.8	2.5	8.4	6.8	4.3	1.5	1.2	.88	.37
21	.85	6.0	18	2.8	2.8	8.0	6.1	4.4	1.5	1.9	.85	.37
22	.98	5.2	20	7.0	4.5	7.4	5.3	4.3	1.5	2.5	.78	.37
23	1.1	4.8	17	13	16	12	4.8	4.3	1.9	3.3	.78	.36
24	.98	4.5	16	3.3	37	15	4.7	4.0	1.5	3.3	.79	.41
25	.91	4.3	14	3.2	62	16	4.5	3.8	1.3	3.3	.85	.37
26	.91	4.0	11	2.8	38	16	4.0	3.5	1.2	3.8	.85	.37
27	.91	3.3	11	2.3	28	15	3.5	3.0	1.2	4.8	.82	.33
28	.92	6.0	11	2.3	21	13	3.3	3.8	1.2	4.0	.55	.25
29	1.1	11	11	2.3	---	20	2.8	3.5	1.2	4.0	.33	.29
30	1.2	9.2	17	2.3	---	39	2.5	2.8	1.2	4.0	.40	.33
31	1.1	---	19	2.3	---	67	---	2.8	---	3.5	.51	---
TOTAL	29.99	192.8	394.4	198.8	277.5	458.0	355.4	193.9	48.9	65.1	40.19	13.01
MEAN	.97	6.43	12.7	6.41	9.91	14.8	11.8	6.25	1.63	2.10	1.30	.43
MAX	1.3	11	20	19	62	67	65	24	2.5	4.8	3.3	.69
MIN	.51	1.1	5.2	2.3	1.7	7.4	2.5	2.3	1.2	1.1	.33	.25
†	+5.55	+4.43	+4.46	+5.55	+5.56	+4.46	+4.46	+4.49	+5.50	+4.47	+5.50	+5.31
MEAN†	1.52	6.86	13.2	6.96	10.5	15.3	12.3	6.74	2.14	2.57	1.81	.74
CFSM†	.46	2.09	4.02	2.12	3.20	4.66	3.75	2.05	.65	.78	.55	.23
IN.†	.53	2.33	4.64	2.45	3.33	5.38	4.18	2.37	.73	.90	.63	.26

CAL YR 1984 TOTAL 3167.19 MEAN 8.65 MAX 113 MIN .51 ADJ +5.50 MEAN† 9.15 CFSM† 2.83 IN.† 38.01
 WTR YR 1985 TOTAL 2267.99 MEAN 6.21 MAX 67 MIN .25 ADJ +4.8 MEAN† 6.69 CFSM† 2.04 IN.† 27.73

† Diversion for municipal supply, equivalent in cubic feet per second, furnished by Conemaugh Township Municipal Authority.

‡ Adjusted for diversion.

KISKIMINETAS RIVER BASIN

03039930 SOUTH FORK BENS CREEK NEAR THOMASDALE, PA.--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1983 to September 1985 (discontinued).

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	ACIDITY (MG/L AS H)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)
OCT 24...	1430	.92	50	6.9	11.5	<.1	5.7	1.4	.90	1.0	10	8.5
NOV 27...	1030	3.6	36	6.3	4.5	<.1	3.6	1.0	.60	.61	3.0	7.4
DEC 17...	1515	11	36	6.2	9.5	<.1	3.3	1.0	.50	.64	1.0	8.3
JAN 22...	1200	29	35	6.3	.0	.1	3.5	1.0	.60	.63	2.0	7.6
FEB 27...	1400	28	36	5.8	2.0	.1	2.9	.90	.40	.67	1.0	8.4
MAR 26...	1045	16	37	6.2	5.5	.0	2.9	.96	.41	.60	1.2	8.4
APR 23...	1025	5.3	36	6.8	13.0	.0	2.6	.80	.40	.62	2.5	7.4
MAY 28...	1045	3.6	34	6.6	13.5	.0	3.0	.82	.48	.72	3.2	7.5
JUN 25...	1000	1.2	44	7.1	13.0	.0	3.4	.81	.62	.45	6.5	6.9
JUL 24...	1415	5.7	40	7.0	15.0	.0	3.4	.80	.70	.47	4.8	6.8
AUG 20...	1020	.76	40	6.9	16.0	.0	3.9	.93	.83	.80	7.9	6.1
SEP 17...	1030	--	48	7.1	10.0	.0	4.4	.98	1.0	.70	11	6.2

DATE	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	BROMIDE DIS- SOLVED (MG/L AS BR)	SILICA, DIS- SOLVED (MG/L AS SIO2)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N)
OCT 24...	1.1	.00	.00	4.6	.008	<.002	20	14	6	1.1	.20
NOV 27...	.97	.04	.02	4.0	<.005	<.002	20	<3	18	.70	.74
DEC 17...	.92	.04	.02	4.1	<.005	<.010	40	5	17	.80	.74
JAN 22...	.90	.04	.02	4.4	.006	.002	20	7	8	.80	.74
FEB 27...	.86	.04	.03	3.6	.012	.010	50	5	25	.80	.95
MAR 26...	.88	.04	.02	3.4	.004	.001	30	4	19	.60	.82
APR 23...	.89	.07	.02	3.3	.005	.005	20	4	9	1.2	.68
MAY 28...	.85	.04	.02	3.4	.055	.006	80	72	11	1.2	.71
JUN 25...	.93	.05	.02	3.4	.019	<.001	10	7	3	.90	.65
JUL 24...	1.1	.05	.03	3.5	.010	<.001	30	5	4	1.5	.64
AUG 20...	.98	.05	.03	3.9	.007	<.001	20	3	7	1.1	.58
SEP 17...	1.1	.04	.02	3.3	.005	<.001	20	4	4	.90	.50

KISKIMINETAS RIVER BASIN

61

03040000 STONYCREEK RIVER AT FERNDAL, PA

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.

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 National Geodetic Vertical Datum of 1929. 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, Jan. 14 to Feb. 23, 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 observations of water temperature were made during the year. Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--47 years, 773 ft³/s, 23.28 in/yr, adjusted for storage and diversion 1938-81.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 59,000 ft³/s, Mar. 18, 1936, gage height, 30.26 ft, from high-water mark, site and datum then in use, from rating curve extended above 13,000 ft³/s on the basis of slope-area and contracted-opening measurements of peak flow; minimum observed, 5 ft³/s, Sept. 8, 1929.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 9,710 ft³/s, Feb. 25, gage height, 9.15 ft; minimum daily, 67 ft³/s, Sept. 21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	135	134	1270	1180	200	1750	8650	370	550	124	148	119
2	163	130	1090	1100	210	1530	4520	812	419	136	140	107
3	128	132	1020	940	200	1360	3120	3940	360	256	128	102
4	110	152	1030	816	190	1190	2770	2160	340	258	116	95
5	102	571	810	790	250	1240	2400	1480	340	177	115	91
6	94	414	767	683	230	1130	1990	1200	230	171	114	90
7	88	289	635	636	220	941	1750	1070	207	146	114	98
8	89	232	575	603	200	993	1780	916	197	136	153	109
9	96	215	511	495	210	1100	1680	780	190	517	151	98
10	96	251	494	441	220	936	1310	676	181	435	139	103
11	92	355	705	471	200	864	1370	599	170	458	127	100
12	89	436	974	424	500	1850	1290	578	180	327	123	90
13	81	391	1220	396	1300	2010	1130	756	179	283	119	78
14	75	360	1380	350	1000	1600	1040	564	177	320	119	77
15	80	347	1340	320	800	1300	956	496	164	665	119	74
16	84	401	1160	270	640	1100	886	490	233	510	136	69
17	90	356	1010	280	520	991	826	564	284	327	136	69
18	106	330	881	310	420	885	726	1060	226	225	134	68
19	97	352	1300	270	400	754	629	764	190	183	121	69
20	110	317	2050	240	380	764	564	585	177	164	113	69
21	111	275	1900	200	340	769	526	377	194	159	109	67
22	119	225	3120	240	370	662	486	338	185	638	105	68
23	164	230	2030	360	2510	2350	462	466	240	583	102	69
24	181	228	1530	340	6600	3040	471	520	201	320	105	75
25	176	220	1700	320	8090	2430	447	448	161	231	164	80
26	158	217	1340	290	4140	1770	421	380	149	229	170	78
27	141	213	1170	270	3010	1440	362	350	139	312	134	78
28	116	582	1180	250	2210	1260	328	402	130	217	117	75
29	141	1860	1100	230	---	2570	305	460	131	174	115	72
30	208	1220	1330	220	---	6050	386	375	125	159	117	70
31	165	---	1300	200	---	8320	---	460	---	149	136	---
TOTAL	3685	11435	37922	13935	35560	54949	43581	24436	6649	8989	3939	2507
MEAN	119	381	1223	450	1270	1773	1453	788	222	290	127	83.6
MAX	208	1860	3120	1180	8090	8320	8650	3940	550	665	170	119
MIN	75	130	494	200	190	662	305	338	125	124	102	67

CAL YR 1984 TOTAL 300196 MEAN 820 MAX 13900 MIN 75
WTR YR 1985 TOTAL 247587 MEAN 678 MAX 8650 MIN 67

KISKIMINETAS RIVER BASIN

03041000 LITTLE CONEMAUGH RIVER AT EAST CONEMAUGH, PA

LOCATION.--Lat 40°20'37", long 78°53'07", Cambria County, Hydrologic Unit 05010007, on right bank 100 ft downstream from bridge on State Highway 271 at East Conemaugh, 0.3 mi downstream from Clapboard Run, and 2.5 mi upstream from confluence with Stonycreek River.

DRAINAGE AREA.--183 mi².

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

REVISED RECORDS.--WSP 1305: 1939-50 (adjusted monthly runoff). WDR PA-78-3: 1977 (M).

GAGE.--Water-stage recorder. Datum of gage is 1,211.29 ft above National Geodetic Vertical Datum of 1929. Prior to February 1, 1940, July 21, 1977 to December 13, 1979, and February 7, 1984 to September 30, 1984, nonrecording gage at site 100 ft upstream at datum 3.0 ft lower. February 2, 1940 to July 20, 1977, December 14, 1979 to February 6, 1984 and October 1, 1984 to current year, water-stage recorder at same site and datum.

REMARKS.--Estimated daily discharges: Oct. 1-15, Dec. 20 to Jan. 1, Jan. 10 to Feb. 24, Mar. 23 to Apr. 16, June 4-15, 20, 25-30, July 18-20, and July 29 to Sept. 30. Records fair. Flow regulated by reservoirs and diversion above station; the two most effective reservoirs have a combined capacity of 5,640 acre-ft. Figures of daily discharge do not include diversion at South Fork intake to Cambria plant of Bethlehem Steel Co., from Saltlick Run Reservoir to city of Johnstown, and from Wilmore Reservoir, capacity, 3,145 acre-ft to Franklin plant of Bethlehem Steel Co. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--46 years, 329 ft³/s, 24.42 in/yr, adjusted for storage and diversion 1940-81.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 40,000 ft³/s, July 20, 1977, gage height, 18.85 ft from high-water mark, from rating curve extended above 5,200 ft³/s on basis of slope-area measurements at peak flow and at gage height 8.86 ft; minimum, 3.4 ft³/s, Sept. 28, Oct. 8, 9, 11, 1963, gage height, 1.08 ft.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 17, 18, 1936, reached a discharge of 28,800 ft³/s by slope-area measurement.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 4,200 ft³/s, Apr. 1; minimum daily, 28 ft³/s, Sept. 17-23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	70	65	355	410	72	597	4200	150	444	79	56	48
2	74	64	355	403	74	529	2200	488	228	68	54	43
3	66	61	431	361	72	490	1600	1470	176	72	50	40
4	58	64	396	348	70	449	1500	696	150	95	48	38
5	52	165	307	344	80	461	1300	524	140	105	46	37
6	46	116	310	311	76	416	1100	445	130	96	46	35
7	42	87	255	297	72	370	1000	385	120	99	66	37
8	43	79	234	295	68	405	900	319	110	111	66	40
9	48	78	213	279	72	430	820	272	105	274	64	42
10	50	83	206	260	78	380	740	246	100	173	60	38
11	49	97	271	270	76	370	680	226	94	141	56	42
12	47	105	309	220	130	1030	620	214	90	108	52	37
13	45	96	482	200	520	834	580	217	96	102	50	33
14	43	92	492	170	380	702	520	182	90	96	49	31
15	58	92	488	150	300	588	480	166	88	154	48	35
16	64	100	410	130	250	500	470	169	131	111	52	30
17	65	95	373	120	200	465	396	211	172	94	60	28
18	62	89	336	110	170	410	355	333	127	84	58	28
19	61	88	605	96	170	360	318	213	110	76	54	28
20	66	83	580	84	160	370	290	180	94	68	50	28
21	65	79	700	72	160	330	264	155	119	82	48	28
22	67	76	840	90	200	301	245	146	104	207	46	28
23	84	78	660	130	900	800	226	152	120	169	43	28
24	74	77	540	120	1800	1800	216	152	103	104	43	29
25	65	76	580	110	2490	1200	206	133	90	96	56	32
26	72	75	430	100	1280	900	196	123	84	93	64	34
27	72	75	410	94	888	600	184	119	76	112	60	33
28	65	185	390	88	711	480	174	175	70	93	50	32
29	67	496	370	82	---	520	166	194	64	80	47	31
30	75	355	470	78	---	1600	155	145	64	70	44	30
31	69	---	420	70	---	4100	---	171	---	62	52	---
TOTAL	1884	3371	13218	5892	11519	22787	22101	8771	3689	3374	1638	1023
MEAN	60.8	112	426	190	411	735	737	283	123	109	52.8	34.1
MAX	84	496	840	410	2490	4100	4200	1470	444	274	66	48
MIN	42	61	206	70	68	301	155	119	64	62	43	28

CAL YR 1984 TOTAL 112224 MEAN 307 MAX 3900 MIN 42
WTR YR 1985 TOTAL 99267 MEAN 272 MAX 4200 MIN 28

KISKIMINETAS RIVER BASIN

63

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 National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except for estimated daily discharges, Jan. 12 to Feb. 21, 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 observations of water temperature were made during the year. Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--47 years, 1,283 ft³/s, 24.37 in/yr, adjusted for storage 1938-75.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 115,000 ft³/s, July 20, 1977, gage height, 27.06 ft from high-water mark, from slope-area measurement at peak flow; minimum not determined; minimum daily, 105 ft³/s, Dec. 28, 29, 31, 1938.

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.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 14,100 ft³/s, Apr. 1, gage height, 9.45 ft; maximum gage height, 10.25 ft, Feb. 13 (backwater from ice); minimum discharge, 180 ft³/s, Sept. 29, 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	318	322	2080	2050	540	2840	11300	518	1180	265	349	238
2	366	320	1850	1940	560	2500	6200	1340	783	251	314	221
3	322	301	1810	1670	540	2250	4540	5660	596	390	286	223
4	293	306	1880	1480	430	1980	4110	3290	541	538	259	223
5	274	1020	1500	1430	430	2070	3530	2240	523	363	264	217
6	235	860	1430	1260	580	1890	2960	1830	499	386	269	213
7	219	587	1230	1150	580	1580	2580	1590	445	361	273	242
8	226	486	1070	1140	440	1680	2620	1340	416	344	288	256
9	239	449	956	907	400	1840	2500	1130	396	1180	288	235
10	234	485	919	759	430	1580	2220	973	377	912	270	234
11	226	551	1190	826	500	1510	2320	860	363	835	252	226
12	220	730	1600	680	900	3880	2310	810	402	602	253	219
13	213	692	1970	620	3000	3710	2100	980	399	503	252	206
14	204	644	2330	680	2200	2960	1910	772	389	509	253	194
15	231	611	2290	540	1500	2430	1770	655	365	1010	250	193
16	254	686	1990	400	960	2020	1640	664	442	831	301	196
17	260	638	1750	540	840	1820	1500	785	599	571	269	197
18	296	569	1540	440	720	1630	1320	1530	481	445	246	197
19	260	599	1950	360	680	1390	1190	1060	410	380	251	196
20	266	558	3420	300	660	1390	1050	784	399	345	247	192
21	257	494	2870	420	800	1340	955	657	434	324	244	193
22	298	438	4910	720	1220	1170	877	591	405	1060	232	195
23	371	411	3410	780	4710	3510	825	600	469	1080	229	206
24	371	416	2580	840	8940	4790	823	660	421	587	234	212
25	361	408	2670	740	10900	3950	796	586	361	452	335	213
26	363	398	2200	600	6060	2950	750	506	337	437	366	207
27	326	395	1960	560	4660	2450	659	468	319	556	284	207
28	278	603	2000	520	3540	2200	600	562	307	441	253	193
29	318	2860	1900	540	---	5620	561	737	296	379	246	186
30	396	1970	2350	500	---	8010	538	565	270	347	267	192
31	370	---	2310	500	---	10500	---	654	---	352	271	---
TOTAL	8865	19807	63915	25892	57720	89440	67054	35397	13624	17036	8395	6322
MEAN	286	660	2062	835	2061	2885	2235	1142	454	550	271	211
MAX	396	2860	4910	2050	10900	10500	11300	5660	1180	1180	366	256
MIN	204	301	919	300	400	1170	538	468	270	251	229	186

CAL YR 1984 TOTAL 527206 MEAN 1440 MAX 17800 MIN 204

WTR YR 1985 TOTAL 413467 MEAN 1133 MAX 11300 MIN 186

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 National Geodetic Vertical Datum of 1912. Prior to Aug. 25, 1953, nonrecording gage at same site and datum.

REMARKS.--Records good except for estimated daily discharges, Oct. 1-15, Jan. 10 to Feb. 23, which are fair. Some regulation at low flow by mine pumpage above station. Several observations of water temperature were made during the year. Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--33 years, 372 ft³/s, 26.31 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 45,700 ft³/s, July 20, 1977, gage height, 19.89 ft from floodmark in gage well, 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; minimum, 19 ft³/s, Sept. 14, 1952, Nov. 4, 1953; minimum gage height, 3.15 ft, Oct. 15, 1969.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base 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)
Feb. 25	0430	3310	6.14	Mar. 29	Unknown	*9650	a*8.96
Mar. 12	1400	2790	5.79	May 3	0230	2770	5.78

(a) Floodmark in gage well.

Minimum daily discharge, 46 ft³/s, Sept. 3, 4, 18, 20, 29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	64	119	843	788	160	628	2960	188	735	77	82	59
2	58	125	683	673	160	534	1720	732	493	78	73	47
3	54	125	669	566	155	469	1330	2020	389	101	69	46
4	56	170	725	512	155	420	1270	851	339	104	61	46
5	54	924	566	483	200	509	929	576	297	89	60	52
6	56	604	531	420	230	442	758	467	257	96	58	54
7	56	415	432	386	180	359	632	435	199	144	62	54
8	58	333	392	369	150	439	647	398	166	121	69	51
9	58	298	390	288	120	481	637	390	156	640	66	122
10	60	419	360	260	150	405	571	374	143	477	65	81
11	60	447	471	240	180	376	699	344	123	442	63	65
12	62	425	529	230	260	1980	836	315	143	278	59	57
13	62	388	655	210	600	1480	734	285	171	204	54	53
14	64	364	740	220	480	1070	626	254	162	172	58	51
15	66	349	728	210	400	783	559	227	134	515	60	52
16	65	413	626	190	340	604	490	218	187	348	61	51
17	68	364	541	180	280	516	432	220	364	226	70	48
18	74	324	490	180	270	448	402	303	242	158	58	46
19	73	304	776	175	260	381	395	343	170	127	55	48
20	77	278	1230	170	250	370	389	296	147	117	51	46
21	68	260	878	170	240	320	381	242	155	107	55	47
22	98	235	1460	170	330	287	361	205	119	121	58	49
23	157	211	889	170	1480	1000	334	191	126	94	55	51
24	116	211	706	165	2720	455	311	190	105	87	58	54
25	94	198	700	165	2910	801	298	180	85	86	107	53
26	101	183	546	165	1610	647	291	161	89	90	119	49
27	107	171	569	165	1210	537	271	147	82	106	71	49
28	95	280	689	160	824	493	244	372	75	86	64	49
29	134	861	628	160	---	4540	220	577	71	74	62	46
30	187	582	1350	160	---	2530	199	280	80	73	63	47
31	143	---	991	160	---	2840	---	360	---	78	59	---
TOTAL	2545	10380	21783	8560	16304	27144	19926	12141	6004	5516	2025	1623
MEAN	82.1	346	703	276	582	876	664	392	200	178	65.3	54.1
MAX	187	924	1460	788	2910	4540	2960	2020	735	640	119	122
MIN	54	119	360	160	120	287	199	147	71	73	51	46
CFSM	.43	1.80	3.66	1.44	3.03	4.56	3.46	2.04	1.04	.93	.34	.28
IN.	.49	2.01	4.22	1.66	3.16	5.26	3.86	2.35	1.16	1.07	.39	.31

CAL YR 1984 TOTAL 160053 MEAN 437 MAX 5810 MIN 54 CFSM 2.28 IN. 31.01
WTR YR 1985 TOTAL 133951 MEAN 367 MAX 4540 MIN 46 CFSM 1.91 IN. 25.95

KISKIMINETAS RIVER BASIN

65

03042260 YELLOW CREEK LAKE AT YELLOW CREEK STATE PARK, PA

LOCATION.--Lat 40°35'27", long 79°03'11", Indiana County, Hydrologic Unit 05010007, in gatehouse at right end of dam on Yellow Creek, at Yellow Creek State Park, 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 National Geodetic Vertical datum (Pennsylvania Department of Environmental Resources bench mark).

REMARKS.--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 (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 Resources.

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, 15,300 acre-ft, Mar. 29, elevation, 1,281.70 ft; minimum, 12,800 acre-ft, Sept. 30, elevation, 1,278.83 ft.

MONTHEND ELEVATION AND CONTENTS AT 2400, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

Date	Elevation (feet)	Contents (acre- feet)	Change in contents (equivalent in cfs)
03042260 Yellow Creek Lake			
Sept. 30	1279.04	12940	-
Oct. 31	1279.37	13230	+ 4.7
Nov. 30	1280.08	13870	+ 10.8
Dec. 31	1280.38	14140	+ 4.4
CAL YR 1984	-	-	+ 0.7
Jan. 31	1279.41	13270	- 14.1
Feb. 28	1279.36	13220	- 0.9
Mar. 31	1281.00	14700	+ 24.1
Apr. 30	1279.45	13300	- 23.5
May 31	1279.33	13200	- 1.6
June 30	1279.25	13120	- 1.3
July 31	1279.27	13140	+ 0.3
Aug. 31	1279.21	13090	- 0.8
Sept. 30	1278.83	12760	- 5.5
WTR YR 1985	-	-	- 0.2

KISKIMINETAS RIVER BASIN

03042280 YELLOW CREEK NEAR HOMER CITY, PA

LOCATION.--Lat 40°34'18", long 79°06'13", Indiana County, Hydrologic Unit 0510007, 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 National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good except for estimated daily discharges Jan. 11 to Feb. 22, Feb. 24-28, June 23 to July 12, Aug. 5-7, and Aug. 31 to Sept. 30, which are fair. Flow regulated since 1971 by Yellow Creek Lake (station 03042260) 4.2 mi upstream. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--18 years, 108 ft³/s, 25.55 in/yr, adjusted for storage beginning June 1971.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,000 ft³/s, July 20, 1977, gage height 12.60 ft, from rating curve extended above 810 ft³/s on basis of computation of peak flow over dam and flow over dam measurement at gage height 7.46 ft; minimum, 1.4 ft³/s, July 19, 1969, gage height, 1.99 ft.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,430 ft³/s, Mar. 29, gage height, 5.10 ft; minimum daily, 7.3 ft³/s, Oct. 6, 7, 11-14.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.4	19	160	386	23	195	844	23	293	38	16	10
2	7.7	19	178	320	22	26	605	99	142	42	15	9.8
3	7.6	18	183	275	22	51	452	326	84	43	13	9.6
4	7.6	26	190	167	22	68	416	316	89	30	13	9.4
5	7.6	94	167	11	21	95	279	257	84	16	12	9.0
6	7.3	114	152	19	21	105	220	210	80	18	15	8.8
7	7.3	106	134	34	21	102	209	110	56	21	10	8.9
8	7.7	92	115	47	20	113	195	26	25	50	11	12
9	7.9	82	100	48	20	126	188	53	27	140	10	16
10	7.5	93	93	47	32	123	174	74	27	330	9.8	12
11	7.3	106	104	45	50	123	167	52	21	140	9.4	10
12	7.3	110	119	43	76	379	99	22	15	50	9.2	9.8
13	7.3	105	217	42	130	471	72	24	34	21	9.2	9.8
14	7.3	99	330	40	120	413	101	24	18	33	9.0	9.6
15	7.6	92	292	38	115	191	115	120	19	181	9.3	9.6
16	7.6	90	271	37	105	81	115	62	29	174	9.6	9.4
17	7.8	85	134	36	94	106	101	10	63	70	9.3	19
18	8.4	80	13	34	86	112	101	12	64	65	8.9	33
19	10	74	68	33	78	107	93	14	58	58	8.9	20
20	10	67	185	32	72	101	84	16	53	51	8.7	12
21	9.7	60	241	31	68	91	74	18	50	45	8.4	18
22	13	53	336	30	130	159	67	18	44	41	8.4	27
23	15	47	308	29	254	226	59	19	40	35	8.4	22
24	17	42	254	28	710	272	54	19	34	28	9.1	18
25	18	38	213	27	740	282	48	18	28	23	12	16
26	17	33	174	26	600	254	42	18	24	24	9.9	15
27	17	30	161	26	480	223	37	18	21	26	10	14
28	16	43	185	25	386	318	32	136	18	23	9.9	13
29	18	92	191	25	---	1230	28	262	16	21	9.9	12
30	18	107	285	24	---	976	24	226	24	19	11	12
31	18	---	405	23	---	754	---	198	---	18	10	---
TOTAL	333.9	2116	5958	2028	4518	7873	5095	2800	1580	1874	323.3	414.7
MEAN	10.8	70.5	192	65.4	161	254	170	90.3	52.7	60.5	10.4	13.8
MAX	18	114	405	386	740	1230	844	326	293	330	16	33
MIN	7.3	18	13	11	20	26	24	10	15	16	8.4	8.8
MEAN†	15.5	81.3	196	51.3	160	278	146	88.7	51.4	60.8	9.6	8.3
CSFM†	.27	1.42	3.41	.89	2.79	4.84	2.54	1.55	.90	1.06	.17	.14
IN.†	.31	1.58	3.93	1.03	2.91	5.58	2.83	1.79	1.00	1.22	.20	.16

CAL YR 1984 TOTAL 45995.7 MEAN 126 MAX 1360 MIN 7.3 ADJ +0.7 MEAN† 127 CFSN† 2.21 IN.† 29.94
WTR YR 1985 TOTAL 34913.9 MEAN 95.7 MAX 1230 MIN 7.3 ADJ -0.2 MEAN† 95.5 CFSM† 1.66 IN.† 22.54

† Adjusted for change in contents in Yellow Creek Lake.

KISKIMINETAS RIVER BASIN

67

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 National Geodetic Vertical Datum of 1929.

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

REMARKS.--Records good except for estimated daily discharges, Jan. 10 to Feb. 11, and Feb. 15-22, 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 (station 03042260) 11 mi upstream. Several observations of water temperature were made during the year. Corps of Engineers gage-height telemeter at station.

AVERAGE DISCHARGE.--34 years, 283 ft³/s, 22.47 in/yr, adjusted for storage since December 1968.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 32,000 ft³/s, July 20, 1977, gage height, 18.65 ft (backwater), from highwater mark, 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 above gage, adjusted to gage site; minimum, 2.0 ft³/s, Sept. 14, 15, 1952, gage height, 1.27 ft; minimum daily, 8.7 ft³/s, Sept. 14, 1952.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,500 ft³/s, Mar. 29, gage height, 8.58 ft; minimum daily, 52 ft³/s, Aug. 9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	71	83	380	978	76	427	2030	81	1130	121	127	127
2	65	89	328	560	76	217	1640	435	725	128	121	123
3	73	81	382	471	74	229	1090	589	235	134	103	119
4	66	135	407	388	72	239	941	454	216	120	54	117
5	73	348	375	208	70	292	800	366	204	60	53	115
6	73	250	436	208	70	275	701	327	188	70	82	112
7	73	220	453	165	68	267	480	304	164	73	101	108
8	74	194	301	160	68	312	445	192	126	109	63	111
9	76	185	285	149	66	307	439	164	127	416	52	213
10	79	289	257	145	90	299	416	147	122	741	53	127
11	90	272	271	140	120	314	509	146	121	512	66	115
12	68	249	310	130	214	967	597	161	140	337	71	106
13	69	239	513	125	288	1040	404	102	207	99	96	99
14	69	225	875	125	264	933	301	137	183	129	73	91
15	66	216	739	120	230	678	307	285	181	417	72	84
16	68	215	467	115	210	277	311	320	214	289	88	78
17	69	195	356	110	190	294	238	133	191	149	72	117
18	70	186	201	110	180	290	213	115	119	132	70	283
19	90	174	386	105	170	280	200	73	109	116	69	186
20	83	160	738	105	160	246	188	71	116	103	69	58
21	71	150	572	100	150	196	177	71	105	98	66	124
22	117	138	1030	98	230	244	164	70	96	102	72	215
23	97	132	1000	96	765	478	157	75	94	89	71	201
24	83	126	522	94	1730	842	150	73	80	101	85	169
25	81	122	431	90	1950	765	144	69	73	185	167	146
26	82	116	375	88	1350	561	136	68	68	221	111	136
27	79	112	410	86	845	412	130	68	63	201	101	130
28	79	190	566	84	588	387	162	431	61	149	111	120
29	112	257	745	82	---	3200	119	476	59	140	126	110
30	92	241	632	80	---	2390	107	403	84	133	146	103
31	86	---	1000	78	---	1990	---	479	---	136	134	---
TOTAL	2444	5589	15743	5593	10364	19648	13696	6885	5601	5810	2745	3943
MEAN	78.8	186	508	180	370	634	457	222	187	187	88.5	131
MAX	117	348	1030	978	1950	3200	2030	589	1130	741	167	283
MIN	65	81	201	78	66	196	107	68	59	60	52	58
†	-26.5	+47.1	+18.7	-19.8	+5.4	+37.9	-40.3	+30.9	-29.0	-2.1	-49.1	-108
MEAN†	52.3	233	527	160	375	672	417	253	158	185	39.4	23.0
CFSM†	.31	1.36	3.08	.94	2.19	3.93	2.44	1.48	.92	1.08	.23	.13
IN.†	.36	1.52	3.55	1.08	2.28	4.53	2.72	1.71	1.03	1.25	.27	.15

CAL YR 1984 TOTAL 130912 MEAN 358 MAX 3150 MIN 62 ADJ +0.1 MEAN† 358 CFSM† 2.09 IN.† 28.49
WTR YR 1985 TOTAL 98061 MEAN 269 MAX 3200 MIN 52 ADJ -11.1 MEAN† 258 CFSM† 1.51 IN.† 20.45

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

‡ Adjusted for change in reservoir contents.

KISKIMINETAS RIVER BASIN

03044000 CONEMAUGH RIVER AT TUNNELTON, PA

LOCATION.--Lat 40°27'16", long 79°23'28", Indiana County, Hydrologic Unit 05010007, on right bank at downstream side of highway bridge at Tunnelton, 0.9 mi downstream from Boatyard Run, 2.0 mi downstream from Conemaugh River Dam, 3.8 mi southeast of Saltsburg, and 5.5 mi upstream from confluence with Loyalhanna Creek.

DRAINAGE AREA.--1,358 mi².

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

GAGE.--Water-stage recorder. Datum of gage is 844.64 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1952, nonrecording gage at same site and datum.

REMARKS.--Records good except for estimated daily discharges, Jan. 19-24, and Feb. 9, 10, which are fair. Flow regulated since 1971 by Yellow Creek Lake (station 03042260) since 1952 by Conemaugh River Lake 2 mi upstream and by reservoirs above station, the nine most effective of which have a combined capacity of 68,090 acre-ft. 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 observations of water temperature were made during the year. Corps of Engineers satellite telemeter at station.

COOPERATION.--Two discharge measurements furnished by Corps of Engineers.

AVERAGE DISCHARGE.--46 years, 2,385 ft³/s, 23.85 in/yr, adjusted for storage 1952-75.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 59,200 ft³/s, Mar. 7, 1945, gage height, 21.0 ft from graph based on gage readings; minimum, 1 ft³/s, Sept. 10, 1954, gage height, 1.20 ft; minimum daily, 1 ft³/s, Sept. 10, 1954.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 16,300 ft³/s, Feb. 27, gage height, 9.73 ft; minimum daily, 381 ft³/s, Aug. 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	472	690	4050	4080	1040	14600	2660	844	1660	488	544	510
2	523	692	4050	5200	1040	13500	7910	955	2250	503	569	510
3	572	686	3960	6240	1030	10000	13700	3040	2740	513	570	501
4	566	685	3900	3560	1010	5160	13500	4840	2640	576	551	496
5	540	1110	3820	1580	1010	3720	13200	6210	2190	632	501	485
6	509	1710	3650	1640	1020	3620	12800	7210	1790	633	450	477
7	466	1710	3440	1660	1010	2940	12400	5710	991	634	441	466
8	429	1690	2360	1680	1000	2380	11900	2170	789	651	471	459
9	445	1660	1420	1670	989	2470	11400	1490	800	1280	474	460
10	460	1650	2240	1670	1000	2520	9530	1780	803	2120	463	469
11	453	1650	2610	1660	1030	2530	7590	1780	800	2780	442	471
12	432	1650	2240	1650	1040	2100	6590	1770	794	2720	422	467
13	414	1660	2400	1630	1500	4100	5600	1740	803	2140	409	460
14	400	1650	3180	1590	3280	7260	5390	1720	816	1560	420	452
15	388	1650	3820	1580	4690	7050	4640	1680	816	1550	428	442
16	392	1650	3880	1540	4510	6660	3910	1650	816	1620	432	427
17	409	1640	3830	1470	4150	4780	3160	1630	834	1610	529	407
18	439	1630	3700	1310	3760	3660	2480	1640	860	1550	393	396
19	479	1600	3520	1140	2080	2950	2420	1680	856	1180	400	450
20	496	1580	3750	1120	1390	2340	1840	1660	856	802	400	470
21	512	1540	4020	890	1440	2320	1530	1450	851	789	391	428
22	526	1470	4260	600	1530	2270	1550	1250	843	786	390	406
23	613	1150	5660	610	1770	2270	1550	1210	835	1350	381	427
24	655	811	7140	620	2070	3380	1540	1200	829	1550	383	438
25	666	819	6850	874	2300	5590	1520	1180	813	830	437	449
26	665	819	6460	1170	5100	6880	1500	987	703	836	495	447
27	660	822	4960	1140	12000	6510	1150	806	593	847	515	438
28	658	857	3570	1110	15600	5220	804	852	571	855	519	426
29	651	1320	3620	1070	---	2740	824	1810	542	849	510	415
30	670	2740	3770	1050	---	2190	841	2550	508	823	512	399
31	686	---	3990	1040	---	2430	---	2050	---	649	510	---
TOTAL	16246	40991	120120	53844	79389	146140	165429	66544	31992	35706	14352	13548
MEAN	524	1366	3875	1737	2835	4714	5514	2147	1066	1152	463	452
MAX	686	2740	7140	6240	15600	14600	13700	7210	2740	2780	570	510
MIN	388	685	1420	600	989	2100	804	806	508	488	381	396

CAL YR 1984 TOTAL 1012663 MEAN 2767 MAX 15100 MIN 388

WTR YR 1985 TOTAL 784301 MEAN 2149 MAX 15600 MIN 381

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 National Geodetic Vertical Datum of 1929 (Corps of Engineers bench mark). Prior to Oct. 1, 1969, at datum 1.00 ft higher.

REMARKS.--Records good except for estimated daily discharges, Oct. 1-20, Jan. 11 to Feb. 12, Feb. 16-22, and Aug. 31 to Sept. 30, 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 observations of water temperature were made during the year. Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--46 years, 302 ft³/s, 23.84 in/yr, adjusted for storage and diversion.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 29,700 ft³/s, Oct. 15, 1954, gage height, 15.8 ft, present datum, from floodmarks, from rating curve extended above 8,700 ft³/s on basis of contracted-opening measurement of peak flow; minimum, 0.1 ft³/s, Sept. 4, 1953; minimum daily, 0.2 ft³/s, Oct. 23, 24, 1953.

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.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than 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)
Feb. 12	---	---	ice jam	Mar. 31	2230	4320	7.40
Feb. 23	2030	3590	6.90	July 9	0800	*6280	*8.54
Mar. 31	0100	3780	7.04				

Minimum daily discharge, 11 ft³/s, Sept. 22-24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	31	91	717	633	115	441	2830	101	186	26	103	48
2	33	194	494	488	120	375	1450	407	131	28	80	34
3	31	185	506	377	115	315	1020	1550	113	69	65	29
4	29	172	431	333	100	278	767	680	112	135	60	24
5	27	635	346	319	92	386	600	461	107	47	52	22
6	22	421	337	266	110	301	482	373	94	38	49	21
7	20	314	280	250	125	262	435	343	75	33	47	35
8	20	245	251	229	105	340	456	267	72	143	60	58
9	20	223	220	174	90	327	433	215	67	3150	48	42
10	21	283	225	155	82	288	401	183	62	769	41	28
11	21	276	391	140	90	281	476	162	52	416	37	24
12	21	250	411	130	350	723	472	158	72	314	36	21
13	20	242	414	125	999	612	431	140	87	261	26	19
14	20	244	445	120	481	516	405	114	70	234	24	17
15	20	235	503	115	363	420	362	125	57	379	26	16
16	23	285	421	110	290	352	341	165	59	229	68	15
17	26	237	369	115	250	321	320	232	66	158	62	14
18	29	217	319	125	230	279	268	632	64	122	37	13
19	28	238	685	115	210	236	240	343	52	100	29	12
20	27	203	794	110	190	259	213	257	46	87	26	12
21	37	170	794	105	180	240	189	201	70	91	26	12
22	61	151	1310	100	500	201	173	167	50	508	24	11
23	153	143	750	100	2470	458	161	178	179	302	22	11
24	115	135	553	100	2820	578	159	164	90	178	23	11
25	81	125	546	100	2090	554	188	130	61	137	67	15
26	70	114	379	100	1160	440	159	108	49	186	81	16
27	62	104	395	98	809	384	141	96	41	396	42	14
28	57	486	392	98	560	362	133	216	34	191	31	12
29	102	1020	355	96	---	1410	117	250	32	148	26	14
30	147	522	1100	96	---	2700	104	150	28	120	24	12
31	107	---	824	105	---	3220	---	201	---	103	60	---
TOTAL	1481	8160	15957	5527	15096	17859	13926	8769	2278	9098	1402	632
MEAN	47.8	272	515	178	539	576	464	283	75.9	293	45.2	21.1
MAX	153	1020	1310	633	2820	3220	2830	1550	186	3150	103	58
MIN	20	91	220	96	82	201	104	96	28	26	22	11
†	+3.9	+10.0	+18.9	+8.8	+8.8	+8.7	+5.2	+11.0	+1.8	+8.1	+2.3	-1.4
MEAN‡	51.7	282	534	187	548	585	469	294	77.7	301	47.5	19.7
CFSM‡	.30	1.64	3.10	1.09	3.19	3.40	2.73	1.71	.45	1.75	.28	.11
IN.‡	.35	1.83	3.57	1.26	3.32	3.92	3.05	1.97	.50	2.02	.32	.12
CAL YR 1984	TOTAL 129529	MEAN 354	MAX 4770	MIN 20	ADJ +8.9	MEAN‡ 363	CFSM‡ 2.11	IN.‡ 28.71				
WTR YR 1985	TOTAL 100185	MEAN 274	MAX 3220	MIN 11	ADJ +7.2	MEAN‡ 281	CFSM‡ 1.63	IN.‡ 22.23				

† 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.

‡ Adjusted for diversion and change in reservoir contents.

KISKIMINETAS RIVER BASIN
03047000 LOYALHANNA CREEK AT LOYALHANNA DAM, PA

LOCATION.--Lat 40°27'53", long 79°27'05", Westmoreland County, Hydrologic Unit 05010008, on left bank at downstream side of highway bridge, 0.7 mi downstream from Loyalhanna Dam, 1.5 mi south of Saltsburg, and 4.0 mi upstream from confluence with Conemaugh River.

DRAINAGE AREA.--292 mi².

PERIOD OF RECORD.--October 1939 to current year. Prior to October 1970, published as "at Loyalhanna Creek Dam." Monthly discharge only for some periods, published in WSP 1305.

REVISED RECORDS.--WSP 1435: 1941.

GAGE.--Water-stage recorder. Datum of gage is 861.15 ft above National Geodetic Vertical Datum of 1929 (Corps of Engineers bench mark).

REMARKS.--Records good except for estimated daily discharges, Jan. 20-22, 27, Feb. 3-5, 9, 10, 16, which are fair. Flow completely regulated since 1942 by Loyalhanna Lake 0.7 mi upstream and Latrobe Reservoir, combined capacity, 99,000 acre-ft. Several observations of water temperature were made during the year. Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--46 years, 484 ft³/s, 22.51 in/yr, adjusted for storage since June 1942.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,700 ft³/s, June 5, 1941, gage height, 10.30 ft; from rating curve extended above 5,200 ft³/s; no flow on Aug. 9, 1979, minimum gage height, -0.18 ft, Aug. 23, 1974.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,660, ft³/s Apr. 2, gage height, 6.01 ft; minimum daily, 19 ft³/s, Sept. 19-23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	119	240	921	1040	102	2310	919	218	348	111	148	109
2	119	239	1090	1040	104	2260	2150	227	216	111	107	109
3	120	237	1070	1030	104	2200	3590	1020	217	111	107	109
4	121	238	1060	1010	104	2120	3510	1640	218	111	107	109
5	119	244	908	743	104	1410	3400	1600	218	111	107	108
6	119	384	739	429	158	993	3290	1270	211	113	107	107
7	119	490	609	428	215	643	3130	843	161	116	107	107
8	119	486	453	428	216	430	2950	418	109	117	78	106
9	79	484	451	423	216	436	1550	215	111	201	48	104
10	53	485	324	288	216	437	689	217	111	479	48	70
11	55	485	232	208	213	437	702	218	111	1670	48	47
12	55	481	239	209	213	447	716	218	111	2360	48	47
13	55	479	245	209	486	739	722	218	111	2300	48	47
14	55	475	546	210	904	1030	724	218	111	2200	48	47
15	55	471	779	212	1040	1020	724	218	111	1500	48	47
16	55	470	778	212	1010	994	719	218	111	642	77	47
17	55	465	774	212	986	710	713	218	111	323	109	47
18	56	462	768	212	956	433	574	340	111	213	109	31
19	56	458	761	213	480	431	433	457	111	213	109	19
20	56	330	776	213	203	324	431	457	111	212	109	19
21	56	234	788	213	206	214	429	454	111	212	107	19
22	58	234	818	213	321	216	321	445	112	214	107	19
23	90	234	1220	208	475	219	212	438	114	351	107	19
24	126	234	1710	206	516	465	212	434	114	432	78	20
25	126	234	1670	206	536	730	215	263	114	427	50	20
26	126	233	1630	207	1320	730	215	107	114	422	50	21
27	126	231	1330	207	2410	726	217	108	114	419	50	20
28	126	233	1010	153	2360	722	218	182	114	293	50	20
29	127	544	988	100	---	755	218	541	111	221	50	20
30	178	784	991	101	---	808	218	708	111	221	79	20
31	242	---	1040	102	---	869	---	559	---	221	110	---
TOTAL	3021	11298	26718	10885	16174	26258	34111	14687	4159	16647	2555	1634
MEAN	97.5	377	862	351	578	847	1137	474	139	537	82.4	54.5
MAX	242	784	1710	1040	2410	2310	3590	1640	348	2360	148	109
MIN	53	231	232	100	102	214	212	107	109	111	48	19
†	+9.11	+25.6	+5.6	-31.6	+250	+55.3	-284	-17.7	+15.1	-17.1	+10.9	-17.0
MEAN†	107	403	868	319	828	902	853	456	154	520	93.3	37.5
CFSM†	.37	1.38	2.97	1.09	2.84	3.09	2.92	1.56	.53	1.78	.32	.13
IN.†	.43	1.54	3.42	1.26	2.96	3.56	3.26	1.80	.59	2.05	.37	.15

CAL YR 1984 TOTAL 223721 MEAN 611 MAX 2750 MIN 53 ADJ +1.42 MEAN† 612 CFSM† 2.10 IN.† 28.55
WTR YR 1985 TOTAL 168147 MEAN 461 MAX 3590 MIN 19 ADJ -.93 MEAN† 460 CFSM† 1.58 IN.† 21.39

† Change in contents, equivalent in cubic feet per second, in Latrobe Reservoir and Loyalhanna Lake. Records of contents in Latrobe Reservoir furnished by the Latrobe Municipal Authority.

‡ Adjusted for change in reservoir contents.

KISKIMINETAS RIVER BASIN

71

03048500 KISKIMINETAS RIVER AT VANDERGRIFT, 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 Vandergrift, 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 Forest and Waters.

GAGE.--Water-stage recorder. Datum of gage is 769.40 ft above National Geodetic Vertical Datum of 1929 (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, Jan. 21 to Feb. 14, and Feb. 22-25, 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 observations of water temperature were made during the year. Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--48 years, 3,102 ft³/s, 23.08 in/yr, adjusted for storage and diversion, 1938-75.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 71,900 ft³/s, Mar. 31, 1940, gage height, 25.70 ft; minimum, 56 ft³/s, Oct. 15, 16, 1952; minimum daily, 60 ft³/s, Oct. 15, 1952.

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.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 18,800 ft³/s, Feb. 28, gage height, 13.18 ft; minimum daily, 421 ft³/s, Sept. 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	625	955	5420	5690	1450	17700	5730	1200	3390	645	795	621
2	631	964	5520	6320	1450	16600	8620	2010	2580	658	697	616
3	679	943	5420	8020	1450	13900	18500	4340	3400	715	703	611
4	689	963	5280	5960	1450	8300	18100	7270	3380	702	693	604
5	668	1300	5080	2680	1450	5850	17600	7910	2780	782	657	594
6	642	2240	4720	2330	1450	5050	17000	9390	2650	807	600	583
7	612	2400	4410	2360	1450	4460	16400	7940	1680	834	562	576
8	581	2350	3550	2370	1450	3250	15800	3760	1060	828	576	580
9	566	2340	2020	2330	1450	3280	14400	1910	1060	2090	538	570
10	521	2590	2370	2240	1450	3350	11800	2200	1050	2600	526	567
11	520	2510	3450	2090	1450	3390	9310	2220	1030	4340	513	525
12	506	2430	2740	2060	1500	3470	8600	2200	1060	5290	497	518
13	484	2380	2950	2090	2400	3940	7170	2170	1050	4870	503	507
14	471	2350	3680	2060	4500	9120	6950	2140	1040	3790	513	489
15	455	2350	5000	1950	6650	8830	6340	2100	1030	3780	552	480
16	442	2340	5060	1930	6400	8410	5190	2060	1060	2650	577	467
17	457	2290	4990	1860	5930	6840	4640	2070	1080	2200	660	453
18	487	2270	4820	1820	5340	4570	3510	2100	1080	1920	598	435
19	539	2240	4780	1510	3910	4120	3210	2330	1080	1800	544	425
20	577	2120	4980	1310	1910	3110	2840	2320	1070	1130	526	476
21	575	1920	5370	900	2010	2880	2200	2230	1070	1100	518	456
22	652	1840	6150	760	2000	2840	2180	1870	1060	1100	508	422
23	704	1690	6920	770	2300	2850	1990	1830	1070	1200	502	425
24	788	1100	9510	780	2600	3620	1970	1800	1030	2460	518	450
25	799	1110	9100	960	3000	6270	1960	1730	1020	1430	583	446
26	808	1110	8610	1500	5000	8330	1920	1350	985	1410	574	465
27	795	1110	7400	1500	13500	8000	1810	1030	767	1440	567	513
28	796	1230	4960	1450	18400	7210	1180	1550	738	1340	570	447
29	844	1800	4990	1450	---	6960	1190	1920	713	1150	564	433
30	834	3250	5630	1400	---	4370	1190	3570	681	1130	584	421
31	950	---	5680	1400	---	5100	---	3970	---	1120	638	---
TOTAL	19697	56485	160560	71850	103300	195970	219300	92490	42744	57311	17956	15175
MEAN	635	1883	5179	2318	3689	6322	7310	2984	1425	1849	579	506
MAX	950	3250	9510	8020	18400	17700	18500	9390	3400	5290	795	621
MIN	442	943	2020	760	1450	2840	1180	1030	681	645	497	421

CAL YR 1984 TOTAL 1372084 MEAN 3749 MAX 18600 MIN 442
WTR YR 1985 TOTAL 1052838 MEAN 2884 MAX 18500 MIN 421

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, by barometer. Prior to July 19, 1962, nonrecording gage at same site and datum.

REMARKS.--Records good except for estimated daily discharges, Nov. 7 to Dec. 21, Dec. 26-28, and Jan. 7 to Feb. 23, which are fair. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--45 years, 193 ft³/s, 19.13 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14,000 ft³/s, Oct. 15, 1954, gage height, 13.60 ft, from flood-marks, from rating curve extended above 4,300 ft³/s on basis of slope-area measurement of peak flow; minimum observed, 1.3 ft³/s, Oct. 16-18, 1960; minimum gage height, 0.69 ft, Sept. 1, 1962.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than 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)
Feb. 23	2230	2690	5.29	Mar. 29	0630	*5540	*8.08
Feb. 25	0100	2570	5.17	May 31	1300	3230	5.83
Mar. 12	1030	2070	4.67				

Minimum discharge, 9.0 ft³/s, Sept. 23, 24, gage height, 0.88 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	39	34	480	602	62	379	1250	59	1330	30	39	51
2	54	36	380	460	60	334	893	178	603	30	26	36
3	29	36	400	348	60	273	802	289	365	52	21	29
4	24	47	410	302	60	243	795	156	244	68	17	25
5	21	452	310	275	60	375	614	128	280	43	16	22
6	19	235	260	226	60	277	500	119	183	88	16	20
7	18	130	210	160	60	233	397	123	132	64	16	18
8	18	105	180	130	58	342	369	100	113	56	21	21
9	21	82	160	100	58	330	321	84	105	622	24	55
10	21	740	130	110	58	292	275	76	94	554	16	36
11	19	680	370	120	58	278	253	71	75	278	13	24
12	21	390	400	110	90	1310	223	67	207	149	12	19
13	20	300	500	130	150	1080	196	69	182	102	11	16
14	17	250	600	140	220	754	199	60	142	105	12	14
15	17	200	520	115	180	543	192	55	107	280	26	13
16	18	300	470	100	160	408	176	56	107	132	94	13
17	19	220	410	94	140	350	147	65	97	93	61	13
18	20	170	360	90	120	284	127	143	87	73	30	12
19	20	150	500	86	110	230	120	79	75	61	22	12
20	18	130	640	84	96	218	112	62	68	54	18	10
21	18	115	520	80	90	175	104	54	66	50	16	9.6
22	30	110	795	78	300	154	95	50	61	46	15	9.6
23	80	100	593	74	1300	183	89	47	80	42	14	9.5
24	41	96	461	74	2130	248	86	44	58	36	13	10
25	28	88	361	72	1840	278	104	40	49	32	39	11
26	25	80	240	70	960	214	88	36	43	33	39	17
27	23	76	250	68	674	203	76	36	40	57	23	54
28	23	220	280	66	470	205	71	819	36	35	18	29
29	54	370	322	64	---	3690	67	419	35	28	16	18
30	74	170	1010	64	---	1450	61	209	33	25	80	15
31	42	---	743	62	---	1330	---	1810	---	31	139	---
TOTAL	891	6112	13265	4554	9684	16663	8802	5603	5097	3349	923	641.7
MEAN	28.7	204	428	147	346	538	293	181	170	108	29.8	21.4
MAX	80	740	1010	602	2130	3690	1250	1810	1330	622	139	55
MIN	17	34	130	62	58	154	61	36	33	25	11	9.5
CFSM	.21	1.49	3.12	1.07	2.53	3.93	2.14	1.32	1.24	.79	.22	.16
IN.	.24	1.66	3.60	1.24	2.63	4.52	2.39	1.52	1.38	.91	.25	.17

CAL YR 1984 TOTAL 100813 MEAN 275 MAX 3350 MIN 17 CFSM 2.01 IN. 27.37
WTR YR 1985 TOTAL 75584.7 MEAN 207 MAX 3690 MIN 9.5 CFSM 1.51 IN. 20.52

OHIO RIVER MAIN STEM

73

03049500 ALLEGHENY RIVER AT NATRONA, PA

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, and at mile 24.3.

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

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 737.11 ft above National Geodetic Vertical Datum of 1929, (Corps of Engineers bench mark). Prior to Apr. 14, 1940, nonrecording gage at same site and datum.

REMARKS.--Records good except for estimated daily discharges, Nov. 5-8, Dec. 1-31, Feb. 15-24, and July 9 to Aug. 10, which are fair. 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, and Loyalhanna Lakes 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 observations of water temperature were made during the year. Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--47 years, 19,580 ft³/s, 23.30 in/yr, adjusted for storage from 1940 to 1975.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 238,000 ft³/s, Dec. 30, 1942, gage height, 27.46 ft; minimum, 895 ft³/s, Oct. 22, 1963; minimum gage height, 8.82 ft, July 25, 26, 1966.

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 102,000 ft³/s, Feb. 25, gage height, 17.55 ft; minimum, 3,360 ft³/s, May 27, Aug. 30, gage height, 9.32 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4410	15400	21300	51200	8830	68100	61700	7030	18400	5970	4700	5700
2	4790	13000	22600	47600	11000	65400	63600	7900	14800	6180	4500	5590
3	5690	11800	24000	46500	10200	61000	68100	12100	16500	5910	3700	5050
4	6520	12200	24600	40700	9410	53700	67000	16100	13200	4290	3300	4630
5	6460	19600	24600	36100	9890	52100	63100	15200	11500	3850	2800	4310
6	6210	28900	23000	33600	10700	60500	59000	16000	10300	5120	3000	3870
7	5540	26000	21400	30200	10800	53600	55500	14700	8040	5930	3000	4010
8	5350	23200	19400	26200	10800	50600	52300	11400	6200	8900	4500	3770
9	5680	21900	16600	23600	10700	61300	47600	7890	5570	15000	7340	3610
10	5620	29900	17000	19600	10700	56500	40800	7600	5080	18500	6400	4400
11	5490	49200	19900	17700	10100	49200	35400	7310	5090	17000	5350	8010
12	5070	50100	20600	16000	11100	63900	32800	6690	6530	16000	4060	9060
13	5070	42500	25600	15600	12600	85700	28400	6280	7740	13000	4410	9160
14	4550	37100	36000	15900	15700	71700	26300	6720	8360	11000	4140	9240
15	3990	32600	39000	15800	17500	65200	24000	6720	9540	11500	4050	8250
16	3920	30900	36800	13300	17800	58300	22900	6160	9240	15000	5420	6940
17	4360	29900	32800	12900	17100	52300	21700	6570	8560	20000	7160	6060
18	4240	26800	28500	13100	16000	45200	19700	6710	8980	16000	6630	5330
19	3620	23900	27400	13300	15900	40200	18000	6370	10400	12000	6040	4900
20	4050	20900	29200	11000	15000	35700	18000	6860	9660	11000	6080	4620
21	4610	18600	27400	6060	17900	33100	16100	6450	8850	9400	5580	4480
22	5290	17900	35700	4750	18000	28900	15600	5840	10200	8800	5410	4300
23	6760	16100	38100	4830	37500	25500	14200	5880	10200	8400	5080	4070
24	6510	15200	39800	5910	77600	27100	11500	5970	12500	8200	4870	4690
25	6500	14400	36900	7320	94100	28000	10600	5340	11500	7000	5240	5160
26	6540	12600	32000	8430	84000	28000	10300	4290	8640	6000	5120	5520
27	6630	11000	29500	8070	73100	36400	9150	3640	6850	5400	5050	6410
28	7900	10700	29800	7610	72100	35100	7650	6970	7070	5000	4510	6500
29	8810	12300	44300	7950	---	72700	6930	9990	7320	4800	4100	6330
30	13100	15500	65000	8310	---	69500	7360	12200	6550	5200	3590	5760
31	16300	---	61300	8300	---	56500	---	15100	---	5000	5040	---
TOTAL	189580	690100	950100	577440	726130	1591000	935290	263980	283370	295350	150170	169730
MEAN	6115	23000	30650	18630	25930	51320	31180	8515	9446	9527	4844	5658
MAX	16300	50100	65000	51200	94100	85700	68100	16100	18400	20000	7340	9240
MIN	3620	10700	16600	4750	8830	25500	6930	3640	5080	3850	2800	3610

CAL YR 1984 TOTAL 9055210 MEAN 24740 MAX 107000 MIN 3620
WTR YR 1985 TOTAL 6822240 MEAN 18690 MAX 94100 MIN 2800

OHIO RIVER MAIN STEM

03049625 ALLEGHENY RIVER AT NEW KENSINGTON, PA
(National stream quality accounting network, and Radiochemical program)

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 19.0 mi from mouth.

DRAINAGE AREA.--11,500 mi².

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

REMARKS.--Composite samples taken as part of the USGS-EPA surveillance network. Records of discharge are given for 03049500 Allegheny River at Natrona, Pa.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM- FLOW- INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUC- TANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	ALKA- LINITY FIELD (MG/L AS CACO3)	TUR- BID- ITY (NTU)	BARO- METRIC PRES- SURE (MM OF HG)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	CALCIUM DIS- SOLVED (MG/L AS CA)
NOV 28...	1100	10300	240	6.7	4.5	20	3.0	736	11.6	280	130	24
MAR 14...	1000	71500	165	7.0	5.0	12	25	741	13.6	420	780	14
JUN 13...	0900	7770	340	7.2	21.0	24	1.7	739	8.0	1600	200	34
SEP 26...	1000	5360	305	7.5	19.5	31	1.5	740	9.0	2000	80	28

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)
NOV 28...	6.4	11	1.4	57	19	.10	4.7	142	.63	.050	.40	<.010
MAR 14...	4.1	6.6	1.2	39	11	<.10	4.7	95	.57	.050	.40	.080
JUN 13...	9.3	15	1.7	99	18	.20	4.2	195	.86	.100	.30	.010
SEP 26...	7.3	16	1.9	73	23	.20	3.0	197	.32	.020	.30	.020

DATE	PHOS- PHORUS TOTAL (MG/L AS PO4)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)	SEDI- MENT, SUS- PENDE (MG/L)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)
NOV 28...	--	<.010	<.010	17	83	30	<1	55	.0	1	1
MAR 14...	--	.040	<.010	135	80	40	<1	48	<.5	<1	<1
JUN 13...	.03	<.010	<.010	19	80	50	<1	60	<.5	1	<1
SEP 26...	.06	.010	<.010	19	76	50	<1	57	<.5	<1	<1

OHIO RIVER MAIN STEM

75

03049625 ALLEGHENY RIVER AT NEW KENSINGTON, PA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)	LITHIUM DIS- SOLVED (UG/L AS LI)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)
NOV 28...	6	<1	210	2	7	340	.1	<10	11	<1	100
MAR 14...	<3	3	81	1	<4	310	<.1	<10	10	<1	65
JUN 13...	4	1	4	<1	15	320	.1	<10	15	<1	160
SEP 26...	<3	1	3	8	11	130	<.1	<10	3	<1	140

DATE	VANA- DIUM, DIS- SOLVED (UG/L AS V)	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, DIS- SOLVED (UG/L AS ZN)	GROSS ALPHA, DIS- SOLVED (UG/L AS U-NAT)	GROSS ALPHA, SUSP. TOTAL (UG/L AS U-NAT)	GROSS BETA, DIS- SOLVED (PCI/L AS CS-137)	GROSS BETA, SUSP. TOTAL (PCI/L AS CS-137)	GROSS BETA, DIS- SOLVED (PCI/L AS SR/ YT-90)	GROSS BETA, SUSP. TOTAL (PCI/L AS SR/ YT-90)	RADIUM 226, DIS- SOLVED, RADON METHOD (PCI/L)	URANIUM DIS- SOLVED, EXTRAC- TION (UG/L)
NOV 28...	<6	<1	78	--	--	--	--	--	--	--	--
MAR 14...	<6	<1	16	<1.9	1.2	1.5	1.3	1.3	1.1	.07	.08
JUN 13...	<6	<1	20	--	--	--	--	--	--	--	--
SEP 26...	<6	<1	15	--	--	--	--	--	--	--	--

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 778.26 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except for estimated daily discharges, Jan. 9 to Feb. 23, which are fair. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--23 years, 6.16 ft³/s, 14.47 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,040 ft³/s, June 30, 1974, gage height, 6.06 ft, from peak-stage indicator, from rating curve extended above 150 ft³/s on basis of contracted-opening measurement of peak flow at site about 1.5 mi upstream, adjusted for flow from intervening area; no flow on many days.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than 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)
Mar. 29	0500	*240	*2.10	No other peak greater than base discharge.			

Minimum discharge, 0.04 ft³/s, Aug. 12; minimum gage height, 0.29 ft, Aug. 12, 13, 14, 23, 24, Sept. 18, 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.6	1.8	4.7	16	2.3	5.7	30	2.0	19	.54	.55	.38
2	1.4	2.4	3.7	9.3	2.2	5.3	19	28	9.8	1.0	.38	.33
3	1.1	1.7	3.9	7.1	2.2	3.8	19	22	6.4	2.9	.33	.43
4	1.1	9.5	3.1	6.1	2.2	4.5	15	10	4.2	1.1	.30	.27
5	.92	15	2.9	5.9	2.1	5.7	12	6.8	3.8	.97	.28	.24
6	.84	6.5	3.3	5.2	2.1	2.8	10	5.9	2.9	1.7	.28	.25
7	.84	4.2	5.0	6.0	2.0	3.8	11	4.8	2.4	1.2	.27	.28
8	1.4	3.1	5.3	5.0	2.0	10	11	3.8	2.2	13	.27	.29
9	1.3	4.9	3.7	4.3	2.0	5.5	11	3.2	2.2	21	.23	.38
10	1.1	21	5.6	4.0	1.9	4.7	13	2.9	1.8	9.9	.21	.27
11	.95	16	10	3.9	2.7	7.8	18	2.6	1.6	3.8	.22	.27
12	1.0	9.6	9.2	3.8	4.5	28	15	2.4	3.4	2.4	.19	.21
13	1.1	6.4	8.6	3.6	31	16	13	2.2	2.5	1.7	.16	.20
14	1.3	4.7	16	3.5	21	12	12	1.8	1.8	1.4	.18	.19
15	1.3	4.4	13	3.4	14	9.2	9.6	1.9	1.6	1.4	1.7	.20
16	1.6	3.9	9.3	3.3	10	7.1	8.4	2.0	1.9	1.0	.98	.19
17	2.0	3.1	7.3	3.2	7.0	6.1	5.7	2.4	1.7	.78	.46	.15
18	2.8	3.0	5.8	3.1	4.8	4.9	5.3	2.3	1.7	.70	.31	.14
19	2.4	2.8	10	3.1	3.2	4.5	4.9	1.8	1.5	.64	.26	.14
20	2.6	2.4	8.9	3.0	3.1	3.8	4.4	1.5	1.3	.63	.23	.11
21	2.8	2.2	18	2.9	3.1	2.7	3.9	1.4	1.1	.73	.21	.11
22	8.1	2.0	25	2.8	9.0	2.9	3.5	1.3	1.8	1.1	.20	.12
23	3.6	2.0	14	2.8	50	3.9	3.1	1.2	1.5	.62	.17	.08
24	2.2	1.9	10	2.7	40	5.1	4.2	1.1	1.0	.50	.90	.29
25	1.7	1.8	8.1	2.7	20	4.1	4.3	.97	.83	.45	3.2	.16
26	1.7	1.7	6.4	2.6	14	3.3	3.2	.91	.75	3.9	.81	.21
27	1.6	1.6	6.1	2.6	9.9	3.3	2.7	3.2	.69	1.4	.50	.42
28	1.6	4.5	5.7	2.5	6.7	3.6	2.5	23	.65	.73	.37	.24
29	6.3	3.6	9.7	2.5	---	70	2.2	5.5	.65	.59	.32	.18
30	2.9	3.7	37	2.4	---	34	2.0	5.9	.59	.52	.93	.17
31	2.2	---	23	2.3	---	40	---	51	---	.72	.55	---
TOTAL	65.35	151.4	302.3	131.6	275.0	324.1	278.9	205.78	83.26	79.02	15.95	6.90
MEAN	2.11	5.05	9.75	4.25	9.82	10.5	9.30	6.64	2.78	2.55	.51	.23
MAX	8.1	21	37	16	50	70	30	51	19	21	3.2	.43
MIN	.84	1.6	2.9	2.3	1.9	2.7	2.0	.91	.59	.45	.16	.08
CFSM	.37	.87	1.69	.74	1.70	1.82	1.61	1.15	.48	.44	.09	.04
IN.	.42	.97	1.95	.85	1.77	2.09	1.79	1.32	.54	.51	.10	.04

CAL YR 1984 TOTAL 2457.33 MEAN 6.71 MAX 40 MIN .52 CFSM 1.16 IN. 15.82
WTR YR 1985 TOTAL 1919.56 MEAN 5.26 MAX 70 MIN .08 CFSM .91 IN. 12.35

MONONGAHELA RIVER BASIN

77

03070415 STONY FORK NEAR FARMINGTON, PA

LOCATION.--Lat 39°46'51", long 79°34'31", Fayette County, Hydrologic Unit 05020004, at culvert on gravel road, 0.2 mi southwest of Camp Riamo, 1.8 mi (2.9 km) south of Farmington, 2.8 mi east of Elliottsville, and 3.0 mi northeast of Gibbon Glade.

DRAINAGE AREA.--2.50 mi².

PERIOD OF RECORD.--March 1977 to September 1985 (discontinued).

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

		AGENCY ANA- LYZING SAMPLE (CODE NUMBER)	SPE- CIFIC CON- DUC- TANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	ACIDITY (MG/L AS CACO3)	ALKA- LITY FIELD (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	
OCT 31...	1215	9813	145	4.7	13.5	6.0	2	45	820	540	310	
NOV 29...	1300	9813	85	5.3	6.0	6.0	2	30	910	730	280	
JAN 03...	1300	9813	120	5.0	4.5	18	1	35	2200	1800	280	
FEB 05...	1230	9813	140	5.3	.5	20	6	50	2500	2400	460	
FEB 27...	1320	9813	77	5.2	5.0	6.0	1	28	1000	900	200	
MAR 28...	1315	9813	110	4.9	10.0	14	3	28	1800	1500	280	
APR 30...	1315	9813	180	4.7	15.5	24	<1	68	3500	3100	500	
MAY 30...	1335	9813	120	4.9	16.0	16	2	40	1400	1100	580	
JUN 27...	1300	9813	170	4.4	18.0	26	0	62	2800	2600	840	
JUL 24...	1345	9813	155	4.9	18.0	16	1	44	1500	1500	580	
SEP 03...	1245	9813	460	4.2	20.0	89	0	190	--	--	800	
SEP 30...	1245	9813	300	4.5	15.0	60	0	110	1800	1700	930	
		MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	SEDI- MENT, SUS- PENDED (MG/L)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC DIS- SOLVED (UG/L AS AS)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	
OCT 31..	330	1200	1400	80	70	1	--	--	--	--	--	
NOV 29...	180	740	740	70	70	5	--	--	--	--	--	
JAN 03...	170	1300	1300	100	90	1	--	--	--	--	--	
FEB 05...	340	1500	1500	120	110	12	--	--	--	--	--	
FEB 27...	120	580	590	70	60	6	--	--	--	--	--	
MAR 28...	190	1100	1100	80	70	--	<10	<10	<1	<1	<10	
APR 30...	420	2300	2200	140	120	1	--	--	--	--	--	
MAY 30...	370	1300	1300	90	80	3	--	--	--	--	--	
JUN 27...	700	2400	2400	120	120	12	--	--	--	--	--	
JUL 24...	480	1600	1600	100	--	17	--	--	--	--	--	
SEP 03...	710	--	--	450	440	2	--	--	--	--	--	
SEP 30...	840	4600	4500	110	110	10	--	--	--	--	--	
		CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY DIS- SOLVED (UG/L AS HG)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, TOTAL RECOV- ERABLE (UG/L AS SE)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)
MAR 28...	<10	<10	<10	<10	<10	<1.0	<1.0	40	20	<10	<10	

MONONGAHELA RIVER BASIN

03070420 STONY FORK TRIBUTARY NEAR GIBBON GLADE, PA.

LOCATION.--Lat 39°45'51", long 79°35'16", Fayette County, Hydrologic Unit 05020004, on left bank 1.5 mi upstream from mouth, 1.7 mi north of Gibbon Glade, and 3.2 mi southwest of Farmington.

DRAINAGE AREA.--0.93 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1977 to current year.

GAGE.--Water-stage recorder and V-notch wooden weir. Elevation of gage is 1,750 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good except for estimated daily discharge, Oct. 4, Jan. 11 to Feb. 12, Feb. 24-26, and July 9-23, which are fair.

AVERAGE DISCHARGE.--8 years, 1.70 ft³/s, 24.82 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 126 ft³/s, July 16, 1978, gage height, 3.61 ft; no flow part of Aug. 6, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 40 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
May 31	0630	*63	*2.85	No other peak greater than base discharge.			

Minimum daily discharge, 0.01 ft³/s, Sept 7, 8, 29, 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.69	1.2	3.5	1.7	1.0	2.6	9.4	.51	4.5	.08	.78	.04
2	.23	1.3	2.5	1.5	.98	2.1	5.2	2.4	2.4	.09	.24	.03
3	.07	1.1	3.0	1.3	.90	1.7	3.7	5.9	1.7	.13	.17	.03
4	.05	2.6	2.4	1.3	.98	1.5	3.2	2.5	1.2	.27	.10	.11
5	.03	3.8	2.0	1.4	.90	2.0	2.7	1.8	1.1	.08	.08	.14
6	.03	2.5	1.9	1.2	.76	1.4	2.3	1.3	.88	.13	.07	.02
7	.02	1.8	1.5	1.2	.66	1.3	2.2	1.1	.74	.09	.06	.01
8	.05	1.4	1.4	1.1	.60	3.0	2.0	.94	.65	.11	.06	.01
9	.05	2.2	1.3	.99	.66	2.5	2.0	.80	.59	6.1	.04	.33
10	.03	3.7	1.7	.93	.64	2.0	2.3	.73	.47	2.6	.03	.07
11	.03	3.0	3.5	.88	.66	2.8	2.8	.66	.41	1.3	.02	.05
12	.03	2.4	3.4	.84	1.5	12	2.5	.63	1.2	.84	.02	.08
13	.04	2.1	2.8	.78	2.8	5.6	2.2	.54	.73	.69	.02	.05
14	.05	1.9	3.3	.74	2.1	3.9	2.0	.45	.59	1.5	.02	.09
15	.05	1.9	3.2	.72	1.8	2.8	1.7	.75	.58	4.2	.03	.08
16	.35	2.0	2.5	.68	1.6	2.2	1.4	.67	1.3	2.8	1.5	.09
17	.59	1.7	2.1	.66	1.4	1.9	1.2	.84	.74	1.6	.34	.02
18	.68	1.7	1.7	.66	1.3	1.6	1.1	1.2	.67	1.1	.08	.02
19	.59	1.8	6.3	.64	1.3	1.2	.97	1.0	.74	.84	.07	.02
20	.92	1.5	5.3	.62	1.3	1.2	.89	.74	.76	.69	.08	.02
21	.68	1.3	8.2	.62	1.5	1.0	.81	.73	.61	.69	.07	.02
22	1.4	1.2	7.7	.60	4.5	1.1	.80	.63	.61	1.4	.03	.02
23	1.9	1.2	4.6	.58	11	4.5	.73	1.4	.55	.76	.02	.02
24	1.9	1.3	4.1	.56	14	4.2	.76	1.0	.41	.48	.33	.02
25	1.4	1.3	5.2	.56	11	3.2	.90	.78	.30	.41	.37	.02
26	1.1	1.2	3.4	.56	7.4	2.5	.73	.70	.22	.82	.24	.02
27	.97	1.4	2.8	.54	5.0	2.0	.69	.59	.17	.57	.15	.03
28	1.2	8.1	2.2	.54	3.3	1.7	.64	1.6	.14	.32	.03	.02
29	4.0	6.8	1.9	.52	---	1.7	.60	1.3	.11	.22	.02	.01
30	2.2	4.1	1.9	.52	---	8.7	.54	.94	.08	.17	.10	.01
31	1.4	---	1.7	.72	---	12	---	12	---	.37	.07	---
TOTAL	22.73	69.5	99.0	26.16	81.54	97.9	58.96	47.13	25.15	31.45	5.24	1.50
MEAN	.73	2.32	3.19	.84	2.91	3.16	1.97	1.52	.84	1.01	.17	.05
MAX	4.0	8.1	8.2	1.7	14	12	9.4	12	4.5	6.1	1.5	.33
MIN	.02	1.1	1.3	.52	.60	1.0	.54	.45	.08	.08	.02	.01
CFSM	.78	2.49	3.43	.90	3.13	3.40	2.12	1.63	.90	1.09	.18	.05
IN.	.91	2.78	3.96	1.05	3.26	3.92	2.36	1.89	1.01	1.26	.21	.06
CAL YR 1984	TOTAL 659.17	MEAN 1.80	MAX 19	MIN .01	CFSM 1.94	IN. 26.37						
WTR YR 1985	TOTAL 566.26	MEAN 1.55	MAX 14	MIN .01	CFSM 1.67	IN. 22.65						

03070420 STONY FORK TRIBUTARY NEAR GIBBON GLADE, PA.--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--March 1977 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1977 to September 1984.

pH: October 1977 to September 1984.

WATER TEMPERATURES: October 1977 to September 1984.

SUSPENDED SEDIMENT DISCHARGE: October 1977 to current year.

INSTRUMENTATION.--Water-quality monitor and sediment pumping sampler since October 1977.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 991 micromhos Sept. 3, 1982; minimum, 15 micromhos Nov. 2, 1983.

pH: Maximum, 7.9 Sept. 29, 1980, July 8, 1982; minimum, 5.5 May 22, 1984.

WATER TEMPERATURES: Maximum, 27.5°C July 20, 1980; minimum, 0.0°C on many days during winter months.

SEDIMENT CONCENTRATIONS: Maximum daily, 1,460 mg/L July 3, 1983; minimum daily, 2 mg/L Oct. 25, 26, 27, 1979.

SEDIMENT DISCHARGES: Maximum daily, 110 tons Apr. 12, 1981; minimum daily, 0.0 ton on many days.

EXTREMES FOR CURRENT YEAR.--

SEDIMENT CONCENTRATIONS: Maximum daily, 785 mg/L July 14; minimum daily, 3 mg/L Nov. 27, Apr. 3.

SEDIMENT DISCHARGES: Maximum daily, 20 tons Mar. 12; minimum daily, 0.0 ton on many days.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	AGENCY ANA- LYZING SAMPLE (CODE NUMBER)	SPE- CIFIC CON- DUC- TANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	ACIDITY (MG/L AS CACO3)	ALKA- LINITY FIELD (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)
OCT											
31...	1400	9813	80	6.4	15.5	6.0	14	10	210	60	510
NOV											
29...	1400	9813	70	6.7	7.0	3.0	8	10	320	70	560
JAN											
03...	1320	9813	67	6.6	4.5	2.0	12	10	240	<50	380
FEB											
05...	1215	9813	80	6.6	1.5	6.0	14	<5.0	200	170	470
27...	1330	9813	73	6.2	5.0	2.0	8	8.0	310	290	460
MAR											
28...	1330	9813	65	--	11.0	4.0	8	8.0	50	<50	340
APR											
30...	1200	9813	70	6.9	15.5	6.0	12	18	200	70	520
MAY											
30...	1300	9813	80	6.8	16.0	2.0	14	10	290	80	660
JUN											
27...	1230	9813	90	7.0	18.0	2.0	18	10	750	100	1400
JUL											
24...	1415	9813	85	6.9	20.0	4.0	20	8.0	140	140	630
SEP											
03...	1330	9813	110	6.9	20.0	3.0	48	20	730	100	1700
30...	1340	9813	145	7.1	14.5	4.0	56	22	3000	540	2900

DATE	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	SEDI- MENT, SUS- PENDED (MG/L)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC DIS- SOLVED (UG/L AS AS)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)
OCT											
31...	170	110	100	30	20	12	--	--	--	--	--
NOV											
29...	410	110	--	30	30	35	--	--	--	--	--
JAN											
03...	160	80	70	20	10	8	--	--	--	--	--
FEB											
05...	470	120	--	40	40	31	--	--	--	--	--
27...	400	130	--	60	40	22	--	--	--	--	--
MAR											
28...	110	90	90	20	20	13	<10	<10	<1	<1	<10
APR											
30...	280	130	--	20	20	6	--	--	--	--	--
MAY											
30...	290	190	--	40	20	9	--	--	--	--	--
JUN											
27...	200	90	90	10	10	23	--	--	--	--	--
JUL											
24...	600	90	90	10	--	32	--	--	--	--	--
SEP											
03...	220	220	--	10	--	27	--	--	--	--	--
30...	590	220	180	<10	<10	27	--	--	--	--	--

DATE	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY DIS- SOLVED (UG/L AS HG)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, TOTAL (UG/L AS SE)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)
MAR											
28...	<10	<10	<10	<10	<10	<1.0	<1.0	10	<10	<10	<10

MONONGAHELA RIVER BASIN

03070420 STONY FORK TRIBUTARY NEAR GIBBON GLADE, PA.--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L) OCTOBER	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L) NOVEMBER	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L) DECEMBER	SEDIMENT DISCHARGE (TONS/DAY)
1	.69	78	.15	1.2	50	.16	3.5	120	1.1
2	.23	50	.03	1.3	110	.39	2.5	60	.41
3	.07	25	.00	1.1	60	.18	3.0	75	.61
4	.05	15	.00	2.6	160	1.9	2.4	40	.26
5	.03	10	.00	3.8	50	.51	2.0	30	.16
6	.03	8	.00	2.5	40	.27	1.9	50	.26
7	.02	7	.00	1.8	30	.15	1.5	30	.12
8	.05	6	.00	1.4	20	.08	1.4	25	.09
9	.05	5	.00	2.2	30	.18	1.3	40	.14
10	.03	8	.00	3.7	25	.25	1.7	15	.07
11	.03	7	.00	3.0	20	.16	3.5	20	.19
12	.03	5	.00	2.4	15	.10	3.4	23	.21
13	.04	15	.00	2.1	10	.06	2.8	15	.11
14	.05	12	.00	1.9	8	.04	3.3	20	.18
15	.05	10	.00	1.9	7	.04	3.2	15	.13
16	.35	12	.01	2.0	40	.22	2.5	10	.07
17	.59	13	.02	1.7	30	.14	2.1	5	.03
18	.68	12	.02	1.7	25	.11	1.7	20	.09
19	.59	12	.02	1.8	20	.10	6.3	275	18
20	.92	15	.04	1.5	15	.06	5.3	30	.43
21	.68	12	.02	1.3	10	.04	8.2	135	4.9
22	1.4	15	.06	1.2	8	.03	7.7	60	1.2
23	1.9	15	.08	1.2	6	.02	4.6	30	.37
24	1.9	14	.07	1.3	5	.02	4.1	40	.44
25	1.4	13	.05	1.3	5	.02	5.2	25	.35
26	1.1	12	.04	1.2	5	.02	3.4	20	.18
27	.97	11	.03	1.4	3	.01	2.8	22	.17
28	1.2	10	.03	8.1	440	12	2.2	18	.11
29	4.0	300	4.6	6.8	75	1.4	1.9	15	.08
30	2.2	80	.48	4.1	40	.44	1.9	22	.11
31	1.4	100	.38	---	---	---	1.7	18	.08
TOTAL	22.73	---	6.13	69.5	---	19.10	99.0	---	30.65
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L) JANUARY	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L) FEBRUARY	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L) MARCH	SEDIMENT DISCHARGE (TONS/DAY)
1	1.7	12	.06	1.0	25	.07	2.6	15	.11
2	1.5	10	.04	.98	20	.05	2.1	10	.06
3	1.3	25	.09	.90	15	.04	1.7	30	.14
4	1.3	20	.07	.98	30	.08	1.5	25	.10
5	1.4	15	.06	.90	20	.05	2.0	60	.32
6	1.2	10	.03	.76	15	.03	1.4	35	.13
7	1.2	22	.07	.66	20	.04	1.3	30	.11
8	1.1	18	.05	.60	15	.02	3.0	25	.20
9	.99	20	.05	.66	12	.02	2.5	60	.41
10	.93	18	.05	.64	10	.02	2.0	30	.16
11	.88	16	.04	.66	8	.01	2.8	150	1.1
12	.84	12	.03	1.5	175	1.2	12	430	20
13	.78	10	.02	2.8	15	.11	5.6	60	.91
14	.74	8	.02	2.1	15	.09	3.9	50	.53
15	.72	25	.05	1.8	20	.10	2.8	45	.34
16	.68	22	.04	1.6	15	.06	2.2	30	.18
17	.66	20	.04	1.4	10	.04	1.9	28	.14
18	.66	18	.03	1.3	9	.03	1.6	20	.09
19	.64	15	.03	1.3	8	.03	1.2	10	.03
20	.62	10	.02	1.3	10	.04	1.2	10	.03
21	.62	8	.01	1.5	25	.10	1.0	12	.03
22	.60	4	.00	4.5	290	4.5	1.1	45	.13
23	.58	5	.00	11	355	14	4.5	45	.55
24	.56	5	.00	14	400	15	4.2	30	.34
25	.56	25	.04	11	100	3.0	3.2	20	.17
26	.56	20	.03	7.4	50	1.0	2.5	15	.10
27	.54	21	.03	5.0	25	.34	2.0	10	.05
28	.54	15	.02	3.3	20	.18	1.7	20	.09
29	.52	9	.01	---	---	---	1.7	15	.07
30	.52	8	.01	---	---	---	8.7	325	8.9
31	.72	15	.03	---	---	---	12	430	19
TOTAL	26.16	---	1.07	81.54	---	40.25	97.9	---	54.52

MONONGAHELA RIVER BASIN

81

03070420 STONY FORK TRIBUTARY NEAR GIBBON GLADE, PA.--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L) APRIL	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L) MAY	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L) JUNE	SEDIMENT DISCHARGE (TONS/DAY)
1	9.4	10	.25	.51	11	.02	4.5	15	.18
2	5.2	5	.07	2.4	185	.20	2.4	15	.10
3	3.7	3	.03	5.9	140	2.2	1.7	40	.18
4	3.2	10	.09	2.5	50	.34	1.2	30	.10
5	2.7	8	.06	1.8	30	.15	1.1	30	.09
6	2.3	7	.04	1.3	18	.06	.88	25	.06
7	2.2	8	.05	1.1	20	.06	.74	30	.06
8	2.0	30	.16	.94	30	.08	.65	25	.04
9	2.0	25	.14	.80	20	.04	.59	25	.04
10	2.3	30	.19	.73	15	.03	.47	20	.03
11	2.8	35	.26	.66	18	.03	.41	24	.03
12	2.5	30	.20	.63	15	.03	1.2	60	.19
13	2.2	25	.15	.54	14	.02	.73	40	.08
14	2.0	70	.38	.45	13	.02	.59	30	.05
15	1.7	65	.30	.75	19	.04	.58	25	.04
16	1.4	60	.23	.67	17	.03	1.3	24	.08
17	1.2	40	.13	.84	50	.11	.74	45	.09
18	1.1	20	.06	1.2	80	.26	.67	40	.07
19	.97	20	.05	1.0	40	.11	.74	45	.09
20	.89	15	.04	.74	25	.05	.76	40	.08
21	.81	20	.04	.73	20	.04	.61	30	.05
22	.80	15	.03	.63	15	.03	.61	30	.05
23	.73	14	.03	1.4	30	.11	.55	25	.04
24	.76	12	.02	1.0	45	.12	.41	20	.02
25	.90	11	.03	.78	30	.06	.30	30	.02
26	.73	10	.02	.70	25	.05	.22	25	.01
27	.69	9	.02	.59	22	.04	.17	20	.00
28	.64	14	.02	1.6	30	.13	.14	20	.00
29	.60	13	.02	1.3	25	.09	.11	25	.00
30	.54	12	.02	.94	20	.05	.08	20	.00
31	---	---	---	12	590	23	---	---	---
TOTAL	58.96	---	3.13	47.13	---	27.60	25.15	---	1.87
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L) JULY	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L) AUGUST	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L) SEPTEMBER	SEDIMENT DISCHARGE (TONS/DAY)
1	.08	30	.00	.78	350	.74	.04	34	.00
2	.09	40	.00	.24	100	.06	.03	30	.00
3	.13	30	.01	.17	50	.02	.03	20	.00
4	.27	50	.04	.10	15	.00	.11	20	.00
5	.08	40	.00	.08	10	.00	.14	190	.07
6	.13	50	.02	.07	18	.00	.02	90	.00
7	.09	40	.00	.06	15	.00	.01	60	.00
8	.11	70	.02	.06	12	.00	.01	25	.00
9	6.1	350	18	.04	10	.00	.33	240	.74
10	2.6	90	.63	.03	9	.00	.07	20	.00
11	1.3	30	.11	.02	8	.00	.05	20	.00
12	.84	20	.05	.02	7	.00	.08	45	.00
13	.69	15	.03	.02	6	.00	.05	50	.00
14	1.5	785	9.2	.02	5	.00	.09	55	.01
15	4.2	660	6.2	.03	25	.00	.08	64	.01
16	2.8	100	.76	1.5	280	4.7	.09	70	.02
17	1.6	35	.15	.34	30	.03	.02	40	.00
18	1.1	30	.09	.08	35	.00	.02	35	.00
19	.84	25	.06	.07	30	.00	.02	35	.00
20	.69	30	.06	.08	25	.00	.02	15	.00
21	.69	25	.05	.07	50	.00	.02	10	.00
22	1.4	250	.95	.03	40	.00	.02	115	.00
23	.76	40	.08	.02	30	.00	.02	50	.00
24	.48	30	.04	.33	82	.15	.02	48	.00
25	.41	20	.02	.37	100	.10	.02	30	.00
26	.82	60	.13	.24	80	.05	.02	50	.00
27	.57	40	.06	.15	50	.02	.03	45	.00
28	.32	35	.03	.03	40	.00	.02	40	.00
29	.22	30	.02	.02	45	.00	.01	30	.00
30	.17	25	.01	.10	70	.02	.01	35	.00
31	.37	450	.45	.07	50	.00	---	---	---
TOTAL	31.45	---	37.27	5.24	---	5.89	1.50	---	0.85

MONONGAHELA RIVER BASIN

03070430 STONY FORK AT BETHEL CHAPEL, NEAR ELLIOTTSVILLE, PA

LOCATION.--Lat 39°46'54", long 79°35'00", Fayette County, Hydrologic Unit 05020004, at bridge on Legislative Route 26073, 0.3 mi from State Route 381, and 2.5 mi northeast of Elliottsville.

DRAINAGE AREA.--4.85 mi².

PERIOD OF RECORD.--March 1977 to September 1985 (discontinued).

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	AGENCY ANALYZING SAMPLE (CODE NUMBER)	SPE- CIFIC CON- DUC- TANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	ACIDITY (MG/L AS CACO3)	ALKA- LINITY FIELD (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)
OCT 31...	1135	9813	115	6.2	15.0	4.0	22	25	410	<50	410
NOV 29...	1230	9813	80	6.1	6.0	2.0	3	10	610	70	390
JAN 03...	1115	9813	100	5.9	4.5	6.0	4	30	960	240	480
FEB 05...	1120	9813	115	5.9	.0	4.0	4	35	1200	450	510
FEB 27...	1130	9813	70	5.9	5.0	2.0	3	18	510	190	230
MAR 28...	1215	9813	98	5.5	10.0	7.9	4	20	920	220	350
APR 30...	1140	9813	140	5.6	14.0	7.9	2	50	830	190	630
MAY 30...	1215	9813	118	6.2	16.0	4.0	4	30	460	70	610
JUN 27...	1105	9813	140	7.6	18.0	4.0	10	38	170	<50	640
JUL 24...	1245	9813	135	6.4	18.0	6.0	8	35	210	70	610
SEP 03...	0845	9813	220	5.5	18.0	9.9	6	75	280	100	830
SEP 30...	0905	9813	210	7.0	11.0	6.0	24	59	40	40	1100
DATE	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	SEDI- MENT, SUS- PENDED (MG/L)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC DIS- SOLVED (UG/L AS AS)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)
OCT 31...	100	810	790	--	70	1	--	--	--	--	--
NOV 29...	130	500	470	50	50	13	--	--	--	--	--
JAN 03...	270	730	730	60	60	8	--	--	--	--	--
FEB 05...	360	830	820	80	60	8	--	--	--	--	--
FEB 27...	90	350	350	50	50	7	--	--	--	--	--
MAR 28...	180	650	650	60	50	6	<10	<10	1	1	<10
APR 30...	430	1400	1300	70	70	5	--	--	--	--	--
MAY 30...	330	910	910	60	50	9	--	--	--	--	--
JUN 27...	430	1200	1200	50	50	2	--	--	--	--	--
JUL 24...	380	1000	1000	50	60	19	--	--	--	--	--
SEP 03...	740	--	3100	120	90	2	--	--	--	--	--
SEP 30...	420	--	1700	--	13	9	--	--	--	--	--
DATE	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY DIS- SOLVED (UG/L AS HG)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, TOTAL (UG/L AS SE)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)
MAR 28...	<10	<10	<10	<10	<10	<1.0	<1.0	20	10	<10	<10

MONONGAHELA RIVER BASIN

83

03070435 STONY FORK TRIBUTARY NO. 4 NEAR ELLIOTTSVILLE, PA

LOCATION.--Lat 39°46'48", long 79°35'38", Fayette County, Hydrologic Unit 05020004, at culvert on State Route 381, 2.0 mi northeast of Elliottsville, and 2.4 mi southwest of Farmington.

DRAINAGE AREA.--0.54 mi².

PERIOD OF RECORD.--March 1977 to September 1985 (discontinued).

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	AGENCY ANA- LYZING SAMPLE (CODE NUMBER)	SPE- CIFIC CON- DUC- TANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	ACIDITY (MG/L AS CACO3)	ALKA- LINITY FIELD (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)
OCT 31...	0945	9813	95	6.8	16.0	6.0	28	10	200	<50	1300
NOV 29...	1100	9813	70	6.6	4.5	2.0	16	8.0	140	80	540
JAN 03...	1015	9813	70	7.2	6.0	2.0	12	25	260	120	970
FEB 05...	1100	9813	75	6.9	1.0	6.0	20	20	<50	<50	870
FEB 27...	1100	9813	55	6.7	4.0	4.0	8	15	190	120	420
MAR 28...	1120	9813	65	7.0	11.0	4.0	14	10	270	50	820
APR 30...	1030	9813	80	7.1	18.0	4.0	20	23	370	150	1800
MAY 30...	1125	9813	75	7.0	21.0	4.0	26	10	220	30	1500
JUN 27...	1100	9813	90	7.0	17.0	6.0	30	5.0	430	100	3800
JUL 24...	1145	9813	85	7.2	25.0	2.0	28	6.0	140	100	2200
SEP 03...	0830	9813	105	7.0	20.0	9.9	36	12	220	100	1600
SEP 30...	0915	9813	125	7.0	11.0	9.9	24	24	60	40	1900

DATE	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	SEDI- MENT, SUS- PENDED (MG/L)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC DIS- SOLVED (UG/L AS AS)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)
OCT 31...	500	220	190	20	20	18	--	--	--	--	--
NOV 29...	210	140	140	30	30	15	--	--	--	--	--
JAN 03...	280	170	170	20	20	20	--	--	--	--	--
FEB 05...	320	370	360	40	10	19	--	--	--	--	--
FEB 27...	170	110	120	20	20	11	--	--	--	--	--
MAR 28...	230	140	120	20	20	24	<10	<10	1	1	<10
APR 30...	670	390	360	40	20	24	--	--	--	--	--
MAY 30...	730	290	250	10	10	20	--	--	--	--	--
JUN 27...	1700	1000	870	10	10	16	--	--	--	--	--
JUL 24...	1600	240	210	20	20	25	--	--	--	--	--
SEP 03...	560	490	490	10	20	9	--	--	--	--	--
SEP 30...	1200	570	--	<10	<10	16	--	--	--	--	--

DATE	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY DIS- SOLVED (UG/L AS HG)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, TOTAL RECOV- ERABLE (UG/L AS SE)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)
MAR 28...	<10	<10	<10	<10	<10	<1.0	<1.0	<10	<10	<10	<10

MONONGAHELA RIVER BASIN

03070455 STONY FORK NEAR ELLIOTTSTVILLE, PA

LOCATION.--Lat 39°46'10", long 79°36'34", Fayette County, Hydrologic Unit 05020004, on right bank, 1.3 mi upstream from mouth, and 0.9 mi east of Elliottsville.

DRAINAGE AREA.--7.44 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1977 to September 1985 (discontinued).

GAGE.--Water-stage recorder. Elevation of gage is 1,630 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good except for estimated daily discharges, Dec. 6-9, and Jan. 9 to Feb. 12, which are fair.

AVERAGE DISCHARGE.--8 years, 13.5 ft³/s, 24.70 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 749 ft³/s, Apr. 12, 1981, gage height, 5.09 ft; no flow Aug. 29, 1981.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than 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)
Feb. 24	1645	226	2.92	May 31	0845	*302	*3.30

Minimum daily discharge, 0.61 ft³/s, Oct. 13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.6	8.9	26	12	12	18	84	3.6	41	1.9	10	2.2
2	3.4	9.7	18	12	9.6	15	40	9.3	22	2.1	4.7	1.9
3	1.9	7.6	19	11	7.2	13	28	50	16	3.0	3.5	1.8
4	1.3	13	17	11	9.0	11	24	21	12	3.2	3.2	1.6
5	1.0	30	15	11	8.0	14	21	15	9.3	2.5	2.9	1.6
6	.94	19	13	8.8	6.4	11	17	12	7.5	2.1	2.7	1.5
7	.88	14	13	8.8	5.2	9.4	16	9.6	5.8	2.2	2.8	1.2
8	.93	10	11	8.3	4.8	18	15	7.7	5.4	2.3	2.7	1.1
9	1.1	11	10	7.6	5.4	18	15	6.4	4.7	35	2.7	2.7
10	1.1	26	10	7.2	6.2	15	14	5.7	4.0	18	2.2	3.6
11	1.3	21	23	6.6	7.0	16	17	5.2	3.5	12	1.8	2.0
12	1.7	17	25	6.4	17	87	16	4.7	7.9	7.6	1.6	1.7
13	.61	14	21	6.2	44	40	15	4.5	5.8	5.5	1.7	1.5
14	.82	13	21	5.8	29	28	14	3.6	4.6	7.4	1.7	1.2
15	1.1	14	23	5.6	19	19	12	5.2	4.4	39	2.2	1.1
16	2.2	14	18	5.4	16	15	11	6.7	8.0	24	8.2	1.1
17	2.6	12	15	5.2	13	14	9.3	5.9	5.6	13	4.0	1.0
18	4.5	12	13	5.0	11	12	8.1	13	5.1	8.8	2.6	.88
19	2.9	13	50	5.2	10	9.5	7.4	12	4.7	6.6	2.2	.84
20	6.1	10	44	6.0	11	8.9	6.7	7.9	6.5	5.4	2.0	.77
21	5.5	8.7	62	6.6	13	7.8	6.1	8.2	4.8	5.0	2.0	.76
22	7.9	9.2	64	8.2	30	7.4	5.6	9.8	4.2	9.0	1.9	.76
23	15	9.3	33	8.0	98	28	5.0	15	5.0	9.2	1.7	.76
24	15	7.9	25	6.8	137	30	4.9	15	3.5	5.1	2.2	.79
25	12	8.3	40	6.0	93	25	6.2	10	3.1	4.0	4.8	1.2
26	8.5	8.4	25	5.6	49	18	4.9	7.8	2.7	4.9	3.3	.83
27	6.7	9.1	20	5.4	32	15	4.4	6.3	2.4	7.4	2.6	.97
28	6.6	59	15	4.9	23	14	4.4	11	2.3	4.1	2.0	.83
29	27	55	14	4.6	---	13	4.0	13	2.0	3.4	1.8	.98
30	18	29	14	4.3	---	73	3.6	8.3	1.8	3.2	1.9	.91
31	13	---	13	5.4	---	104	---	103	---	3.0	2.8	---
TOTAL	175.18	493.1	730	220.9	725.8	727.0	439.6	416.4	215.6	259.9	92.4	40.08
MEAN	5.65	16.4	23.5	7.13	25.9	23.5	14.7	13.4	7.19	8.38	2.98	1.34
MAX	27	59	64	12	137	104	84	103	41	39	10	3.6
MIN	.61	7.6	10	4.3	4.8	7.4	3.6	3.6	1.8	1.9	1.6	.76
CFSM	.76	2.20	3.16	.96	3.48	3.16	1.98	1.80	.97	1.13	.40	.18
IN.	.88	2.47	3.65	1.10	3.63	3.63	2.20	2.08	1.08	1.30	.46	.20

CAL YR 1984 TOTAL 5391.92 MEAN 14.7 MAX 214 MIN .32 CFSM 1.98 IN. 26.96
WTR YR 1985 TOTAL 4535.96 MEAN 12.4 MAX 137 MIN .61 CFSM 1.67 IN. 22.68

MONONGAHELA RIVER BASIN

85

03070455 STONY FORK NEAR ELLIOTTSVILLE, PA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--March 1977 to September 1985 (discontinued).

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1977 to September 1984.

pH: October 1977 to September 1984.

WATER TEMPERATURES: October 1977 to September 1984.

SUSPENDED SEDIMENT DISCHARGE: October 1977 to September 1985.

INSTRUMENTATION.--Water-quality monitor and sediment pumping sampler since October 1977.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 661 micromhos Aug. 13, 14, 15, 1981; minimum, 25 micromhos May 29, 1984.

pH: Maximum, 8.9 Apr. 30, 1984; minimum, 4.5 Aug. 16, 1983.

WATER TEMPERATURES: Maximum, 24.5°C July 17, 18, 1982, Aug. 20, 1983, Aug. 9, 1984; minimum, 0.0°C on many days during winter months.

SEDIMENT CONCENTRATIONS: Maximum daily, 1,130 mg/L Apr. 5, 1984; minimum daily, 1 mg/L on several days.

SEDIMENT DISCHARGES: Maximum daily, 1,060 tons Apr. 5, 1984; minimum daily, 0.0 ton on several days.

EXTREMES FOR CURRENT YEAR.--

SEDIMENT CONCENTRATIONS: Maximum daily, 480 mg/L May 31; minimum daily, 1 mg/L on several days.

SEDIMENT DISCHARGES: Maximum daily, 232 tons May 31; minimum daily, 0.0 ton on several days.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	AGENCY ANA- LYZING SAMPLE (CODE NUMBER)	SPE- CIFIC CON- DUC- TANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	ACIDITY (MG/L AS CACO3)	ALKA- LINITY FIELD (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)
OCT											
31...	1100	9813	125	6.6	14.0	6.0	8	35	260	<50	330
NOV											
29...	1200	9813	89	6.5	5.5	2.0	12	20	590	<50	800
JAN											
03...	1030	9813	190	4.6	4.0	14	1	65	1800	1500	2000
FEB											
05...	1030	9813	150	6.2	.0	7.9	6	45	990	380	1400
27...	1130	9813	125	4.8	4.5	12	2	35	1300	920	1700
MAR											
28...	1130	9813	120	6.7	11.0	3.0	6	30	430	50	430
APR											
30...	1100	9813	280	5.1	14.5	7.9	3	100	690	560	240
MAY											
30...	1200	9813	160	6.5	16.0	4.0	6	52	130	60	280
JUN											
27..	1120	9813	265	5.6	16.0	4.0	4	98	360	290	250
JUL											
24...	1230	9813	265	4.6	18.0	24	<1	100	2500	2500	530
SEP											
03...	0815	9813	375	4.5	18.0	20	0	150	2400	2300	110
30...	1045	9813	700	4.2	10.0	58	0	380	3900	3900	100

MONONGAHELA RIVER BASIN

03070455 STONY FORK NEAR ELLIOTTSVILLE, PA--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L) OCTOBER	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L) NOVEMBER	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L) DECEMBER	SEDIMENT DISCHARGE (TONS/DAY)
1	3.6	10	.10	8.9	12	.29	26	50	3.5
2	3.4	11	.10	9.8	11	.29	18	45	2.2
3	1.9	9	.05	7.6	10	.21	19	50	2.6
4	1.3	10	.04	13	24	2.0	17	35	1.6
5	1.0	8	.02	30	44	3.8	15	20	.81
6	.94	6	.02	19	10	.51	13	20	.70
7	.88	4	.00	14	9	.34	13	40	1.4
8	.93	3	.00	10	8	.22	11	35	1.0
9	1.1	2	.00	11	13	.39	10	30	.81
10	1.1	2	.00	26	33	2.3	10	20	.54
11	1.3	10	.04	21	12	.68	23	10	.62
12	1.7	150	.69	17	10	.46	25	15	1.0
13	.61	25	.04	14	8	.30	21	14	.79
14	.82	20	.04	13	7	.25	21	12	.68
15	1.1	18	.05	14	20	.76	23	15	.93
16	2.2	20	.12	14	18	.68	18	10	.49
17	2.6	25	.18	12	18	.58	15	9	.36
18	4.5	30	.36	12	27	.87	13	8	.28
19	2.9	20	.16	13	28	.98	50	159	41
20	6.1	11	.18	10	15	.41	44	98	12
21	5.5	15	.22	8.7	8	.19	62	170	40
22	7.9	14	.30	9.2	6	.15	64	40	6.9
23	15	20	.81	9.3	5	.13	33	15	1.3
24	15	18	.73	7.9	8	.17	25	18	1.2
25	12	16	.52	8.3	17	.38	40	40	4.3
26	8.5	12	.28	8.4	30	.68	25	20	1.4
27	6.7	8	.14	9.1	35	.86	20	16	.86
28	6.6	10	.18	59	305	90	15	14	.57
29	27	70	5.1	55	80	12	14	13	.49
30	18	22	1.1	29	70	5.5	14	13	.49
31	13	13	.46	---	---	---	13	12	.42
TOTAL	175.18	---	12.03	493.2	---	126.38	730	---	131.24
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L) JANUARY	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L) FEBRUARY	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L) MARCH	SEDIMENT DISCHARGE (TONS/DAY)
1	12	10	.32	12	15	.49	18	60	2.9
2	12	10	.32	9.6	10	.26	15	50	2.0
3	11	10	.30	7.2	6	.12	13	40	1.4
4	11	8	.24	9.0	15	.36	11	40	1.2
5	11	7	.21	8.0	13	.28	14	45	1.7
6	8.8	6	.14	6.4	13	.22	11	35	1.0
7	8.8	5	.12	5.2	11	.15	9.4	25	.63
8	8.3	20	.45	4.8	11	.14	18	20	.97
9	7.6	20	.41	5.4	15	.22	18	15	.73
10	7.2	18	.35	6.2	10	.17	15	30	1.2
11	6.6	18	.32	7.0	11	.21	16	10	.43
12	6.4	18	.31	17	54	5.5	87	212	64
13	6.2	15	.25	44	40	4.8	40	25	2.7
14	5.8	8	.13	29	20	1.6	28	25	1.9
15	5.6	7	.11	19	20	1.0	19	20	1.0
16	5.4	6	.09	16	20	.86	15	18	.73
17	5.2	8	.11	13	18	.63	14	16	.60
18	5.0	7	.09	11	16	.48	12	15	.49
19	5.2	6	.08	10	12	.32	9.5	15	.38
20	6.0	15	.24	11	10	.30	8.9	15	.36
21	6.6	20	.36	13	12	.42	7.8	14	.29
22	8.2	15	.33	30	69	8.8	7.4	10	.20
23	8.0	10	.22	98	215	71	28	48	4.1
24	6.8	7	.13	137	270	122	30	60	4.9
25	6.0	6	.10	93	160	40	25	25	1.7
26	5.6	6	.09	49	200	26	18	20	.97
27	5.4	5	.07	32	80	6.9	15	15	.61
28	4.9	4	.05	23	70	4.3	14	10	.38
29	4.6	7	.09	---	---	---	13	30	1.1
30	4.3	6	.07	---	---	---	73	205	49
31	5.4	10	.15	---	---	---	104	143	57
TOTAL	220.9	---	6.25	725.8	---	297.53	727.0	---	206.57

MONONGAHELA RIVER BASIN

87

03070455 STONY FORK NEAR ELLIOTTSVILLE, PA--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L) APRIL	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L) MAY	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L) JUNE	SEDIMENT DISCHARGE (TONS/DAY)
1	84	90	20	3.6	10	.10	41	220	24
2	40	40	4.3	9.3	72	4.3	22	35	2.1
3	28	35	2.6	50	104	19	16	20	.86
4	24	30	1.9	21	10	.57	12	15	.49
5	21	20	1.1	15	15	.61	9.3	15	.38
6	17	10	.46	12	15	.49	7.5	14	.28
7	16	7	.30	9.6	10	.26	5.8	14	.22
8	15	5	.20	7.7	9	.19	5.4	12	.17
9	15	10	.41	6.4	7	.12	4.7	11	.14
10	14	15	.57	5.7	5	.08	4.0	10	.11
11	17	20	.92	5.2	2	.03	3.5	8	.08
12	16	20	.86	4.7	3	.04	7.9	5	.11
13	15	25	1.0	4.5	4	.05	5.8	10	.16
14	14	20	.76	3.6	3	.03	4.6	8	.10
15	12	15	.49	5.2	15	.21	4.4	6	.07
16	11	25	.74	6.7	10	.18	8.0	11	.24
17	9.3	20	.50	5.9	8	.13	5.6	6	.09
18	8.1	25	.55	13	25	.88	5.1	5	.07
19	7.4	30	.60	12	10	.32	4.7	4	.05
20	6.7	20	.36	8.0	5	.11	6.5	10	.18
21	6.1	16	.26	8.2	12	.27	4.8	8	.10
22	5.6	7	.11	9.8	18	.48	4.3	5	.06
23	5.0	10	.14	15	24	.97	5.0	6	.08
24	4.9	8	.11	15	25	1.0	3.5	3	.03
25	6.2	6	.10	10	15	.41	3.1	2	.02
26	4.9	4	.05	7.8	10	.21	2.7	1	.00
27	4.4	3	.04	6.3	8	.14	2.4	1	.00
28	4.4	2	.02	11	20	.59	2.3	2	.01
29	4.0	7	.08	13	25	.88	2.0	2	.01
30	3.6	5	.05	8.3	20	.45	1.8	2	.00
31	---	---	---	103	480	232	---	---	---
TOTAL	439.6	---	39.58	416.5	---	265.10	215.7	---	30.21
DAY	MEAN DISCHARGE (CFS)	CONCEN- TRATION (MG/L) JULY	MEAN SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	CONCEN- TRATION (MG/L) AUGUST	MEAN SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	CONCEN- TRATION (MG/L) SEPTEMBER	MEAN SEDIMENT DISCHARGE (TONS/DAY)
1	1.9	3	.02	10	25	.68	2.2	2	.01
2	2.1	23	.13	4.7	10	.13	1.9	2	.01
3	3.0	32	.26	3.5	8	.08	1.8	10	.05
4	3.2	36	.31	3.2	10	.09	1.6	8	.03
5	2.5	15	.10	2.9	10	.08	1.6	6	.03
6	2.1	12	.07	2.7	6	.04	1.5	5	.02
7	2.2	12	.07	2.8	5	.04	1.3	6	.02
8	2.3	20	.12	2.7	5	.04	1.1	19	.06
9	35	294	33	2.7	6	.04	2.7	14	.10
10	18	75	3.6	2.2	5	.03	3.6	8	.08
11	12	20	.65	1.8	6	.03	2.0	7	.04
12	7.6	10	.21	1.6	6	.03	1.7	14	.06
13	5.5	8	.12	1.7	7	.03	1.5	6	.02
14	7.4	24	1.2	1.7	7	.03	1.2	4	.01
15	39	146	19	2.2	9	.05	1.1	2	.00
16	24	40	2.6	8.2	63	1.4	1.1	2	.00
17	13	13	.46	4.0	46	.50	1.0	3	.00
18	8.8	11	.26	2.6	28	.20	.88	3	.00
19	6.6	10	.18	2.2	20	.12	.84	4	.00
20	5.4	8	.12	2.0	15	.08	.77	4	.00
21	5.0	8	.11	2.0	30	.16	.76	4	.00
22	9.0	18	.44	1.9	30	.15	.76	4	.00
23	9.2	20	.50	1.7	9	.04	.76	3	.00
24	5.1	9	.12	2.2	20	.12	.79	3	.00
25	4.0	9	.10	4.8	16	.21	1.2	6	.02
26	4.9	12	.16	3.3	3	.03	.83	3	.00
27	7.4	11	.22	2.6	3	.02	.97	3	.00
28	4.1	9	.10	2.0	2	.01	.83	2	.00
29	3.4	8	.07	1.8	2	.00	.98	3	.00
30	3.2	7	.06	1.9	1	.00	.91	3	.00
31	3.0	7	.06	2.8	1	.00	---	---	---
TOTAL	259.9	---	64.42	92.4	---	4.46	40.18	---	0.56
YEAR	4536.36		1184.33						

MONONGAHELA RIVER BASIN

03072000 DUNKARD CREEK AT SHANNOPIN, PA

LOCATION.--Lat 39°45'33", long 79°58'15", Greene County, Hydrologic Unit 05020005, on left bank at Shannopin, 1,300 ft upstream from highway bridge at mine buildings, 1.2 mi north of Dunkard, 3.5 mi upstream from mouth, and 4 mi southwest of Greensboro.

DRAINAGE AREA.--229 mi².

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 National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).

REMARKS.--Records good except for estimated daily discharges, Jan. 14 to Feb. 12, Feb. 17-23, and Apr. 8 to July 17, which are fair. Some regulation at low flow by mine pumpage above station. Several observations of water temperature were made during the year. Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--45 years, 277 ft³/s, 16.43 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 17,600 ft³/s, Aug. 18, 1980, gage height, 14.27 ft; minimum, 0.4 ft³/s, Aug. 28, 1944, gage height, 0.75 ft.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than 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)
Dec. 22	0900	4050	8.48	Apr. 1	0400	4550	8.77
Mar. 30	1400	*8950	*10.60	May 31	Unknown	Unknown	Unknown

Minimum discharge, 2.8 ft³/s, Sept. 25, 26, gage height, 1.03 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19	130	338	377	120	270	3450	82	1500	18	21	12
2	22	101	306	369	180	240	1440	220	840	50	19	11
3	40	98	247	334	230	201	823	820	1000	330	15	7.9
4	36	96	230	294	190	175	638	450	680	380	11	7.8
5	26	315	186	276	200	183	581	270	380	120	9.2	12
6	19	402	183	232	230	191	481	190	260	240	7.9	15
7	15	232	185	211	190	162	409	150	180	250	7.2	16
8	12	149	136	225	150	157	460	125	150	660	9.3	12
9	11	115	158	184	130	194	420	100	130	350	16	8.7
10	12	195	193	146	120	182	370	90	110	210	12	6.6
11	16	399	649	171	130	176	330	76	96	130	8.4	4.7
12	15	348	599	131	200	890	300	70	115	90	7.5	7.8
13	11	232	401	119	673	1210	270	60	105	70	6.1	7.8
14	8.6	165	302	110	604	650	240	54	94	56	5.8	6.6
15	8.3	126	254	98	460	463	220	48	80	310	11	5.5
16	9.6	107	220	92	352	341	200	64	70	140	69	5.1
17	9.9	92	197	90	270	292	180	66	60	73	62	6.3
18	25	78	181	88	230	242	170	70	56	49	50	4.7
19	23	83	168	84	210	210	160	60	58	31	31	7.6
20	27	106	480	80	250	194	150	47	62	22	22	8.3
21	33	123	545	80	370	167	140	37	60	18	22	7.3
22	62	106	2690	78	700	156	130	110	52	19	22	5.9
23	79	97	1080	76	1600	276	130	400	250	23	19	4.0
24	126	100	587	76	1540	341	150	360	150	25	16	3.9
25	93	108	526	76	813	366	170	180	90	22	15	3.1
26	69	112	435	74	531	306	140	110	50	21	12	5.5
27	54	109	369	72	420	271	120	80	40	29	11	24
28	46	205	318	72	322	245	94	190	30	18	14	20
29	374	644	259	70	---	260	94	330	23	14	19	14
30	539	401	279	70	---	5150	94	180	21	15	16	9.2
31	218	---	394	80	---	3430	---	5000	---	17	14	---
TOTAL	2058.4	5574	13095	4535	11415	17591	12554	10089	6792	3800	580.4	270.3
MEAN	66.4	186	422	146	408	567	418	325	226	123	18.7	9.01
MAX	539	644	2690	377	1600	5150	3450	5000	1500	660	69	24
MIN	8.3	78	136	70	120	156	94	37	21	14	5.8	3.1
CFSM	.29	.81	1.84	.64	1.78	2.48	1.83	1.42	.99	.54	.08	.04
IN.	.33	.91	2.13	.74	1.85	2.86	2.04	1.64	1.10	.62	.09	.04

CAL YR 1984 TOTAL 98536.1 MEAN 269 MAX 2690 MIN 6.2 CFSM 1.17 IN. 16.01
WTR YR 1985 TOTAL 88354.1 MEAN 242 MAX 5150 MIN 3.1 CFSM 1.06 IN. 14.35

MONONGAHELA RIVER BASIN

89

03072500 MONONGAHELA RIVER AT GREENSBORO, PA

LOCATION.--Lat 39°47'15", long 79°55'26", Greene County, Hydrologic Unit 05020005, on left bank on land guide wall, 950 ft upstream from dam at lock 7, at Greensboro, 0.4 mi upstream from Georges Creek, 2.0 mi downstream from Dunkard Creek, 4.3 mi downstream from Cheat River, and at mile 85.2.

DRAINAGE AREA.--4,407 mi².

PERIOD OF RECORD.--October 1938 to current year. 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 767.55 ft above National Geodetic Vertical Datum, adjustment of 1912.

REMARKS.--No estimated daily discharges. Records good above 5,000 ft³/s and fair below except those below 1,000 ft³/s, which are poor. Flow regulated since 1938 by Tygart Lake 66 mi upstream and since 1926 by Lake Lynn 8 mi upstream combined capacity, 357,300 acre-ft. Several observations of water temperature were made during the year. Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--47 years, 8,227 ft³/s, 25.35 in/yr, adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 134,000 ft³/s, Mar. 7, 1967, gage height, 29.61 ft; minimum daily, 204 ft³/s, Sept. 1-3, 5, 1946; minimum gage height, 10.23 ft, Apr. 29, 1941.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of July 1888 reached a stage of about 36 ft, from high-water profile by Corps of Engineers. Flood of Mar. 18, 1936, reached a stage of 28.4 ft discharge, 130,000 ft³/s.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 66,800 ft³/s, May 31, gage height, 19.30 ft; minimum daily, 414 ft³/s, Sept. 22.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3200	10600	20300	8900	9410	23200	38700	2280	30300	1690	2740	878
2	2830	10700	15900	9650	14800	18700	23700	4110	15200	1580	4250	1420
3	4360	11400	12300	9290	12500	15500	20400	22600	11600	1750	4270	2210
4	2250	11000	13100	8690	11000	15200	15600	27200	10700	2580	1600	1250
5	1990	16800	11600	8730	11400	12900	15000	19700	9790	3070	1590	963
6	1530	18700	9780	9390	11800	10500	11800	13400	11300	2580	2280	1060
7	1220	14100	10200	9540	11500	10100	6400	6400	7990	1110	2100	951
8	1740	11600	6920	9480	10300	9770	8600	4960	6730	2850	1830	820
9	1690	7740	6720	10300	7790	13100	6250	3500	10200	13900	2030	1160
10	1660	9800	7800	8280	5630	9700	5690	3990	9300	31900	2160	1440
11	1630	9780	15300	7670	8480	10500	7220	3060	8810	27300	1100	867
12	1660	8330	17800	5360	8650	31000	5410	2270	14700	16200	1540	1130
13	1270	8550	14200	3260	12500	36300	5650	2200	15000	6620	1310	522
14	1260	7090	11300	4110	11000	25400	6750	2640	12900	4230	2070	478
15	1680	6200	10600	3920	7410	21900	6050	2560	9100	12300	1180	514
16	1850	4280	8760	4070	5710	18700	6310	3820	7130	7510	1690	475
17	1810	4930	8910	3640	7020	12300	9720	3470	7340	9530	1600	1270
18	2040	4850	7750	2940	5740	11400	6510	3650	5080	6300	1540	837
19	2480	10700	9480	3300	6450	8520	6440	3680	4200	4010	1730	619
20	1410	17700	20200	2610	9230	6840	2940	5060	3580	2420	1840	960
21	2590	17300	19100	3160	12100	6690	2630	4770	3890	1620	1670	726
22	2950	13700	28800	3390	15900	5040	4900	3450	2970	3050	1810	414
23	5550	11700	20800	3860	26000	7380	3820	7230	2010	2660	1300	852
24	8730	7910	18600	3720	29800	12500	3850	17300	3120	3720	656	1330
25	11400	5800	22300	3090	45600	17500	3660	20200	2610	2470	1160	1000
26	8920	5650	23900	2440	30400	15100	4450	16000	2230	1900	2340	1520
27	7540	6280	22800	2870	28200	11700	2060	10800	2160	3110	1850	1200
28	7050	10400	19900	4820	25100	10800	1660	6330	1630	3540	939	801
29	15400	30000	15000	2760	---	9150	3010	6880	1230	2520	1430	796
30	18400	22100	13800	4290	---	30800	3230	4600	1000	2550	1220	674
31	9980	---	13500	3880	---	33600	---	41700	---	1780	1260	---
TOTAL	138070	335690	457420	171410	401420	481790	248410	279810	233800	188350	56085	29137
MEAN	4454	11190	14760	5529	14340	15540	8280	9026	7793	6076	1809	971
MAX	18400	30000	28800	10300	45600	36300	38700	41700	30300	31900	4270	2210
MIN	1220	4280	6720	2440	5630	5040	1660	2200	1000	1110	656	414
†	+267	-778	-407	+11.4	+1160	-460	+291	+530	-131	-82.9	-249	-445
MEAN†	4721	10410	14350	5540	15500	15080	8571	9556	7662	5993	1560	526
CFSM†	1.07	2.36	3.26	1.26	3.52	3.42	1.94	2.17	1.74	1.36	.35	.12
IN.†	1.23	2.63	3.76	1.45	3.67	3.94	2.16	2.50	1.94	1.57	.40	.13

CAL YR 1984 TOTAL 3408824 MEAN 9314 MAX 49600 MIN 544 ADJ -12.0 MEAN† 9302 CFSM† 2.11 IN.† 28.74
WTR YR 1985 TOTAL 3021392 MEAN 8278 MAX 45600 MIN 414 ADJ -31.9 MEAN† 8246 CFSM† 1.87 IN.† 25.38

† Change in contents, equivalent in cubic feet per second, in Tygart Lake and Lake Lynn. Records of contents in Lake Lynn furnished by Allegheny Power Service Corp.

‡ Adjusted for change in reservoir contents.

MONONGAHELA RIVER BASIN

03072818 DANIELS RUN NEAR WEST ZOLLARVILLE, PA

LOCATION.--Lat 40°03'06", long 80°05'37", Washington County, Hydrologic Unit 05020005, on left bank at old railroad abutment, 1.5 mi upstream from Little Daniels Run, 1.7 mi north of West Zollarsville, and 2.7 mi southwest of Scenery Hill.

DRAINAGE AREA.--8.47 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1982 to September 1985 (discontinued).

GAGE.--Water-stage recorder. Elevation of gage is 920 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good except for estimated daily discharges, Dec. 5-9, 26-29, Jan. 8-11, 15-21, Jan. 24 to Feb. 12, Feb. 15-21, and Apr. 9-24, which are fair. Some regulation by deep-mine discharges above station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 280 ft³/s, May 31, 1985, gage height, 3.32 ft; minimum, 0.06 ft³/s, Sept. 16, 1985, gage height, 0.79 ft.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 100 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar. 30	0530	199	2.92	May 31	0615	*280	*3.32
Mar. 31	2315	183	2.84				

Minimum discharge, 0.06 ft³/s, Sept. 16, gage height, 0.79 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.0	.90	4.1	8.3	1.7	7.1	63	3.3	13	1.1	2.1	.84
2	.70	1.6	3.2	6.7	2.0	6.4	31	25	6.3	1.5	.88	.71
3	.38	1.4	3.2	5.8	7.0	5.5	25	29	8.1	1.5	.60	.58
4	.34	3.1	2.8	5.7	3.8	5.5	20	11	7.1	.98	.51	.35
5	.27	8.1	2.4	5.7	2.2	6.1	16	7.3	5.0	1.1	.45	.48
6	.22	3.6	2.0	4.9	1.9	4.6	14	6.4	4.0	2.1	.78	.52
7	.27	2.4	1.8	4.9	1.8	4.5	16	5.5	3.4	1.5	.76	.64
8	.39	1.7	1.9	4.3	1.7	5.4	19	4.6	3.1	2.6	.60	.62
9	.47	2.1	2.5	3.8	1.6	4.7	22	4.0	2.9	1.5	.45	.51
10	.60	3.8	5.2	3.2	1.7	4.3	17	3.7	2.7	6.2	.32	.52
11	.35	3.7	12	3.5	2.0	5.1	14	3.4	2.4	2.3	.31	.47
12	.49	2.8	7.9	4.7	5.0	20	11	3.3	2.5	1.4	.23	.45
13	.30	2.4	6.6	6.8	13	12	9.8	2.9	2.5	1.2	.17	.34
14	.29	2.0	14	3.2	7.5	9.1	8.4	2.5	2.3	1.0	.22	.28
15	.54	2.0	12	2.9	5.0	6.9	7.4	2.6	2.2	7.9	.86	.14
16	.78	2.1	8.0	2.6	3.6	6.0	6.6	2.7	2.0	3.5	1.8	.09
17	.57	1.9	6.5	2.5	3.0	5.5	5.8	2.6	2.0	1.9	.90	.11
18	.56	1.9	5.3	2.4	3.5	4.7	5.2	3.1	2.1	1.5	.46	.13
19	.48	2.5	5.9	2.4	4.3	4.4	4.7	2.7	1.9	1.2	.34	.10
20	.52	2.6	6.0	2.3	6.0	4.7	4.3	2.1	1.8	1.1	.52	.41
21	.29	2.2	14	2.2	11	3.9	4.0	1.9	1.6	1.4	.48	.63
22	1.9	1.8	24	6.7	32	4.2	3.5	1.9	5.8	3.2	.42	.56
23	2.1	1.6	12	4.5	42	6.2	3.3	2.8	6.4	1.4	.30	.53
24	1.3	1.5	9.3	2.7	27	6.4	4.0	2.1	2.8	1.0	.44	.58
25	.87	1.4	7.8	2.1	16	6.1	5.2	1.8	2.2	.72	10	.43
26	.84	1.3	5.6	1.7	12	5.3	4.2	1.8	1.7	1.4	2.8	.99
27	1.0	1.2	5.0	1.6	9.9	5.1	3.8	1.7	1.6	1.9	1.5	.84
28	1.0	2.7	4.3	1.5	7.9	5.5	3.6	5.9	1.4	1.1	1.1	.60
29	1.9	3.7	3.8	1.5	---	9.3	3.2	3.8	1.2	.79	.83	.51
30	1.6	2.9	9.6	1.4	---	88	3.0	2.6	1.1	.61	.78	.53
31	1.1	---	9.2	1.4	---	89	---	56	---	1.3	1.2	---
TOTAL	23.42	72.90	217.9	113.9	236.1	361.5	358.0	210.0	103.1	57.90	33.11	14.49
MEAN	.76	2.43	7.03	3.67	8.43	11.7	11.9	6.77	3.44	1.87	1.07	.48
MAX	2.1	8.1	24	8.3	42	89	63	56	13	7.9	10	.99
MIN	.22	.90	1.8	1.4	1.6	3.9	3.0	1.7	1.1	.61	.17	.09
CFSM	.09	.29	.83	.43	.00	1.38	1.40	.80	.41	.22	.13	.06
IN.	.10	.32	.96	.50	1.04	1.59	1.57	.92	.45	.25	.15	.06

CAL YR 1984 TOTAL 2886.83 MEAN 7.89 MAX 140 MIN .09 CFSM .93 IN. 12.68
WTR YR 1985 TOTAL 1802.32 MEAN 4.94 MAX 89 MIN .09 CFSM .58 IN. 7.92

MONONGAHELA RIVER BASIN

91

03072818 DANIELS RUN NEAR WEST ZOLLARSVILLE, PA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1982 to September 1985 (discontinued).

WATER-QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUC- TANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	ACIDITY (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
FEB 01...	0845	2.5	1030	7.9	.0	210	--	64	13	170	2.1
APR 24...	1300	5.0	580	8.3	23.0	190	--	58	12	45	2.4
AUG 22...	1100	.48	2900	8.2	22.5	330	.0	90	25	520	4.6

DATE	ALKA- LINITY FIELD (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)
FEB 01...	190	220	120	.30	6.4	725	340	14	110	81
APR 24...	170	83	27	.20	3.8	334	590	15	60	28
AUG 22...	250	680	410	.70	6.3	1970	240	20	90	80

MONONGAHELA RIVER BASIN

03073000 SOUTH FORK TENMILE CREEK AT JEFFERSON, PA

LOCATION.--Lat 39°55'23", long 80°04'22", Greene County, Hydrologic Unit 05020005, on right bank at downstream side of bridge on State Highway 188, 1 mi southwest of Jefferson, and 3.1 mi downstream from Ruff Creek.

DRAINAGE AREA.--180 mi².

PERIOD OF RECORD.--October 1931 to current year. Monthly discharge only for October 1931, published in WSP 1305.

REVISED RECORDS.--WSP 1305: 1949. WSP 1435: 1932-34, 1935 (M).

GAGE.--Water-stage recorder and masonry control. Datum of gage is 852.54 ft above National Geodetic Vertical Datum, adjustment of 1907. Prior to Oct. 21, 1938, nonrecording gage at same site and datum.

REMARKS.--Records good except for estimated daily discharges, Jan. 16 to Feb. 22, which are fair. Slight diversion into basin during winter months from Monongahela River for Waynesburg water supply. Some regulation from reservoirs and pumpage above station. Several observations of water temperature were made during the year. Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--54 years, 201 ft³/s, 15.16 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,800 ft³/s, June 4, 1941, gage height, 18.45 ft, from flood-mark in gage house, from rating curve extended above 7,600 ft³/s on basis of slope-area measurement of peak flow; minimum observed, 0.05 ft³/s, Sept. 3, 1938, gage height, 0.36 ft.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than 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)
Mar. 30	0830	6890	11.75	May 31	1230	*8000	*12.83

Minimum discharge, 2.9 ft³/s, Sept. 30, gage height, 0.80 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	42	162	298	110	180	1830	59	1510	15	24	12
2	20	42	142	240	190	160	844	129	519	39	32	12
3	17	52	125	184	170	130	581	679	690	192	21	11
4	13	46	112	164	130	120	497	286	484	526	16	9.5
5	9.6	262	89	167	150	154	473	173	277	155	14	7.7
6	7.4	181	103	137	170	131	377	128	181	231	13	6.1
7	6.2	101	97	131	140	111	316	110	122	238	12	4.7
8	5.7	69	137	129	110	130	407	90	102	1190	12	4.7
9	5.4	60	138	97	94	132	383	74	85	354	10	5.0
10	5.5	152	123	104	86	119	371	63	74	262	9.5	9.7
11	5.1	193	454	104	84	120	360	54	59	203	9.3	7.1
12	4.8	167	335	136	82	693	313	52	73	109	8.1	5.4
13	4.5	112	241	135	440	561	256	47	65	75	7.5	4.5
14	3.6	82	230	116	370	397	227	40	55	57	6.3	4.1
15	3.4	68	268	95	300	284	201	34	57	544	6.5	3.8
16	4.4	64	213	80	240	211	178	45	54	230	19	3.7
17	5.5	52	169	70	200	186	179	50	45	109	54	3.6
18	34	46	134	62	170	154	140	52	44	72	25	3.6
19	26	62	182	58	140	128	123	50	41	52	17	3.3
20	16	77	421	56	250	123	110	39	46	41	13	3.3
21	16	71	525	54	600	108	101	30	45	40	11	3.2
22	29	61	1400	52	1050	107	95	24	39	264	9.9	3.2
23	100	55	566	58	1590	223	93	283	183	106	8.9	3.4
24	63	56	352	66	1090	252	103	248	91	61	8.9	3.4
25	40	55	309	62	598	234	110	101	53	43	59	3.9
26	30	53	217	58	402	185	90	65	36	37	108	4.6
27	26	50	184	54	301	164	79	46	26	78	38	4.7
28	26	83	161	56	215	151	66	84	21	48	22	7.1
29	85	240	142	58	---	154	67	246	18	31	16	4.1
30	115	150	261	54	---	4170	66	102	16	25	14	3.1
31	61	---	356	70	---	2550	---	4280	---	22	14	---
TOTAL	799.1	2804	8348	3205	9472	12522	9036	7763	5111	5449	638.9	165.5
MEAN	25.8	93.5	269	103	338	404	301	250	170	176	20.6	5.52
MAX	115	262	1400	298	1590	4170	1830	4280	1510	1190	108	12
MIN	3.4	42	89	52	82	107	66	24	16	15	6.3	3.1
CFSM	.14	.52	1.49	.57	1.88	2.24	1.67	1.39	.94	.98	.11	.03
IN.	.17	.58	1.73	.66	1.96	2.59	1.87	1.60	1.06	1.13	.13	.03

CAL YR 1984 TOTAL 63333.6 MEAN 173 MAX 2000 MIN 2.3 CFSM .96 IN. 13.09
WTR YR 1985 TOTAL 65313.5 MEAN 179 MAX 4280 MIN 3.1 CFSM .99 IN. 13.50

MONONGAHELA RIVER BASIN

93

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 National Geodetic Vertical Datum of 1929. Prior to Nov. 15, 1973, nonrecording gage 15 ft downstream at same datum.

REMARKS.--Records good except for estimated daily discharges, Jan. 11 to Feb. 11, and Feb. 17-21, which are fair. Some regulation at low flow by mine pumpage into stream above station. Several observations of water temperature were made during the year. Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--43 years, 99.8 ft³/s, 18.39 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,660 ft³/s, June 23, 1972, gage height, 14.83 ft; minimum observed, 4.2 ft³/s, Aug. 2, 1962; minimum gage height, 0.25 ft, Oct. 10, 11, 1983.

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 21	2230	1060	4.10	Apr. 1	0015	10.60	4.09
Mar. 30	0500	*2430	*6.66				

Minimum discharge, 21 ft³/s, Sept. 23, 26, gage height, 0.30 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	97	122	213	164	78	124	635	66	262	34	248	43
2	68	205	164	146	70	113	353	129	159	52	87	42
3	48	164	157	126	64	102	269	259	126	67	67	38
4	44	176	130	121	58	97	247	143	103	153	56	33
5	41	290	116	122	64	106	203	115	96	57	51	33
6	37	219	123	107	72	84	174	103	82	49	48	32
7	35	172	105	107	70	79	165	91	70	45	53	31
8	38	139	99	102	60	93	156	80	66	44	48	32
9	34	153	96	86	52	87	146	72	61	99	43	39
10	34	187	121	82	52	75	129	66	57	93	40	40
11	33	161	185	74	64	83	133	62	54	65	37	33
12	30	139	166	70	291	156	122	75	82	52	36	30
13	29	124	151	64	239	124	116	68	73	45	35	29
14	30	111	159	62	160	115	129	55	62	116	42	27
15	29	105	151	60	133	107	116	88	60	269	66	27
16	55	99	135	58	114	99	127	124	56	106	101	27
17	111	89	125	56	100	95	116	110	50	76	56	26
18	131	96	115	54	96	88	105	174	49	61	46	26
19	71	121	196	52	100	80	98	154	56	54	45	25
20	138	106	187	50	110	79	94	114	74	49	43	25
21	90	94	348	50	130	72	88	97	50	59	44	25
22	135	85	454	49	255	71	82	86	52	149	41	24
23	176	82	259	48	406	155	77	102	66	87	35	24
24	140	79	211	48	382	149	83	81	47	60	77	30
25	114	74	195	47	283	133	140	70	43	52	94	27
26	102	70	154	46	210	114	106	63	40	99	56	44
27	89	68	143	45	170	110	96	58	38	124	46	66
28	108	344	130	44	140	106	88	82	37	73	46	33
29	303	374	118	43	---	129	78	79	35	62	44	28
30	208	227	197	42	---	1300	71	61	34	55	55	27
31	154	---	172	64	---	830	---	405	---	61	57	---
TOTAL	2752	4475	5275	2289	4023	5155	4542	3332	2140	2467	1843	966
MEAN	88.8	149	170	73.8	144	166	151	107	71.3	79.6	59.5	32.2
MAX	303	374	454	164	406	1300	635	405	262	269	248	66
MIN	29	68	96	42	52	71	71	55	34	34	35	24
CFSM	1.20	2.02	2.31	1.00	1.95	2.25	2.05	1.45	.97	1.08	.81	.44
IN.	1.39	2.26	2.66	1.16	2.03	2.60	2.29	1.68	1.08	1.25	.93	.49

CAL YR 1984 TOTAL 41208 MEAN 113 MAX 931 MIN 26 CFSM 1.53 IN. 20.80
WTR YR 1985 TOTAL 39259 MEAN 108 MAX 1300 MIN 24 CFSM 1.47 IN. 19.82

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, and 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 783, 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. Datum of gage is 725.50 ft above National Geodetic Vertical Datum of 1929 (Corps of Engineers bench mark). From Oct. 1, 1967, to Sept. 30, 1976, at site 17.5 mi upstream at datum 8.10 ft higher. Prior to Oct. 1, 1967, water-stage recorder at site 17.9 mi upstream at datum 9.83 ft higher. Oct. 1, 1965, to Sept. 30, 1967, auxiliary staff gage and Apr. 14, 1966, to Sept. 30, 1967, auxiliary water-stage recorder at present site.

REMARKS.--Estimated daily discharges: July 24-29. Records good except those below 1,000 ft³/s and for estimated daily discharges, which are fair. Flow regulated by locks above station, since 1938 by Tygart Lake and since 1926 by Lake Lynn, combined capacity, 357,000 acre-ft. Several observations of water temperature were made during the year. Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--52 years, 9,123 ft³/s, 23.20 in/yr, adjusted for storage 1940-75.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 158,000 ft³/s, Mar. 7, 1967, gage height, 41.63 ft, from flood-mark in gage well, site and datum then in use; minimum not determined.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 71,500 ft³/s, June 1, gage height, 10.95 ft; minimum daily, 492 ft³/s, Sept. 15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2510	9970	21200	11500	6880	25000	50300	2980	50700	1780	3430	1550
2	3610	10600	16900	10000	15500	20700	33600	4820	19200	1560	4160	1220
3	4070	12000	13400	10400	12900	16800	24200	18900	12700	2620	5050	1920
4	2800	11500	12600	9720	10900	15500	19000	32900	13500	5060	2540	1910
5	2910	15300	12700	9420	12300	14900	18300	22000	10800	3860	1620	1060
6	1470	20700	11100	9670	12300	10600	15000	15200	11300	2470	2750	1180
7	1600	15000	10800	10200	11700	11200	9700	8060	10000	2560	2300	1200
8	1680	12700	7620	9270	10700	9760	9370	6170	7300	3380	1710	784
9	1770	9650	7980	10400	8870	12800	8440	4480	9640	8770	1850	1400
10	1820	9230	7550	9930	6690	11100	7600	4220	9690	29200	2490	1660
11	1750	11000	14000	8010	6860	10400	8370	3840	9520	31000	1710	1310
12	2240	8710	19300	6400	9800	25200	7540	2590	11900	18100	1790	1000
13	1050	9130	14900	4540	13600	43200	6410	2850	16200	7920	1180	1010
14	1560	8020	12500	4490	12700	28700	7930	2380	12300	4140	2180	580
15	1430	6180	11700	3980	10300	24000	7380	3340	10500	12600	2010	492
16	1930	5370	10200	4380	6690	20300	6990	4080	7160	9190	2270	536
17	2010	4930	9280	4630	7180	13900	9440	4050	7400	10100	2210	932
18	2140	4910	8630	3250	6400	13100	8670	4130	5370	6400	1750	965
19	2890	8970	8810	3750	7230	9280	7560	3830	4340	5020	2030	1330
20	1560	17600	20000	2730	9400	7910	3950	5850	4310	2620	1790	675
21	3030	16600	20300	3910	12300	7210	3770	5670	4000	1800	1570	780
22	2700	13900	32400	2760	17000	6830	4840	5390	3200	4240	2380	718
23	5320	12500	25000	4580	30400	6170	4160	8110	3010	2710	1930	602
24	8480	9510	19900	4580	33700	12900	4910	14700	3450	5000	807	896
25	10800	6740	23100	3010	46500	17800	4150	21000	2290	2600	1780	1750
26	9730	5030	25000	3180	37100	17000	4500	17500	2380	1800	3020	1240
27	7890	6230	25000	3040	31200	12800	3850	12300	2650	4200	2040	1740
28	7120	7850	21600	4710	27800	11800	2020	8260	1360	2800	1480	1290
29	13700	29400	16100	3840	---	10800	3020	7810	2080	5300	1260	681
30	20900	25100	16100	4220	---	36700	3750	5960	740	2800	1710	629
31	10900	---	14200	4040	---	46900	---	32400	---	2300	1220	---
TOTAL	143370	344330	489870	188540	434900	531260	308720	295770	268990	203900	66017	33040
MEAN	4625	11480	15800	6082	15530	17140	10290	9541	8966	6577	2130	1101
MAX	20900	29400	32400	11500	46500	46900	50300	32900	50700	31000	5050	1920
MIN	1050	4910	7550	2730	6400	6170	2020	2380	740	1560	807	492

CAL YR 1984 TOTAL 3762751 MEAN 10280 MAX 52500 MIN 873
WTR YR 1985 TOTAL 3308707 MEAN 9065 MAX 50700 MIN 492

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 Stage 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 Forest 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 National Geodetic Vertical Datum of 1929. 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 for estimated daily discharges, Dec. 8, 9, Jan. 13, 14, 21-23, 27, 28, and Feb. 3, 4, which are fair. Low and medium flow regulated since July 1925 by Deep Creek Reservoir. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--51 years (water years 1899-1904, 1941-85), 645 ft³/s, 29.69 in/yr, adjusted for storage since October 1940.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,600 ft³/s, Mar. 29, 1924, gage height, 14.2 ft, from flood-marks, site and datum then in use or 10.2 ft, present site and datum, from rating curve extended above 5,800 ft³/s on basis of slope-area measurement of peak flow; minimum daily discharge, 8.2 ft³/s, Sept. 11, 1966.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 8,260 ft³/s, July 10, gage height, 7.34 ft; minimum discharge, 39 ft³/s, Sept. 30, gage height, 1.95 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	315	377	1390	504	647	1730	2560	184	4500	252	593	91
2	416	313	1110	614	665	1120	1650	264	1490	300	643	77
3	282	329	1020	579	250	949	1300	2270	1210	269	311	117
4	295	256	961	546	240	1040	1150	1230	1030	217	246	112
5	307	442	746	606	851	1310	932	795	1520	314	357	106
6	74	669	697	413	836	1130	662	613	3010	165	328	105
7	62	639	587	602	757	829	594	504	1600	176	313	71
8	173	528	435	712	793	898	693	419	1600	290	350	55
9	222	514	405	497	510	826	708	359	1180	3560	354	112
10	228	431	502	509	265	645	650	358	808	5300	141	153
11	231	446	765	494	457	755	770	284	650	5330	124	125
12	265	520	1040	390	1040	2520	880	261	1370	2400	204	113
13	68	467	1040	320	1530	2190	620	250	1680	1840	190	104
14	50	420	962	415	1190	1550	558	234	1270	1500	188	54
15	128	424	758	451	1030	1200	609	208	886	2470	251	49
16	182	575	629	483	464	783	636	207	1080	1740	222	93
17	177	492	649	460	314	630	852	269	1020	1340	115	94
18	151	432	595	451	303	863	656	334	921	788	93	116
19	138	496	1060	268	544	763	563	300	822	671	185	94
20	71	487	2490	207	438	724	408	232	734	402	83	92
21	144	468	1670	560	469	681	366	183	632	314	177	45
22	212	341	2060	540	611	603	391	161	447	463	124	42
23	268	339	1320	540	1310	687	385	205	399	569	123	89
24	433	320	1100	516	3340	1320	339	361	440	468	74	93
25	416	301	1940	556	5940	1670	358	230	432	391	139	89
26	372	355	1430	439	3700	1160	328	182	389	395	185	90
27	253	382	1250	198	3080	930	245	157	358	461	145	90
28	172	1080	925	194	2380	712	230	276	336	373	134	44
29	399	3100	679	630	---	717	263	412	223	412	128	41
30	860	1590	611	601	---	1530	200	323	157	346	126	91
31	584	---	665	612	---	2030	---	3530	---	353	87	---
TOTAL	7948	17533	31491	14907	33954	34495	20556	15595	32194	33869	6733	2647
MEAN	256	584	1016	481	1213	1113	685	503	1073	1093	217	88.2
MAX	860	3100	2490	712	5940	2520	2560	3530	4500	5330	643	153
MIN	50	256	405	194	240	603	200	157	157	165	74	41
(†)	-106	+33.6	+142	-63.5	+110	+47.1	+48.8	+78.1	-25.2	-11.4	-71.6	-55.5
MEAN‡	150	618	1158	418	1323	1160	734	581	1048	1082	145	32.7
CFSM‡	0.51	2.09	3.93	1.42	4.48	3.93	2.49	1.97	3.55	3.67	0.49	0.11
IN‡	0.59	2.33	4.53	1.64	4.66	4.53	2.78	2.27	3.96	4.23	0.56	0.12

CAL YR 1984 TOTAL 308255 MEAN 842 MAX 6090 MIN 50 MEAN‡ 852 CFSM‡ 2.89 IN‡ 39.31
WTR YR 1985 TOTAL 251922 MEAN 690 MAX 5940 MIN 41 MEAN‡ 700 CFSM‡ 2.37 IN‡ 32.21

† Change in contents, equivalent in cubic feet per second, in Deep Creek Reservoir furnished by Pennsylvania Electric Co.

‡ Adjusted for change in contents.

MONOGAHELA RIVER BASIN

03077500 YOUGHIOGHENY RIVER AT YOUGHIOGHENY RIVER DAM, PA

LOCATION.--Lat 39°48'19", long 79°21'52", Somerset County, Hydrologic Unit 05020006, on right bank 800 ft upstream from bridge on State Highway 281, 0.2 mi downstream from Youghiogheny River Dam, 0.2 mi south of Confluence, 0.7 mi upstream from Casselman River, and at mile 73.2.

DRAINAGE AREA.--436 mi².

PERIOD OF RECORD.--September 1904 to September 1913 (gage heights only), October 1939 to current year. Monthly discharge only for October 1939 to April 1940, published in WSP 1305. Figures of daily discharge prior to January 1911, published in WSP 169, 205, 243, 263, and 283 are unreliable and should not be used. September 1904 to September 1922 (gage heights only) in reports of Water Supply Commission of Pennsylvania or Pennsylvania Department of Forests and Waters. Published as "at Confluence" 1904-22.

REVISED RECORDS.--WSP 893: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,310.17 ft above National Geodetic Vertical Datum of 1929 (Corps of Engineers bench mark).

REMARKS.-- No estimated daily discharges. Records good. Flow regulated since 1925 by Deep Creek Reservoir and since 1943 by Youghiogheny River Lake 0.2 mi upstream. Several observations of water temperature were made during the year. Corps of Engineers gage-height telemeter at station.

COOPERATION.--One discharge measurement furnished by Corps of Engineers.

AVERAGE DISCHARGE.--46 years (1939-85), 878 ft³/s, 27.35 in/yr, adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,700 ft³/s, Mar. 5, 1948, gage height, 11.28 ft; maximum gage height, 19.08 ft, Oct. 15, 1954 (backwater from Casselman River); practically no flow at times during May and June 1950 when reservoir gates were closed.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 6,340 ft³/s, July 11, gage height, 8.17 ft; minimum daily, 188 ft³/s, Feb. 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	880	849	1540	1710	329	1630	982	459	637	611	646	909
2	868	858	1530	1700	329	1610	1600	459	1040	611	640	909
3	868	849	1670	1690	329	1610	2930	1030	2430	611	645	909
4	868	853	1810	1670	329	1600	3380	1310	3650	588	641	909
5	868	862	1800	1650	329	1610	3380	1290	4120	588	599	912
6	868	861	1780	1640	261	1600	2740	1290	3770	588	635	909
7	865	849	1770	1620	190	1600	1530	1290	2350	587	635	909
8	856	849	1750	1610	190	1600	813	1270	1740	584	635	907
9	856	855	1740	1600	190	1600	658	878	1740	588	783	898
10	856	852	1730	1590	190	1600	649	635	1860	1620	933	721
11	856	849	1730	1580	190	1590	562	628	2010	3980	933	611
12	856	849	1730	1560	188	1260	635	572	1410	6240	933	611
13	856	849	1740	1540	190	937	635	476	759	6190	933	746
14	856	849	1740	1090	190	926	635	471	859	5240	933	882
15	856	846	1730	506	190	932	793	471	873	3970	933	883
16	856	850	1730	506	190	933	957	471	884	3490	1080	877
17	856	872	1720	426	190	933	1150	471	1260	2740	849	873
18	856	866	1700	361	190	934	1260	462	1650	1530	1010	1030
19	856	861	1690	347	190	935	1260	448	1650	950	1030	1130
20	856	861	1700	339	190	934	1010	448	1280	945	919	1130
21	847	859	1740	339	190	942	567	448	897	807	909	1120
22	844	859	1740	334	192	945	344	448	897	671	909	1110
23	844	855	1740	329	222	959	237	448	921	659	909	1100
24	844	849	1980	329	222	970	237	337	729	648	909	1100
25	844	849	2140	329	245	971	237	237	599	652	909	1100
26	844	850	2150	329	261	970	350	337	599	658	722	1080
27	843	849	2140	329	576	971	457	441	599	646	618	1070
28	851	849	2130	329	1270	982	462	437	599	646	623	1070
29	842	861	2110	329	---	987	460	437	611	647	807	1070
30	848	1200	2100	329	---	982	459	437	611	647	921	1070
31	849	---	1910	329	---	982	---	523	---	646	913	---
TOTAL	26513	25969	56210	28369	7742	37035	31369	19359	43034	49578	25494	28555
MEAN	855	866	1813	915	277	1195	1046	624	1434	1599	822	952
MAX	880	1200	2150	1710	1270	1630	3380	1310	4120	6240	1080	1130
MIN	842	846	1530	329	188	926	237	237	599	584	599	611
†	-567	+116	-165	-445	+1487	+519	+84.7	+228	-220	-2.2	-622	-887
MEAN†	288	982	1648	470	1764	1714	1131	852	1214	1597	200	65.0
CFSM†	.66	2.25	3.78	1.08	4.05	3.93	2.59	1.95	2.78	3.66	.46	.15
IN.†	.76	2.51	4.36	1.25	4.22	4.53	2.89	2.25	3.10	4.22	.53	.17

CAL YR 1984 TOTAL 396317 MEAN 1083 MAX 4800 MIN 56 ADJ +33.1 MEAN† 1116 CFSM† 2.56 IN.† 34.85
WTR YR 1985 TOTAL 379227 MEAN 1039 MAX 6240 MIN 188 ADJ -49.9 MEAN† 989 CFSM† 2.27 IN.† 30.79

† Change in contents, equivalent in cubic feet per second, in Deep Creek Reservoir and Youghiogheny River Lake. Records for Deep Creek Reservoir furnished by Pennsylvania Electric Co.

‡ Adjusted for change in contents.

MONONGAHELA RIVER BASIN

97

03078000 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 northeast 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 National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except for estimated daily discharges, Jan. 9 to Feb. 23, which are fair. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--38 years, 119 ft³/s, 25.86 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,400 ft³/s, Oct. 15, 1954, gage height, 10.70 ft, from rating curve extended above 1,600 ft³/s on basis of contracted-opening measurement at gage height 8.13 ft; no flow Aug. 31, 1962, result of regulation from unknown source.

EXTREMES 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)
Feb. 23	2215	1020	3.71	May 3	0530	1070	3.79
Feb. 24	2030	*1900	*4.82	July 9	1330	1270	4.04
Mar. 31	2300	1210	3.97	July 10	1815	1820	4.73

Minimum discharge, 2.7 ft³/s, Sept. 27, 28, 29, 30, gage height, 0.95 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	38	46	341	122	50	276	822	35	254	27	58	15
2	33	45	230	113	50	264	422	139	113	30	34	12
3	19	42	220	99	48	246	332	752	86	31	25	9.6
4	13	44	189	94	56	205	308	247	76	27	21	8.8
5	11	179	145	102	64	257	258	157	153	30	18	7.5
6	9.0	112	137	88	58	200	212	123	112	28	16	6.8
7	8.4	84	114	86	54	157	184	105	74	27	16	6.6
8	8.5	69	122	81	50	190	176	90	67	25	17	6.2
9	9.2	64	123	76	50	193	171	78	57	739	16	7.7
10	9.0	105	95	72	50	150	149	70	49	933	14	9.7
11	8.4	134	203	68	54	147	174	64	42	547	13	9.7
12	7.3	116	212	64	80	460	166	58	68	197	12	8.2
13	7.9	92	257	66	150	318	135	53	86	144	10	7.0
14	7.5	82	216	68	120	243	120	46	64	184	9.9	6.0
15	7.1	84	190	64	100	194	111	42	70	448	18	6.1
16	14	115	153	68	90	163	104	44	193	234	26	5.4
17	18	89	132	64	80	148	93	49	128	136	23	5.0
18	58	79	117	60	74	130	81	72	116	99	14	4.6
19	26	85	282	56	74	116	73	71	84	79	13	4.3
20	25	76	322	56	76	111	68	50	77	66	12	4.3
21	28	68	314	60	80	100	63	40	66	61	12	4.0
22	24	88	410	60	150	97	59	38	54	66	11	4.0
23	55	128	244	60	400	300	56	50	54	58	9.5	3.6
24	86	93	200	58	1200	464	53	67	45	44	11	3.4
25	66	72	384	56	1250	397	55	45	43	38	21	3.3
26	45	68	215	52	678	262	50	34	34	42	17	3.3
27	35	80	181	50	532	209	45	28	29	51	13	3.1
28	35	400	166	48	352	184	44	41	27	37	11	3.0
29	134	567	144	45	---	199	41	145	24	29	9.9	2.8
30	88	245	152	44	---	570	37	66	21	27	9.3	2.8
31	58	---	135	48	---	833	---	319	---	27	14	---
TOTAL	991.3	3551	6345	2148	6070	7783	4662	3218	2366	4511	524.6	183.8
MEAN	32.0	118	205	69.3	217	251	155	104	78.9	146	16.9	6.13
MAX	134	567	410	122	1250	833	822	752	254	933	58	15
MIN	7.1	42	95	44	48	97	37	28	21	25	9.3	2.8
CFSM	.51	1.89	3.28	1.11	3.47	4.02	2.48	1.66	1.26	2.34	.27	.10
IN.	.59	2.11	3.78	1.28	3.61	4.63	2.77	1.92	1.41	2.68	.31	.11

CAL YR 1984 TOTAL 48873.6 MEAN 134 MAX 1680 MIN 5.9 CFSM 2.14 IN 29.09
WTR YR 1985 TOTAL 42353.7 MEAN 116 MAX 1250 MIN 2.8 CFSM 1.86 IN 25.21

MONONGAHELA 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 measurement 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 National Geodetic Vertical Datum, adjustment of 1907. Prior to Nov. 19, 1940, nonrecording gage at same site and datum.

REMARKS.--Records good except for estimated daily discharges, Dec. 25-27, and Jan. 11 to Feb. 23, which are fair. Slight diversion above station to city of Frostburg, Md., in the Potomac River basin. Several observations of water temperature were made during the year. Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--65 years (1920-85), 659 ft³/s, 23.43 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 50,000 ft³/s, estimated, Oct. 15, 1954, gage height, 14.06 ft, on basis of summation of peak flows at nearby stations; minimum, 10 ft³/s, Sept. 9, 1957; minimum gage height, 0.81 ft, Sept. 30, 1985.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than 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)
Feb. 24	2400	*10500	*7.75	Apr. 1	0030	8090	6.96

Minimum discharge, 25 ft³/s, Sept. 30, gage height, 0.81 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	116	293	1450	722	230	1740	5670	211	1160	112	651	99
2	171	312	1200	704	240	1510	2950	341	599	143	328	86
3	122	285	1090	606	260	1370	2120	3660	409	174	217	76
4	88	364	1070	562	290	1170	2030	1700	350	197	177	67
5	71	1240	804	590	310	1300	1740	1060	363	165	154	62
6	62	833	765	527	280	1110	1390	811	497	190	142	56
7	54	586	633	503	250	861	1230	695	322	170	133	54
8	52	456	575	483	230	1010	1200	581	277	140	166	60
9	59	406	548	367	220	1130	1110	482	245	2270	145	89
10	59	570	517	337	210	869	1010	416	212	2730	115	75
11	54	686	797	300	200	811	1110	373	187	2320	105	67
12	51	682	1140	280	400	2760	1050	343	203	931	95	58
13	49	582	1310	260	1000	2120	879	325	253	640	88	50
14	48	536	1320	240	860	1540	803	285	247	675	83	44
15	45	527	1210	230	620	1230	742	261	217	2710	85	41
16	59	623	1000	210	500	985	693	260	485	1730	193	40
17	72	524	857	190	440	866	663	285	461	894	279	40
18	131	452	741	180	420	766	554	431	306	628	149	38
19	151	486	1350	180	390	657	487	385	292	474	113	39
20	131	437	2130	170	370	638	440	287	291	383	99	34
21	134	375	1910	200	360	573	400	226	311	350	93	34
22	130	296	2850	240	500	513	367	209	232	754	84	33
23	278	299	1690	300	2500	1680	348	299	244	466	77	32
24	457	330	1310	360	6990	2300	333	377	215	323	76	33
25	424	343	1150	330	8020	2140	333	271	196	251	152	34
26	294	343	1050	300	4200	1470	313	208	169	351	176	31
27	227	350	980	330	3350	1180	281	179	144	580	119	28
28	196	977	1070	350	2340	1020	262	190	131	307	93	27
29	527	3060	925	300	---	1350	245	365	120	225	79	26
30	581	1490	860	270	---	4240	227	316	113	192	77	26
31	384	---	792	250	---	5500	---	437	---	185	116	---
TOTAL	5277	18743	35094	10871	35980	46409	30980	16269	9251	21660	4659	1479
MEAN	170	625	1132	351	1285	1497	1033	525	308	699	150	49.3
MAX	581	3060	2850	722	8020	5500	5670	3660	1160	2730	651	99
MIN	45	285	517	170	200	513	227	179	113	112	76	26
CFSM	.45	1.64	2.96	.92	3.36	3.92	2.70	1.37	.81	1.83	.39	.13
IN.	.51	1.83	3.42	1.06	3.50	4.52	3.02	1.58	.90	2.11	.45	.14

CAL YR 1984 TOTAL 279915 MEAN 765 MAX 11700 MIN 45 CFSM 2.00 IN. 27.26
WTR YR 1985 TOTAL 236672 MEAN 648 MAX 8020 MIN 26 CFSM 1.70 IN. 23.05

MONONGAHELA RIVER BASIN

99

03079700 GARYS RUN NEAR BARRONVALE, PA

LOCATION.--Lat 39°58'25". long 79°17'51", Somerset County, Hydrologic Unit 05020006, at culvert 100 ft upstream mouth to Blue Hole Creek, 1.2 m north on Blue Hole road, 2.3 mi northwest of Barronvale.

DRAINAGE AREA.--1.22 mi².

PERIOD OF RECORD.--October 1983 to September 1985 (discontinued).

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	ACIDITY (MG/L AS H)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINE- ITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)
OCT 25...	1000	4.0	31	5.1	11.0	<.1	2.2	1.0	.30	.47	<1.0	9.5
NOV 28...	0915	1.6	29	5.4	8.0	<.1	2.3	1.1	.40	.35	1.0	8.9
DEC 18...	0945	3.3	32	5.3	8.0	<.1	2.3	1.1	.30	.43	<1.0	9.1
JAN 23...	0945	1.3	32	5.8	.0	.1	2.2	1.1	.40	.42	1.0	8.2
FEB 27...	1000	7.0	37	4.9	4.0	.1	2.0	.80	.30	.40	1.0	9.4
MAR 27...	0915	2.8	33	5.6	5.0	.0	1.9	.95	.34	.39	.500	9.1
APR 24...	0915	1.6	28	5.7	12.0	.0	1.8	.90	.30	.43	<.500	8.3
MAY 29...	0900	2.2	30	5.5	11.5	.0	1.8	.78	.78	.30	.500	8.9
JUN 26...	0950	.41	27	6.2	12.0	.0	1.8	.80	.34	.26	.600	7.9
JUL 24...	0900	2.3	29	5.4	12.0	.0	1.9	.80	.40	.28	<.500	8.7
AUG 21...	0920	.51	27	6.2	14.5	.0	2.0	.89	.51	.41	.800	7.6
SEP 18...	0940	.28	31	6.3	11.5	.0	1.9	.85	.39	.31	1.3	7.3

DATE	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	BROMIDE DIS- SOLVED (MG/L AS BR)	SILICA, DIS- SOLVED (MG/L AS SIO2)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N)
OCT 25...	.80	.00	<.00	4.2	.005	<.002	330	9	130	1.4	.30
NOV 28...	.81	.04	.02	4.2	<.005	<.002	150	9	72	.30	.37
DEC 18...	.78	.04	.02	4.3	<.005	<.010	190	<3	75	1.1	.41
JAN 23...	.77	.05	.02	4.8	.004	.010	70	3	33	1.0	.37
FEB 27...	.71	.05	.02	3.2	.013	.006	550	28	120	1.1	.74
MAR 27...	.74	.05	.02	3.5	.005	.001	210	5	59	.70	.44
APR 24...	.74	.05	.02	3.7	.009	.004	70	4	49	1.3	.36
MAY 29...	.72	.06	.03	3.5	.022	.001	160	4	68	1.2	.24
JUN 26...	.74	.06	.02	3.8	.015	<.001	30	4	21	1.1	.30
JUL 24...	.65	.06	.02	3.4	.008	<.001	130	7	72	1.8	.34
AUG 21...	.71	.05	.03	4.2	.014	<.001	30	3	28	5.9	.31
SEP 18...	.75	.02	.02	3.8	.001	<.001	40	3	29	1.0	.32

MONONGAHELA RIVER BASIN

03079705 COLE RUN NEAR BARRONVALE, PA

LOCATION.--Lat 39°58'00", long 79°17'25", Somerset County, Hydrologic Unit 05020006, 200 ft upstream inflow to Blue Hole Creek, 0.6 mi north on Blue Hole road, 1.1 mi northwest of Barronvale.

DRAINAGE AREA.--1.31 mi².

PERIOD OF RECORD.--October 1983 to September 1985 (discontinued).

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	ACIDITY (MG/L AS H)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY LAB (MG/L AS CAO3)	SULFATE DIS- SOLVED (MG/L AS SO4)
OCT 25...	0930	3.3	36	4.5	11.5	<.1	1.8	.60	.30	.44	<1.0	10
NOV 28...	0900	1.5	32	4.6	7.5	<.1	1.7	.70	.40	.29	<1.0	9.4
DEC 18...	0915	3.1	36	4.6	8.0	<.1	1.8	.65	.40	.35	<1.0	9.6
JAN 23...	0900	.80	36	4.7	.0	.1	1.6	.70	.40	.34	1.0	8.8
FEB 27...	1030	5.0	41	4.5	4.0	.1	1.5	.50	.30	.34	1.0	10
MAR 27...	0845	2.8	35	4.7	4.5	.0	1.4	.59	.32	.29	.500	9.7
APR 24...	0845	1.3	34	4.7	12.0	.0	1.4	.60	.30	.35	<.500	8.9
MAY 29...	0830	1.3	34	4.6	11.5	.0	1.5	.55	.30	.30	.500	8.9
JUN 26...	0920	.23	31	4.7	12.0	.0	1.5	.57	.33	.25	<.500	8.4
JUL 24...	0840	2.1	30	4.6	13.0	.0	1.6	.50	.30	.20	<.500	9.2
AUG 21...	0855	.32	31	4.7	15.5	.0	1.4	.53	.32	.30	<.500	8.2
SEP 18...	0905	.18	32	4.9	12.0	.0	1.4	.57	.34	.26	<.500	8.1

DATE	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	BROMIDE DIS- SOLVED (MG/L AS BR)	SILICA, DIS- SOLVED (MG/L AS SiO2)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N)
OCT 25...	.90	.00	<.00	4.2	.009	<.002	430	33	140	2.0	.00
NOV 28...	.81	.02	.01	4.3	<.005	<.002	370	23	100	1.6	.12
DEC 18...	.81	.04	.02	4.2	<.006	<.010	470	26	110	1.2	.11
JAN 23...	.75	.03	.02	4.7	.014	.010	350	18	88	1.2	.16
FEB 27...	.75	.48	.02	3.1	.027	.010	660	33	130	1.3	.29
MAR 27...	.74	.05	.02	3.3	.007	.001	420	18	82	1.0	.15
APR 24...	.74	.07	.02	3.6	.007	.004	310	15	85	1.6	.16
MAY 29...	.68	.05	.02	3.6	.012	.001	270	24	89	1.4	.13
JUN 26...	.74	.04	.02	3.8	.019	<.001	190	12	94	.60	.15
JUL 24...	.68	.05	.02	3.7	.010	<.001	310	29	99	2.1	.08
AUG 21...	.76	.03	.02	4.0	.007	<.001	190	15	110	1.5	.11
SEP 18...	.76	.03	.02	3.8	.003	<.001	180	15	120	1.4	.13

MONONGAHELA RIVER BASIN

101

03080000 LAUREL HILL CREEK AT URSINA, PA

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.

PERIOD OF RECORD.--August to September 1913 (gage heights and discharge measurement 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 National Geodetic Vertical Datum of 1929, unadjusted. 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, Jan. 7 to Feb. 23, and May 14 to June 3, which are fair. Several observations of water temperature were made during the year. Corps of Engineers satellite tele-meter at station.

AVERAGE DISCHARGE.--67 years (1918-85), 266 ft³/s, 29.85 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,900 ft³/s, Oct. 15, 1954, gage height, 10.63 ft, from rating curve extended above 6,100 ft³/s on basis of slope-area measurement of peak flow; minimum, 2.2 ft³/s, Sept. 26, 1932.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than 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)
Feb. 25	0100	3170	4.63	July 9	0600	*5520	*6.44

Minimum discharge, 10 ft³/s, Sept. 30, gage height, 0.89 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	65	250	523	314	96	504	2090	77	400	43	534	101
2	74	303	419	307	120	428	1110	160	200	66	238	79
3	53	289	405	263	110	383	724	1090	120	69	161	67
4	45	372	397	245	94	329	665	561	106	69	122	60
5	39	1010	319	244	88	404	591	371	98	53	98	50
6	36	702	311	209	110	358	485	297	86	47	79	42
7	34	526	276	180	98	290	420	245	72	43	70	39
8	35	399	269	150	82	350	417	199	66	44	111	46
9	40	342	270	130	72	394	381	160	71	2540	81	62
10	40	428	211	115	66	320	339	137	72	1130	57	66
11	37	405	284	100	78	305	390	121	64	668	46	44
12	34	376	366	90	150	884	394	111	86	367	40	42
13	33	344	483	84	260	766	359	112	100	253	37	34
14	33	314	504	76	220	572	332	96	94	246	43	28
15	32	320	529	72	180	451	299	92	95	1080	53	24
16	59	470	440	68	160	356	266	92	105	746	178	24
17	57	380	369	64	150	313	236	110	97	400	229	22
18	167	333	312	62	135	269	202	180	87	275	111	20
19	127	314	532	58	130	224	179	140	71	201	83	18
20	144	259	846	56	120	213	161	110	92	153	68	17
21	160	216	801	66	200	215	147	90	85	145	61	15
22	177	189	1250	80	300	180	135	72	74	757	51	16
23	381	197	757	90	820	442	124	110	90	415	44	16
24	382	177	542	110	2160	587	119	150	86	256	41	16
25	326	160	677	120	2540	516	126	110	67	192	90	18
26	269	153	487	110	1300	395	119	88	55	321	310	16
27	229	147	404	100	908	334	103	62	50	627	159	17
28	209	387	368	92	666	299	96	92	48	302	101	14
29	380	852	315	84	---	464	91	145	45	219	79	12
30	387	530	348	76	---	2140	83	125	43	169	73	11
31	297	---	343	72	---	2240	---	230	---	148	153	---
TOTAL	4381	11144	14357	3887	11413	15925	11183	5735	2825	12044	3601	1036
MEAN	141	371	463	125	408	514	373	185	94.2	389	116	34.5
MAX	387	1010	1250	314	2540	2240	2090	1090	400	2540	534	101
MIN	32	147	211	56	66	180	83	62	43	43	37	11
CFSM	1.17	3.07	3.83	1.03	3.37	4.25	3.08	1.53	.78	3.21	.96	.29
IN.	1.35	3.43	4.41	1.20	3.51	4.90	3.44	1.76	.87	3.70	1.11	.32

CAL YR 1984 TOTAL 108127 MEAN 295 MAX 3740 MIN 27 CFSM 2.44 IN. 33.24
WTR YR 1985 TOTAL 97531 MEAN 267 MAX 2540 MIN 11 CFSM 2.21 IN. 29.98

MONONGAHELA 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, and 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 National Geodetic Vertical Datum of 1929, unadjusted.

REMARKS.--Records good except for estimated daily discharges, Feb. 8-13, 20-23, which are fair. Flow regulated since 1925 by Deep Creek Reservoir and since 1943 by Youghiogheny River Lake 1 mi upstream. Several observations of water temperature were made during the year. Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--45 years, 2,001 ft³/s, 26.41 in/yr, adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 69,500 ft³/s, Oct. 15, 1954, gage height, 19.92 ft, from rating curve extended above 25,000 ft³/s on basis of slope-area measurement of peak flow; minimum, 40 ft³/s, Oct. 14, 1943, gage height, 0.31 ft; minimum daily, 121 ft³/s, Sept. 27, 1943.

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.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 16,400 ft³/s, Feb. 25, gage height, 9.94 ft; minimum daily, 520 ft³/s, Feb. 10, 11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1110	1600	4050	3080	727	4370	10800	727	2300	691	1830	1150
2	1200	1640	3720	3040	741	3950	6580	843	2100	742	1330	1100
3	1140	1640	3540	2860	744	3710	6360	5940	3290	816	1080	1080
4	1060	1600	3780	2770	731	3410	6180	4080	4460	873	966	1050
5	1030	3560	3340	2780	746	3560	6210	3020	4890	789	861	1030
6	1000	2920	3260	2670	689	3400	5010	2630	4700	822	857	1020
7	990	2340	3050	2610	608	3030	3490	2420	3050	791	833	1000
8	984	2000	2880	2550	560	3140	2680	2240	2310	744	884	1000
9	987	1850	2810	2400	540	3430	2360	1710	2260	6560	1040	1060
10	975	2090	2750	2310	520	3070	2180	1300	2410	5910	1180	880
11	978	2180	3060	2360	520	2930	2240	1220	2510	7960	1140	671
12	967	2210	3660	2280	660	3840	2300	1100	1910	8170	1120	659
13	920	2050	3910	2160	2500	3670	2090	932	1210	7630	1100	789
14	945	1960	4070	1760	2310	3460	1960	859	1380	6860	1090	958
15	944	1920	3950	1020	1800	2550	1990	812	1360	8690	1090	944
16	983	2190	3610	937	1520	1400	2080	825	1570	6680	1420	934
17	1010	2030	3310	916	1340	1260	2200	831	2060	4570	1480	928
18	1220	1880	3150	859	1180	1120	2180	1130	2300	2790	1340	1110
19	1210	1890	3870	857	1050	1590	2090	1140	2230	1860	1310	1250
20	1220	1800	5730	668	920	1970	1780	927	1900	1690	1130	1240
21	1240	1660	5030	608	880	1920	1220	813	1450	1460	1110	1220
22	1210	1530	7040	766	1100	1830	924	767	1360	2180	1090	1220
23	1620	1470	5070	815	4000	3150	761	846	1370	1750	1070	1210
24	1860	1500	4450	814	10600	4270	733	947	1090	1370	1060	1200
25	1830	1510	5700	788	13000	4080	734	655	864	1180	1160	1200
26	1610	1500	4670	761	8620	3190	807	632	808	1170	1270	1190
27	1470	1490	4210	741	5670	2750	856	692	763	2090	884	1170
28	1390	2060	4030	746	4910	2530	819	699	737	1390	783	1160
29	1900	5770	3730	740	---	2870	791	965	719	1170	954	1150
30	2170	3920	3690	724	---	8240	756	941	703	1050	1090	1140
31	1790	---	3360	704	---	9950	---	1090	---	989	1200	---
TOTAL	38963	63760	122480	49074	69186	103640	81161	43733	60064	91437	34752	31713
MEAN	1257	2125	3951	1583	2471	3343	2705	1411	2002	2950	1121	1057
MAX	2170	5770	7040	3080	13000	9950	10800	5940	4890	8690	1830	1250
MIN	920	1470	2750	608	520	1120	733	632	703	691	783	659
†	-567	+116	-165	-445	+1487	+519	+84.7	+228	-220	-2.2	-622	-887
MEAN†	690	2241	3786	1138	3958	3862	2790	1639	1782	2948	499	170
CFSM†	.67	2.18	3.68	1.11	3.85	3.75	2.71	1.59	1.73	2.86	.48	.17
IN.†	.77	2.43	4.24	1.28	4.01	4.32	3.02	1.83	1.93	3.30	.55	.19

CAL YR 1984 TOTAL 890459 MEAN 2433 MAX 19400 MIN 330 ADJ +33.1 MEAN† 2466 CFSM† 2.40 IN.† 32.60
WTR YR 1985 TOTAL 789963 MEAN 2164 MAX 13000 MIN 520 ADJ -49.9 MEAN† 2114 CFSM† 2.05 IN.† 27.87

† 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.

‡ Adjusted for change in reservoir contents.

MONONGAHELA RIVER BASIN

103

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, and at mile 44.0.

DRAINAGE AREA.--1,326 mi².

PERIOD OF RECORD.--July 1908 to current year. Monthly discharge only for 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 National Geodetic Vertical Datum of 1929. 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, Jan. 20 to Feb. 13, and Feb. 18-23, 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 observations of water temperature were made during the year. Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--77 years, 2,573 ft³/s, 26.35 in/yr, adjusted for storage since August 1925.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 103,000 ft³/s, Oct. 16, 1954, gage height, 21.96 ft, from rating curve extended above 55,000 ft³/s; minimum, 11 ft³/s, Sept. 23, 26, 27, 1908, Oct. 18, 1910, gage height, 0.11 ft.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 21,800 ft³/s, Feb. 25, gage height, 10.68 ft; minimum daily, 700 ft³/s, Feb. 11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1260	2380	5360	3930	880	5820	16300	1030	3390	783	3220	1300
2	1420	2620	4880	3820	900	5180	9520	1260	2710	812	2110	1200
3	1330	2640	4440	3580	920	4800	8100	7530	3640	1030	1550	1140
4	1200	2370	4710	3410	920	4370	7750	6120	4940	1300	1300	1110
5	1130	4650	4140	3400	920	4520	7810	4400	5580	1040	1160	1080
6	1090	4790	3990	3240	820	4440	6630	3700	5520	969	1050	1060
7	1060	3810	3700	3140	780	3890	5090	3280	3970	943	1060	1050
8	1060	3130	3430	3080	760	3940	3970	2920	2650	897	1070	1070
9	1070	2760	3320	2890	800	4470	3430	2470	2560	13800	1080	1150
10	1070	2940	3260	2720	760	4020	3140	1680	2590	8090	1320	1240
11	1050	3080	3830	2780	700	3770	3210	1560	2770	9610	1260	768
12	1040	3110	4580	2690	800	6370	3400	1470	2740	9630	1230	740
13	1030	2930	4710	2520	3600	6520	3080	1250	1380	8440	1190	714
14	1020	2760	5000	2510	3280	5040	2870	1130	1600	8220	1180	992
15	1010	2650	4920	1430	2510	4240	2710	1210	1550	13400	1250	991
16	1110	2890	4510	1200	2030	3590	2860	1430	1630	9260	1860	971
17	1210	2930	4140	1330	1890	3210	2810	1340	2110	6310	2220	965
18	1950	2650	3850	1180	1500	2910	2830	2140	2620	4150	1370	992
19	1640	2590	4390	1150	1400	2600	2670	2150	2500	2510	1630	1260
20	1830	2470	7400	880	1250	2460	2480	1620	2490	2160	1260	1250
21	1790	2220	6340	740	1150	2380	1700	1300	1650	2040	1220	1230
22	1810	1990	9600	840	1600	2190	1370	1260	1550	4370	1190	1220
23	2640	1840	6970	1000	6500	3320	1100	1230	1630	3180	1150	1210
24	2820	1830	5700	1000	14200	5480	1160	1450	1460	2120	1200	1220
25	2710	1830	6710	960	19000	5450	1450	1070	1030	1660	1380	1210
26	2360	1800	5890	940	10500	4370	1330	887	952	1710	1570	1240
27	2070	1780	5150	920	7660	3730	1360	962	896	3320	1120	1230
28	1900	2690	4850	920	6490	3380	1250	1060	852	2180	933	1190
29	2590	7910	4530	900	---	3970	1170	1380	822	1690	908	1170
30	3530	5520	4630	880	---	13300	1080	1300	807	1440	1210	1150
31	2820	---	4470	880	---	14900	---	1880	---	1370	1410	---
TOTAL	51620	89560	153400	60860	94520	148630	113630	63469	70589	128434	42661	33113
MEAN	1665	2985	4948	1963	3376	4795	3788	2047	2353	4143	1376	1104
MAX	3530	7910	9600	3930	19000	14900	16300	7530	5580	13800	3220	1300
MIN	1010	1780	3260	740	700	2190	1080	887	807	783	908	714
†	-567	+116	-165	-445	+1487	+519	+84.7	+228	-220	-2.2	-622	-887
Mean†	1098	3101	4783	1518	4863	5314	3873	2275	2133	4141	754	217
CFSM†	.83	2.34	3.61	1.14	3.67	4.01	2.92	1.72	1.61	3.12	.57	.16
IN.†	.96	2.61	4.16	1.31	3.82	4.62	3.26	1.98	1.80	3.60	.66	.18

CAL YR 1984 TOTAL 1129998 MEAN 3087 MAX 27900 MIN 390 ADJ +33.1 MEAN† 3120 CFSM† 2.35 IN.† 32.03
WTR YR 1985 TOTAL 1050486 MEAN 2878 MAX 19000 MIN 700 ADJ -49.9 MEAN† 2828 CFSM† 2.13 IN.† 28.96

† 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.

‡ Adjusted for change in reservoir contents.

MONONGAHELA RIVER BASIN

03083500 YOUGHIOGHENY RIVER AT SUTERSVILLE, PA

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, and at mile 15.2.

DRAINAGE AREA.--1,715 mi².

PERIOD OF RECORD.--October 1920 to current year. Monthly discharge only for some periods, published in WSP 1305.

REVISED RECORD.--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 National Geodetic Vertical Datum of 1929. Prior to June 1, 1939, nonrecording gage at site 500 ft downstream at same datum.

REMARKS.--Records good except for estimated daily discharges, Jan. 20 to Feb. 23, May 31, June 2, June 25 to July 3, July 5-8, 10, 18-21, 23-26, 28-31, Aug. 2-15, 18, 20-25, 27-29, and Sept. 1-30, which are fair. Flow regulated since 1925 by Deep Creek Reservoir and since 1943 by Youghiogheny River Lake, 58 mi upstream and by several smaller reservoirs above station. Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--65 years, 3,030 ft³/s, 24.00 in/yr, adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 108,000 ft³/s, Oct. 16, 1954, gage height, 32.5 ft, from floodmark; minimum observed, 57 ft³/s, Sept. 29, 30, 1922.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 25,200 ft³/s, Apr. 1, gage height, 13.76 ft; minimum daily, 860 ft³/s, Jan. 21, Feb. 11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1300	2800	6320	4900	1050	6350	22600	1310	3310	980	3710	1600
2	1570	2840	5880	4590	1100	5590	13100	1880	2500	1050	2600	1500
3	1500	3260	5120	4280	1100	5110	9580	7130	3250	1200	2000	1400
4	1350	2820	5380	4020	1100	4710	9320	7950	4680	1890	1600	1300
5	1250	4680	4840	3980	1050	4690	8480	5210	5540	1350	1400	1300
6	1190	5930	4550	3830	960	4800	7700	4270	5590	1250	1300	1250
7	1160	4550	4310	3660	920	4220	6060	3840	4620	1150	1250	1200
8	1160	3670	3920	3610	880	4080	4980	3420	2990	1100	1250	1200
9	1190	3200	3820	3390	940	4640	4340	3100	2810	16200	1250	1250
10	1180	3440	3750	3130	880	4350	4040	2270	2710	9000	1400	1600
11	1150	3640	4350	3150	860	4040	3990	1950	2940	11400	1450	1000
12	1130	3620	5140	3090	1000	5740	4100	1890	3080	10900	1400	940
13	1120	3430	5260	2970	4600	7740	3870	1740	2060	9620	1350	880
14	1110	3220	5780	2980	4200	5750	3620	1480	1730	9110	1300	1000
15	1100	3060	5920	2210	3200	4860	3420	1360	1780	14100	1500	1200
16	1180	3250	5430	1450	2300	4130	3440	1920	1740	11300	2590	1200
17	1270	3370	4920	1550	2000	3690	3340	1740	2130	7900	3660	1200
18	1980	3030	4510	1610	1800	3410	3360	2260	2670	4700	1600	1200
19	1950	3050	4460	1490	1600	3090	3170	2760	2760	3000	2300	1400
20	1910	2940	8250	1200	1500	2900	3010	2260	3050	2600	1700	1500
21	2090	2610	7240	860	1350	2830	2430	1800	2500	2400	1400	1500
22	2040	2380	12200	1000	2800	2630	1940	1610	2190	5590	1350	1500
23	2890	2180	9250	1200	6800	3070	1580	1540	2400	3700	1300	1500
24	3190	2140	6870	1150	15300	5470	1470	1740	2300	2400	1300	1500
25	3140	2120	7240	1150	22100	5880	1760	1570	1350	2000	2000	1500
26	2800	2090	7070	1100	13100	5020	1880	1160	1200	1900	2830	1500
27	2430	2060	5920	1100	8640	4200	1700	1100	1100	4250	1400	1900
28	2180	2390	5570	1100	7210	3840	1620	1530	1050	2800	1200	1600
29	2470	8770	5230	1050	---	4880	1500	2120	1000	2200	1050	1400
30	4060	7070	5550	1050	---	14500	1390	1780	980	1800	1560	1400
31	3390	---	5650	1050	---	19300	---	1700	---	1600	2040	---
TOTAL	57430	103610	179700	72900	110340	165510	142790	77390	78010	150440	54040	40420
MEAN	1853	3454	5797	2352	3941	5339	4760	2496	2600	4853	1743	1347
MAX	4060	8770	12200	4900	22100	19300	22600	7950	5590	16200	3710	1900
MIN	1100	2060	3750	860	860	2630	1390	1100	980	980	1050	880
†	-567	+116	-165	-445	+1487	+519	+84.7	+228	-220	-2.2	-622	-887
MEAN‡	1286	3570	5632	1907	5428	5858	4845	2724	2380	4851	1121	460
CFSM‡	.75	2.08	3.28	1.11	3.17	3.42	2.83	1.59	1.39	2.83	.65	.27
IN.‡	.86	2.32	3.78	1.28	3.30	3.94	3.16	1.83	1.55	3.26	.75	.30

CAL YR 1984 TOTAL 1341136 MEAN 3664 MAX 33200 MIN 500 ADJ + 33.1 MEAN‡ 3697 CFSM‡ 2.16 IN.‡ 29.34
WTR YR 1985 TOTAL 1232580 MEAN 3377 MAX 22600 MIN 860 ADJ - 49.9 MEAN‡ 3320 CFSM‡ 1.94 IN.‡ 26.33

† 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.

‡ Adjusted for change in contents.

MONONGAHELA RIVER BASIN
03084000 ABERS CREEK NEAR MURRYSVILLE, PA

LOCATION.--Lat 40°27'10", long 79°42'46", Allegheny County, Hydrologic Unit 05020005, on upstream side of highway bridge on State Highway 286, 2,700 ft upstream from Piersons Run, 2 mi northwest of Murrysville, and 5 mi northwest of Export.

DRAINAGE AREA.--4.39 mi².

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

GAGE.--Nonrecording gage. Datum of gage is 936.73 ft above National Geodetic Vertical Datum of 1929 (Pennsylvania Department of Transportation bench mark). Prior to Oct. 1, 1950, water-stage recorder at same site at different datum. Oct. 1, 1950 to Apr. 26, 1984, water-stage recorder at site 800 ft downstream at same datum.

REMARKS.--Estimated daily discharges: Jan. 1 to Mar. 1 and Apr. 1 to May 15. Records poor. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--37 years, 5.38 ft³/s, 16.64 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,600 ft³/s, July 5, 1950, gage height, 7.72 ft, from flood-marks, from rating curve extended above 910 ft³/s on basis of contracted-opening measurement of peak flow; maximum gage height, 11.65 ft, Mar. 29, 1985; no flow at times during some years.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than 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)
Mar. 29	0430	*500	a*11.65	July 9	0430	498	11.64
May 27	2330	232	10.25	Aug. 25	0800	240	10.30
June 3	1700	380	11.05				

(a) From graph based on gage readings.

Minimum daily discharge, 0.11 ft³/s Sept. 22.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18	4.5	6.8	9.6	2.0	4.6	35	3.0	8.6	.77	.69	.25
2	15	4.5	7.3	7.4	2.0	3.6	23	7.0	2.7	.69	.49	.25
3	13	4.1	11	6.0	2.0	4.0	15	20	95	1.1	.44	.28
4	5.3	7.8	10	5.0	2.0	3.3	11	12	8.6	1.1	.39	.22
5	4.1	29	9.5	4.5	2.0	2.4	9.4	7.0	10	.93	.39	.19
6	3.7	12	12	4.2	2.0	2.0	8.4	4.6	4.8	1.2	.35	.17
7	3.7	6.3	16	3.9	2.0	1.8	7.4	3.7	3.6	1.1	.44	.22
8	14	5.8	15	3.6	2.0	4.0	8.2	3.0	2.7	.19	.31	.49
9	9.5	8.3	7.8	3.4	2.0	1.8	9.2	2.6	2.4	130	.25	.44
10	5.8	23	7.8	3.2	2.0	1.8	10	2.4	1.6	33	.22	.25
11	4.5	15	15	3.1	2.0	1.2	12	2.1	1.2	6.6	.28	.25
12	4.1	7.3	15	2.9	8.0	1.4	10	1.9	2.7	2.7	.25	.19
13	3.1	6.3	13	2.8	24	2.0	9.0	1.7	3.0	1.6	.28	.17
14	7.3	5.3	19	2.7	15	6.6	7.6	1.5	1.6	1.4	.35	.17
15	6.8	4.5	15	2.6	13	5.4	6.8	1.4	1.6	1.2	.39	.17
16	8.9	3.7	12	2.6	11	4.4	5.8	1.4	1.4	1.1	1.0	.15
17	7.8	4.1	8.3	2.5	9.6	4.0	5.0	2.2	2.2	.85	.44	.17
18	9.5	4.9	11	2.5	8.2	3.6	4.7	1.8	1.1	.85	.39	.15
19	6.3	6.8	12	2.4	7.6	2.7	4.1	1.2	1.1	1.0	.35	.13
20	4.5	5.3	18	2.4	6.8	1.6	3.6	1.1	.93	.55	.39	.13
21	8.3	4.1	29	2.3	10	2.0	3.4	.85	.85	.69	.35	.13
22	23	3.4	24	2.3	16	1.8	3.2	.77	.77	1.0	.28	.11
23	6.3	2.9	14	2.2	38	5.4	2.9	.85	1.1	1.0	.25	.15
24	6.8	2.5	11	2.2	20	6.0	2.7	.69	1.2	.93	.22	2.7
25	4.9	3.7	8.3	2.2	13	4.4	2.5	.69	.62	.77	30	.39
26	4.1	3.1	7.8	2.2	10	3.0	2.3	.62	.44	6.0	.93	1.0
27	3.4	3.4	7.3	2.1	7.6	2.2	2.2	22	.44	1.1	.85	.69
28	5.3	8.3	6.8	2.1	6.0	7.9	2.1	66	.44	.77	.77	.35
29	20	11	12	2.1	---	126	1.9	6.0	.55	.85	.62	.25
30	5.3	8.9	28	2.1	---	38	1.8	7.2	.85	.77	24	.25
31	4.5	---	14	2.0	---	48	---	67	---	.85	.35	---
TOTAL	246.8	219.8	403.7	101.1	245.8	306.9	230.2	254.27	164.09	221.47	66.71	10.46
MEAN	7.96	7.33	13.0	3.26	8.78	9.90	7.67	8.20	5.47	7.14	2.15	.35
MAX	23	29	29	9.6	38	126	35	67	95	130	30	2.7
MIN	3.1	2.5	6.8	2.0	2.0	1.2	1.8	.62	.44	.55	.22	.11
CFSM	1.81	1.67	2.96	.74	2.00	2.26	1.75	1.87	1.25	1.63	.49	.08
IN.	2.09	1.86	3.42	.86	2.08	2.60	1.95	2.15	1.39	1.88	.57	.09

CAL YR 1984 TOTAL 2517.76 MEAN 6.88 MAX 56 MIN .60 CFSM 1.57 IN. 21.34
WTR YR 1985 TOTAL 2471.30 MEAN 6.77 MAX 130 MIN .11 CFSM 1.54 IN. 20.94

MONONGAHELA RIVER BASIN

03085000 MONONGAHELA RIVER AT BRADDOCK, PA
(National stream quality accounting network)

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 from confluence with Allegheny River. Water-quality sampling site at Rankin Bridge, 1.7 mi downstream.

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 707.16 ft above National Geodetic Vertical Datum of 1929. Prior to Aug. 13, 1951, at site 700 ft upstream at same datum.

REMARKS.--Records good except for estimated daily discharges, Jan. 21, 22, 26, and Jan. 28 to Feb. 17, which are fair. Flow regulated by locks and hydroelectric plants, since 1938 by Tygart Lake, since 1926 by Lake Lynn, since 1925 by Deep Creek Reservoir, and since 1943 by Youghiogheny River Lake, combined capacity, 704,300 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.

AVERAGE DISCHARGE.--47 years, 12,480 ft³/s, 23.10 in/yr, adjusted for storage and diversion 1938-75.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 201,000 ft³/s, June 5, 1941, gage height, 31.20 ft; maximum gage height, 31.39 ft, June 24, 1972 (backwater from Allegheny River); minimum discharge, 559 ft³/s, Sept. 20, 22, 23, 1946; minimum daily, 703 ft³/s, Sept. 3, 4, 22, 1946; minimum gage height, 12.01 ft, Oct. 7-13, 1943.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 18, 1936, reached a stage of 38.8 ft from floodmarks, discharge, 210,000 ft³/s.

EXTREMES FOR CURRENT YEAR.--Maximum discharge 74,500 ft³/s, June 1, gage height, 20.50 ft; minimum, 1,480 ft³/s, Sept. 16, gage height, 12.13 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3350	12600	27200	16800	7040	30000	69800	4630	57100	2570	5090	3230
2	5390	13300	23000	14700	21000	26100	49200	7160	23400	2680	7080	2650
3	5200	15000	18500	14800	18000	21500	33700	21000	16000	3640	7040	3120
4	4740	14100	17700	13900	15000	19700	28800	40700	17700	5890	4640	3490
5	4020	18100	17200	13400	16500	19500	26400	27300	16100	5680	3150	2590
6	2930	26000	15800	13700	17000	15500	23000	20000	16800	4220	3690	2480
7	2860	19600	15100	13800	16000	15300	17200	13600	15400	4130	3810	2480
8	2700	16500	12200	13100	15000	14100	14400	10100	10700	4540	3230	2170
9	3160	13300	11700	13600	13000	16900	14200	8020	11900	20600	3170	2590
10	3070	12600	11000	13100	10000	15700	12300	6880	12000	41700	3470	2820
11	3070	14800	16900	11500	9400	14000	12600	6220	12400	39800	3430	2800
12	3300	12600	24200	10100	11000	26800	12800	4870	13700	28200	3080	1940
13	2480	12700	20000	7570	15000	49200	10900	4690	18500	18400	2600	2200
14	2550	11300	18700	7200	18500	34100	11600	3920	13800	13000	3260	1720
15	2510	9470	17700	6870	17000	28100	11500	5020	12700	22300	3770	1860
16	3280	9040	15900	5940	11000	23900	10700	5640	10000	21600	3740	1870
17	3180	8140	14300	6220	9400	18100	12500	6090	9470	17500	4810	2020
18	3630	8150	13400	5140	9230	16300	12800	6020	8420	12800	4060	2300
19	4670	11000	13200	5360	9540	12600	10900	6960	7220	9480	3490	2540
20	3530	18700	25400	4160	11300	11500	8100	7870	6990	5650	3480	2250
21	4760	19200	27700	3800	13600	9980	6670	7120	6710	4140	3160	2220
22	4940	17100	41400	5400	18400	10100	6450	6640	5660	7700	3560	2250
23	7770	14700	35100	5620	34300	8620	6590	7490	5330	7830	3410	2120
24	11000	12300	26700	6110	44900	16800	6310	15200	5310	6670	2460	2220
25	13600	9210	28100	4740	60900	22500	5900	21300	4260	5590	4130	3250
26	12700	6950	30900	4200	50700	21700	6600	18700	3870	4710	5440	2500
27	10500	8630	29600	4340	38200	17100	6450	13900	3960	5770	4100	3830
28	9510	9730	26700	6400	33600	15900	3890	11600	2750	7280	3240	2940
29	14400	33500	21000	5260	---	16400	4130	10100	3260	5410	2500	2290
30	23800	33400	21600	5800	---	42300	5440	8230	1990	4600	2880	2070
31	14900	---	19700	5270	---	65300	---	26500	---	4330	2750	---
TOTAL	197500	441720	657600	267900	564510	675600	461830	363470	353400	348410	117720	74810
MEAN	6371	14720	21210	8642	20160	21790	15390	11720	11780	11240	3797	2494
MAX	23800	33500	41400	16800	60900	65300	69800	40700	57100	41700	7080	3830
MIN	2480	6950	11000	3800	7040	8620	3890	3920	1990	2570	2460	1720

CAL YR 1984 TOTAL 5035280 MEAN 13760 MAX 69800 MIN 2170

WTR YR 1985 TOTAL 4524470 MEAN 12400 MAX 69800 MIN 1720

MONONGAHELA RIVER BASIN

107

03085000 MONONGAHELA RIVER AT BRADDOCK, PA--Continued

WATER-QUALITY RECORDS

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUC- TANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	ALKA- LINITY FIELD (MG/L AS CACO3)	TUR- BID- ITY (NTU)	BARO- METRIC PRES- SURE (MM OF HG)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	
NOV 27...	1130	8920	300	6.9	6.5	20	3.0	746	12.4	600	110	
MAR 12...	1000	22500	240	7.1	7.5	14	7.0	733	8.6	2300	580	
JUN 12...	0930	13000	240	6.7	21.5	17	5.0	734	8.4	1300	120	
SEP 24...	1115	2150	460	7.9	23.5	30	--	745	6.9	16000	1600	
DATE		CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)
NOV 27...	28		7.2	13	1.6	84	11	.10	5.0	173	.82	.210
MAR 12...	21		5.5	12	1.1	64	13	<.10	4.5	132	.96	.160
JUN 12...	24		6.1	12	1.3	75	7.6	<.10	5.2	165	.93	.130
SEP 24...	--	--	--	--	--	--	--	--	--	--	.74	.150
DATE		NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS TOTAL (MG/L AS PO4)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)	SEDI- MENT, SUS- PENDE (MG/L)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE)
NOV 27...		.30	.030	--	.010	.020	--	--	20	<1	42	<.0
MAR 12...		.60	.070	--	.020	<.010	37	78	10	<1	42	<.5
JUN 12...		.20	.020	.06	<.010	<.010	4	88	40	<1	47	.6
SEP 24...		.70	.050	.15	.040	<.010	15	88	--	--	--	--
DATE		CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)	LITHIUM DIS- SOLVED (UG/L AS LI)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	MOLBY- DENUM, DIS- SOLVED (UG/L AS MO)	NICKEL, DIS- SOLVED (UG/L AS NI)
NOV 27...	<1	<1	<3	<1	9	2	9	210	.1	<10		6
MAR 12...	<1	1	<3	26	11	<1	<4	220	<.1	<10		8
JUN 12...	1	<1	<3	<1	24	<1	13	170	<.1	<10		6
SEP 24...	--	--	--	--	--	--	--	--	--	--	--	--
DATE					SELE- NIUM, DIS- SOLVED (UG/L AS SE)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)	VANA- DIUM, DIS- SOLVED (UG/L AS V)	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, DIS- SOLVED (UG/L AS ZN)			
NOV 27...					<1	150	<6	<1	41			
MAR 12...					<1	130	<6	<1	28			
JUN 12...					<1	140	<6	<1	16			
SEP 24...					--	--	--	--	--			

CHARTIERS CREEK BASIN

03085217 CHARTIERS CREEK AT LAGONDA, PA

LOCATION.--Lat 40°07'19", long 80°17'25", Washington County, Hydrologic Unit 05030101, on left bank, at downstream side of concrete bridge abutment, on Legislative Route 62126, 300 ft west of state highway 18, and 3.2 mi south of Washington, Pa.

DRAINAGE AREA.--3.97 m².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--November 1982 to September 1985 (discontinued).

GAGE.--Water-stage recorder. Elevation of gage is 1,070 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good except for estimated daily discharges, Dec. 6-9, 27-29, Jan. 10 to Feb. 22, and May 9-22, which are fair.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 563 ft³/s, May 28, 1984, gage height, 5.53 ft; minimum, 0.10 ft³/s, Sept. 19, 20, 29, 30, 1985, gage height, 0.90 ft.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than 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)
May 31	0530	*465	*5.14	No other peak greater than base discharge.			

Minimum discharge, 0.10 ft³/s, Sept. 19, 20, 29, 30, gage height, 0.90 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.1	.73	2.9	5.0	2.4	4.8	25	2.0	5.6	.62	1.1	.42
2	.69	1.3	1.9	4.3	3.3	4.5	12	17	2.4	.87	.49	.44
3	.62	.83	1.9	3.8	2.9	4.1	10	10	.72	.36	.46	.46
4	.62	3.8	1.5	3.8	2.3	4.2	8.6	4.2	6.3	.85	.33	.43
5	.50	4.5	1.4	3.5	2.7	4.9	7.4	3.2	4.2	.84	.33	.43
6	.45	1.9	1.3	3.1	3.4	3.9	6.7	2.8	3.2	1.3	.31	.43
7	.50	1.4	1.2	3.2	2.6	3.3	7.6	2.7	2.5	.96	.30	.45
8	.81	1.1	1.1	3.0	2.2	4.5	8.4	2.3	2.2	15	.32	.41
9	.75	1.7	1.4	2.7	2.3	4.1	8.1	1.9	2.0	1.9	.28	.40
10	.59	4.7	5.2	2.4	2.4	3.7	7.1	1.7	1.7	2.6	.25	.40
11	.60	4.7	7.6	2.2	3.4	3.4	6.6	1.5	1.4	1.5	.25	.35
12	.63	3.0	4.8	2.0	5.0	8.9	5.9	1.4	1.7	1.3	.23	.33
13	.62	1.9	4.2	1.8	8.6	5.1	5.4	1.3	1.6	1.1	.24	.36
14	.64	1.7	6.5	1.7	5.6	4.2	5.0	1.2	1.6	1.1	.28	.44
15	.68	1.6	5.3	1.6	4.4	3.6	4.6	1.5	1.5	3.7	.98	.45
16	1.0	1.6	4.0	1.5	4.0	3.2	4.4	2.0	1.5	1.4	1.2	.49
17	.81	1.3	3.3	1.4	3.6	3.0	3.7	1.5	1.3	.94	.45	.75
18	.83	1.5	3.4	1.4	3.2	2.7	3.4	2.0	1.3	.80	.30	1.9
19	.61	2.4	4.8	1.3	3.2	2.3	3.2	1.6	1.1	.78	.26	1.4
20	.58	2.7	4.3	1.2	3.6	2.9	2.7	1.3	1.0	.84	.25	.12
21	.72	4.5	11	1.2	4.7	2.4	2.8	.96	.95	1.2	.25	.15
22	5.2	4.2	12	1.2	24	2.6	2.6	1.1	2.4	1.7	.22	.19
23	2.2	4.2	6.3	1.7	26	3.2	2.2	1.3	7.3	.75	.21	.25
24	1.1	4.0	5.6	2.1	13	3.4	3.0	1.2	1.9	.67	.70	.33
25	.79	3.3	5.1	1.9	8.0	2.9	2.8	1.1	1.4	.76	14	.17
26	.76	2.7	4.1	1.8	6.3	2.4	2.4	1.0	1.2	1.7	1.4	.26
27	.72	.74	3.6	1.7	5.7	2.5	2.2	1.2	1.1	1.1	.75	.52
28	.78	1.8	3.3	1.6	5.0	2.8	2.1	5.8	.99	.70	.51	1.0
29	1.6	1.5	3.0	1.5	---	4.3	2.0	2.2	1.1	.60	.43	.53
30	.98	1.9	6.7	1.5	---	64	1.9	1.5	.84	.57	.52	.13
31	.78	---	5.3	2.0	---	54	---	81	---	.71	.51	---
TOTAL	30.26	73.20	134.0	69.1	163.8	225.8	169.8	161.46	73.28	49.58	28.01	14.39
MEAN	.98	2.44	4.32	2.23	5.85	7.28	5.66	5.21	2.44	1.60	.90	.48
MAX	5.2	4.7	12	5.0	26	64	25	81	10	15	14	1.9
MIN	.45	.73	1.1	1.2	2.2	2.3	1.9	.96	.84	.57	.21	.12
CFSM	.25	.61	1.09	.56	1.47	1.83	1.43	1.31	.61	.40	.23	.12
IN.	.28	.69	1.26	.65	1.53	2.12	1.59	1.51	.69	.46	.26	.13

CAL YR 1984 TOTAL 1588.89 MEAN 4.34 MAX 84 MIN .17 CFSM 1.09 IN. 14.89
WTR YR 1985 TOTAL 1192.68 MEAN 3.27 MAX 81 MIN .12 CFSM .82 IN. 11.18

CHARTIERS CREEK BASIN

109

03085217 CHARTIERS CREEK AT LAGONDA, PA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1982 to September 1985 (discontinued).

WATER-QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUC- TANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	ACIDITY (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
FEB 01...	1045	2.4	451	8.0	.0	200	--	64	8.6	23	1.8
AUG 22...	0840	.20	630	7.7	18.0	220	9.9	70	11	40	4.3

DATE	ALKA- LINITY FIELD (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)
FEB 01...	140	47	38	.10	7.0	284	620	35	200	170
AUG 22...	200	41	51	.20	7.7	374	830	26	340	260

CHARTIERS CREEK BASIN

03085219 UNNAMED TRIBUTARY NO.2b TO CHARTIERS CREEK AT LAGONDA, PA

LOCATION.--Lat 40°07'23", long 80°15'41", Washington County, Hydrologic Unit 05030101, on left bank of left arm inflow to Reservoir No. 4, about 300 ft upstream of culvert under Legislative Route 62067, about 1.0 mi upstream of reservoir spillway, and 1.3 mi east of Lagonda.

DRAINAGE AREA.--0.37 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1984 to September 1985 (discontinued).

GAGE.--Water-stage recorder and V-notch wooden weir. Elevation of gage is 1,100 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Dec. 5-9, 28, 29, Jan. 15-29, Feb. 2-5, 7-12, 15-21, May 9-29, June 13-18, and Aug. 26 to Sept. 30. Records fair.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 33 ft³/s, July 10, 1984, gage height, 0.85 ft; minimum daily, 0.02 ft³/s, Aug. 22, 23, 1985

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 6.0 ft³/s, Mar. 31; minimum daily, 0.02 ft³/s, Aug. 22, 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.19	.06	.24	.34	.17	.41	2.7	.23	.95	.06	.16	.05
2	.09	.14	.20	.31	.14	.40	1.3	1.8	.58	.09	.17	.06
3	.06	.08	.18	.27	.12	.40	1.6	1.5	.88	.11	.05	.06
4	.06	.25	.16	.27	.10	.40	1.6	.59	.74	.07	.05	.05
5	.04	.38	.14	.26	.12	.44	1.1	.42	.54	.08	.04	.04
6	.04	.21	.13	.23	.13	.37	1.1	.36	.44	.15	.05	.05
7	.04	.17	.12	.23	.11	.35	1.5	.31	.38	.11	.06	.06
8	.06	.14	.11	.22	.09	.38	1.5	.26	.33	.59	.05	.05
9	.07	.19	.12	.20	.09	.33	1.9	.27	.29	.21	.04	.04
10	.06	.38	.34	.19	.08	.32	1.6	.23	.21	.29	.04	.05
11	.04	.36	.53	.20	.08	.36	1.6	.22	.18	.19	.04	.04
12	.05	.25	.39	.17	.14	.60	1.2	.20	.17	.14	.04	.04
13	.04	.19	.33	.15	.31	.47	.91	.19	.15	.09	.03	.05
14	.05	.16	.46	.13	.26	.44	.93	.17	.13	.09	.04	.05
15	.06	.14	.43	.12	.23	.39	.73	.22	.12	.37	.06	.05
16	.10	.13	.36	.12	.20	.38	.95	.28	.11	.12	.05	.08
17	.08	.13	.30	.11	.18	.36	.89	.22	.09	.07	.05	.14
18	.08	.11	.26	.11	.18	.35	.69	.24	.08	.06	.03	.22
19	.07	.18	.32	.10	.23	.33	.57	.17	.09	.06	.03	.07
20	.05	.18	.29	.10	.33	.35	.52	.14	.20	.09	.03	.04
21	.06	.15	.70	.10	.50	.31	.44	.12	.16	.15	.03	.03
22	.30	.14	.67	.10	2.2	.31	.43	.11	.34	.18	.02	.03
23	.20	.12	.41	.13	3.2	.37	.41	.13	.46	.13	.02	.03
24	.11	.12	.36	.17	1.4	.37	.42	.09	.18	.10	.06	.04
25	.08	.11	.33	.14	.66	.36	.37	.08	.13	.10	.48	.03
26	.07	.09	.28	.12	.54	.35	.33	.07	.15	.23	.14	.04
27	.07	.09	.26	.12	.47	.33	.33	.06	.09	.28	.10	.05
28	.09	.15	.23	.11	.45	.34	.28	2.0	.10	.14	.08	.10
29	.13	.17	.21	.12	---	.44	.24	.53	.08	.13	.06	.06
30	.09	.16	.40	.13	---	3.9	.21	.27	.07	.12	.08	.03
31	.06	---	.35	.15	---	6.0	---	4.8	---	.15	.06	---
TOTAL	2.59	5.13	9.61	5.22	12.71	20.91	28.35	16.28	8.42	4.75	2.24	1.73
MEAN	.08	.17	.31	.17	.45	.67	.94	.53	.28	.15	.07	.06
MAX	.30	.38	.70	.34	3.2	6.0	2.7	4.8	.95	.59	.48	.22
MIN	.04	.06	.11	.10	.08	.31	.21	.06	.07	.06	.02	.03
CFSM	.23	.46	.84	.46	1.22	1.81	2.54	1.43	.76	.41	.19	.16
IN.	.26	.52	.97	.52	1.28	2.10	2.85	1.64	.85	.48	.23	.17

WTR YR 1985 TOTAL 117.94 MEAN .32 MAX 6.0 MIN .02 CFSM .86 IN. 11.86

CHARTIERS CREEK BASIN

111

03085219 UNNAMED TRIBUTARY NO. 2b TO CHARTIERS CREEK AT LAGONDA, PA.--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1982 to September 1985 (discontinued).

WATER-QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUC- TANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	ACIDITY (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
FEB 01...	1200	.18	423	8.0	.0	210	--	73	7.3	9.6	1.2

DATE	ALKA- LINITY FIELD (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)
FEB 01...	160	49	14	.20	6.5	330	200	8	110	89

CHARTIERS CREEK BASIN

03085221 UNNAMED TRIBUTARY NO. 1 TO CHARTIERS CREEK AT LAGONDA, PA

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1982 to September 1985 (discontinued).

WATER-QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUC- TANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	ACIDITY (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
DEC 27...	1410	.15	530	7.7	21.0	230	--	79	7.0	14	2.4
FEB 01...	1200	.35	489	7.9	.0	220	--	75	6.9	23	1.5
AUG 22...	1000	.06	560	8.0	17.0	260	9.9	90	8.3	19	2.8

DATE	ALKA- LINITY FIELD (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)
DEC 27...	200	46	.00	.20	9.6	297	700	15	130	110
FEB 01...	160	49	39	.20	7.8	313	490	150	240	190
AUG 22...	230	37	28	.20	9.6	361	660	12	160	130

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 National Geodetic Vertical Datum of 1929. 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 National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except for estimated daily discharges, Dec. 6-9, Jan. 13 to Feb. 11, and Feb. 17-21, which are fair. Some regulations at low flow by mine drainage, reservoirs, and industrial usage above station. Several observations of water temperature were made during the year. Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--59 years, 291 ft³/s, 15.38 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,500 ft³/s, Aug. 6, 1956, gage height, 16.37 ft site and datum then in use; minimum observed, 16 ft³/s, Aug. 9, 1926, and at times in Sept. 1932.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Sept. 2, 1912 reached a discharge of 20,000 ft³/s, from Corps of Engineers.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than 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. 31	0730	3300	5.30	May 31	0930	*3740	*5.74
May 2	2200	2920	4.92				

Minimum discharge, 58 ft³/s, Sept. 16, 17, 26, 28, 29, 30, gage height, 1.08 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	180	94	210	373	110	348	1510	170	925	92	76	92
2	123	114	176	328	105	318	905	1270	449	103	73	80
3	80	104	169	280	105	277	752	1660	395	149	71	77
4	70	270	155	264	105	276	636	618	470	123	70	74
5	66	543	134	271	105	364	561	430	322	120	71	73
6	65	257	115	231	100	264	479	373	253	218	70	71
7	66	168	105	223	100	241	497	359	214	160	68	70
8	92	136	96	218	100	349	614	291	201	194	69	69
9	111	156	92	183	100	308	596	254	195	155	67	69
10	83	556	187	183	100	264	579	230	177	462	65	67
11	73	520	507	187	100	268	645	213	165	225	64	64
12	70	341	428	170	262	646	548	201	235	129	61	63
13	71	232	368	160	467	521	482	192	195	107	61	61
14	72	189	433	150	289	415	459	180	163	99	68	62
15	70	178	463	150	233	352	424	173	157	461	497	62
16	113	184	352	140	203	309	428	197	163	227	347	60
17	121	148	292	140	180	291	376	195	180	140	116	62
18	137	143	251	135	170	259	331	226	156	110	87	64
19	86	159	365	130	160	237	309	185	139	98	76	66
20	83	144	404	130	150	248	283	155	132	92	71	67
21	88	133	508	125	270	250	262	142	125	95	70	67
22	365	125	966	125	934	214	244	137	145	227	67	66
23	321	120	496	120	1790	271	231	131	399	112	66	64
24	142	117	382	120	1330	294	264	131	189	91	100	77
25	105	109	348	120	816	277	291	123	133	84	610	69
26	100	106	260	115	569	231	215	117	114	234	300	61
27	90	108	250	115	462	220	196	127	106	182	124	69
28	87	173	247	110	381	234	189	657	101	103	95	62
29	234	184	233	110	---	679	178	322	98	86	84	61
30	153	149	570	110	---	1040	170	172	93	81	134	60
31	108	---	445	110	---	2520	---	2310	---	79	136	---
TOTAL	3625	5960	10007	5326	9796	12785	13654	11941	6789	4838	3934	2029
MEAN	117	199	323	172	350	412	455	385	226	156	127	67.6
MAX	365	556	966	373	1790	2520	1510	2310	925	462	610	92
MIN	65	94	92	110	100	214	170	117	93	79	61	60
CFSM	.46	.77	1.26	.67	1.36	1.60	1.77	1.50	.88	.61	.49	.26
IN.	.52	.86	1.45	.77	1.42	1.85	1.98	1.73	.98	.70	.57	.29

CAL YR 1984 TOTAL 112702 MEAN 308 MAX 3200 MIN 52 CFSM 1.20 IN. 16.31
WTR YR 1985 TOTAL 90684 MEAN 248 MAX 2520 MIN 60 CFSM .96 IN. 13.13

OHIO RIVER MAIN STEM

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 690.41 ft above National Geodetic Vertical Datum of 1929. Prior to Nov. 22, 1933 nonrecording gage, Nov. 22, 1933 to May 1981 waterstage recorder at site 1.5 mi upstream, at same datum.

REMARKS.--Records good except for estimated daily discharges, Oct. 1-3, 5-21, Nov. 4, 5, 26, Dec. 1, 4, 8, 12, 13, 22, 26, 28-30, Jan. 13, 22-25, Feb. 2-25, Mar. 18, 19, 21, 23-26, Apr. 1, 21, 22, 24, Apr. 26 to May 1, May 9-24, 27, 29-31, June 8-11, 14-27, 29, and July 1 to Sept. 30, 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 and Deep Creek Reservoir and 15 smaller reservoirs, 2,773,000 acre-ft. Several observations of water temperature were made during the year. Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--52 years, 32,920 ft³/s, 22.93 in/yr, adjusted for storage May 1938 to September 1975.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 574,000 ft³/s, Mar. 18, 1936, gage height, 34.75 ft, from flood-mark in gage house; minimum, 1,800 ft³/s, Sept. 4, 1957, gage height, 2.60 ft.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 163,000 ft³/s, Feb. 25, gage height, 10.85 ft; minimum daily, 5,980 ft³/s, Aug. 5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8070	28800	50400	72400	16400	104000	137000	12100	79300	8880	9660	9290
2	10600	28200	48100	65700	33300	94300	118000	17700	39800	9200	11500	8580
3	11300	28100	44800	65600	29300	84900	107000	37000	34700	9930	10600	8500
4	12000	31500	44000	59300	25400	76400	101000	60000	32300	10600	7740	8450
5	10900	39200	43800	51800	27400	74400	93800	44300	28700	9910	5980	7180
6	9510	55900	41900	51100	28800	79900	85800	38000	28200	9710	6540	6600
7	8740	48800	38900	47900	27900	72900	76400	29400	25000	10500	6770	6750
8	8370	43200	37300	42900	26800	67200	69500	23200	17600	14000	7520	6180
9	9190	37700	30400	40000	24600	81700	65200	16500	18200	32900	10900	6450
10	9040	42500	29800	35100	20300	76900	56200	15100	17800	60000	10700	7510
11	8900	66800	38700	31000	20300	65900	50800	14100	18200	55900	9130	11200
12	8700	67100	46600	28400	23000	86600	49200	12000	20700	42300	7420	11400
13	7850	58900	47400	24400	28700	136000	42200	11400	28200	31100	7290	11800
14	7380	51400	54400	24200	35600	115000	39900	11100	23000	24400	7700	11400
15	6760	45800	59200	24300	36100	98800	38300	12200	23100	33600	8130	10500
16	7490	42900	57600	20300	30000	85700	36200	12300	20000	33400	9530	9160
17	7840	40700	51400	19900	27600	73300	36000	13200	18800	34800	11600	8400
18	8230	38100	46200	19000	26200	64000	34700	13200	18100	27900	11100	7940
19	8620	37200	43800	19500	26400	54900	30500	13900	18300	22300	9910	7740
20	7880	41000	54800	16400	27300	49500	28000	15300	17300	16800	9940	7140
21	9740	40500	60700	10100	31000	44800	23700	14100	16200	13200	9090	6970
22	11000	38200	80200	10600	37900	41100	22900	12800	16500	16100	9330	6810
23	14200	32600	78700	10900	74700	35500	22700	13900	16200	15600	8830	6440
24	18000	29500	70200	17800	127000	45700	18500	22000	18500	14200	7620	7190
25	20900	25100	67500	12500	161000	52500	17300	27900	16400	12300	9740	8750
26	20000	20300	65400	13100	141000	51700	17600	24700	13000	10500	11000	8340
27	17000	21500	63100	13200	117000	55400	16200	21700	11200	10700	9520	10600
28	17500	20000	58500	14600	112000	51600	12000	23500	10300	12700	8060	9820
29	23700	46400	67900	13900	---	85200	11500	23000	11000	10100	6860	8960
30	39000	53300	90100	14200	---	114000	13300	21200	9380	9700	6730	8140
31	32500	---	89900	14400	---	126000	---	43300	---	9080	8100	---
TOTAL	400910	1201200	1701700	904500	1343000	2345800	1471400	670100	665980	632310	274540	254190
MEAN	12930	40040	54890	29180	47960	75670	49050	21620	22200	20400	8856	8473
MAX	39000	67100	90100	72400	161000	136000	137000	60000	79300	60000	11600	11800
MIN	6760	20000	29800	10100	16400	35500	11500	11100	9380	8880	5980	6180

CAL YR 1984 TOTAL 14875990 MEAN 40640 MAX 164000 MIN 4840
WTR YR 1985 TOTAL 11865630 MEAN 32510 MAX 161000 MIN 5980

BEAVER RIVER BASIN

115

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, and 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 National Geodetic Vertical Datum, adjustment of 1907.

REMARKS.--No estimated daily discharges. Records good. Flow regulated since 1933 by Pymatuning Reservoir (station 03100500). Several observations of water temperature were made during the year. Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--51 years, 205 ft³/s, 16.67 in/yr, adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,540 ft³/s, Sept. 4, 1937, gage height, 9.2 ft; minimum, 0.1 ft³/s, June 30, to July 3, 1934.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 802 ft³/s, Mar. 31, gage height, 6.54 ft; minimum daily, 12 ft³/s, May 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	99	41	454	721	125	143	695	12	119	26	135	136
2	75	44	454	709	125	167	650	13	30	26	133	136
3	73	42	459	694	125	163	684	14	29	26	133	136
4	72	52	454	715	123	189	692	14	28	26	133	149
5	53	96	448	730	123	260	705	14	28	26	145	155
6	40	97	556	724	123	246	700	15	27	27	154	155
7	40	116	605	724	125	305	700	16	27	26	170	138
8	40	112	605	721	123	383	699	15	27	26	142	155
9	40	112	605	718	123	351	698	14	27	26	123	157
10	40	214	609	715	123	454	696	15	27	27	123	165
11	39	311	626	712	124	454	695	15	26	27	123	166
12	38	490	651	709	126	311	693	15	30	24	123	207
13	38	609	648	709	130	389	690	14	34	24	123	196
14	38	626	634	331	132	602	688	14	29	31	131	188
15	38	662	626	125	140	637	686	15	28	31	136	188
16	38	662	612	125	138	691	681	15	29	30	137	188
17	38	676	658	125	130	688	677	16	28	25	136	174
18	38	688	697	125	130	679	468	17	28	26	136	165
19	38	685	697	125	128	676	265	15	27	25	136	166
20	38	682	697	123	126	676	108	15	27	25	136	168
21	38	634	697	123	120	672	108	17	27	25	136	168
22	41	454	733	123	163	672	107	16	27	26	136	168
23	41	454	700	123	443	669	52	15	30	58	136	72
24	39	448	694	123	275	679	18	15	26	76	136	25
25	38	448	688	123	170	623	22	15	26	90	139	36
26	38	448	685	125	137	421	19	14	26	103	136	36
27	39	448	700	125	133	133	17	14	26	103	136	38
28	42	448	712	125	128	91	15	29	26	102	136	36
29	83	454	634	125	---	203	15	18	25	114	136	35
30	47	448	609	125	---	331	13	15	25	128	136	33
31	42	---	718	125	---	702	---	88	---	135	136	---
TOTAL	1441	11701	19365	11745	4111	13660	12956	549	919	1490	4207	3935
MEAN	46.5	390	625	379	147	441	432	17.7	30.6	48.1	136	131
MAX	99	688	733	730	443	702	705	88	119	135	170	207
MIN	38	41	448	123	120	91	13	12	25	24	123	25

CAL YR 1984 TOTAL 100325 MEAN 274 MAX 821 MIN 38
WTR YR 1985 TOTAL 86079 MEAN 236 MAX 733 MIN 12

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 National Geodetic Vertical Datum, adjustment of 1912. 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, Jan. 13 to Feb. 23, and June 11, 12, which are fair. Several observations of water temperature were made during the year. Corps of Engineers telemeter at station.

AVERAGE DISCHARGE.--72 years, 142 ft³/s, 18.54 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,540 ft³/s, Jan. 22, 1959, gage height, 14.30 ft, from rating curve extended above 3,200 ft³/s on basis of slope-area measurement at gage height 12.26 ft; minimum, 2.9 ft³/s, July 31, 1934, gage height, 0.58 ft.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than 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)
Feb. 24	0245	*2280	*7.46	Mar. 29	1630	1950	6.90
Mar. 13	0115	1580	6.15				

Minimum discharge, 14 ft³/s, Sept. 6, 7, 8, gage height, 0.97 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	32	49	91	413	72	236	873	56	158	26	20	23
2	54	59	100	336	88	214	542	52	70	26	19	19
3	37	75	98	236	84	177	493	52	49	26	17	18
4	29	82	134	185	82	177	652	50	40	28	17	16
5	26	400	108	164	80	841	384	50	36	28	16	16
6	23	330	92	135	78	605	274	48	33	39	16	15
7	22	188	92	122	74	308	243	63	30	62	36	14
8	22	124	100	117	70	629	220	58	29	75	94	82
9	23	98	102	95	68	597	216	47	28	101	44	110
10	23	356	98	96	64	305	202	43	28	77	31	188
11	22	719	131	106	72	240	180	39	27	73	28	105
12	21	650	222	93	100	932	168	38	77	50	28	51
13	20	401	348	88	160	1220	143	36	98	38	25	35
14	20	364	356	86	150	549	131	32	71	75	23	28
15	20	302	304	84	130	352	117	29	48	285	21	24
16	20	448	234	82	115	249	105	32	63	248	25	22
17	20	347	181	80	105	207	94	39	62	114	25	21
18	20	229	144	78	96	170	85	51	50	71	21	19
19	20	175	125	76	84	143	81	45	43	51	20	19
20	19	135	145	76	76	147	84	37	38	41	19	18
21	20	113	125	74	70	125	76	40	37	36	18	17
22	31	100	327	74	120	110	68	48	41	33	17	16
23	36	91	243	72	1100	111	63	37	114	30	17	15
24	32	86	159	72	2160	153	63	32	97	26	17	19
25	27	81	131	72	1550	203	145	29	61	24	23	21
26	28	76	98	70	730	136	115	26	45	24	24	19
27	45	73	140	70	418	113	83	25	37	26	20	23
28	44	73	456	68	280	150	73	140	32	24	18	22
29	197	94	570	68	---	1460	66	108	29	22	17	20
30	135	94	1080	66	---	1130	60	55	27	21	20	19
31	71	---	757	68	---	613	---	225	---	20	26	---
TOTAL	1159	6412	7291	3522	8276	12602	6099	1662	1598	1820	762	1034
MEAN	37.4	214	235	114	296	407	203	53.6	53.3	58.7	24.6	34.5
MAX	197	719	1080	413	2160	1460	873	225	158	285	94	188
MIN	19	49	91	66	64	110	60	25	27	20	16	14
CFSM	.36	2.06	2.26	1.10	2.85	3.91	1.95	.52	.51	.56	.24	.33
IN.	.41	2.29	2.61	1.26	2.96	4.51	2.18	.59	.57	.65	.27	.37

CAL YR 1984 TOTAL 62990 MEAN 172 MAX 1810 MIN 18 CFSM 1.65 IN. 22.53
WTR YR 1985 TOTAL 52237 MEAN 143 MAX 2160 MIN 14 CFSM 1.37 IN. 18.68

BEAVER RIVER BASIN

117

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 northeast of Transfer, and at mile 71.8.

DRAINAGE AREA.--337 mi².

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

REVISED RECORDS.--WDR PA-71-1: 1966, 1967.

GAGE.--Water-stage recorder. Datum of gage is 913.94 ft above National Geodetic Vertical Datum of 1929, (Pennsylvania Department of Transportation bench mark).

REMARKS.--Records good except estimated daily discharges, Jan. 16 to Feb. 12, and Feb. 14-23, which are fair. Flow regulated since 1933 by Pymatuning Reservoir (station 03100500) 13 mi upstream and by mills above station. Several observations of water temperature were made during the year. Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--20 years, 476 ft³/s, 19.18 in/yr, adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,200 ft³/s, Feb. 17, 1976, gage height, 10.09 ft; minimum, 33 ft³/s, July 20, 21, 22, 1968, gage height, 1.71 ft.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,970 ft³/s, Feb. 24, gage height, 7.87 ft; minimum daily, 46 ft³/s, Sept. 24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	176	96	615	1400	170	559	2380	86	528	65	174	141
2	153	111	603	1240	170	567	1570	84	156	66	164	134
3	121	118	674	1060	190	496	1690	83	106	69	161	132
4	106	194	718	996	260	532	1830	80	93	71	160	136
5	97	988	609	988	250	2050	1390	79	87	73	168	151
6	75	609	656	940	240	1230	1210	78	83	121	200	152
7	66	367	794	922	230	860	1160	95	79	136	328	153
8	62	244	790	907	220	1720	1130	86	77	166	400	331
9	62	206	789	863	220	1330	1120	77	77	199	211	595
10	63	1300	829	828	210	1000	1080	72	77	154	174	627
11	63	1780	1070	860	210	924	1050	69	78	135	167	346
12	62	1440	1410	843	310	2620	1020	68	172	95	163	285
13	62	1310	1570	847	575	2070	975	66	238	81	151	256
14	62	1280	1340	647	430	1520	953	63	156	377	155	221
15	62	1250	1290	189	350	1230	916	61	107	615	174	210
16	63	1640	1060	185	280	1150	889	65	144	502	190	204
17	63	1200	968	185	240	1070	862	81	137	219	184	192
18	63	1040	989	185	210	1020	757	92	110	123	169	169
19	63	981	968	180	200	979	470	81	98	96	170	168
20	63	911	993	180	180	986	271	70	91	85	167	166
21	65	875	967	180	160	943	268	91	86	78	163	167
22	84	641	1430	180	450	912	245	89	95	76	159	165
23	87	583	1150	180	2600	917	206	75	245	78	157	141
24	79	573	1010	180	3840	1020	113	70	181	116	162	46
25	73	563	954	175	2810	1050	307	65	109	115	180	60
26	76	552	873	175	1340	778	221	62	91	153	175	58
27	89	543	1020	175	892	473	140	63	78	155	160	73
28	99	565	1850	175	643	523	118	341	71	145	153	64
29	530	637	1710	170	---	3340	100	232	70	141	152	58
30	222	589	2790	170	---	1830	92	102	66	164	183	55
31	119	---	1890	170	---	1870	---	717	---	179	147	---
TOTAL	3130	23186	34379	16375	17880	37569	24533	3443	3786	4848	5621	5656
MEAN	101	773	1109	528	639	1212	818	111	126	156	181	189
MAX	530	1780	2790	1400	3840	3340	2380	717	528	615	400	627
MIN	62	96	603	170	160	473	92	61	66	65	147	46

CAL YR 1984 TOTAL 215124 MEAN 588 MAX 4030 MIN 62
WTR YR 1985 TOTAL 180406 MEAN 494 MAX 3840 MIN 46

BEAVER RIVER BASIN

03103500 SHENANGO RIVER AT SHARPSVILLE, PA

LOCATION.--Lat 41°15'58", long 80°28'22", Mercer County, Hydrologic Unit 05030102, on left bank 800 ft upstream from double highway bridge at Sharpsville, 0.7 mi downstream from Shenango River Dam, 1.8 mi upstream from McCullough Run, and at mile 55.1.

DRAINAGE AREA.--584 mi².

PERIOD OF RECORD.--March 1938 to current year. Monthly discharge only for some periods, published in WSP 1305.

REVISED RECORDS.--WSP 2107: 1970 Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 861.57 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records good. Flow regulated by Pymatuning Reservoir (station 03100500) since 1933 and by Shenango River Lake 0.7 mi upstream, since 1967. Several observations of water temperature were made during the year. Corps of Engineers satellite telemeter at station.

COOPERATION.--Three discharge measurement furnished by Corps of Engineers.

AVERAGE DISCHARGE.--47 years, 752 ft³/s, 17.49 in/yr, adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,700 ft³/s, Jan. 22, 1959, gage height, 15.97 ft; minimum daily, 43 ft³/s, Sept. 3, 1941.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 26, 1913, reached a stage of 19.3 ft, from Pymatuning survey profile map (discharge not determined).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,050 ft³/s, Feb. 28, gage height, 5.80 ft; minimum daily, 179 ft³/s, May 15, 17-19.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	273	189	1950	2460	375	2990	574	262	235	255	251	251
2	271	192	1920	2550	375	2930	1340	231	289	255	251	251
3	274	192	1880	2460	375	2860	2200	227	289	255	251	251
4	275	193	1830	2430	375	2770	2220	227	289	255	251	251
5	273	305	1810	2410	375	2730	2230	227	289	253	251	251
6	270	451	1790	2370	519	2720	2380	227	289	255	251	251
7	270	455	1770	2320	673	2680	2510	224	289	253	251	251
8	270	455	1760	2280	667	2670	2500	223	287	252	248	252
9	270	461	1750	2220	659	2680	2480	223	286	252	247	269
10	270	470	1740	2160	653	2650	2470	203	285	252	247	422
11	270	484	1730	1850	644	2600	2450	183	284	251	247	565
12	270	496	1730	1560	638	2240	1970	183	284	251	247	562
13	270	462	1890	1540	636	1850	791	182	264	251	219	558
14	410	441	2050	1350	641	2080	806	181	251	256	251	558
15	748	843	2060	841	642	2300	1260	179	251	255	251	553
16	1100	1080	2170	368	644	2290	1340	180	251	255	251	550
17	1470	1260	2270	234	649	2270	1410	179	251	255	251	551
18	1580	1380	2250	235	740	2250	1490	179	251	255	251	545
19	894	1470	2230	235	897	2210	1480	179	251	255	251	544
20	286	1620	2210	238	937	2180	1470	180	251	255	251	538
21	181	1730	2180	239	919	1940	1440	181	251	255	251	535
22	184	1730	2170	239	920	1730	1430	183	251	255	251	537
23	184	1710	2160	239	793	1700	1010	183	251	255	251	537
24	184	1700	2220	239	657	1680	438	183	251	255	251	380
25	184	1680	2230	240	906	1680	296	183	251	254	251	275
26	183	1670	2270	243	1920	1490	295	183	256	255	251	275
27	184	1660	2280	243	2660	1050	298	184	259	254	251	245
28	184	1650	2260	306	2910	807	298	183	259	254	251	211
29	185	1710	2290	375	---	727	293	183	259	254	251	211
30	188	1850	2370	375	---	531	293	183	257	250	253	211
31	188	---	2440	375	---	555	---	188	---	251	251	---
TOTAL	12043	29989	63660	35224	23799	63840	41462	6096	7961	7868	7732	11641
MEAN	388	1000	2054	1136	850	2059	1382	197	265	254	249	388
MAX	1580	1850	2440	2550	2910	2990	2510	262	289	256	253	565
MIN	181	189	1730	234	375	531	293	179	235	250	219	211

CAL YR 1984 TOTAL 377388 MEAN 1031 MAX 3100 MIN 181
WTR YR 1985 TOTAL 311315 MEAN 853 MAX 2990 MIN 179

BEAVER RIVER BASIN

119

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, and 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).

GAGE.--Water-stage recorder. Datum of gage is 736.24 ft above National Geodetic Vertical Datum of 1929, (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, auxiliary gage 10 mi downstream at Beaver Falls (station 03107500) which 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 observations of water temperature were made during the year.

AVERAGE DISCHARGE.--57 years (1914-18, 1932-85), 2,474 ft³/s, 15.03 in/yr, adjusted for storage from 1932-75.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 50,100 ft³/s, May 28, 1946, from slope-rating curve extended above 28,000 ft³/s on basis of contracted-opening measurement at gage height 21.44 ft; maximum gage height, 24.86 ft, Jan. 22, 1959 (backwater from Connoquenessing Creek); minimum discharge observed, 74 ft³/s, July 30, 1933, gage height, 1.70 ft; minimum daily, 97 ft³/s, July 22, Aug. 23, 1933.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since 1912, 29.9 ft, Mar. 26, 1913, from floodmark, discharge, about 87,000 ft³/s.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 28,200 ft³/s, Mar. 29, gage height, 16.12 ft; minimum daily, 791 ft³/s, May 26.

REVISIONS.--The maximum discharge for the water year 1984 has been revised to 16,100 ft³/s, Dec. 12, 1983, gage height, 11.55 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1840	1590	2970	6700	1370	5530	13300	1170	2830	935	1130	1510
2	2050	1770	2940	5450	1360	5450	9920	1310	2450	950	973	1290
3	1730	1830	2960	4910	1280	5110	8570	1440	2240	963	930	1180
4	1540	2110	3000	4560	1200	4940	9030	1220	2130	981	960	1150
5	1430	4140	2760	4320	1220	6770	7420	1100	2110	944	986	1120
6	1380	3770	2680	4260	1250	6870	6420	1050	2080	1130	994	1120
7	1360	3070	2630	4160	1450	5920	6100	1160	1970	1540	1010	1100
8	1370	2550	2560	4090	1520	7420	6070	1080	1640	1200	1120	1110
9	1380	2370	2560	3850	1460	7600	6070	1010	1220	1120	1040	1380
10	1370	8760	2670	3660	1440	6370	5830	952	1190	1270	997	1620
11	1350	8620	3720	3630	1470	5620	5670	922	1110	1290	956	1690
12	1330	6480	4890	3180	1680	12200	5380	921	1940	1070	934	1640
13	1300	5330	5420	2810	2320	12800	4280	929	2140	947	937	1510
14	1290	4790	5340	2760	2360	8450	3410	904	2040	1360	976	1440
15	1460	4070	5790	2580	2340	6750	3570	934	1670	4110	1100	1420
16	1880	4310	5160	1770	2290	5730	3540	987	1530	2410	1470	1400
17	2160	3950	4720	1500	2270	5300	3130	1050	1490	1540	1270	1400
18	2420	3720	4300	1340	2170	4960	2940	1080	1570	1130	1120	1390
19	2330	3550	3810	1310	2290	4590	2820	1020	1690	951	984	1380
20	1460	3530	4040	1130	2320	4000	2900	966	1550	885	951	1370
21	1160	3560	4240	839	2340	3640	2730	947	1290	896	970	1350
22	1190	3540	5940	1030	3780	3140	2600	972	1220	1230	977	1350
23	1290	3480	5590	1200	12800	3040	2520	937	1590	1110	968	1340
24	1220	3430	4810	1190	18100	3220	1820	863	1370	999	978	1440
25	1140	3220	4350	1190	16900	3500	1740	815	1220	988	1190	1230
26	1110	3040	3980	1180	10300	3240	1630	791	1080	1020	1070	1020
27	1110	2750	3910	1160	6750	2760	1430	793	968	1090	1030	1140
28	1060	2720	4200	1180	5790	2350	1310	3400	965	983	988	997
29	1960	2930	4820	1260	---	21000	1290	2480	970	946	966	878
30	2130	2890	8960	1340	---	18900	1200	2210	949	943	1700	846
31	1860	---	8410	1340	---	12900	---	2520	---	1100	2140	---
TOTAL	47660	111870	134130	80879	111820	210070	134640	37933	48212	38031	33815	38811
MEAN	1537	3729	4327	2609	3994	6776	4488	1224	1607	1227	1091	1294
MAX	2420	8760	8960	6700	18100	21000	13300	3400	2830	4110	2140	1690
MIN	1060	1590	2560	839	1200	2350	1200	791	949	885	930	846

CAL YR 1984 TOTAL 1201444 MEAN 3283 MAX 12400 MIN 859
WTR YR 1985 TOTAL 1027871 MEAN 2816 MAX 21000 MIN 791

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 above ft National Geodetic Vertical Datum, adjustment of 1912. Prior to June 23, 1941, nonrecording gage at same site and datum.

REMARKS.--Records good except for estimated daily discharges, Dec. 6-10, and Jan. 11 to Feb. 23, which are fair. Some regulation by mills above station. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--66 years, 465 ft³/s, 17.74 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 23,000 ft³/s, June 29, 1924, gage height, 16.66 ft, from rating curve extended above 18,000 ft³/s; minimum observed, 6.0 ft³/s, July 21-23, 1936; minimum gage height, 0.76 ft, Aug. 8, Sept. 16, 17, 1966.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than 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. 24	0400	6360	9.51	May 28	2000	5820	9.06
Mar. 29	1600	*9870	*12.21				

Minimum discharge, 28 ft³/s, Sept. 23, 24, gage height, 1.13 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	93	107	248	1370	160	795	3210	180	2640	105	155	145
2	170	110	245	1100	175	700	2090	361	1230	99	102	101
3	98	126	224	815	170	580	1680	898	800	124	80	85
4	74	179	231	704	165	516	1670	493	609	164	68	76
5	67	1130	210	644	160	782	1250	373	487	132	64	70
6	62	644	190	532	155	632	1030	326	424	189	59	63
7	59	397	180	472	150	509	852	342	303	184	59	59
8	59	285	165	439	145	686	790	280	257	152	65	57
9	64	263	150	335	140	693	740	233	233	2300	83	67
10	68	1500	230	267	140	598	684	205	224	1650	62	81
11	65	2230	526	250	150	571	633	188	185	1040	53	66
12	61	1680	670	240	200	2420	575	175	1580	583	48	54
13	58	1120	796	230	400	2360	514	203	1190	390	46	47
14	58	843	913	220	860	1580	487	178	839	316	49	41
15	57	685	1100	210	740	1140	477	156	587	850	68	39
16	67	635	892	210	660	839	422	174	491	500	308	37
17	68	502	766	200	580	723	372	159	431	315	235	33
18	76	413	640	200	500	608	320	221	343	242	112	33
19	78	366	604	190	440	495	300	187	284	199	82	33
20	67	310	772	185	390	471	280	147	249	170	70	32
21	63	267	637	180	500	389	258	127	229	155	62	30
22	75	234	1550	180	800	333	238	117	222	146	56	30
23	212	210	1240	175	2000	340	228	109	407	137	54	30
24	133	207	960	170	5450	410	225	102	258	119	54	35
25	95	193	784	170	4140	490	459	96	193	105	90	40
26	82	179	581	165	2160	360	332	87	159	98	145	46
27	78	167	530	160	1400	322	259	83	141	128	91	40
28	75	177	646	160	990	316	232	3040	127	116	69	35
29	150	294	649	155	---	6660	216	1870	120	90	58	36
30	226	227	2500	150	---	4770	191	779	113	81	193	36
31	133	---	1790	150	---	3010	---	1290	---	98	332	---
TOTAL	2791	15680	21619	10628	23920	35098	21014	13179	15355	10977	3072	1577
MEAN	90.0	523	697	343	854	1132	700	425	512	354	99.1	52.6
MAX	226	2230	2500	1370	5450	6660	3210	3040	2640	2300	332	145
MIN	57	107	150	150	140	316	191	83	113	81	46	30

CAL YR 1984 TOTAL 188831 MEAN 516 MAX 2840 MIN 57
WTR YR 1985 TOTAL 174910 MEAN 479 MAX 6660 MIN 30

BEAVER RIVER BASIN

121

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 from 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 current year.

REVISED RECORDS.--WDR PA-79-3: 1978.

GAGE.--Water-stage recorder. Datum of gage is 1,160.91 ft above National Geodetic Vertical Datum of 1929 (Pennsylvania Department of Environmental Resources 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.--No estimated daily discharges. Records fair. Some regulation from October 1966 to May 1969 and completely regulated thereafter by Lake Arthur (station 03106280) 1,000 ft upstream. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--22 years, 74.8 ft³/s, 19.84 in/yr, adjusted for storage since May 1969.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,640 ft³/s, Mar. 10, 1964, gage height, 8.18 ft, from rating curve extended above 820 ft³/s on basis of slope-area measurement of peak flow; minimum, 0.4 ft³/s, Sept. 17, 1966; minimum gage height, 1.09 ft, Sept. 26, 1972.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 554 ft³/s, Mar. 31, gage height, 5.38 ft; minimum daily, 5.7 ft³/s, Sept. 17, 18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.8	12	42	170	79	181	531	38	92	31	13	17
2	9.2	11	43	169	79	174	512	51	99	27	10	15
3	9.0	12	40	163	78	165	485	54	97	24	9.5	15
4	8.8	13	51	153	78	160	462	51	88	24	8.9	13
5	8.6	20	71	141	78	170	407	46	81	23	8.3	13
6	9.2	21	69	135	78	164	339	45	73	23	7.6	11
7	8.6	26	65	124	77	159	307	46	67	21	8.1	11
8	8.3	28	62	116	76	168	271	43	57	21	9.8	12
9	8.4	28	58	110	76	168	240	41	52	56	9.2	12
10	8.5	59	55	106	77	163	212	37	48	67	8.7	10
11	8.4	115	56	98	76	162	186	37	43	66	7.7	9.4
12	8.3	155	70	94	77	232	168	37	89	59	7.0	8.0
13	8.3	170	92	90	77	298	151	34	114	53	6.6	7.2
14	9.2	174	96	87	77	309	139	31	121	50	7.0	6.3
15	8.1	164	98	84	76	291	123	32	119	49	16	6.0
16	8.1	144	98	83	78	268	106	30	110	43	19	5.8
17	8.6	132	94	82	77	239	96	30	103	38	21	5.7
18	8.2	119	89	81	77	214	86	29	96	34	20	5.7
19	7.4	104	90	81	77	195	80	28	88	30	17	11
20	6.2	92	91	81	77	173	75	25	80	26	15	21
21	6.8	82	94	80	77	161	69	24	74	31	13	20
22	7.9	73	103	80	78	149	63	23	73	28	12	20
23	8.5	66	110	80	82	136	60	22	80	25	11	20
24	8.3	60	109	79	84	128	62	19	70	22	11	21
25	8.5	56	103	79	117	121	64	17	61	19	13	21
26	8.4	52	100	79	163	84	60	16	52	18	12	21
27	8.9	48	98	79	183	35	54	16	45	20	10	20
28	8.9	47	97	79	186	45	48	54	39	17	9.9	21
29	12	46	101	79	---	292	44	65	33	16	9.5	20
30	12	45	128	79	---	458	41	63	31	14	15	24
31	11	---	139	79	---	518	---	78	---	13	17	---
TOTAL	270.4	2174	2612	3120	2515	6180	5541	1162	2275	988	362.8	423.1
MEAN	8.72	72.5	84.3	101	89.8	199	185	37.5	75.8	31.9	11.7	14.1
MAX	12	174	139	170	186	518	531	78	121	67	21	24
MIN	6.2	11	40	79	76	35	41	16	31	13	6.6	5.7

CAL YR 1984 TOTAL 32246.6 MEAN 88.1 MAX 323 MIN 6.2
WTR YR 1985 TOTAL 27623.3 MEAN 75.7 MAX 531 MIN 5.7

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 National Geodetic Vertical Datum of 1929. 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, Dec. 7-10, and Jan. 11 to Feb. 24, which are fair. Some regulation since May 1969 by Lake Arthur (station 03106280) 13 mi upstream. Several observations of water temperature were made during the year. Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--74 years, 562 ft³/s, 19.18 in/yr, adjusted for storage since May 1969.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 19,000 ft³/s, Jan. 25, 1937, gage height, 12.05 ft, from flood-mark, site and datum then in use, from rating curve extended above 14,000 ft³/s; minimum observed, 16 ft³/s, Sept. 13, 1932.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than 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. 11	1330	4900	5.95	Mar. 13	0330	4610	5.79
Feb. 25	0400	5670	6.36	Mar. 29	1030	*7820	*7.46

Minimum discharge, 74 ft³/s, Sept. 19, 20, gage height, 0.52 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	172	190	413	1360	240	1120	3130	316	2150	171	128	247
2	238	182	413	1170	260	1000	2400	452	1060	165	122	162
3	178	187	386	941	250	884	2100	694	670	165	108	137
4	140	247	423	802	240	808	2340	487	514	171	101	122
5	126	1280	396	726	220	1590	1780	389	443	167	97	111
6	118	994	376	648	220	1500	1400	365	406	308	94	103
7	112	614	350	605	220	998	1270	425	345	281	101	100
8	110	446	330	575	210	1710	1350	398	306	232	114	99
9	116	379	310	484	210	1800	1310	340	294	371	112	101
10	117	2560	290	410	210	1190	1160	315	287	349	100	138
11	114	4260	556	400	210	994	1010	304	259	312	92	142
12	111	2910	860	370	250	3500	918	307	633	234	86	116
13	110	1960	1280	350	500	3830	813	312	827	198	87	98
14	109	1560	1260	340	1050	2270	743	290	689	192	84	90
15	108	1230	1240	320	960	1690	684	287	496	529	98	85
16	112	1170	944	310	840	1290	622	323	455	383	380	84
17	121	946	768	300	760	1080	550	339	437	264	271	82
18	119	763	659	300	720	922	492	409	395	192	167	80
19	114	657	645	290	640	799	471	374	360	165	131	77
20	119	563	870	280	600	768	605	313	318	152	112	89
21	128	499	766	270	540	693	598	276	299	159	102	90
22	175	456	1600	270	1100	607	473	263	304	198	98	89
23	298	410	1410	260	2100	591	418	245	552	232	96	87
24	231	389	953	260	4500	662	407	223	436	174	96	93
25	168	369	806	250	5140	791	590	208	323	147	123	98
26	156	347	630	240	3020	609	580	198	253	143	125	99
27	186	329	630	240	1870	467	433	201	223	177	114	99
28	178	352	1100	240	1370	513	388	1390	204	154	102	96
29	279	481	1310	240	---	6670	370	1160	191	130	95	94
30	394	430	2340	230	---	4410	331	613	181	117	189	92
31	248	---	1940	230	---	2890	---	1780	---	121	499	---
TOTAL	5005	27160	26254	13711	28450	48646	29736	13996	14310	6753	4224	3200
MEAN	161	905	847	442	1016	1569	991	451	477	218	136	107
MAX	394	4260	2340	1360	5140	6670	3130	1780	2150	529	499	247
MIN	108	182	290	230	210	467	331	198	181	117	84	77
MEAN†	170	917	855	468	1051	1621	922	463	462	209	138	84.3
CFSM†	.43	2.30	2.15	1.18	2.64	4.07	2.32	1.16	1.16	.53	.35	.21
IN.†	.50	2.57	2.48	1.36	2.75	4.69	2.59	1.34	1.29	.61	.40	.23

CAL YR 1984 TOTAL 281540 MEAN 769 MAX 5020 MIN 108 ADJ + 0.9 MEAN† 770 CFSM† 1.93 IN.† 26.33
WTR YR 1985 TOTAL 221445 MEAN 607 MAX 6670 MIN 77 ADJ - 1.1 MEAN† 606 CFSM† 1.52 IN.† 21.81

† Adjusted for change in reservoir contents.

BEAVER RIVER BASIN

03107500 BEAVER RIVER AT BEAVER FALLS, PA
(National stream quality accounting network)

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, and at mile 5.5. Water-quality sampling site 0.25 mi upstream.

DRAINAGE AREA.--3,106 mi².

WATER-DISCHARGE RECORDS

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 National Geodetic Vertical Datum of 1929 (Corps of Engineers bench mark). Prior to Dec. 3, 1941, nonrecording gage at site 200 ft downstream at same datum.

REMARKS.--Estimated daily discharges: July 6 to Sept. 30. 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. Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--29 years, (1956-85), 3,721 ft³/s, 16.27 in/yr, adjusted for storage 1957-75.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 69,900 ft³/s, Jan. 22, 1959, gage height, 14.42 ft; minimum not determined.

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.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 38,000 ft³/s, Mar. 29, gage height, 11.02 ft; minimum daily, 970 ft³/s, Aug. 13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2030	2000	4030	10200	2340	7920	19800	2050	8240	1320	1430	1830
2	2530	2080	4040	8290	2290	7600	15600	2380	5080	1320	1230	1600
3	2100	2190	3990	7130	2220	7060	13200	3590	4050	1330	1100	1500
4	1810	2440	4080	6480	2100	6660	14000	2690	3560	1430	1090	1400
5	1660	5950	3810	6070	2140	9160	11500	2300	3360	1360	1270	1400
6	1580	5570	3700	5810	2200	9650	9600	2150	3180	1580	1090	1400
7	1560	4310	3630	5550	2370	7890	8750	2280	2820	2120	1100	1400
8	1560	3450	3520	5400	2440	9810	8600	2180	2450	1740	1210	1400
9	1580	3100	3540	5020	2360	10800	8550	1980	2030	3290	1180	1700
10	1570	10700	3730	4660	2320	8680	8180	1870	1930	3770	1100	2000
11	1560	14700	4990	4700	2340	7560	7820	1780	1810	3020	1050	2200
12	1530	11700	6610	4250	2590	16300	7340	1740	4410	2030	986	2200
13	1490	8790	7670	3810	3720	19200	6220	1740	4490	1670	970	1900
14	1470	7560	7750	3840	4130	13500	5060	1690	3930	1690	1000	1800
15	1570	6300	8470	3590	4000	10400	5090	1630	3050	5270	1070	1750
16	1940	6360	7440	2740	3830	8420	5030	1740	2690	3560	1940	1700
17	2320	5740	6650	2560	3760	7580	4520	1760	2550	2320	1920	1700
18	2580	5230	6000	2440	3610	6980	4190	1870	2450	1720	1430	1650
19	2540	4920	5360	2420	3670	6420	4040	1870	2500	1430	1140	1650
20	1830	4770	6010	2100	3680	5660	4100	1690	2280	1310	1030	1600
21	1430	4660	6000	1710	3670	5150	4010	1580	1980	1270	1000	1550
22	1420	4570	9220	1960	4980	4610	3710	1580	1890	1540	1000	1550
23	1810	4440	8800	2210	17600	4430	3530	1540	2580	1580	1100	1500
24	1790	4380	7250	2240	27300	4640	2900	1450	2220	1350	1100	1650
25	1530	4140	6390	2230	26100	5090	3110	1370	1890	1250	1600	1500
26	1430	3940	5590	2180	17000	4670	3080	1290	1670	1250	1500	1400
27	1440	3640	5380	2160	11100	4040	2520	1310	1500	1390	1400	1500
28	1410	3640	6100	2200	8840	3590	2320	7940	1430	1270	1200	1400
29	2120	4100	7000	2260	---	27300	2280	6460	1410	1180	1100	1250
30	2890	3990	13800	2320	---	27600	2120	4100	1380	1120	2000	1100
31	2400	---	13200	2310	---	19000	---	5700	---	1230	2890	---
TOTAL	56480	159360	193750	120840	174700	297370	200770	75300	84810	57710	40226	48180
MEAN	1822	5312	6250	3898	6239	9593	6692	2429	2827	1862	1298	1606
MAX	2890	14700	13800	10200	27300	27600	19800	7940	8240	5270	2890	2200
MIN	1410	2000	3520	1710	2100	3590	2120	1290	1380	1120	970	1100

CAL YR 1984 TOTAL 1782450 MEAN 4870 MAX 17600 MIN 1410
WTR YR 1985 TOTAL 1509496 MEAN 4136 MAX 27600 MIN 970

BEAVER RIVER BASIN

03107500 BEAVER RIVER AT BEAVER FALLS, PA--Continued

WATER-QUALITY RECORDS

PERIODS OF RECORD.--Water years 1966, 1973, November 1975 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUC- TANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	ALKA- LILITY FIELD (MG/L AS CAO3)	TUR- BID- ITY (NTU)	BARO- METRIC PRES- SURE (MM OF HG)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)
NOV 29...	1115	4100	375	7.0	8.0	66	.50	740	9.8	K3100	760
MAR 13...	1330	19000	280	7.2	5.5	40	30	741	10.8	15000	7700
JUN 11...	1200	1800	450	7.2	23.0	70	1.0	740	9.0	210	48
SEP 25...	1000	1030	420	7.9	22.0	75	3.0	748	5.8	180	380

DATE	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)
NOV 29...	39	9.9	17	3.5	65	26	.20	5.8	212	1.3	.520
MAR 13...	27	6.4	15	2.4	50	28	.10	5.8	172	1.3	.120
JUN 11...	47	12	22	3.6	82	35	.30	3.6	299	1.7	.070
SEP 25...	44	10	22	4.5	63	40	.40	1.8	263	1.5	<.010

DATE	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS TOTAL (MG/L AS PO4)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, ORTH- DIS- SOLVED (MG/L AS P)	SEDI- MENT, SUS- PENDED (MG/L)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE)
NOV 29...	1.1	.210	--	.130	.130	13	86	20	1	38	.0
MAR 13...	1.1	.080	--	.060	<.010	113	88	30	<1	33	<.5
JUN 11...	.90	.120	.37	.100	.080	99	76	50	1	47	.7
SEP 25...	.90	.190	.58	.140	.140	56	92	30	1	38	<.5

DATE	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)	LITHIUM DIS- SOLVED (UG/L AS LI)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)	NICKEL, DIS- SOLVED (UG/L AS NI)
NOV 29...	<1	<1	<3	<1	61	3	4	130	.1	<10	16
MAR 13...	<1	3	<3	12	98	<1	17	100	<.1	<10	3
JUN 11...	1	<1	<3	1	9	<1	5	160	.3	<10	5
SEP 25...	<1	<1	<3	2	21	10	12	66	<.1	<10	4

DATE	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)	VANA- DIUM, DIS- SOLVED (UG/L AS V)	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, DIS- SOLVED (UG/L AS ZN)
NOV 29...	<1	140	<6	<1	45
MAR 13...	<1	96	<6	<1	15
JUN 11...	<1	170	<6	<1	17
SEP 25...	<1	140	<6	<1	8

BEAVER RIVER BASIN

125

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 National Geodetic Vertical Datum, adjustment of 1907. 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 Resources.

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, 192,800 acre-ft, Apr. 3, elevation, 1,008.83 ft; minimum, 150,300 acre-ft, Jan. 14, elevation, 1005.29 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 National Geodetic Vertical Datum (Pennsylvania Department of Environmental Resources 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 Resources.

EXTREMES FOR PERIOD OF RECORD: Maximum contents 44,060 acre-ft, June 26, 1972, elevation, 1,191.96 ft; minimum (after first filling), 21,320 acre-ft, Nov. 30, 1975, elevation, 1,183.88 ft.

EXTREMES FOR CURRENT YEAR: Maximum contents, 42,840 acre-ft, Mar. 5, elevation, 1,191.60 ft; minimum, 36,640 acre-ft, Sept. 30, elevation, 1,189.38 ft.

MONTHEND ELEVATION AND CONTENTS AT 2400, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

Date	Elevation (feet)	Contents (acre- feet)	Change in contents (equivalent in cfs)	Elevation (feet)	Contents (acre- feet)	Change in contents (equivalent in cfs)
<u>03100500 Pymatuning Reservoir</u>				<u>03106280 Lake Arthur</u>		
Sept. 30	1006.73	170000	-	1189.95	37450	-
Oct. 31	1006.74	170100	+ 1.6	1190.13	38020	+ 9.3
Nov. 30	1006.74	170500	+ 6.7	1190.35	38720	+ 11.8
Dec. 31	1006.12	161500	+ 146	1190.50	39200	+ 7.8
CAL YR 1984	-	-	+ 1.1	-	-	+ 0.9
Jan. 31	1005.38	151500	- 163	1189.99	37570	+ 26.5
Feb. 28	1006.88	172000	+ 369	1190.59	39490	+ 34.6
Mar. 31	1008.07	189100	+ 278	1191.56	42700	+ 52.2
Apr. 30	1007.45	180100	- 151	1190.31	38590	- 69.1
May 31	1007.37	179000	- 17.9	1190.54	39330	+ 12.0
June 30	1007.54	181400	+ 40.3	1190.26	38430	- 15.1
July 31	1007.35	178700	- 43.9	1190.09	37890	- 8.8
Aug. 31	1006.88	172000	- 109	1190.13	38020	+ 2.1
Sept. 30	1006.27	163600	- 141	1189.69	36670	- 22.7
WTR YR 1985	-	-	- 8.8	-	-	- 1.1

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 National Geodetic Vertical Datum of 1929 (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, Dec. 6-9, and Jan. 13 to Feb. 23, 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 observations of water temperature were made during the year.

AVERAGE DISCHARGE.--44 years, 193 ft³/s, 14.72 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,590 ft³/s, Jan. 27, 1952, gage height, 9.71 ft; minimum, 4.5 ft³/s, Aug. 24, 25, 1965; minimum gage height, 1.28 ft, Aug. 26, 1962.

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.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than 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)
Feb. 24	0300	1930	4.61	May 31	1900	*2150	*4.85
May 3	0100	1910	4.60				

Minimum discharge, 11 ft³/s, Sept. 19, 20, 21, 22, 23, gage height, 1.39 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	43	55	67	364	185	232	778	110	992	41	34	27
2	63	50	65	310	190	204	561	524	396	39	30	22
3	39	50	62	252	176	184	488	1360	283	51	27	19
4	32	61	61	231	185	179	422	540	280	47	26	20
5	28	263	52	216	187	262	373	379	185	40	25	18
6	27	154	64	189	188	236	330	307	135	81	25	18
7	26	104	61	178	178	207	297	281	105	110	23	17
8	28	79	88	135	154	268	345	202	99	74	20	16
9	30	77	99	111	144	269	308	166	103	83	19	17
10	34	269	100	111	143	241	296	140	88	115	18	16
11	31	462	184	121	157	201	386	123	129	132	16	14
12	27	381	217	110	230	692	390	104	303	64	16	14
13	27	255	197	106	534	707	320	98	254	53	15	13
14	26	198	212	127	672	519	306	87	197	41	15	13
15	26	139	254	124	613	342	303	82	159	40	17	12
16	32	132	223	113	547	247	302	137	151	53	83	12
17	35	113	195	117	507	226	284	116	146	35	52	12
18	102	105	167	150	472	214	253	123	134	28	31	12
19	50	102	172	145	447	186	236	114	122	27	24	12
20	35	94	239	117	387	187	214	97	106	26	21	11
21	34	67	208	123	396	166	196	64	98	27	18	11
22	63	63	420	206	628	152	163	61	72	71	18	11
23	174	57	317	210	1370	129	155	57	102	46	17	11
24	79	58	237	210	1530	141	138	56	74	32	17	14
25	56	56	204	210	1040	159	155	53	61	27	40	14
26	49	55	158	210	785	132	132	47	58	45	66	15
27	65	53	154	189	464	129	119	46	57	132	34	13
28	63	59	152	179	342	131	114	502	87	57	26	12
29	92	84	154	174	---	408	105	427	49	42	22	13
30	108	65	431	165	---	406	100	178	45	36	23	13
31	81	---	464	168	---	814	---	1310	---	39	30	---
TOTAL	1605	3760	5678	5371	12851	8570	8569	7891	5070	1734	848	442
MEAN	51.8	125	183	173	459	276	286	255	169	55.9	27.4	14.7
MAX	174	462	464	364	1530	814	778	1360	992	132	83	27
MIN	26	50	52	106	143	129	100	46	45	26	15	11
CFSM	.29	.70	1.03	.97	2.58	1.55	1.61	1.43	.95	.31	.15	.08
IN.	.34	.79	1.19	1.12	2.69	1.79	1.79	1.65	1.06	.36	.18	.09

CAL YR 1984 TOTAL 74749 MEAN 204 MAX 1300 MIN 23 CFSM 1.15 IN. 15.62
WTR YR 1985 TOTAL 62389 MEAN 171 MAX 1530 MIN 11 CFSM .96 IN. 13.04

BUFFALO CREEK BASIN

127

03111150 BRUSH RUN NEAR BUFFALO, PA

LOCATION.--Lat 40°11'54", long 80°24'28", Washington County, Hydrologic Unit 05030106, on right bank at upstream side of highway bridge, 2.2 mi upstream from Dunkle Run, 3.0 mi upstream from mouth, 3.2 mi south west of Buffalo, and 8 mi west of Washington.

DRAINAGE AREA.--10.3 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1960 to September 1978, October 1982 September 1985 (discontinued).

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 965.02 ft above National Geodetic Datum of 1929.

REMARKS.--Records good except for estimated daily discharges, Dec. 5-9, 25-29, Jan. 6 to Feb. 23, May 5 to June 19, July 17-21, 24-26, 29-31, which are fair.

AVERAGE DISCHARGE.--21 years, 9.51 ft³/s, 12.54 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,700 ft³/s, May 19, 1978, gage height, 8.72 ft, from rating curve extended above 210 ft³/s on basis of slope-area measurement at gage height 7.26 ft; no flow on many days.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 170 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Feb. 22	---	---	ice jam	May 31	0600	*473	*5.69
Mar. 30	2245	206	4.47				

Minimum discharge, 0.08 ft³/s, Sept. 23, 24, 30, gage height, 1.95 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.4	1.8	7.6	15	3.4	9.6	41	3.7	32	1.1	3.4	2.1
2	1.7	2.9	6.2	13	8.6	8.6	26	34	25	6.5	2.8	1.4
3	.88	2.0	5.9	11	6.0	7.5	22	30	58	7.7	2.5	1.1
4	.65	8.7	4.6	11	5.2	7.8	19	13	40	2.8	2.3	.82
5	.58	14	3.8	10	6.4	11	17	11	20	2.4	2.2	.66
6	.52	6.7	3.9	8.2	8.2	7.4	14	8.0	14	8.0	2.2	.58
7	.50	4.1	4.0	7.8	6.0	7.1	16	6.4	10	3.8	2.2	.59
8	1.8	3.1	5.0	7.6	5.0	11	18	5.2	8.0	38	2.3	.51
9	2.1	4.0	7.0	6.0	4.4	10	19	4.5	6.0	15	1.9	.44
10	1.1	22	16	6.2	4.9	9.0	19	3.8	5.4	29	1.5	.43
11	.79	22	24	6.4	5.4	10	20	3.3	4.7	17	1.3	.39
12	.71	12	15	7.2	15	32	17	2.9	5.6	12	1.2	.37
13	.65	8.6	13	8.2	50	20	15	2.6	4.5	8.7	1.0	.32
14	.65	7.0	18	7.0	40	16	14	2.2	3.8	12	1.7	.26
15	.67	6.9	16	5.6	29	12	13	2.0	3.6	48	13	.24
16	2.8	6.8	13	4.8	20	10	11	2.8	3.5	25	7.4	.24
17	1.5	5.5	10	4.4	15	9.6	9.0	4.0	3.1	12	4.2	.22
18	2.2	5.5	8.8	4.2	11	8.5	8.3	5.6	3.8	7.0	3.0	.18
19	1.3	6.3	12	4.0	16	8.1	7.6	4.0	2.7	3.4	2.3	.14
20	1.1	5.3	12	3.7	21	8.9	6.9	2.8	2.1	1.8	2.1	.13
21	1.1	4.5	26	3.5	40	7.5	6.3	1.9	1.8	5.0	2.0	.12
22	11	4.3	40	3.4	54	7.3	6.0	1.4	4.9	12	1.7	.10
23	6.4	5.2	20	3.8	62	8.8	5.6	6.0	8.8	7.1	1.4	.10
24	3.0	4.8	16	4.3	44	10	5.7	4.7	3.1	4.8	2.1	.14
25	2.2	4.1	13	5.2	25	9.0	5.7	3.4	2.2	3.2	13	.21
26	2.0	3.4	11	4.7	18	7.9	4.7	2.9	1.8	3.4	5.7	.15
27	1.5	3.1	9.4	4.1	14	7.7	4.2	2.6	1.6	6.3	3.4	.14
28	1.4	5.2	8.6	3.6	11	8.0	3.9	8.6	1.4	4.4	2.6	.13
29	5.7	5.0	8.0	3.2	---	29	3.6	5.8	1.3	3.3	2.2	.13
30	3.5	4.6	20	2.9	---	61	3.4	3.7	1.2	2.4	6.8	.10
31	2.3	---	17	3.2	---	88	---	120	---	2.0	7.6	---
TOTAL	65.70	199.4	394.8	193.2	548.5	468.3	381.9	312.8	283.9	315.1	109.0	12.44
MEAN	2.12	6.65	12.7	6.23	19.6	15.1	12.7	10.1	9.46	10.2	3.52	.41
MAX	11	22	40	15	62	88	41	120	58	48	13	2.1
MIN	.50	1.8	3.8	2.9	3.4	7.1	3.4	1.4	1.2	1.1	1.0	.10
CFSM	.21	.65	1.23	.60	1.90	1.47	1.23	.98	.92	.99	.34	.04
IN.	.24	.72	1.43	.70	1.98	1.69	1.38	1.13	1.03	1.14	.39	.04

CAL YR 1984 TOTAL 3419.71 MEAN 9.34 MAX 83 MIN .08 CFSM .91 IN. 12.35
WTR YR 1985 TOTAL 3285.04 MEAN 9.00 MAX 120 MIN .10 CFSM .87 IN. 11.86

BUFFALO CREEK BASIN

03111150 BRUSH RUN NEAR BUFFALO, PA.--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1982 to September 1985 (discontinued).

WATER-QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUC- TANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	ACIDITY (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
NOV 08...	1245	3.2	445	8.1	6.0	200	--	67	9.0	8.4	2.8
FEB 01...	0930	3.4	447	7.9	.0	230	--	75	9.5	11	1.6
APR 23...	1255	6.5	435	8.4	21.5	200	--	66	9.5	6.2	1.6
AUG 23...	1045	1.4	360	8.1	17.0	210	.0	66	11	10	3.7

DATE	ALKA- LINITY FIELD (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)
NOV 08...	160	56	13	.10	7.2	250	280	15	50	42
FEB 01...	170	48	16	.20	7.0	307	270	17	90	33
APR 23...	160	51	9.1	.10	3.6	246	430	20	40	25
AUG 23...	160	44	13	.10	4.6	268	310	11	50	37

WHEELING CREEK BASIN

129

03111585 ENLOW FORK NEAR WEST FINLEY, PA

LOCATION.--Lat 39°58'06", long 80°26'53", Washington County, Hydrologic Unit 05030106, on right bank, 20 ft from bridge on Legislative Route 62007, 0.6 mi downstream of Templeton Fork, and 1.7 mi southeast of West Finley, Pa.

DRAINAGE AREA.--38.1 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1979 to September 1985 (discontinued).

GAGE.--Water-stage recorder. Elevation of gage is 930 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good except for estimated daily discharges, Dec. 6-9, Jan. 9 to Feb. 22, Apr. 18 to May 1, and May 9-17, 19-22, 24-27, which are fair.

AVERAGE DISCHARGE.--6 years, 43.7 ft³/s, 15.58 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,440 ft³/s, Aug. 18, 1980, gage height, 9.79 ft; no flow Sept. 7-12, 1983, due to pumping during bridge construction.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 600 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar. 30	0630	637	5.49	May 31	0830	*1280	*7.33
Mar. 30	2300	600	5.36	June 1	0145	951	6.46

Minimum discharge, 0.22 ft³/s, Sept. 23, 24, gage height, 2.06 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.4	7.7	27	57	25	42	308	13	385	3.9	57	3.6
2	6.7	21	21	45	32	36	150	80	109	4.1	13	2.7
3	2.9	14	21	37	27	32	107	115	207	11	7.8	2.3
4	1.8	23	16	35	24	32	83	53	152	12	4.9	1.9
5	1.3	57	13	33	23	43	66	38	80	8.8	3.6	1.5
6	.99	33	11	27	31	31	56	35	54	23	3.1	1.2
7	.97	21	9.6	27	25	30	58	32	39	15	2.7	1.3
8	1.2	14	10	26	20	38	78	28	30	26	2.5	1.1
9	2.2	15	17	20	20	34	78	22	25	13	2.1	1.2
10	2.4	39	37	21	23	32	72	19	21	17	1.4	2.7
11	2.1	47	88	22	37	35	69	16	17	11	1.1	2.8
12	1.9	33	62	28	60	115	59	14	19	7.0	.89	2.3
13	2.0	23	50	28	94	88	54	12	18	4.6	.75	1.1
14	2.2	16	91	23	72	67	49	11	14	4.1	.66	.60
15	2.6	14	80	18	58	51	44	9.0	14	30	.75	.44
16	6.1	14	57	16	45	41	41	11	14	11	17	.38
17	8.9	10	42	14	41	37	34	16	12	5.6	7.1	.37
18	18	9.8	31	13	38	32	30	24	14	3.5	3.4	.44
19	7.5	16	41	12	42	29	27	16	9.8	2.5	1.9	.37
20	11	17	44	12	48	28	24	11	9.6	2.0	1.5	.39
21	8.1	14	89	11	60	24	22	5.8	8.7	3.4	1.5	.36
22	34	12	167	11	240	26	20	10	25	28	1.2	.29
23	26	14	88	17	398	37	20	23	38	8.7	.84	.28
24	12	12	65	22	241	41	23	19	17	5.2	1.0	.57
25	8.3	10	55	19	128	39	25	17	11	3.7	.84	.63
26	8.1	8.1	41	17	86	34	20	13	7.9	21	23	.86
27	7.1	7.1	35	15	63	33	17	11	6.3	23	12	1.3
28	6.4	13	32	15	48	34	15	34	5.4	9.4	8.0	1.1
29	16	18	28	14	---	34	14	27	4.6	5.9	6.4	.87
30	14	15	66	15	---	403	14	20	4.0	4.6	5.0	1.5
31	9.4	---	65	20	---	439	---	489	---	3.9	5.0	---
TOTAL	241.56	567.7	1499.6	690	2049	2017	1677	1243.8	1371.3	331.9	281.09	36.45
MEAN	7.79	18.9	48.4	22.3	73.2	65.1	55.9	40.1	45.7	10.7	9.07	1.21
MAX	34	57	167	57	398	439	308	489	385	30	84	3.6
MIN	.97	7.1	9.6	11	20	24	14	5.8	4.0	2.0	.66	.28
CFSM	.20	.50	1.27	.59	1.92	1.71	1.47	1.05	1.20	.28	.24	.03
IN.	.24	.55	1.46	.67	2.00	1.97	1.64	1.21	1.34	.32	.27	.04

CAL YR 1984 TOTAL 12935.17 MEAN 35.3 MAX 528 MIN .26 CFSM .93 IN. 12.63
WTR YR 1985 TOTAL 12006.40 MEAN 32.9 MAX 489 MIN .28 CFSM .86 IN. 11.72

WHEELING CREEK BASIN

03111585 ENLOW FORK NEAR WEST FINLEY, PA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1979 to September 1985 (discontinued)..

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1979 to September 1982.

pH: October 1979 to September 1982.

WATER TEMPERATURE: October 1979 to September 1982.

DISSOLVED OXYGEN: April 1981 to September 1981.

SUSPENDED SEDIMENT DISCHARGE: October 1979 to September 1985.

INSTRUMENTATION.--Water-quality monitor October 1979 to September 1982, automatic sediment sampler since October 1979.

REVISED RECORDS.--WDR PA-82-3: 1981

EXTREMES FOR PERIOD OF DAILY RECORD.--

SEDIMENT CONCENTRATIONS: Maximum daily, 2,200 mg/L, Aug. 1, 1983; minimum daily, 0 mg/L, Sept. 7-12, 1983.

SEDIMENT DISCHARGES: Maximum daily, 7,510 tons, Apr. 12, 1981; minimum daily, 0.0 ton, on several days.

EXTREMES FOR CURRENT YEAR.--

SEDIMENT CONCENTRATIONS: Maximum daily, 1,140 mg/L, May 31; minimum daily, 1 mg/L, on several days.

SEDIMENT DISCHARGES: Maximum daily, 2,030 tons, May 31; minimum daily 0.0, ton on several days.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUC- TANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	ACIDITY (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
FEB 01...	1030	30	315	8.0	.0	130	--	44	6.0	15	1.3
AUG 22...	0940	3.3	650	8.0	17.5	170	.0	55	8.1	60	3.0

DATE	ALKA- LITY FIELD (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	
FEB 01...	5	120	42	18	<.10	5.7	218	190	21	40	16
AUG 22...		130	57	81	.20	3.7	361	180	7	20	8

WHEELING CREEK BASIN

131

03111585 ENLOW FORK NEAR WEST FINLEY, PA--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L) OCTOBER	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L) NOVEMBER	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L) DECEMBER	SEDIMENT DISCHARGE (TONS/DAY)
1	9.4	63	1.6	7.7	6	.12	27	6	.44
2	6.7	40	.72	21	21	1.2	21	5	.28
3	2.9	13	.10	14	9	.34	21	5	.28
4	1.8	9	.04	23	41	6.0	16	4	.17
5	1.3	5	.02	57	55	8.5	13	4	.14
6	.99	5	.01	33	10	.89	11	6	.18
7	.97	5	.01	21	8	.45	9.6	9	.23
8	1.2	6	.02	14	7	.26	10	8	.22
9	2.2	7	.04	15	8	.32	17	8	.37
10	2.4	8	.05	39	36	3.8	37	52	12
11	2.1	7	.04	47	36	4.9	88	106	28
12	1.9	7	.04	33	13	1.2	62	26	4.4
13	2.0	7	.04	23	6	.37	50	22	3.0
14	2.2	7	.04	16	5	.22	91	65	16
15	2.6	4	.03	14	5	.19	80	51	11
16	6.1	15	.25	14	13	.49	57	26	4.0
17	8.9	9	.22	10	8	.22	42	20	2.3
18	18	36	1.7	9.8	6	.16	31	12	1.0
19	7.5	18	.36	16	12	.52	41	22	2.4
20	11	24	.71	17	16	.73	44	15	1.8
21	8.1	7	.15	14	12	.45	89	196	96
22	34	108	17	12	10	.32	167	153	83
23	26	37	2.6	14	12	.45	88	20	4.8
24	12	15	.49	12	10	.32	65	12	2.1
25	8.3	9	.20	10	8	.22	55	11	1.6
26	8.1	7	.15	8.1	6	.13	41	18	2.0
27	7.1	5	.10	7.1	4	.08	35	13	1.2
28	6.4	7	.12	13	3	.11	32	8	.69
29	16	9	.39	18	3	.15	28	7	.53
30	14	7	.26	15	2	.08	66	45	8.0
31	9.4	7	.18	---	---	---	65	15	2.6
TOTAL	241.56	---	27.68	567.7	---	33.19	1499.6	---	290.73
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L) JANUARY	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L) FEBRUARY	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L) MARCH	SEDIMENT DISCHARGE (TONS/DAY)
1	57	10	1.5	25	3	.20	42	20	2.3
2	45	8	.97	32	4	.35	36	19	1.8
3	37	6	.60	27	4	.29	32	14	1.2
4	35	6	.57	24	2	.13	32	11	.95
5	33	6	.53	23	1	.06	43	23	2.7
6	27	5	.36	31	3	.25	31	10	.84
7	27	7	.51	25	1	.07	30	12	.97
8	26	5	.35	20	1	.05	38	16	1.6
9	20	2	.11	20	3	.16	34	10	.92
10	21	16	.91	23	1	.06	32	7	.60
11	22	3	.18	37	2	.20	35	3	.28
12	28	4	.30	60	25	4.1	115	195	72
13	28	7	.53	94	35	8.9	88	19	4.5
14	23	1	.06	72	19	3.7	67	11	2.0
15	18	1	.05	58	11	1.7	51	10	1.4
16	16	1	.04	45	9	1.1	41	12	1.3
17	14	1	.04	41	8	.89	37	14	1.4
18	13	1	.04	38	15	1.5	32	14	1.2
19	12	1	.03	42	40	4.5	29	14	1.1
20	12	1	.03	48	52	6.7	28	15	1.1
21	11	1	.03	60	80	13	24	14	.91
22	11	3	.09	240	230	149	26	14	.98
23	17	3	.14	398	760	817	37	20	2.0
24	22	3	.18	241	126	82	41	27	3.0
25	19	1	.05	128	74	26	39	20	2.1
26	17	1	.05	86	40	9.3	34	13	1.2
27	15	1	.04	63	30	5.1	33	7	.62
28	15	2	.08	48	24	3.1	34	12	1.1
29	14	2	.08	---	---	---	34	16	1.5
30	15	2	.08	---	---	---	403	650	707
31	20	2	.11	---	---	---	439	800	948
TOTAL	690	---	8.64	2049	---	1139.41	2017	---	1768.57

WHEELING CREEK BASIN

03111585 ENLOW FORK NEAR WEST FINLEY, PA--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L) APRIL	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L) MAY	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L) JUNE	SEDIMENT DISCHARGE (TONS/DAY)
1	308	410	341	13	5	.18	385	468	468
2	150	14	5.7	80	193	90	109	55	16
3	107	13	3.8	115	80	25	207	358	345
4	83	12	2.7	53	24	3.4	152	117	48
5	66	11	2.0	38	20	2.1	80	60	13
6	56	10	1.5	35	18	1.7	54	48	7.0
7	58	9	1.4	32	17	1.5	39	36	3.8
8	78	10	2.1	28	15	1.1	30	24	1.9
9	78	9	1.9	22	13	.77	25	18	1.2
10	72	12	2.3	19	10	.51	21	14	.79
11	69	17	3.2	16	14	.60	17	9	.41
12	59	12	1.9	14	13	.49	19	10	.51
13	54	26	3.8	12	11	.36	18	7	.34
14	49	18	2.4	11	12	.36	14	7	.26
15	44	12	1.4	9.0	10	.24	14	7	.26
16	41	7	.77	11	20	.59	14	7	.26
17	34	8	.73	16	13	.56	12	34	1.1
18	30	10	.81	24	18	1.2	14	29	1.1
19	27	13	.95	16	12	.52	9.8	26	.69
20	24	11	.71	11	7	.21	9.6	44	1.1
21	22	9	.53	5.8	6	.09	8.7	23	.54
22	20	8	.43	10	11	.30	25	104	13
23	20	8	.43	23	14	.87	38	108	11
24	23	10	.62	19	16	.82	17	46	2.1
25	25	15	1.0	17	13	.60	11	8	.24
26	20	4	.22	13	10	.35	7.9	14	.30
27	17	6	.28	11	10	.30	6.3	19	.32
28	15	6	.24	34	77	7.1	5.4	28	.41
29	14	7	.26	27	58	4.2	4.6	16	.20
30	14	6	.23	20	20	1.1	4.0	14	.15
31	---	---	---	489	1140	2030	---	---	---
TOTAL	1677	---	385.31	1243.8	---	2177.12	1371.3	---	938.98
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L) JULY	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L) AUGUST	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L) SEPTEMBER	SEDIMENT DISCHARGE (TONS/DAY)
1	3.9	22	.23	57	368	112	3.6	5	.05
2	4.1	20	.22	13	32	1.1	2.7	5	.04
3	11	13	.39	7.8	8	.17	2.3	5	.03
4	12	58	1.9	4.9	7	.09	1.9	5	.03
5	8.8	23	.55	3.6	6	.06	1.5	5	.02
6	23	36	2.2	3.1	5	.04	1.2	4	.01
7	15	16	.65	2.7	5	.04	1.3	5	.02
8	26	64	4.5	2.5	4	.03	1.1	5	.01
9	13	46	1.6	2.1	4	.02	1.2	9	.03
10	17	50	2.3	1.4	3	.01	2.7	9	.07
11	11	34	1.0	1.1	3	.00	2.8	10	.08
12	7.0	26	.49	.89	3	.00	2.3	10	.06
13	4.6	16	.20	.75	3	.00	1.1	6	.02
14	4.1	11	.12	.66	2	.00	.60	8	.01
15	30	86	7.0	.75	3	.00	.44	8	.00
16	11	43	1.3	17	44	2.0	.38	5	.00
17	5.6	18	.27	7.1	8	.15	.37	13	.01
18	3.5	17	.16	3.4	4	.04	.44	20	.02
19	2.5	16	.11	1.9	4	.02	.37	7	.00
20	2.0	17	.09	1.5	4	.02	.39	7	.00
21	3.4	20	.18	1.5	3	.01	.36	7	.00
22	28	242	.29	1.2	3	.00	.29	21	.02
23	8.7	30	.70	.84	3	.00	.28	6	.00
24	5.2	18	.25	1.0	5	.01	.57	5	.00
25	3.7	17	.17	.84	392	207	.63	9	.02
26	21	53	3.0	23	24	1.5	.86	6	.01
27	23	60	3.7	12	15	.49	1.3	7	.02
28	9.4	18	.46	8.0	10	.22	1.1	6	.02
29	5.9	11	.18	6.4	9	.16	.87	5	.01
30	4.6	8	.10	5.0	6	.08	1.5	5	.02
31	3.9	60	6.7	5.0	6	.08	---	---	---
TOTAL	331.9	---	69.72	281.09	---	325.34	36.45	---	0.63

STREAM 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 National Geodetic Vertical Datum of 1929, unadjusted. Prior to Aug. 17, 1924, nonrecording gage at same site and datum.

REMARKS.--Records good except estimated daily discharges, Jan. 6 to Feb. 22, which are poor. Water-quality data collected at this site 1965 to 1977. Sediment data collected 1970 to 1974.

AVERAGE DISCHARGE.--48 years, 269 ft³/s, 20.88 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 17,000 ft³/s, Jan. 22, 1959, gage height, 11.70 ft; maximum gage height, 12.94 ft, Mar. 4, 1934 (backwater from ice); minimum discharge, 0.2 ft³/s, July 31, Aug. 1, 1933, Aug. 1, 2, 1934.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,900 ft³/s and maximums (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 29	2300	4250	6.98	Mar. 6	0200	6170	7.98
Feb. 24	1800	*9840	*9.55	Mar. 30	0800	3020	6.19
Mar. 5	0100	2900	6.11	Apr. 1	2100	3610	6.59

Minimum daily discharge, 13 ft³/s, Sept. 7, 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	40	120	146	906	130	365	2930	56	106	23	24	30
2	44	190	348	1350	130	324	1620	49	147	23	27	29
3	69	389	260	879	130	304	636	45	90	22	25	23
4	53	256	340	556	130	571	1060	42	65	22	21	21
5	39	1110	248	419	130	3270	615	41	49	22	18	16
6	32	1750	173	240	130	3140	367	41	38	23	16	15
7	28	2210	139	180	130	505	272	41	32	36	19	13
8	27	537	124	140	130	729	221	47	29	75	21	19
9	25	266	176	120	130	1010	262	46	29	97	41	178
10	24	553	183	120	130	455	305	39	27	90	29	330
11	25	1220	304	110	130	302	291	34	27	75	24	210
12	24	1390	630	110	250	665	339	32	227	66	18	136
13	22	984	1130	110	450	1260	281	29	291	43	17	73
14	22	863	901	110	600	605	300	29	405	79	18	42
15	22	619	627	110	540	438	219	27	201	1390	17	31
16	22	1150	412	110	300	287	171	28	190	2010	17	26
17	21	832	271	110	240	215	139	31	326	415	17	22
18	20	365	210	110	200	187	115	34	177	147	31	19
19	22	251	168	110	190	163	107	34	106	79	26	18
20	26	187	166	110	180	169	113	34	83	52	22	15
21	23	142	188	120	170	195	106	41	56	42	34	15
22	22	118	329	120	520	149	93	49	46	41	27	14
23	25	104	630	120	3530	138	80	58	41	52	22	13
24	22	97	284	120	8210	223	73	39	69	36	18	16
25	26	91	197	120	6180	451	137	33	56	30	20	15
26	30	85	136	120	1650	292	245	30	40	28	18	17
27	28	73	146	130	598	184	164	28	34	26	19	17
28	38	75	865	130	445	194	101	33	29	23	19	16
29	566	94	3310	130	---	1260	75	30	27	21	17	21
30	772	134	2930	130	---	2200	64	43	25	19	16	19
31	219	---	1700	130	---	1150	---	43	---	25	16	---
TOTAL	2378	16255	17671	7380	25683	21370	11501	1186	3068	5132	674	1429
MEAN	76.7	542	570	238	917	689	383	38.3	102	166	21.7	47.6
MAX	772	2210	3310	1350	8210	3270	2930	58	405	2010	41	330
MIN	20	73	124	110	130	138	64	27	25	19	16	13
CFSM	.44	3.10	3.26	1.36	5.24	3.94	2.19	.22	.58	.95	.12	.27
IN.	.51	3.46	3.76	1.57	5.46	4.54	2.44	.25	.65	1.09	.14	.30
CAL YR 1984	TOTAL	119913	MEAN	328	MAX	3420	MIN	14	CFSM	1.87	IN.	25.46
WTR YR 1985	TOTAL	113727	MEAN	312	MAX	8210	MIN	13	CFSM	1.78	IN.	24.18

STREAMS TRIBUTARY TO LAKE ERIE

04213040 RACCOON CREEK NEAR WEST SPRINGFIELD, PA

LOCATION.--Lat 41°56'42", long 80°26'51", Erie County, Hydrologic Unit 04120101, on right bank 12 ft upstream from highway bridge on Sanford Road, 1.4 mi east of West Springfield, 4.4 mi upstream from mouth, and 7 mi southwest of Girard.

DRAINAGE AREA.--2.53 mi².

PERIOD OF RECORD.--Annual maximum, water years 1962-68. October 1968 to current year.

REVISED RECORD.--WDR PA-74-1: 1973.

GAGE.--Water-stage recorder, crest-stage gage, and concrete control installed Aug. 2, 1973. Elevation of gage is 715 ft above National Geodetic Vertical Datum of 1929, from topographic map. May 9, 1961, to Oct. 2, 1968, crest-stage gage at same site and datum.

REMARKS.--Records good except for estimated daily discharges, Dec. 6-9, 24-26, Jan. 5 to Feb. 23, July 2, 3, Aug. 5, 6, 12-14, 21-24, 29, Sept. 3-6, 14-22, which are fair. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--17 years, 3.61 ft³/s, 19.38 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 408 ft³/s, Dec. 28, 1968, gage height, 6.06 ft, from rating curve extended above 76 ft³/s on basis of computation of flow through culvert at gage height 5.39; no flow on many days.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 100 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Feb. 23	1100	142	3.99	Mar. 4	2300	*162	*4.24

Minimum daily discharge, 0.04 ft³/s, Aug. 23, 24, 29, Sept. 3-6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.0	.20	6.4	27	1.3	6.6	25	2.0	7.8	.12	.43	.05
2	1.5	.99	4.6	12	1.3	5.9	11	1.9	2.5	.10	.22	.05
3	1.2	.51	5.4	7.6	1.3	4.2	15	1.9	6.5	.09	.12	.04
4	1.2	4.6	4.5	5.6	1.3	34	11	1.8	2.8	.12	.07	.04
5	1.0	7.3	3.7	4.7	1.2	41	7.1	1.8	1.8	.17	.06	.04
6	.88	13	3.2	4.0	1.2	8.2	6.2	2.6	1.5	.34	.06	.04
7	.80	6.6	3.0	3.6	1.2	5.4	4.9	2.2	1.2	.25	.53	.05
8	.96	4.1	2.9	3.4	1.2	18	5.7	2.0	.80	.99	.37	1.0
9	.96	3.6	2.8	3.2	1.1	7.3	6.4	1.9	.44	.51	.19	.73
10	.80	12	5.5	3.0	1.1	4.5	4.9	1.9	.27	.53	.09	.50
11	.74	13	10	2.8	1.1	4.1	6.2	1.8	4.5	.34	.06	.39
12	.62	13	9.7	2.7	2.0	20	5.7	1.8	22	.22	.05	.20
13	.50	16	8.2	2.5	3.5	9.2	9.1	1.7	12	.14	.05	.10
14	.41	11	10	2.4	3.2	5.9	13	1.5	3.5	3.7	.05	.08
15	.36	9.9	8.5	2.3	2.7	4.0	7.1	1.3	1.4	17	.06	.07
16	.37	9.2	5.8	2.2	2.4	3.1	5.2	1.3	5.1	2.9	.07	.07
17	.35	6.0	4.8	2.1	2.1	3.0	4.0	1.5	1.8	.98	.06	.06
18	.32	4.8	3.9	2.0	1.8	2.5	3.6	1.6	1.4	.58	.06	.06
19	.32	4.1	4.1	2.0	1.6	2.1	3.4	1.4	.90	.39	.09	.05
20	.27	3.4	4.3	1.9	1.4	3.1	3.4	1.4	.69	.27	.06	.05
21	.25	3.1	4.4	1.8	1.3	2.4	3.1	2.3	.50	.26	.05	.06
22	.25	2.9	10	1.7	9.0	2.0	2.7	1.5	.52	.33	.05	.07
23	.27	2.8	5.5	1.7	64	2.8	2.3	1.4	.67	.18	.04	.10
24	.26	2.7	3.4	1.6	47	5.8	3.3	1.2	.37	.13	.04	.39
25	.23	2.6	2.9	1.6	21	4.3	8.2	1.2	.26	.10	.08	.16
26	.30	2.5	2.5	1.6	10	2.7	4.5	1.2	.22	.10	.05	.12
27	.33	2.4	4.3	1.5	9.0	2.5	3.1	.83	.20	.11	.10	.33
28	.26	3.1	39	1.5	6.8	5.9	2.5	1.8	.19	.12	.05	.11
29	.35	3.9	27	1.5	---	22	2.2	1.3	.19	.08	.04	.10
30	.23	3.2	21	1.4	---	8.7	2.0	.98	.18	.07	.05	.10
31	.20	---	10	1.4	---	36	---	13	---	.41	.08	---
TOTAL	18.49	172.50	241.3	114.3	202.1	287.2	191.8	62.01	82.20	31.63	3.38	5.21
MEAN	.60	5.75	7.78	3.69	7.22	9.26	6.39	2.00	2.74	1.02	.11	.17
MAX	2.0	16	39	27	64	41	25	13	22	17	.53	1.0
MIN	.20	.20	2.5	1.4	1.1	2.0	2.0	.83	.18	.07	.04	.04
CFSM	.24	2.27	3.08	1.46	2.85	3.66	2.53	.79	1.08	.40	.04	.07
IN.	.27	2.54	3.55	1.68	2.97	4.22	2.82	.91	1.21	.47	.05	.08

CAL YR 1984 TOTAL 1391.32 MEAN 3.80 MAX 39 MIN .04 CFSM 1.50 IN. 20.46
WTR YR 1985 TOTAL 1412.12 MEAN 3.87 MAX 64 MIN .04 CFSM 1.53 IN. 20.76

As the number of streams on which streamflow information is likely to be desired far exceeds the number of stream-gaging stations feasible to operate at one time, the Geological Survey collects limited streamflow data at sites other than stream-gaging stations. When limited streamflow data are collected on a systematic basis over a period of years for use in hydrologic analyses, the site at which the data are collected is called a partial-record station. Data collected at these partial-record stations are usable in low-flow or floodflow analyses, depending on the type of data collected. In addition, discharge measurements are made at other sites not included in the partial-record program. These measurements are generally made in times of drought or flood to give better areal coverage to those events. Those measurements and others collected for some special reason are called measurements at miscellaneous sites.

Records collected at partial-record stations are presented in two tables. The first is a table of discharge measurements at low-flow partial-record stations, and the second is a table of annual maximum stage and discharge at crest-stage stations. Discharge measurements made at miscellaneous sites for both low flow and high flow are given in a third table.

Low-flow partial-record stations

Measurements of streamflow in the area covered by this report made at low-flow partial-record stations are given in the following table. These measurements were made during periods of base flow when streamflow is primarily from ground-water storage. These measurements when correlated with the simultaneous discharge of a nearby stream when continuous records are available, will give a picture of the low-flow potentiality of the stream. The column headed "Period of record" shows the water years in which measurements were made at the same, or practically the same, site.

Discharge measurements made at low-flow partial-record stations during water year 1985

Station No.	Station name	Location	Drainage area (mi ²)	Period of record	Measurements Date	Discharge (ft ³ /s)
Clarion River basin						
03029170	Little Toby Creek at Portland Mills, Pa.	Lat 41°21'53", long 78°49'22", Elk County, at railroad bridge 0.1 mi above State Highway 949 and 0.8 mi south of Portland Mills.	126	1972-85	4-30-85 9-05-85	116 29.1
03030600	Piney Creek at Piney, Pa.	Lat 41°10'12", long 79°28'20", Clarion County, at bridge on State Highway 854 at Piney, 0.1 mile above mouth, and 4 miles northwest of Reidsburg.	72.2	1933 1970-85	5-01-85 9-19-85	47.4 24.2
Kiskiminetas River basin						
03045300	McCune Run at Keystone State Park, Pa.	Lat 40°22'26", long 79°22'25", Westmoreland County, at culvert in Keystone State Park, 200 ft above head of Keystone Lake, and 3 miles southeast of New Alexandria.	1.73	1970-85	5-14-85 8-29-85	.52 .18
Pine Creek basin						
03049810	Pine Creek at Etna, Pa.	Lat 40°29'42", long 79°56'26", Allegheny County, at highway bridge on ramp leading to 62nd Street Bridge at Etna and 0.8 mile above mouth.	66.8	1950-52 1970-85	4-30-85 8-28-85	33.1 15.0
Monongahela River basin						
03083100	Jacobs Creek at Jacobs Creek, Pa.	Lat 40°07'23", long 79°44'14", Westmoreland County, 0.3 mile above highway bridge at Jacobs Creek, and 0.4 mile above mouth.	94.9	1950 1965-67 1970-85	5-14-85 8-29-85	59.7 35.5

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

Crest-stage partial-record stations

The following table contains annual maximum discharges for crest-stage stations. A crest-stage gage is a device which will register the peak stage occurring between inspections of the gage. A stage-discharge relation for each gage is developed from discharge measurements made by indirect measurements of peak flow or by current meter. The date of the maximum discharge is not always certain but is usually determined by comparison with nearby continuous-record stations, weather records, or local inquiry. Only the maximum discharge for each water year is given. Information on some lower floods may have been obtained but is not published herein. The years given in the period of record represent water years for which the annual maximum has been determined.

Annual maximum discharge at crest-stage partial-record stations

Station No.	Station name	Location	Drainage area (mi ²)	Period of record	Date	Gage height (feet)	Discharge (ft ³ /s)
Brokenstraw Creek basin							
03015390	Hare Creek near Corry, Pa.	Lat 41°56'29", long 79°38'41", Erie County, at concrete dam of Corry Water Co., 1.1 miles above Bear Creek, and 1.5 miles north of Corry.	12.3	1964-85	2-25-85	5.72	816
Monongahela River basin							
03072880	Browns Creek near Nineveh, Pa.	Lat 39°56'27", long 80°17'21", Greene County, at highway bridge just below Patterson Run 1.8 miles southeast of Nineveh. Datum of gage is 975.60 ft National Geodetic Vertical Datum of 1929.	17.5	1963-85	5-31-85	7.86	495
03078500	Big Piney Run near Salisbury, Pa.	Lat 39°43'34", long 79°02'55", Somerset County, 660 ft upstream from Little Piney Run, and 2.5 mi southeast of Salisbury.	24.5	1932-70†, 1974-85	2-24-85	3.79	680
Streams tributary to Lake Erie							
04213200	Mill Creek at Erie, Pa.	Lat 42°05'54", long 80°04'35", Erie County, at bridge on West 38th Street, 100 ft west of State Highway 505, at Erie.	9.16	1964-85	2-23-85	11.83	995

† Operated as a continuous-record station.

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

137

Discharge measurements made at miscellaneous sites during water year 1985

Stream	Tributary to	Location	Drainage area (mi ²)	Measured previously (water years)	Measurements	
					Date	Discharge (ft ³ /s)
Clarion River Basin						
Clarion River	Allegheny River	Lat 41°25'15", long 78°44'10", Elk County, at bridge on State Highway 948 in Ridgway, 50 ft downstream from Elk Creek.	303	1940-53† 1954-85	10-15-84	182
					12-17-84	912
					3-25-85	1,220
					5-22-85	155
					7-08-85	283
					8-19-85	330
Clarion River	Allegheny River	Lat 41°07'47", long 79°33'18", Clarion County, at bridge on State Highway 58 at Callensburg and 0.3 mi above Licking Creek.	1,163	1970-72† 1979-85	1-10-85	3,230
					2-07-85	152
					3-28-85	5,370
					5-23-85	136
					7-11-85	3,570
					9-05-85	80

† Operated as a continuous record station.

ANALYSIS OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

OLD FORTY MINE STUDY, CLARION COUNTY

410945079252801 OLD FORTY MINE OUTFLOW NEAR CLARION, PA.

LOCATION.--Lat 41°09'45", Long 79°25'28", Clarion County, Hydrologic Unit 05010005, 1.3 mi northwest of Reidsburg, and 4 mi southwest of Clarion.

DATUM.--Elevation of outflow is 1,313 feet from topographic map.

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

REMARKS.--Samples analyzed by the Pennsylvania Department of Environmental Resources Harrisburg laboratory. Discharge, ph, and temperature are field values.

WATER QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	AGENCY ANA- LYZING SAMPLE (CODE NUMBER)	DIS- CHARGE INSTAN- TANEOUS (GPM)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	ACIDITY (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)
OCT									
30...	1150	9813	1.8	4690	3.0	14.0	2640	140	200
NOV									
20...	0925	9813	11	5810	2.3	12.0	3400	120	51
DEC									
11...	0950	9813	11	4350	2.3	10.0	2800	140	---
JAN									
21...	1115	9813	8.2	4730	2.2	12.0	2620	160	180
FEB									
11...	1545	9813	7.5	4770	2.5	12.0	2800	94	51
MAR									
12...	1150	9813	38	4250	2.6	10.0	2490	120	49
APR									
09...	1325	9813	36	3920	2.2	10.5	2040	130	160
MAY									
14...	1600	9813	15	4930	2.2	12.0	2600	65	39
JUN									
12...	0835	9813	13	4780	2.2	12.5	2840	130	160
JUL									
09...	1130	9813	7.5	4800	2.4	14.0	2850	140	160
AUG									
08...	1135	9813	1.8	5350	2.2	16.5	2960	130	59
SEP									
11...	0915	9813	0.2	3900	2.9	15.0	2200	130	150

DATE	SULFATE DIS- SOLVED (MG/L AS SO4)	ALUM- INUM, DIS- SOLVED (MG/L AS AL)	IRON, DIS- SOLVED (MG/L AS FE)	MANGA- NESE, DIS- SOLVED (MG/L AS MN)
OCT				
30...	2670	190	650	95
NOV				
20...	3750	220	810	92
DEC				
11...	2820	120	570	74
JAN				
21...	2480	150	540	94
FEB				
11...	3000	130	540	78
MAR				
12...	2800	110	440	58
APR				
09...	2820	130	330	62
MAY				
14...	3110	140	400	51
JUN				
12...	3910	150	470	73
JUL				
09...	---	160	550	77
AUG				
08...	4010	180	660	98
SEP				
11...	3290	120	560	85

ANALYSIS OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

WASHINGTON COUNTY STUDY

WATER-QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	ACIDITY (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
MONONGAHELA RIVER BASIN											
		03072813 - TENMILE CREEK AT PROSPERITY, PA.					#14 (LAT 40 02 44 LONG 080 17 38)				
AUG 22...	0745	.70	440	7.5	18.5	180	9.9	59	7.9	17	3.6
		03072815 - TENMILE CREEK NEAR AMITY, PA					#13 (LAT 40 10 11 LONG 080 12 20)				
AUG 22...	0745	3.5	360	7.7	18.0	170	5.0	55	7.3	11	3.5
		03072817 - LITTLE TENMILE CREEK NR TENMILE, PA.					#12 (LAT 40 01 15 LONG 080 07 41)				
AUG 22...	0900	1.2	480	7.8	18.5	190	9.9	59	10	30	3.9
		03072820 - DANIELS RUN AT WEST ZOLLARVILLE, PA					#10 (LAT 40 01 51 LONG 080 05 32)				
AUG 22...	1000	3.5	7000	8.1	17.5	590	5.0	130	65	1400	6.1
		03074800 - PIKE RUN AT DAISYTOWN, PA.					#9 (LAT 40 03 32 LONG 079 55 32)				
AUG 22...	1300	6.4	1540	8.4	21.0	390	--	96	36	170	5.0
		03075035 - N BR PIGEON C AT BENTLYVILLE, PA					#8 (LAT 40 07 54 LONG 080 00 19)				
AUG 23...	1145	.33	1000	7.6	19.0	460	15	120	38	43	4.3
		03075037 - PIGEON CREEK AT HAZEL HURST, PA.					#7 (LAT 40 10 38 LONG 079 57 25)				
AUG 23...	1030	7.1	2800	8.6	18.0	460	--	120	38	470	6.3
		03075058 - MINGO C AT RIVER VIEW, PA					#6 (LAT 40 12 31 LONG 079 57 53)				
AUG 23...	0745	.70	2000	7.9	16.0	610	5.0	160	50	220	5.8
		03075081 - PETERS CREEK AT GASTONVILLE, PA.					#5 (LAT 40 15 56 LONG 079 58 58)				
AUG 23...	0745	2.4	4300	8.0	15.5	600	5.0	140	60	810	4.3
CHARTIERS CREEK BASIN											
		03085224 - RES #3, CHARTIERS CR NR WASHINGTON, PA.					#23 (LAT 40 08 35 LONG 080 15 05)				
AUG 22..	1030	.06	530	7.9	17.5	240	5.0	83	8.9	12	1.9

ANALYSIS OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

141

WASHINGTON COUNTY STUDY

WATER-QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	ALKA- LINITY FIELD (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)
MONONGAHELA RIVER BASIN										
03072813 - TENMILE CREEK AT PROSPERITY, PA						#14 (LAT 40 02 44 LONG 080 17 38)				
AUG 22...	160	31	21	.20	4.4	255	530	18	150	140
03072815 - TENMILE CREEK NEAR AMITY, PA						#13 (LAT 40 10 11 LONG 080 12 20)				
AUG 22...	140	33	15	.20	5.3	235	480	25	90	76
03072817 - LITTLE TENMILE CREEK NR TENMILE, PA.						#12 (LAT 40 01 15 LONG 080 07 41)				
AUG 22..	170	56	20	.20	5.7	299	650	20	100	72
03072820 - DANIELS RUN AT WEST ZOLLARSVILLE, PA						#10 (LAT 40 01 51 LONG 080 05 32)				
AUG 22...	370	2600	480	.40	10	5300	180	30	260	250
03074800 - PIKE RUN AT DAISYTOWN, PA.						#9 (LAT 40 03 32 LONG 079 55 32)				
AUG 22...	204	500	38	.40	8.5	1070	220	12	70	36
03075035 - N BR PIGEON CREEK AT BENTLYVILLE, PA						#8 (LAT 40 07 54 LONG 080 00 19)				
AUG 23...	220	300	31	.20	6.7	741	240	12	30	19
03075037 - PIGEON CREEK AT HAZEL HURST, PA.						#7 (LAT 40 10 38 LONG 079 57 25)				
AUG 23..	230	920	230	.60	4.6	2020	270	30	30	30
03075058 - MINGO CREEK AT RIVER VIEW, PA						#6 (LAT 40 12 31 LONG 079 57 53)				
AUG 23...	170	830	90	.30	7.4	1580	160	30	90	100
03075081 - PETERS CREEK AT GASTONVILLE, PA.						#5 (LAT 40 15 56 LONG 079 58 58)				
AUG 23...	170	1700	430	.80	8.2	3290	520	40	390	370
CHARTIERS CREEK BASIN										
03085224 - RES #3, CHARTIERS CR NR WASHINGTON, PA.						#23 (LAT 40 08 35 LONG 080 15 05)				
AUG 22...	190	55	28	.20	11	331	960	13	110	100

ANALYSIS OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS
WASHINGTON COUNTY STUDY

WATER-QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	ALKA- LINITY FIELD (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)
CHARTIERS CREEK BASIN--Continued										
	03085237 - CHARTIERS C AT HOUSTON, PA					#1	(LAT 40 14 26 LONG 080 12 31)			
AUG 22...	120	150	73	1.3	9.5	535	830	38	140	120
	03085240 - CHARTIERS RN AT HOUSTON, PA					#2	(LAT 40 14 54 LONG 080 12 39)			
AUG 22...	160	330	18	.60	7.7	600	490	23	240	220
	03085300 - LITTLE CHARTIERS C AT LINDEN, PA					#3	(LAT 40 14 14 LONG 080 08 20)			
AUG 22...	170	74	48	.30	6.4	373	470	6	40	21
	03085310 - RES #2 L CHARTIERS CR NR MCMURRAY, PA.					#4	(LAT 40 15 27 LONG 080 06 05)			
AUG 22...	230	56	32	.30	11	378	640	8	80	33
	03085400 - MILLERS RUN AT CECIL, PA.					#30	(LAT 40 19 38 LONG 080 11 21)			
AUG 23...	200	100	120	.30	5.5	568	330	6	40	22
	03085450 - ROBINSON RUN AT MCDONALD, PA.					#31	(LAT 40 21 55 LONG 080 14 38)			
AUG 22...	36	1200	26	.60	15	1910	23000	14000	3700	3900
OHIO RIVER BASIN										
	03107600 - RACCOON C AT RACCOON, PA					#32	(LAT 40 23 01 LONG 080 22 05)			
AUG 22...	2	570	40	.60	24	950	12000	12000	2700	2700
	03107690 - RACCOON CREEK NR HICKORY, PA.					#29	(LAT 40 19 13 LONG 080 19 14)			
AUG 22...	190	56	15	.30	6.3	301	600	13	160	120
	03110812 - KINGS C NR FLORENCE, PA					#34	(LAT 40 25 26 LONG 080 29 22)			
AUG 22...	120	170	9.4	.20	6.4	397	640	7	130	79
	03110820 - AUNT CLARA FORK NR PARIS, PA					#35	(LAT 40 25 38 LONG 080 30 43)			
AUG 22...	110	220	5.9	.20	4.7	453	170	9	50	45

ANALYSIS OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

143

WASHINGTON COUNTY STUDY

WATER-QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	ACIDITY (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
CHARTIERS CREEK BASIN--Continued											
		03085237 - CHARTIERS CREEK AT HOUSTON, PA #1 (LAT 40 14 26 LONG 080 12 31)									
AUG 22...	1510	13	850	7.4	21.0	250	9.9	75	15	64	12
		03085240 - CHARTIERS RUN AT HOUSTON, PA #2 (LAT 40 14 54 LONG 080 12 39)									
AUG 22...	1235	1.9	930	7.8	20.5	440	5.0	110	40	49	4.0
		03085300 - LITTLE CHARTIERS CREEK AT LINDEN, PA #3 (LAT 40 14 14 LONG 080 08 20)									
AUG 22...	1610	2.4	625	8.1	22.0	230	.0	71	13	36	3.9
		03085310 - RES #2 LITTLE CHARTIERS C NR MCMURRAY, PA. #4 (LAT 40 15 27 LONG 080 06 05)									
AUG 22...	1740	.06	625	8.1	19.0	280	.0	80	19	24	2.1
		03085400 - MILLERS RUN AT CECIL, PA. #30 (LAT 40 19 38 LONG 080 11 21)									
AUG 23...	0745	1.0	960	8.1	14.5	310	.0	84	25	61	4.2
		03085450 - ROBINSON RUN AT MCDONALD, PA. #31 (LAT 40 21 55 LONG 080 14 38)									
AUG 22...	1350	2.3	2450	6.5	17.5	820	55	190	83	180	19
OHIO RIVER BASIN											
		03107600 - RACCOON CREEK AT RACCOON, PA #32 (LAT 40 23 01 LONG 080 22 05)									
AUG 22...	1140	2.8	1330	4.7	17.0	490	55	130	41	45	3.0
		03107690 - RACCOON CREEK NR HICKORY, PA. #29 (LAT 40 19 13 LONG 080 19 14)									
AUG 22...	1245	.30	505	8.3	20.0	220	--	68	12	15	3.6
		03110812 - KINGS CREEK NEAR FLORENCE, PA #34 (LAT 40 25 26 LONG 080 29 22)									
AUG 22...	0800	.30	585	7.9	16.0	280	5.0	74	23	11	2.4
		03110820 - AUNT CLARA FORK NEAR PARIS, PA #35 (LAT 40 25 38 LONG 080 30 43)									
AUG 22...	0900	.79	638	7.8	16.0	310	5.0	82	26	7.6	2.6

ANALYSIS OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

WASHINGTON COUNTY STUDY

WATER-QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	ALKA- LINITY FIELD (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)
------	---------------------------------------------------	-----------------------------------------------	-----------------------------------------------------	----------------------------------------------------	---------------------------------------------------	--------------------------------------------------------------------	-------------------------------------------------------	--------------------------------------------	-----------------------------------------------------------------	------------------------------------------------------

OHIO RIVER BASIN--Continued

03110920 - HARMON C NR HANLIN STATION, PA						#33 (LAT 40 21 56 LONG 080 30 34)				
AUG 22...	100	780	54	.20	7.6	1380	200	19	90	74
03111001 - CROSS CREEK NEAR HICKORY, PA.						#28 (LAT 40 15 08 LONG 080 21 29)				
AUG 22...	170	43	9.7	<.10	6.9	261	470	25	100	91
03111005 - N FK CROSS C AT AVELLA, PA						#27 (LAT 40 16 38 LONG 080 27 41)				
AUG 22...	150	280	9.1	.30	7.2	605	140	6	150	150
03111140 - BUFFALO CREEK AT TAYLORTOWN, PA.						#24 (LAT 40 09 56 LONG 080 22 47)				
AUG 22..	170	45	32	.20	5.6	301	840	44	110	82
03111220 - DUTCH FORK CREEK NR CLAYSVILLE, PA.						#19 (LAT 40 07 22 LONG 080 28 26)				
AUG 22..	180	72	41	.10	7.2	392	490	10	130	110
03111250 - SUGARCAMP RUN AT FROGTOWN, PA.						#26 (LAT 40 12 25 LONG 080 31 05)				
AUG 23...	170	48	7.2	.10	7.2	284	610	5	10	1

WHEELING CREEK BASIN

03111580 - TEMPLETON FORK NEAR WEST FINLEY, PA						#15 (LAT 39 58 40 LONG 080 26 46)				
AUG 22...	130	31	6.2	.30	4.7	202	140	10	10	9
03111603 - ROBINSON FORK AT WEST FINLEY, PA.						#17 (LAT 39 59 33 LONG 080 28 40)				
AUG 22...	120	32	6.0	.20	4.3	188	160	11	10	7
03111900 - MIDDLE WHEELING CREEK NR W. ALEXANDER, PA.						#18 (LAT 40 03 59 LONG 080 30 59)				
AUG 22...	--	34	11	.20	4.5	225	180	9	20	16

ANALYSIS OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

WASHINGTON COUNTY STUDY

WATER-QUALITY DATA, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	HARD- NESS (MG/L AS CACO3)	ACIDITY (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
OHIO RIVER BASIN--Continued											
03110920 - HARMON CREEK NEAR HANLIN STATION, PA #33 (LAT 40 21 56 LONG 080 30 34)											
AUG 22...	1015	3.1	1680	7.9	17.0	880	5.0	230	75	29	4.5
03111001 - CROSS CREEK NR HICKORY, PA #28 (LAT 40 15 08 LONG 080 21 29)											
AUG 22...	1630	.15	443	8.4	25.0	190	--	59	11	8.4	5.3
03111005 - NORTH FORK CROSS CREEK AT AVELLA, PA #27 (LAT 40 16 38 LONG 080 27 41)											
AUG 22...	1515	1.4	855	8.0	--	360	.0	98	28	37	3.6
BUFFALO CREEK BASIN											
03111140 - BUFFALO CREEK AT TAYLORTOWN, PA. #24 (LAT 40 09 56 LONG 080 22 47)											
AUG 22...	1030	1.6	420	7.9	22.0	210	5.0	68	10	21	2.9
03111220 - DUTCH FORK CREEK NR CLAYSVILLE, PA. #19 (LAT 40 07 22 LONG 080 28 26)											
AUG 22...	1850	.55	650	7.7	19.0	260	5.0	83	12	28	3.5
03111250 - SUGARCAMP RUN AT FROGTOWN, PA. #26 (LAT 40 12 25 LONG 080 31 05)											
AUG 23...	1204	.14	350	7.7	17.0	220	9.9	70	11	6.6	2.7
WHEELING CREEK BASIN											
03111580 - TEMPLETON FORK NEAR WEST FINLEY, PA #15 (LAT 39 58 40 LONG 080 26 46)											
AUG 22...	1030	.96	370	7.9	16.5	160	5.0	52	6.8	6.6	2.7
03111603 - ROBINSON FORK AT WEST FINLEY, PA. #17 (LAT 39 59 33 LONG 080 28 40)											
AUG 22...	1535	.35	340	8.4	21.0	150	5.0	50	6.9	6.0	2.8
03111900 - MIDDLE WHEELING C NR W. ALEXANDER, PA. #18 (LAT 40 03 59 LONG 080 30 59)											
AUG 22...	1620	.27	410	8.0	21.5	180	5.0	58	7.8	8.8	3.0

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.--Continuous strip-chart recorder.

DATUM.--Elevation of land-surface datum is 1,035 ft, from topographic map. Measuring point: Top of casing, 3.45 ft above land-surface datum.

REMARKS.--None.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 4.86 ft below land-surface datum, May 30, 1983; lowest, 8.94 ft below land-surface datum, Nov. 14, 1968.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.09	8.01	7.55	6.50	7.02	6.25	5.47	6.10	6.20	6.66	7.13	7.88
2	8.11	8.05	7.63	6.64	7.29	6.32	5.45	6.09	6.13	6.60	7.22	7.88
3	7.98	8.04	7.61	6.61	7.33	6.40	5.44	6.08	6.16	6.52	7.24	7.88
4	8.10	7.77	7.76	6.25	7.27	6.24	5.42	6.06	6.20	6.54	7.25	7.82
5	8.22	7.65	7.79	6.34	6.80	6.37	5.30	5.91	6.11	6.52	7.25	7.80
6	8.27	7.88	7.46	6.36	7.03	6.61	5.65	5.79	6.17	6.54	7.21	7.89
7	8.21	7.98	7.61	6.10	7.19	6.55	5.69	5.92	6.18	6.59	7.19	7.92
8	8.09	8.00	7.54	6.54	7.24	6.19	5.73	6.02	6.02	6.59	7.26	7.95
9	8.15	7.83	7.57	6.64	7.25	6.21	5.91	6.05	6.14	6.49	7.32	7.85
10	8.20	7.55	7.46	6.56	7.18	6.18	5.91	5.99	6.30	6.50	7.28	7.90
11	8.18	7.50	7.50	6.44	6.88	6.11	5.84	5.93	6.29	6.60	7.41	8.10
12	8.11	7.60	7.33	6.46	6.62	5.97	5.88	5.90	6.13	6.61	7.45	8.22
13	8.00	7.71	7.50	6.33	6.82	6.04	5.79	5.99	6.25	6.67	7.45	8.33
14	7.90	7.78	7.50	6.20	6.92	5.93	5.68	6.05	6.29	6.63	7.50	8.35
15	7.93	7.55	7.49	6.57	6.91	6.08	5.49	6.07	6.28	6.59	7.46	8.25
16	8.04	7.52	7.42	6.74	6.94	6.09	5.57	6.00	6.16	6.80	7.56	8.15
17	8.07	7.61	7.20	6.23	7.18	5.83	5.70	5.89	6.18	6.85	7.59	8.13
18	8.11	7.51	7.26	6.21	7.09	6.01	5.55	6.09	6.08	6.84	7.54	8.21
19	7.96	7.58	7.22	6.45	6.99	6.02	5.66	6.21	6.18	6.82	7.65	8.23
20	8.06	7.77	7.10	6.65	7.01	6.10	5.81	6.25	6.24	6.79	7.72	8.10
21	8.04	7.85	7.06	6.59	7.04	6.15	5.85	6.33	6.30	6.75	7.75	8.11
22	8.10	7.84	7.06	6.65	6.87	6.00	5.84	6.39	6.29	6.76	7.79	8.16
23	8.19	7.65	7.08	6.54	6.85	5.86	5.85	6.31	6.30	6.93	7.82	8.19
24	8.17	7.48	6.87	6.41	6.54	5.92	5.80	6.36	6.37	6.97	7.75	8.27
25	8.19	7.51	7.23	6.96	6.65	6.25	5.87	6.35	6.39	6.98	7.71	8.29
26	8.00	7.52	7.27	6.99	6.52	6.28	5.92	6.38	6.38	6.90	7.83	8.10
27	7.99	7.55	7.04	6.77	6.46	6.05	5.96	6.39	6.40	7.00	7.91	8.31
28	7.89	7.33	6.86	7.00	6.46	5.88	6.12	6.39	6.40	7.04	7.94	8.47
29	8.03	7.37	6.71	7.01	---	5.79	6.20	6.46	6.49	7.03	7.87	8.47
30	8.02	7.33	6.84	6.97	---	5.86	6.17	6.37	6.60	7.08	7.73	8.32
31	8.14	---	6.73	6.96	---	5.68	---	6.21	---	7.04	7.81	---
MEAN	8.08	7.68	7.30	6.57	6.94	6.10	5.75	6.14	6.25	6.75	7.54	8.12
MAX	8.27	8.05	7.79	7.01	7.33	6.61	6.20	6.46	6.60	7.08	7.94	8.47
MIN	7.89	7.33	6.71	6.10	6.46	5.68	5.30	5.79	6.02	6.49	7.13	7.80

WTR YR 1985 MEAN 6.93 HIGH 5.30 Apr 5 LOW 8.47 Sept 28, 29

ARMSTRONG COUNTY

147

404626079344001. Local number, AR 77.

LOCATION.--Lat 40°46'26", long 79°34'40", Hydrologic Unit 05010006, at State Game Land Number 247.

Owner: U.S. Geological Survey.

AQUIFER.--Allegheny Group of Middle Pennsylvanian age.

WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 6 in, depth 242 ft cased to 43 ft, open hole.

INSTRUMENTATION.--Continuous strip-chart recorder.

DATUM.--Elevation of land-surface datum is 1,050 ft, from topographic map. Measuring point: Top of plywood cover, 1.05 ft above land-surface datum.

REMARKS.--Missing record Jan. 22-28.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 26.85 ft below land-surface datum, May 27, 1978; lowest, 52.20 ft below land-surface datum, May 1, 1979.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	31.24	31.58	29.84	28.71	30.08	29.33	28.17	29.27	30.93	30.09	30.95	32.12
2	31.25	31.58	29.88	28.85	30.10	29.17	28.06	29.37	30.79	30.12	31.06	32.12
3	31.25	31.59	29.79	28.89	30.01	29.16	27.97	29.49	30.62	30.11	31.14	32.10
4	31.29	31.57	29.63	28.83	30.10	29.16	27.67	29.56	30.45	30.09	31.22	32.06
5	31.38	31.47	29.57	28.59	30.11	29.05	27.63	29.67	30.26	30.07	31.25	32.04
6	31.38	31.19	29.54	28.58	30.03	29.14	27.49	29.73	30.13	30.07	31.24	32.04
7	31.38	31.19	29.20	28.54	30.05	29.14	27.64	29.82	29.83	30.20	31.01	32.05
8	31.38	31.14	29.12	28.59	30.11	28.95	27.83	30.07	29.64	30.21	31.21	32.05
9	31.27	31.00	29.49	28.76	30.12	28.85	27.95	30.33	29.51	30.22	31.31	31.96
10	31.32	30.90	29.54	28.84	30.18	28.86	28.09	30.44	29.45	30.23	31.33	31.90
11	31.46	30.71	29.50	28.96	30.16	28.85	28.11	30.44	29.50	30.23	31.38	31.95
12	31.59	30.47	29.50	29.07	30.13	28.69	28.15	30.40	29.49	30.27	31.50	31.95
13	31.61	30.23	29.40	29.08	29.94	28.76	28.15	30.43	29.53	30.20	31.56	32.20
14	31.60	30.04	29.43	29.09	29.90	28.75	28.17	30.52	29.33	30.17	31.57	32.79
15	31.56	29.89	29.44	29.22	29.93	28.67	28.07	30.54	29.47	30.19	31.57	32.92
16	31.56	29.64	29.36	29.45	29.93	28.67	28.04	30.54	29.46	30.19	31.57	32.90
17	31.56	29.55	29.29	29.45	29.90	28.64	28.36	30.50	29.37	30.37	31.72	32.62
18	31.58	29.51	29.10	29.40	29.91	28.53	28.46	30.75	29.41	30.42	31.70	32.62
19	31.58	29.34	29.07	29.47	29.95	28.59	28.50	30.88	29.45	30.42	31.53	32.62
20	31.58	29.29	29.12	29.73	29.90	28.56	29.55	30.96	29.46	30.40	31.53	32.62
21	31.58	29.40	29.05	29.86	29.90	28.52	29.55	30.96	29.36	30.40	31.54	32.59
22	31.65	29.52	28.90	---	29.96	28.60	29.48	31.16	29.31	30.23	31.58	32.54
23	31.72	29.52	28.70	---	30.20	28.60	29.44	31.20	29.32	30.29	31.64	32.53
24	31.69	29.51	28.70	---	30.16	28.44	29.46	31.23	29.34	30.37	31.63	32.70
25	31.67	29.44	28.36	---	29.95	28.47	29.50	31.23	29.38	30.38	31.63	32.82
26	31.64	29.52	28.63	---	29.76	28.61	29.47	31.01	29.46	30.37	31.68	32.89
27	31.59	29.61	29.03	---	29.55	28.62	29.54	31.04	29.60	30.43	31.82	32.89
28	31.56	29.62	29.03	---	29.42	28.50	29.61	31.04	29.71	30.66	31.91	32.87
29	31.47	29.59	28.99	30.04	---	28.31	29.54	31.04	29.79	30.69	32.12	32.91
30	31.52	29.58	28.90	30.14	---	28.26	29.17	31.04	29.95	30.77	32.13	32.92
31	31.52	---	28.87	30.15	---	28.26	---	30.99	---	30.86	32.11	---
MEAN	31.50	30.24	29.22	29.18	29.98	28.73	28.56	30.50	29.71	30.31	31.52	32.44
MAX	31.72	31.59	29.88	30.15	30.20	29.33	29.61	31.23	30.93	30.86	32.13	32.92
MIN	31.24	29.29	28.36	28.54	29.42	28.26	27.49	29.27	29.31	30.07	30.95	31.90

WTR YR 1985 MEAN 30.18 HIGH 27.49 Apr 6 LOW 32.92 Sept 15, 30

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.--Continuous strip-chart recorder.

DATUM.--Elevation of land-surface datum is 930 ft, from topographic map. Measuring point: Top of casing, 2.45 ft above land-surface datum.

REMARKS.--Missing record Dec. 24, 29, Jan. 1-8, 11-14, 17-23, Feb. 25, June 26-29, and Aug. 25, to Sept. 1.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 7.75 ft below land-surface datum, Aug. 18, 1980 Apr. 24, 1984; lowest 13.72 ft below land-surface datum, June 5, 1968.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.74	9.41	9.07	---	8.94	8.42	8.14	8.52	8.31	8.95	9.63	---
2	9.77	9.44	9.14	---	9.03	8.52	8.14	8.48	8.34	8.92	9.70	10.01
3	9.70	9.42	9.11	---	9.17	8.57	8.12	8.33	8.41	8.85	9.71	10.00
4	9.76	9.23	9.20	---	9.17	8.49	8.13	8.34	8.49	8.88	9.74	9.99
5	9.84	9.01	9.23	---	9.07	8.61	8.03	8.26	8.45	8.87	9.77	10.00
6	9.88	9.18	8.99	---	8.90	8.77	8.23	8.21	8.52	8.84	9.78	10.03
7	9.89	9.26	9.09	---	9.03	8.75	8.28	8.31	8.53	8.87	9.79	10.07
8	9.80	9.28	9.08	---	9.09	8.49	8.32	8.39	8.44	8.87	9.84	10.09
9	9.80	9.17	9.11	8.82	9.10	8.49	8.40	8.42	8.48	8.80	9.89	10.03
10	9.84	8.93	9.06	8.81	9.10	8.49	8.42	8.37	8.60	8.81	9.89	10.01
11	9.84	8.83	9.03	---	8.97	8.46	8.35	8.36	8.60	8.82	9.94	10.14
12	9.79	8.89	8.93	---	8.68	8.17	8.39	8.34	8.39	8.85	9.97	10.20
13	9.74	9.00	8.99	---	8.65	8.23	8.36	8.43	8.48	8.90	9.99	10.29
14	9.66	9.03	9.02	---	8.73	8.20	8.29	8.45	8.54	8.87	10.01	10.29
15	9.63	8.95	9.02	8.85	8.75	8.35	8.17	8.46	8.54	8.85	9.99	10.26
16	9.69	8.93	8.98	8.91	8.73	8.34	8.28	8.38	8.55	9.00	9.91	10.21
17	9.70	9.01	8.85	---	8.89	8.23	8.40	8.29	8.43	9.05	9.91	10.20
18	9.66	8.94	8.92	---	8.97	8.35	8.36	8.41	8.49	9.05	9.97	10.28
19	9.58	9.00	8.85	---	8.88	8.36	8.31	8.51	8.40	9.06	10.00	10.29
20	9.64	9.17	8.84	---	8.88	8.42	8.34	8.55	8.50	9.05	10.03	10.30
21	9.57	9.23	8.73	---	8.90	8.48	8.39	8.65	8.61	9.04	10.04	10.25
22	9.59	9.25	8.78	---	8.77	8.42	8.38	8.67	8.66	8.93	10.06	10.28
23	9.58	9.14	8.80	---	8.67	8.33	8.36	8.64	8.67	9.63	10.08	10.28
24	9.58	9.05	---	8.63	8.39	8.25	8.33	8.66	8.68	9.68	10.08	10.23
25	9.62	9.05	8.97	8.72	---	8.53	8.35	8.67	8.70	9.70	---	10.28
26	9.48	9.08	9.03	8.93	8.44	8.61	8.40	8.69	---	9.68	---	10.21
27	9.45	9.08	8.92	8.90	8.52	8.39	8.44	8.70	---	9.50	---	10.26
28	9.38	8.94	8.79	8.84	8.53	8.34	8.54	8.57	---	9.51	---	10.37
29	9.39	8.94	---	8.94	---	8.36	8.60	8.58	---	9.52	---	10.39
30	9.39	8.92	8.77	8.96	---	8.41	8.57	8.56	8.91	9.56	---	10.34
31	9.47	---	8.77	8.86	---	8.34	---	8.50	---	9.54	---	---
MEAN	9.66	9.09	8.97	8.85	8.85	8.42	8.33	8.47	8.53	9.11	9.91	10.19
MAX	9.89	9.44	9.23	8.96	9.17	8.77	8.60	8.70	8.91	9.70	10.08	10.39
MIN	9.38	8.83	8.73	8.63	8.39	8.17	8.03	8.21	8.31	8.80	9.63	9.99

WTR YR 1985 MEAN 9.03 HIGH 8.03 Apr 5 LOW 10.39 Sept 29

BUTLER COUNTY

149

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, from topographic map. Measuring point: Top of casing, 2.30 ft above land-surface datum.

REMARKS.--Missing record Jan. 6-21, Jan. 28 to Feb. 19.

PERIOD OF RECORD.--November 1970 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 3.73 ft below land-surface datum, Apr. 16, 1984; lowest, 31.06 ft below land-surface datum, Oct. 16-18, 1983.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21.16	20.55	5.81	5.03	---	4.89	4.00	5.30	5.28	14.91	26.50	27.09
2	21.26	21.91	5.84	5.03	---	5.04	4.06	5.25	5.60	15.84	28.50	27.18
3	21.34	22.77	5.69	5.09	---	5.07	4.00	4.92	5.84	16.56	28.79	27.20
4	21.64	22.01	5.88	5.04	---	4.86	3.94	4.99	5.99	17.31	28.85	27.30
5	21.87	14.07	5.88	5.21	---	4.84	4.00	5.06	6.05	17.67	28.90	27.36
6	23.65	12.89	5.85	---	---	4.84	4.21	5.09	6.28	16.91	28.90	27.57
7	24.33	8.70	5.92	---	---	4.80	4.22	5.20	6.30	17.96	28.86	27.62
8	24.82	9.09	6.00	---	---	4.53	4.08	5.38	6.35	18.05	28.85	27.62
9	26.38	9.20	6.03	---	---	4.62	4.22	5.43	6.48	18.56	28.95	27.57
10	26.49	6.95	5.93	---	---	4.62	4.27	5.48	6.74	18.72	29.08	27.62
11	26.56	6.33	5.72	---	---	4.63	4.39	5.56	6.77	18.76	29.28	27.68
12	26.56	6.27	5.31	---	---	4.25	4.46	5.66	6.58	19.50	29.37	27.68
13	26.52	6.32	5.41	---	---	4.25	4.45	5.84	6.32	20.14	29.36	27.66
14	26.48	6.31	5.40	---	---	4.45	4.43	6.00	6.11	20.32	29.46	27.54
15	26.47	6.09	5.33	---	---	4.51	4.40	6.05	6.31	13.19	29.45	27.37
16	26.70	5.98	5.33	---	---	4.48	4.68	6.03	6.44	12.00	29.36	27.27
17	26.71	6.02	5.37	---	---	4.56	4.73	6.03	6.66	13.63	29.22	27.36
18	26.80	5.93	5.52	---	---	4.64	4.67	6.22	6.94	15.31	29.10	27.56
19	26.76	6.09	5.37	---	---	4.64	4.69	6.50	7.36	16.70	29.04	27.59
20	26.72	6.04	5.30	---	6.98	4.69	4.68	6.96	7.72	17.99	28.91	27.58
21	26.62	6.08	5.27	---	7.00	4.74	4.78	7.36	8.30	18.52	28.90	27.32
22	26.64	6.03	5.15	5.87	6.72	4.66	4.82	7.68	8.68	18.39	28.83	27.36
23	26.61	5.82	5.13	5.87	4.80	4.55	4.84	8.12	6.73	19.85	28.81	27.38
24	26.56	5.80	5.60	5.87	4.69	4.47	4.85	8.65	6.93	20.65	28.80	27.45
25	26.45	5.84	5.58	6.46	4.74	4.67	4.72	9.68	7.33	20.98	28.40	27.47
26	26.21	5.88	4.97	6.49	4.79	4.72	4.83	10.97	7.79	21.10	28.31	27.41
27	21.88	5.89	4.93	6.72	4.94	4.58	4.92	11.91	8.36	21.33	28.34	27.54
28	23.78	5.68	4.78	---	4.94	4.56	5.10	11.01	9.22	21.75	28.32	27.74
29	23.78	5.60	4.81	---	---	4.04	5.19	6.37	11.02	23.00	28.31	27.75
30	18.26	5.58	4.88	---	---	4.17	5.20	6.54	13.25	23.50	27.90	27.70
31	19.99	---	5.02	---	---	4.13	---	6.58	---	25.50	25.60	---
MEAN	24.71	8.92	5.45	5.70	5.51	4.60	4.53	6.70	7.19	18.54	28.69	27.48
MAX	26.80	22.77	6.03	6.72	7.00	5.07	5.20	11.91	13.25	25.50	29.46	27.75
MIN	18.26	5.58	4.78	5.03	4.69	4.04	3.94	4.92	5.28	12.00	25.60	27.09

WTR YR 1985 MEAN 13.21 HIGH 3.94 Apr 4 LOW 29.46 Aug 14

CAMBRIA COUNTY

401935078550601. Local number, CA 1.

LOCATION.--Lat 40°19'35", long 78°55'06", Hydrologic Unit 05010007, at Locust and Park Place, Johnstown.

Owner: Johnstown Tribune Publishing Company.

AQUIFER.--Homewood Sandstone of Middle Pennsylvanian age.

WELL CHARACTERISTICS.--Drilled water-table well, diameter 12 in to 8 in, depth 180 ft, cased to 45 ft, open hole.

INSTRUMENTATION.--Weekly measurement with chalked tape by observer.

DATUM.--Elevation of land-surface datum is 1,165 ft, from topographic map. Measuring point: Top of casing, 10 ft below land-surface datum.

REMARKS.--None.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 10.10 ft below land-surface datum, Sept. 3, 1975; lowest measured, 26.78 ft below land-surface datum, July 23, 1953.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17.80	---	---	---	---	---	13.30	---	---	17.50	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	16.50	---	---	---	---	---	17.00	---	---	17.70
4	---	---	---	---	17.50	16.00	---	---	---	---	---	---
5	---	17.40	---	---	---	---	---	---	---	---	17.40	---
6	---	---	---	---	---	---	---	16.00	---	---	---	---
7	---	---	---	16.70	---	---	---	---	---	---	---	---
8	17.90	---	---	---	---	---	15.70	---	---	17.30	---	---
9	---	---	---	---	---	---	---	---	---	---	---	17.70
10	---	---	17.00	---	---	---	---	---	17.30	---	---	---
11	---	---	---	---	17.70	16.60	---	---	---	---	---	---
12	---	17.40	---	---	---	---	---	---	---	---	17.60	---
13	---	---	---	---	---	---	---	16.80	---	---	---	---
14	---	---	---	17.10	---	---	---	---	---	---	---	---
15	17.80	---	---	---	---	---	16.20	---	---	17.00	---	---
16	---	---	---	---	---	---	---	---	---	---	---	17.80
17	---	---	16.40	---	---	---	---	---	17.00	---	---	---
18	---	---	---	---	17.00	16.20	---	---	---	---	---	---
19	---	17.40	---	---	---	---	---	---	---	---	17.70	---
20	---	---	---	---	---	---	---	17.00	---	---	---	---
21	---	---	---	---	---	---	---	---	---	---	---	---
22	---	---	---	17.50	---	---	17.00	---	---	16.90	---	---
23	---	---	---	---	---	---	---	---	---	---	---	17.90
24	---	---	15.80	---	---	---	---	---	---	---	---	---
25	---	---	---	---	14.20	15.50	---	---	---	---	---	---
26	---	17.80	---	---	---	---	---	---	17.30	---	17.60	---
27	---	---	---	---	---	---	---	---	---	---	---	---
28	---	---	---	17.40	---	---	---	17.30	---	---	---	---
29	17.60	---	---	---	---	---	17.30	---	---	17.20	---	---
30	---	---	---	---	---	---	---	---	---	---	---	17.90
31	---	---	16.30	---	---	---	---	---	---	---	---	---
MEAN	17.78	17.50	16.40	17.18	16.60	16.08	15.90	16.78	17.15	17.18	17.58	17.80
MAX	17.90	17.80	17.00	17.50	17.70	16.60	17.30	17.30	17.30	17.50	17.70	17.90
MIN	17.60	17.40	15.80	16.70	14.20	15.50	13.30	16.00	17.00	16.90	17.40	17.70

WTR YR 1985 MEAN 16.98 HIGH 13.30 Apr 1 LOW 17.90 Oct 8, Sept 23

CRAWFORD COUNTY

151

413542080245001. 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, from topographic map. Measuring point: Top of casing, 2.7 ft above land-surface datum.

REMARKS.--Since the June 9, 1981 well pumping and clean out, the monthly mean water levels have generally been from 12 to 24 feet lower. Missing record Dec. 20 to Jan. 28, and Aug. 24-26.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 20.02 ft below land-surface datum, Feb. 23, 1975; lowest, 55.99 ft below land-surface datum, Oct. 30, 1983.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
 MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	53.04	53.89	49.82	---	49.57	46.89	46.25	49.34	51.48	52.11	53.17	53.44
2	53.07	53.84	49.85	---	49.68	47.19	46.12	49.47	51.45	52.11	53.22	53.42
3	53.06	53.74	49.70	---	49.77	47.24	45.89	49.63	51.52	52.10	53.21	53.41
4	53.16	53.55	49.79	---	49.79	47.05	45.82	49.70	51.54	52.11	53.26	53.41
5	53.26	53.40	49.79	---	49.59	46.95	45.57	49.71	51.59	52.12	53.28	53.45
6	53.29	53.31	49.53	---	49.66	46.94	45.87	49.85	51.67	52.19	53.48	53.53
7	53.29	53.23	49.56	---	49.83	46.63	45.98	49.95	51.67	52.29	53.30	53.59
8	53.31	53.00	49.60	---	49.91	46.32	46.18	50.13	51.66	52.20	53.37	53.60
9	53.37	52.76	49.62	---	49.96	46.68	46.39	50.10	51.81	52.30	53.41	53.60
10	53.40	52.49	49.57	---	49.96	46.68	46.42	50.17	51.88	52.30	53.41	53.65
11	53.41	52.27	49.58	---	49.85	46.63	46.68	50.24	51.86	52.35	53.50	53.78
12	53.41	52.07	49.39	---	49.68	46.60	46.74	50.32	51.77	52.39	53.51	53.82
13	53.39	51.95	49.33	---	49.83	46.53	46.83	50.45	51.91	52.39	53.52	53.90
14	53.42	51.81	49.21	---	49.82	46.28	46.82	50.51	51.93	52.31	53.54	53.86
15	53.47	51.32	49.06	---	49.76	46.43	46.93	50.53	51.92	52.33	53.50	53.81
16	53.54	50.89	48.75	---	49.69	46.42	47.38	50.53	51.83	52.39	53.54	53.77
17	53.54	50.71	48.55	---	49.76	46.53	47.39	50.60	51.92	52.35	53.51	53.86
18	53.64	50.38	48.57	---	49.64	46.76	47.50	50.74	51.74	52.29	53.45	53.95
19	53.69	50.08	48.16	---	49.46	46.83	47.71	50.84	51.81	52.27	53.46	54.03
20	53.70	50.08	---	---	49.45	47.16	47.94	51.01	51.89	52.32	53.46	53.91
21	53.71	50.09	---	---	49.45	47.24	48.11	51.07	51.92	52.15	53.47	53.91
22	53.84	50.01	---	---	49.35	47.23	48.26	51.12	51.90	52.43	53.50	53.96
23	53.87	49.76	---	---	49.00	47.29	48.46	51.19	51.91	52.55	53.50	53.97
24	53.93	49.71	---	---	48.18	47.61	48.53	51.16	51.97	52.80	---	54.09
25	53.94	49.72	---	---	47.92	47.79	48.73	51.21	51.84	52.87	---	54.09
26	53.88	49.75	---	---	47.58	47.78	48.77	51.29	51.90	52.90	---	53.96
27	53.87	49.75	---	---	47.33	47.61	48.87	51.34	51.92	52.95	53.34	54.18
28	53.83	49.65	---	---	47.25	47.57	49.08	51.41	51.92	52.96	53.37	54.26
29	53.89	49.62	---	49.37	---	47.40	49.16	51.45	52.03	52.98	53.33	54.21
30	53.87	49.63	---	49.42	---	47.25	49.20	51.38	52.08	53.06	53.35	54.14
31	53.96	---	---	49.45	---	46.74	---	51.41	---	53.05	53.41	---
MEAN	53.55	51.42	49.34	49.41	49.31	46.98	47.32	50.58	51.81	52.45	53.41	53.82
MAX	53.96	53.89	49.85	49.45	49.96	47.79	49.20	51.45	52.08	53.06	53.54	54.26
MIN	53.04	49.62	48.16	49.37	47.25	46.28	45.57	49.34	51.45	52.10	53.17	53.41

WTR YR 1985 MEAN 50.94 HIGH 45.57 Apr 5 LOW 54.26 Sept 28

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, from topographic map. Measuring point: Top of casing, 2.3 ft above land-surface datum.

REMARKS.--Missing record Oct. 1-3, Nov. 7-27, Dec. 24 to Jan. 24, Jan. 26 to Feb. 22, Mar. 28 to Apr. 19, May 23, 24, May 30 to June 19, June 21 to July 19, and July 21-30.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 2.90 ft below land-surface datum, Mar. 30, 1975; lowest, 6.62 ft below land-surface datum, Oct. 7 and 8, 1980.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	5.19	4.39	---	---	4.05	---	4.20	---	---	5.05	5.40
2	---	5.21	4.46	---	---	4.26	---	4.23	---	---	5.15	5.38
3	---	5.21	4.32	---	---	4.34	---	4.23	---	---	5.15	5.38
4	5.21	5.10	4.35	---	---	4.26	---	4.27	---	---	5.18	5.32
5	5.31	4.80	4.38	---	---	4.21	---	4.23	---	---	5.17	5.33
6	5.38	4.68	4.06	---	---	4.36	---	4.19	---	---	5.16	5.37
7	5.33	---	4.24	---	---	4.34	---	4.30	---	---	5.11	5.43
8	5.26	---	4.36	---	---	3.94	---	4.41	---	---	5.08	5.43
9	5.30	---	4.42	---	---	3.90	---	4.47	---	---	5.07	5.29
10	5.37	---	4.28	---	---	3.87	---	4.40	---	---	5.06	5.16
11	5.40	---	4.28	---	---	3.82	---	4.41	---	---	5.14	5.23
12	5.37	---	4.04	---	---	3.52	---	4.39	---	---	5.14	5.27
13	5.31	---	4.18	---	---	3.57	---	4.45	---	---	5.16	5.36
14	5.25	---	4.18	---	---	3.48	---	4.52	---	---	5.14	5.37
15	5.32	---	4.05	---	---	3.71	---	4.57	---	---	5.20	5.31
16	5.47	---	4.00	---	---	3.72	---	4.50	---	---	5.24	5.24
17	5.47	---	3.92	---	---	3.55	---	4.35	---	---	5.22	5.20
18	5.50	---	4.02	---	---	3.82	---	4.40	---	---	5.24	5.25
19	5.44	---	3.83	---	---	3.84	---	4.57	---	---	5.31	5.27
20	5.54	---	3.87	---	---	3.92	3.83	4.63	5.14	5.33	5.32	5.24
21	5.54	---	3.76	---	---	4.01	3.85	4.67	---	---	5.32	5.21
22	5.59	---	3.83	---	---	3.94	3.86	4.75	---	---	5.38	5.24
23	5.63	---	3.77	---	4.44	3.77	3.88	---	---	---	5.39	5.27
24	5.61	---	---	---	4.14	3.64	3.88	---	---	---	5.30	5.28
25	5.66	---	---	4.93	4.18	3.82	3.89	4.88	---	---	5.30	5.35
26	5.52	---	---	---	4.10	3.74	3.93	4.89	---	---	5.37	5.27
27	5.36	---	---	---	4.14	3.63	4.00	4.91	---	---	5.45	5.29
28	5.24	4.48	---	---	4.16	---	4.12	4.93	---	---	5.46	5.46
29	5.22	4.45	---	---	---	---	4.21	4.98	---	---	5.43	5.48
30	5.17	4.39	---	---	---	---	4.21	---	---	---	5.35	5.40
31	5.24	---	---	---	---	---	---	---	---	4.90	5.39	---
MEAN	5.39	4.83	4.13	4.93	4.19	3.89	3.97	4.51	5.14	5.12	5.24	5.32
MAX	5.66	5.21	4.46	4.93	4.44	4.36	4.21	4.98	5.14	5.33	5.46	5.48
MIN	5.17	4.39	3.76	4.93	4.10	3.48	3.83	4.19	5.14	4.90	5.05	5.16

WTR YR 1985 MEAN 4.73 HIGH 3.48 Mar 14 LOW 5.66 Oct 25

ERIE COUNTY

153

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, from topographic map. Measuring point: Top of plywood cover, 3.50 ft above land-surface datum.

REMARKS.--Missing record Oct. 1 to Dec. 9, Dec. 24 to Jan. 17, Jan. 28 to Feb. 22, and Mar. 10-19.

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, 23.42 ft below land-surface datum, Sept. 1, 2, 1984.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1			---	---	---	18.12	17.96	19.53	21.04	21.08	20.46	21.11
2			---	---	---	18.00	17.91	19.63	21.05	21.17	20.47	21.16
3			---	---	---	17.92	17.85	19.69	21.05	21.22	20.48	21.18
4			---	---	---	17.87	17.81	19.76	21.06	21.26	20.47	21.19
5			---	---	---	17.80	17.80	19.82	21.07	21.31	20.45	21.21
6			---	---	---	17.74	17.83	19.86	21.07	21.33	20.43	21.23
7			---	---	---	17.70	17.87	19.90	21.10	21.39	20.44	21.27
8			---	---	---	17.63	17.93	19.93	21.10	21.42	20.46	21.30
9			---	---	---	17.63	18.00	19.99	21.13	21.41	20.49	21.30
10		18.56	---	---	---	---	18.06	20.05	21.20	21.41	20.55	21.30
11		18.56	---	---	---	---	18.12	20.06	21.29	21.41	20.62	21.30
12		18.53	---	---	---	---	18.27	20.17	21.35	21.40	20.70	21.30
13		18.50	---	---	---	---	18.32	20.34	21.38	21.39	20.77	21.29
14		18.44	---	---	---	---	18.35	20.47	21.39	21.34	20.83	21.29
15		18.38	---	---	---	---	18.38	20.59	21.40	21.24	20.86	21.28
16		18.34	---	---	---	---	18.44	20.67	21.38	21.11	20.88	21.26
17		18.34	---	---	---	---	18.50	20.72	21.28	20.91	20.92	21.25
18		18.31	18.06	---	---	---	18.56	20.76	21.16	20.72	20.96	21.25
19		18.31	18.07	---	---	---	18.63	20.80	21.03	20.57	20.98	21.25
20		18.30	18.07	---	---	17.75	18.68	20.84	20.93	20.46	21.03	21.26
21		18.27	18.07	---	---	17.79	18.75	20.85	20.84	20.37	21.05	21.26
22		18.20	18.08	---	---	17.84	18.82	20.86	20.78	20.29	21.08	21.24
23		18.15	18.11	18.83	---	17.87	18.89	20.90	20.68	20.26	21.09	21.25
24		---	18.15	18.81	---	17.87	18.96	20.94	20.70	20.21	21.10	21.31
25		---	18.20	18.74	---	17.91	19.03	20.97	20.72	20.25	21.10	21.34
26		---	18.26	18.58	---	17.92	19.09	21.01	20.78	20.28	21.10	21.36
27		---	18.33	18.41	---	17.94	19.16	21.01	20.85	20.28	21.09	21.36
28		---	---	18.25	---	17.94	19.24	21.01	20.90	20.32	21.10	21.36
29		---	---	---	---	17.96	19.33	21.01	20.96	20.36	21.10	21.39
30		---	---	---	---	17.97	19.43	21.03	21.02	20.40	21.10	21.40
31		---	---	---	---	17.97	---	21.04	---	20.44	21.10	---
MEAN			18.37	18.14	18.60	17.86	18.47	20.46	21.06	20.87	20.81	21.28
MAX			18.56	18.33	18.83	18.12	19.43	21.04	21.40	21.42	21.10	21.40
MIN			18.15	18.06	18.25	17.63	17.80	19.53	20.68	20.21	20.43	21.11

WTR YR 1985 MEAN 19.98 HIGH 17.63 Mar 8, 9 LOW 21.42 July 8

FAYETTE COUNTY

394843079351401. Local number, FA 17.

LOCATION.--Lat 39°48'43", long 79°35'14", Hydrologic unit 05020006, at Fort Necessity.

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, from topographic map. Measuring point: Top of plywood cover 2.05 ft above land-surface datum.

REMARKS.--Missing record Oct. 22, Nov. 22, 23, Nov. 25 to Dec. 21, Jan. 25, 26, and May 24.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 19.71 ft below land-surface datum, Feb. 23, 1971; lowest, 40.00 ft below land-surface datum, Nov. 8, 1967.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23.37	23.25	---	22.02	23.12	21.91	21.95	23.15	22.55	23.20	23.14	23.34
2	23.46	23.30	---	22.32	23.25	22.28	21.78	23.19	22.49	23.11	23.27	23.34
3	23.45	23.27	---	22.35	23.34	22.38	21.76	23.12	22.44	23.05	23.29	23.28
4	23.36	23.17	---	22.15	23.34	22.37	21.85	23.11	22.48	23.06	23.25	23.16
5	23.36	23.14	---	22.51	23.09	22.77	21.77	23.04	22.44	23.07	23.20	23.16
6	23.32	23.21	---	22.64	22.83	23.07	22.09	22.99	22.55	23.13	23.21	23.16
7	23.25	23.22	---	23.10	23.03	23.07	22.35	23.13	22.56	23.40	23.16	23.16
8	23.18	23.21	---	23.55	23.08	22.84	22.48	23.21	22.59	23.40	23.21	23.20
9	23.29	23.16	---	23.55	23.13	22.86	22.83	23.25	22.74	23.17	23.28	23.11
10	23.30	23.20	---	23.30	23.15	22.95	22.93	23.16	22.88	22.78	23.28	23.12
11	23.26	23.30	---	23.08	23.07	22.97	22.95	23.05	22.87	22.62	23.25	23.32
12	23.22	23.31	---	23.12	22.76	22.72	23.03	23.06	22.82	22.63	23.27	23.37
13	23.16	23.31	---	22.99	22.93	22.75	22.99	23.10	23.02	22.69	23.27	23.44
14	23.24	23.33	---	22.76	23.04	22.64	22.90	23.18	23.13	22.68	23.35	23.36
15	23.25	23.30	---	23.21	23.08	22.89	22.77	23.18	23.13	22.60	23.35	23.22
16	23.29	23.46	---	23.29	23.09	22.89	23.00	23.11	22.99	22.50	23.37	23.07
17	23.30	23.44	---	22.83	23.29	22.80	23.20	22.93	23.04	22.55	23.48	23.08
18	23.29	23.28	---	22.75	23.39	23.10	23.18	23.40	22.93	22.58	23.47	23.41
19	23.39	23.27	---	22.94	23.20	23.18	23.13	23.50	23.04	22.60	23.29	23.42
20	23.48	23.28	---	23.13	23.15	23.32	23.16	23.47	23.21	22.60	23.27	23.31
21	23.36	23.16	---	23.11	23.14	23.38	23.12	23.16	23.27	22.60	23.27	23.12
22	---	---	22.04	23.13	22.99	23.29	23.10	23.00	23.27	22.74	23.27	23.12
23	23.37	---	22.04	23.08	22.91	23.11	23.08	22.81	23.12	22.89	23.31	23.13
24	23.32	23.13	21.88	22.99	22.63	22.86	23.00	---	23.10	23.02	23.17	23.25
25	23.32	---	22.19	---	22.23	23.10	23.08	22.71	23.08	23.06	23.15	23.28
26	23.28	---	22.24	---	22.02	23.13	23.14	22.76	23.10	22.96	23.38	23.17
27	23.28	---	21.99	23.17	21.92	22.95	23.18	22.74	23.10	23.07	23.44	23.31
28	23.23	---	21.87	23.17	21.99	22.61	23.28	22.78	23.04	23.13	23.39	23.51
29	23.33	---	21.68	23.31	---	22.57	23.34	22.89	23.07	23.16	23.17	23.53
30	23.30	---	22.02	23.31	---	22.61	23.29	22.88	23.14	23.18	23.00	23.24
31	23.30	---	22.00	23.15	---	22.51	---	22.85	---	23.17	23.28	---
MEAN	23.31	23.26	22.00	22.97	22.94	22.83	22.79	23.06	22.91	22.92	23.27	23.26
MAX	23.48	23.46	22.24	23.55	23.39	23.38	23.34	23.50	23.27	23.40	23.48	23.53
MIN	23.16	23.13	21.68	22.02	21.92	21.91	21.76	22.71	22.44	22.50	23.00	23.07

WTR YR 1985 MEAN 23.01 HIGH 21.68 Dec 29 LOW 23.55 Jan 8, 9

FOREST COUNTY

155

412823079030601. Local number, FO 11.

LOCATION.--Lat 41°28'23", long 79°03'06", Hydrologic Unit 05010005, at U.S. Forest Lands.

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, from topographic map. Measuring point: Top of casing,

1.4 ft above land-surface datum.

REMARKS.--Missing record Nov. 7-26, Dec. 4-8, Dec. 31 to Jan. 14, Jan. 24 to Feb. 2, Feb. 5-8, 13-18, Mar. 23, 24, Apr. 17-21, May 15-20, 22-24, 27-31, June 1, 4-6, 24, 25, 28, 29, July 7-10, 16-19, and Aug. 22, 23.

PERIOD OF RECORD.--August 1973 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 7.78 ft below land-surface datum, Jan. 27, 28, 1973; lowest, 12.07 ft below land-surface datum, Sept. 18, 19, 1982.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10.48	9.70	9.33	---	---	9.10	8.75	9.36	---	10.40	10.68	10.80
2	10.42	9.63	9.28	---	---	9.05	8.71	9.36	10.39	10.41	10.80	10.80
3	10.40	9.58	9.26	---	9.97	9.09	8.71	9.35	10.40	10.47	10.83	10.79
4	10.33	9.51	---	---	9.96	9.09	8.71	9.35	---	10.54	10.92	10.81
5	10.37	9.40	---	---	---	9.01	8.70	9.34	---	10.58	11.01	10.79
6	10.40	9.30	---	---	---	9.00	8.71	9.34	---	10.60	11.07	10.80
7	10.46	---	---	---	---	9.02	8.75	9.34	10.47	---	11.08	10.86
8	10.47	---	---	---	---	9.00	8.78	9.40	10.47	---	11.05	10.87
9	10.47	---	9.24	---	10.01	8.92	8.79	9.43	10.48	---	11.05	10.85
10	10.51	---	9.25	---	10.00	8.91	8.78	9.45	10.55	---	11.04	10.77
11	10.52	---	9.26	---	9.89	8.89	8.78	9.50	10.58	---	11.09	10.73
12	10.53	---	9.26	---	9.73	8.83	8.82	9.52	10.50	10.62	11.14	10.74
13	10.53	---	9.21	---	---	8.73	8.82	9.58	10.45	10.66	11.22	10.80
14	10.53	---	9.21	---	---	8.73	8.83	9.62	10.40	10.67	11.24	10.83
15	10.51	---	9.16	9.50	---	8.77	8.82	---	10.39	10.63	11.29	10.84
16	10.53	---	9.15	9.47	---	8.81	8.82	---	10.32	---	11.30	10.85
17	10.59	---	9.08	9.42	---	8.81	---	---	10.25	---	11.30	10.83
18	10.62	---	9.09	9.46	---	8.84	---	---	10.20	---	11.30	10.89
19	10.62	---	9.07	9.56	9.76	8.90	---	---	10.19	---	11.32	10.95
20	10.67	---	9.03	9.58	9.77	8.93	---	---	10.22	10.44	11.42	10.97
21	10.67	---	9.04	9.62	9.77	9.01	---	10.31	10.25	10.45	11.50	11.01
22	10.63	---	8.95	9.65	9.76	9.00	9.12	---	10.26	10.45	---	11.04
23	10.56	---	8.98	9.65	9.68	---	9.12	---	10.24	10.43	---	11.06
24	10.48	---	8.99	---	9.53	---	9.12	---	---	10.44	10.91	11.10
25	10.43	---	9.05	---	9.39	8.95	9.13	10.39	---	10.43	10.84	11.13
26	10.34	---	9.11	---	9.31	8.93	9.16	10.40	10.22	10.42	10.85	11.12
27	10.19	9.54	9.11	---	9.21	8.93	9.20	---	10.28	10.46	10.87	11.07
28	10.06	9.49	9.07	---	9.10	8.92	9.24	---	---	10.51	10.90	11.12
29	9.92	9.43	8.98	---	---	8.83	9.31	---	---	10.66	10.92	11.14
30	9.84	9.41	8.94	---	---	8.84	9.33	---	10.32	10.62	10.89	11.13
31	9.76	---	---	---	---	8.83	---	---	---	10.63	10.80	---
MEAN	10.41	9.50	9.12	9.55	9.68	8.92	8.92	9.59	10.36	10.52	11.06	10.92
MAX	10.67	9.70	9.33	9.65	10.01	9.10	9.33	10.40	10.58	10.67	11.50	11.14
MIN	9.76	9.30	8.94	9.42	9.10	8.73	8.70	9.34	10.19	10.40	10.68	10.73

WTR YR 1985 MEAN 9.96 HIGH 8.70 Apr 5 LOW 11.50 Aug 21

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.--Continuous strip-chart recorder.

DATUM.--Elevation of land-surface datum is 1,000 ft, from topographic map. Measuring point: Top of plywood cover 2.02 ft above land-surface datum.

REMARKS.--Missing record Oct. 18-24, Jan. 8-22, June 24, July 28, and Sept. 24, 25. Water level affected by pumping of nearby well Sept. 7-30.

PERIOD OF RECORD.--June 1973 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 29.70 ft below land-surface datum, Apr. 12, 1981; lowest, 47.06 ft below land-surface datum, Nov. 3, 1982.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	43.47	35.27	32.02	31.20	31.98	31.22	30.35	31.66	30.80	32.29	32.30	33.69
2	43.67	35.32	31.98	31.21	31.77	31.31	30.57	31.67	31.10	32.29	32.38	34.00
3	43.78	35.16	32.01	31.29	31.65	31.35	30.74	30.92	31.17	32.31	32.43	34.30
4	43.82	35.04	32.04	31.31	31.62	31.35	30.80	31.12	31.03	32.00	32.50	34.59
5	43.90	34.87	32.04	31.31	31.53	31.44	30.86	31.24	31.18	32.00	32.54	34.63
6	44.00	34.34	32.10	31.40	31.49	31.52	30.95	31.34	31.30	32.09	32.58	34.61
7	44.12	34.25	32.13	31.46	31.54	31.55	30.97	31.39	31.39	32.10	32.64	34.39
8	44.25	34.23	32.15	---	31.61	31.53	31.01	31.50	31.49	32.10	32.72	34.10
9	44.37	34.21	32.15	---	31.62	31.51	31.08	31.68	31.60	31.30	32.82	34.00
10	44.51	34.04	32.11	---	31.63	31.52	31.10	32.00	31.66	31.40	32.96	34.05
11	44.66	33.55	31.79	---	31.63	31.52	31.09	32.20	31.66	31.49	33.12	34.09
12	44.82	33.41	31.57	---	31.61	31.52	31.12	32.34	31.65	31.68	33.27	34.16
13	44.98	33.34	31.71	---	31.51	31.27	31.13	32.51	31.66	31.78	33.44	34.20
14	45.16	33.32	31.75	---	31.32	31.03	31.13	32.65	31.72	31.82	33.50	34.28
15	45.37	33.29	31.73	---	31.29	31.13	31.17	32.72	31.72	31.82	33.45	34.20
16	45.50	33.24	31.71	---	31.30	31.19	31.19	32.59	31.79	31.80	33.05	34.30
17	45.65	33.25	31.73	---	31.36	31.20	31.24	32.35	31.81	31.87	32.39	34.30
18	---	33.22	31.80	---	31.43	31.23	31.25	32.14	31.89	31.94	32.47	34.39
19	---	33.12	31.78	---	31.43	31.35	31.28	32.06	31.94	32.00	32.56	34.40
20	---	33.12	31.57	---	31.43	31.38	31.36	32.09	31.91	32.05	32.62	34.48
21	---	33.00	31.47	---	31.27	31.47	31.40	32.13	31.98	32.09	32.90	34.53
22	---	32.98	30.84	---	30.72	31.47	31.47	32.04	32.03	32.10	32.99	34.51
23	---	32.92	30.97	31.86	30.53	31.45	31.51	31.14	31.94	32.19	33.06	34.44
24	---	32.93	31.16	31.87	30.65	31.00	31.53	31.34	---	32.25	33.07	---
25	37.83	32.91	31.16	31.93	30.85	31.06	31.39	31.47	31.98	32.26	32.95	---
26	37.62	32.83	31.20	32.03	30.91	31.10	31.46	31.56	32.03	32.29	32.99	34.21
27	38.04	32.84	31.27	32.03	31.05	31.11	31.51	31.57	32.10	32.10	32.99	34.08
28	38.52	32.74	31.34	32.01	31.12	31.16	31.60	31.56	32.17	---	33.15	34.24
29	38.44	31.98	31.30	32.02	---	31.20	31.62	31.24	32.21	32.15	33.15	34.28
30	35.75	31.99	31.07	32.02	---	30.37	31.64	31.43	32.27	32.21	33.28	34.55
31	35.44	---	31.18	32.00	---	30.02	---	30.90	---	32.25	33.47	---
MEAN	42.40	33.56	31.64	31.68	31.35	31.24	31.18	31.76	31.70	32.00	32.89	34.29
MAX	45.65	35.32	32.15	32.03	31.98	31.55	31.64	32.72	32.27	32.31	33.50	34.63
MIN	35.44	31.98	30.84	31.20	30.53	30.02	30.35	30.90	30.80	31.30	32.30	33.69

WTR YR 1985 MEAN 32.85 HIGH 30.02 Mar 31 LOW 45.65 Oct 17

INDIANA COUNTY

157

403702079093301. Local number, IN 1.

LOCATION.--Lat 40°37'02", long 79°09'33", Hydrologic Unit 05010007, at Indiana University of Pennsylvania, Indiana.

Owner: Commonwealth of Pennsylvania.

AQUIFER.--Sandstone of Glenshaw Formation of Late Pennsylvanian age.

WELL CHARACTERISTICS.--Drilled artesian well, diameter 6 in, depth 198 ft, casing information not available.

INSTRUMENTATION.--Continuous strip-chart recorder.

DATUM.--Elevation of land-surface datum is 1,305 ft, from topographic map. Measuring point: Top of casing, 1.2 ft above land-surface datum.

REMARKS.--Missing record Dec. 25 to Jan. 1, Feb. 5-12, Aug. 21, and Sept. 26, 27, 30.

PERIOD OF RECORD.--October 1944 to June 1947, September 1949 to January 1950, January 1951 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 72.50 ft below land-surface datum, Apr. 13, 1962; lowest, 87.03 ft below land-surface datum, Oct. 19, 1946.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	74.87	74.74	74.31	---	74.53	73.90	73.47	74.26	73.90	74.77	74.43	74.59
2	74.91	74.70	74.38	73.86	74.66	74.12	73.47	74.24	73.88	74.66	74.59	74.59
3	74.81	74.70	74.22	73.86	74.79	74.18	73.50	73.99	73.95	74.54	74.62	74.57
4	74.97	74.53	74.32	73.56	74.77	74.06	73.56	73.98	74.01	74.55	74.60	74.55
5	75.10	74.30	74.35	73.82	---	74.15	73.43	73.84	73.96	74.55	74.59	74.56
6	75.15	74.45	74.09	73.88	---	74.35	73.81	73.78	74.10	74.54	74.58	74.67
7	75.10	74.56	74.24	73.66	---	74.29	73.82	73.91	74.11	74.56	74.58	74.72
8	74.98	74.54	74.26	74.11	---	73.93	73.79	74.06	73.97	74.56	74.57	74.74
9	75.04	74.36	74.30	74.21	---	73.98	73.92	74.08	74.11	74.31	74.63	74.62
10	75.10	74.15	74.15	74.16	---	74.02	73.92	74.05	74.25	74.22	74.61	74.66
11	75.10	74.09	74.19	74.02	---	73.98	73.84	74.05	74.25	74.27	74.64	74.73
12	75.04	74.15	74.02	74.05	---	73.76	73.91	74.05	74.10	74.25	74.73	74.81
13	74.95	74.26	74.26	73.96	74.24	73.81	73.86	74.12	74.20	74.30	74.71	74.87
14	74.89	74.31	74.28	73.91	74.28	73.75	73.78	74.17	74.33	74.29	74.72	74.86
15	74.94	74.21	74.23	74.37	74.28	73.95	73.62	74.20	74.33	74.04	74.69	74.76
16	75.09	74.12	74.16	74.44	74.34	73.94	73.92	74.09	74.21	74.21	74.66	74.65
17	75.10	74.21	74.04	73.99	74.54	73.82	74.05	73.91	74.30	74.27	74.68	74.76
18	75.15	74.18	74.13	73.98	74.61	74.05	73.95	74.03	74.20	74.29	74.59	74.80
19	75.04	74.22	74.05	74.16	74.46	74.05	73.94	74.21	74.32	74.29	74.58	74.89
20	75.06	74.45	73.92	74.36	74.34	74.11	74.01	74.21	74.43	74.29	74.65	74.83
21	74.99	74.59	73.88	74.35	74.35	74.19	74.05	74.31	74.53	74.29	---	74.85
22	74.99	74.56	73.91	74.33	74.13	74.06	74.04	74.33	74.56	74.29	74.64	74.94
23	74.99	74.35	73.93	74.33	74.06	73.87	74.03	74.22	74.65	74.47	74.66	74.99
24	74.94	74.30	73.74	74.30	73.81	73.68	73.99	74.23	74.79	74.51	74.60	75.08
25	74.93	74.35	---	74.48	74.03	73.99	74.06	74.23	74.80	74.51	74.53	75.10
26	74.74	74.43	---	74.65	73.90	74.03	74.10	74.26	74.74	74.36	74.58	---
27	74.71	74.47	---	74.49	74.04	73.80	74.13	74.24	74.75	74.45	74.65	---
28	74.63	74.31	---	74.55	74.05	73.66	74.29	74.18	74.69	74.46	74.64	75.24
29	74.71	74.19	---	74.66	---	73.74	74.37	74.22	74.69	74.43	74.54	75.25
30	74.72	74.19	---	74.65	---	73.81	74.33	74.15	74.75	74.46	74.37	---
31	74.77	---	---	74.51	---	73.70	---	73.99	---	74.42	74.55	---
MEAN	74.95	74.37	74.14	74.19	74.31	73.96	73.90	74.12	74.33	74.40	74.61	74.80
MAX	75.15	74.74	74.38	74.66	74.79	74.35	74.37	74.33	74.80	74.77	74.73	75.25
MIN	74.63	74.09	73.74	73.56	73.81	73.66	73.43	73.78	73.88	74.04	74.37	74.55

WTR YR 1985 MEAN 74.34 HIGH 73.43 Apr 5 LOW 75.25 Sept 29

JEFFERSON COUNTY

410650078575801. Local number, JE 23.

LOCATION.--Lat 41°06'50", long 78°57'58", Hydrologic Unit 05010006, at State Game Land Number 244.

Owner: U.S. Geological Survey.

AQUIFER.--Sandstone and shale of Kittanning Formation of Middle Pennsylvanian age.

WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 6 in , depth 101 ft, cased to 37 ft, open hole.

INSTRUMENTATION.--Continuous strip-chart recorder.

DATUM.--Elevation of land-surface datum is 1,660 ft, from topographic map. Measuring point: Top of plywood cover, 2.05 ft above land-surface datum.

REMARKS.--None.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 14.17 ft below land-surface datum, Apr. 13, 1970; lowest, 32.12 ft below land-surface datum, Aug. 25, 1974.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	28.98	28.74	28.38	27.06	28.46	27.30	26.11	27.52	28.69	28.82	28.70	28.73
2	28.94	28.98	28.39	27.18	28.71	27.37	26.12	27.59	28.50	28.90	28.70	28.77
3	28.74	28.77	28.11	27.18	28.78	27.38	26.03	27.64	28.53	28.70	28.77	28.75
4	28.89	28.78	28.15	26.92	28.47	27.23	26.04	27.67	28.53	28.60	28.80	28.63
5	28.85	28.63	28.04	27.15	28.31	27.15	25.89	27.70	28.53	28.60	28.73	28.73
6	28.87	28.70	27.72	27.24	28.41	27.30	26.03	27.74	28.51	28.61	28.60	28.69
7	28.65	28.67	27.86	27.20	28.58	27.22	26.03	27.90	28.52	28.64	28.63	28.63
8	28.55	28.67	27.88	27.70	28.49	26.90	26.04	28.03	28.53	28.68	28.70	28.74
9	28.66	28.61	27.90	27.83	28.49	26.91	26.25	28.08	28.60	28.60	28.70	28.66
10	28.73	28.53	27.70	27.82	28.44	26.84	26.26	27.99	28.61	28.59	28.74	28.69
11	28.61	28.50	27.70	27.74	28.40	26.77	26.31	27.99	28.56	28.61	28.77	28.72
12	28.58	28.46	27.47	27.63	28.23	26.59	26.32	27.95	28.61	28.68	28.76	28.72
13	28.62	28.43	27.66	27.53	28.40	26.63	26.31	27.97	28.68	28.63	28.70	28.80
14	28.59	28.42	27.66	27.53	28.46	26.55	26.20	28.07	28.59	28.60	28.69	28.80
15	28.65	28.25	27.54	27.79	28.48	26.63	26.13	28.10	28.54	28.63	28.68	29.00
16	28.73	28.18	27.47	27.83	28.49	26.61	26.35	28.00	28.60	28.78	28.81	28.90
17	28.66	28.27	27.22	27.48	28.63	26.44	26.51	28.00	28.63	28.82	28.80	28.74
18	28.60	28.20	27.26	27.52	28.59	26.70	26.55	28.23	28.60	28.76	28.73	28.70
19	28.77	28.41	27.09	27.76	28.39	26.72	26.74	28.48	28.65	28.68	28.75	28.69
20	28.83	28.62	27.19	27.93	28.43	26.74	26.89	28.50	28.65	28.69	28.70	28.64
21	28.66	28.49	27.16	27.92	28.46	26.74	26.96	28.53	28.68	28.67	28.82	28.64
22	28.69	28.48	27.14	27.95	28.36	26.67	26.84	28.51	28.67	28.56	28.76	28.67
23	28.69	28.27	27.15	27.95	28.35	26.49	26.83	28.51	28.65	28.58	28.72	28.68
24	29.14	28.23	26.99	27.93	28.05	26.62	26.80	28.52	28.70	28.58	28.71	28.61
25	29.12	28.31	27.20	28.09	27.95	26.81	26.80	28.53	28.68	28.62	28.71	28.62
26	28.80	28.39	27.22	28.20	27.76	26.85	26.90	28.53	28.64	28.73	28.73	28.79
27	29.68	28.40	27.06	28.10	27.55	26.87	27.04	28.50	28.76	28.73	28.84	28.81
28	29.27	28.39	26.93	28.22	27.54	26.86	27.32	28.53	28.74	28.80	28.80	28.84
29	29.15	28.39	26.99	28.32	---	26.75	27.42	28.47	28.93	28.81	28.89	28.75
30	29.05	28.29	27.14	28.32	---	26.62	27.43	28.47	28.87	28.75	28.76	28.64
31	28.96	---	27.06	28.31	---	26.45	---	28.54	---	28.73	28.77	---
MEAN	28.83	28.48	27.50	27.72	28.35	26.83	26.52	28.15	28.63	28.68	28.74	28.73
MAX	29.68	28.98	28.39	28.32	28.78	27.38	27.43	28.54	28.93	28.90	28.89	29.00
MIN	28.55	28.18	26.93	26.92	27.54	26.44	25.89	27.52	28.50	28.56	28.60	28.61

WTR YR 1985 MEAN 28.09 HIGH 25.89 Apr 5 LOW 29.68 Oct 27

LAWRENCE COUNTY

159

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 Connoqueenessing Formation of Early Pennsylvanian age.

WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 6 in, depth 150 ft, cased to 30 ft, open hole.

INSTRUMENTATION.--Continuous strip-chart recorder.

DATUM.--Elevation of land-surface datum is 1,040 ft, from topographic map. Measuring point: Top of plywood cover, 3.45 ft above land-surface datum.

REMARKS.--Missing record July 23 to Aug. 27, and Sept. 14, 20, 24-30.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 12.25 ft below land-surface datum, May 19, 1978; lowest, 19.95 ft below land-surface datum, Nov. 16, 1967.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18.39	17.66	16.62	15.42	17.29	14.79	14.49	17.14	17.67	17.87	---	18.60
2	18.00	17.60	16.64	15.49	17.30	15.04	14.13	17.15	17.68	17.91	---	18.61
3	17.89	17.56	16.62	15.49	17.34	15.23	14.10	17.21	17.68	17.93	---	18.62
4	17.94	17.48	16.69	15.48	17.34	15.25	14.15	17.25	17.71	17.95	---	18.65
5	18.06	17.17	16.69	15.67	17.30	15.27	14.27	17.25	17.73	17.99	---	18.66
6	18.11	16.81	16.71	15.74	17.25	15.32	14.59	17.28	17.76	18.00	---	18.67
7	18.12	16.73	16.75	15.81	17.28	15.38	14.71	17.34	17.75	17.99	---	18.73
8	18.13	16.60	16.75	16.00	17.29	15.33	14.79	17.41	17.75	17.96	---	18.75
9	18.17	16.53	16.72	16.10	17.30	15.15	14.91	17.44	17.79	17.96	---	18.75
10	18.20	16.38	16.76	16.14	17.29	15.19	14.98	17.49	17.85	17.95	---	18.77
11	18.27	16.77	16.78	16.25	17.26	15.22	15.14	17.49	17.87	17.97	---	18.74
12	18.27	15.46	16.56	16.29	17.16	15.15	15.30	17.47	17.78	17.95	---	18.80
13	18.26	15.33	16.31	16.32	17.00	14.90	15.43	17.52	17.74	18.00	---	18.83
14	18.27	15.24	16.23	16.43	16.89	14.70	15.52	17.55	17.75	18.01	---	---
15	18.29	15.21	16.05	16.57	16.76	14.81	15.61	17.60	17.72	17.92	---	---
16	18.31	15.32	15.91	16.60	16.70	14.91	15.79	17.60	17.65	17.83	---	---
17	18.33	15.43	15.79	16.59	16.68	15.09	15.92	17.60	17.70	17.90	---	---
18	18.34	15.52	15.82	16.63	16.69	15.32	16.02	17.64	17.59	17.88	---	---
19	18.30	15.68	15.81	16.73	16.67	15.44	16.15	17.70	17.62	17.90	---	---
20	18.32	15.83	15.83	16.81	16.70	15.63	16.36	17.72	17.67	17.94	---	---
21	18.30	15.95	15.82	16.87	16.72	15.78	16.50	17.77	17.68	17.91	---	18.85
22	18.31	16.03	15.75	16.91	16.66	15.87	16.58	17.78	17.68	17.91	---	18.87
23	18.30	16.06	15.71	16.93	16.31	15.93	16.66	17.79	17.67	---	---	18.89
24	18.27	16.16	15.75	16.94	15.45	16.00	16.72	17.84	17.68	---	---	---
25	18.24	16.25	15.87	16.97	14.75	16.10	16.80	17.86	17.69	---	---	---
26	18.19	16.31	15.95	17.13	14.41	16.14	16.86	17.91	17.70	---	---	---
27	18.16	16.45	15.96	17.15	14.53	16.16	16.95	17.94	17.72	---	---	---
28	18.10	16.47	15.96	17.16	14.66	16.23	17.04	17.84	17.77	---	18.74	---
29	18.05	16.47	15.87	17.28	---	16.11	17.09	17.76	17.80	---	18.67	---
30	17.85	16.50	15.76	17.25	---	15.42	17.12	17.72	17.83	---	18.62	---
31	17.71	---	15.55	17.23	---	15.00	---	17.65	---	---	18.54	---
MEAN	18.18	16.30	16.19	16.46	16.61	15.41	15.69	17.57	17.72	17.94	18.64	18.74
MAX	18.39	17.66	16.78	17.28	17.34	16.23	17.12	17.94	17.87	18.01	18.74	18.89
MIN	17.71	15.21	15.55	15.42	14.41	14.70	14.10	17.14	17.59	17.83	18.54	18.60

WTR YR 1985 MEAN 16.90 HIGH 14.10 Apr 3 LOW 18.89 Sept 23

McKEAN COUNTY

413852078341401. Local number, MC 110.

LOCATION.--Lat 41°38'52", long 78°34'14", Hydrologic Unit 05010005, at State Forest Land.

Owner: U.S. Geological Survey.

AQUIFER.--Pottsville Formation of Middle Pennsylvanian age.

WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 6 in (15 cm), depth 107 ft (32.6 m), cased to 28 ft (8.5 m), open hole.

INSTRUMENTATION.--Continuous strip-chart recorder.

DATUM.--Elevation of land-surface datum is 2,050 ft (625 m), from topographic map. Measuring point: Top of casing, 2.1 ft (64 cm) above land-surface datum.

REMARKS.--Missing record Nov. 16-19, 25-27, Jan. 1-15, 18, Mar. 26, May 25-27 and Sept. 27-30.

PERIOD OF RECORD.--August 1973 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 27.08 ft (8.253 m) below land-surface datum, May 17, 1974; lowest, 30.09 ft (9.171 m) below land-surface datum, Aug. 8, 1973.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	28.29	28.52	28.19	---	28.28	27.96	27.43	28.06	28.28	28.29	28.40	28.39
2	28.33	28.27	28.26	---	28.31	27.99	27.45	28.06	28.29	28.21	28.48	28.37
3	28.30	28.27	28.17	---	28.45	28.00	27.42	28.18	28.30	28.11	28.48	28.34
4	28.40	28.27	28.29	---	28.45	27.99	27.47	28.21	28.32	28.16	28.47	28.27
5	28.50	28.12	28.31	---	28.36	28.00	27.37	28.15	28.20	28.17	28.47	28.26
6	28.54	28.32	27.98	---	28.05	28.21	27.48	28.11	28.25	28.17	28.45	28.35
7	28.53	28.40	28.05	---	28.08	28.21	27.56	28.28	28.25	28.27	28.40	28.38
8	28.43	28.40	28.14	---	28.08	27.90	27.56	28.34	28.11	28.26	28.32	28.38
9	28.34	28.36	28.17	---	28.08	27.93	27.69	28.34	28.17	28.21	28.35	28.28
10	28.44	28.07	28.14	---	28.08	27.92	27.72	28.28	28.24	28.27	28.34	28.30
11	28.45	27.98	28.07	---	28.08	27.90	27.73	28.23	28.24	28.32	28.32	28.37
12	28.42	27.97	28.07	---	28.05	27.68	27.82	28.21	28.04	28.34	28.35	28.39
13	28.33	28.07	28.25	---	27.98	27.71	27.82	28.27	28.07	28.35	28.35	28.37
14	28.22	28.07	28.26	---	28.05	27.66	27.79	28.31	28.06	28.31	28.30	28.36
15	28.23	28.06	28.26	---	28.24	27.79	27.70	28.32	28.06	28.26	28.29	28.29
16	28.38	---	28.24	28.00	28.29	27.79	27.72	28.22	28.03	28.37	28.33	28.22
17	28.40	---	28.04	27.74	28.44	27.59	27.82	28.04	28.04	28.41	28.36	28.23
18	28.40	---	28.05	---	28.51	27.73	27.82	28.23	28.03	28.41	28.36	28.27
19	28.37	---	27.99	27.75	28.39	27.73	27.76	28.32	28.04	28.37	28.31	28.28
20	28.31	28.25	27.99	27.87	28.38	27.80	27.83	28.35	28.06	28.31	28.28	28.27
21	28.31	28.30	27.99	27.89	28.34	27.87	27.86	28.37	28.07	28.31	28.28	28.21
22	28.38	28.31	27.98	27.98	28.20	27.83	27.87	28.39	28.06	28.34	28.28	28.19
23	28.42	28.20	28.01	27.98	28.19	27.71	27.88	28.33	28.06	28.41	28.30	28.21
24	28.44	28.13	27.96	27.96	28.08	27.70	27.87	28.31	28.13	28.46	28.24	28.25
25	28.45	---	28.07	27.99	28.20	27.80	27.89	---	28.14	28.46	28.29	28.32
26	28.38	---	28.21	28.27	28.15	---	27.92	---	28.14	28.34	28.34	28.29
27	28.36	---	28.14	28.27	28.01	27.72	27.94	---	28.16	28.39	28.40	---
28	28.34	27.95	28.00	28.23	28.01	27.61	28.05	28.36	28.15	28.44	28.40	---
29	28.48	27.98	27.86	28.35	---	27.60	28.06	28.38	28.17	28.43	28.35	---
30	28.53	27.98	27.96	28.37	---	27.71	28.06	28.36	28.25	28.41	28.21	---
31	28.52	---	27.97	28.31	---	27.70	---	28.21	---	28.40	28.35	---
MEAN	28.39	28.18	28.10	28.06	28.21	27.82	27.75	28.26	28.15	28.32	28.35	28.30
MAX	28.54	28.52	28.31	28.37	28.51	28.21	28.06	28.39	28.32	28.46	28.48	28.39
MIN	28.22	27.95	27.86	27.74	27.98	27.59	27.37	28.04	28.03	28.11	28.21	28.19
WTR YR 1985	MEAN	28.16	HIGH	27.37	Apr 5	LOW	28.54	Oct 6				

MERCER COUNTY

161

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, from topographic map. Measuring point: Top of plywood cover, 2.26 ft above land-surface datum.

REMARKS.--Missing record Jan. 21, Mar. 21-26, June 24, 25, and Sept. 14-19.

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 1984 TO SEPTEMBER 1985
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.87	4.74	4.85	3.90	4.68	3.61	3.39	4.39	4.48	5.15	5.10	5.00
2	4.87	5.11	4.77	4.02	4.97	4.26	3.38	4.42	4.77	4.96	5.01	4.88
3	4.79	4.92	4.60	4.02	4.97	4.14	3.41	4.40	4.59	4.85	5.03	4.91
4	4.79	4.82	4.70	3.97	4.88	4.10	3.33	4.80	4.71	5.01	5.12	5.00
5	5.06	4.45	4.54	4.40	4.46	3.80	3.34	4.78	4.69	4.93	5.04	5.01
6	5.01	4.56	4.59	4.44	4.49	3.98	3.61	4.53	4.85	5.00	4.92	5.14
7	5.36	4.67	4.69	4.29	4.61	3.88	3.57	5.40	4.83	4.78	5.19	5.10
8	5.07	4.64	4.82	4.45	4.61	3.65	3.83	5.09	5.12	5.00	4.88	5.05
9	5.04	4.56	4.86	4.51	4.74	3.71	3.79	4.80	4.94	5.09	4.97	5.12
10	5.02	4.15	4.63	4.43	4.70	3.83	3.96	4.70	4.99	4.89	4.96	4.80
11	5.12	4.31	4.55	4.51	4.67	3.76	3.92	4.70	4.97	4.99	4.93	4.67
12	5.01	3.94	4.24	4.80	4.54	3.54	3.79	4.64	4.84	4.93	5.17	4.62
13	4.85	3.86	4.35	4.79	4.52	3.42	3.86	5.09	4.73	4.98	5.18	5.08
14	4.88	3.92	4.50	4.66	4.58	3.47	3.76	5.00	4.58	4.92	5.18	---
15	5.08	4.12	4.23	4.65	4.65	3.57	4.01	4.80	4.63	4.55	4.96	---
16	5.00	4.03	4.42	4.83	4.56	3.76	4.03	4.58	4.49	4.30	5.04	---
17	5.13	4.06	4.52	4.70	4.84	3.74	4.22	4.52	4.85	4.36	5.02	---
18	5.08	4.24	4.49	4.50	4.70	3.96	4.21	4.55	4.54	4.69	4.96	---
19	5.05	4.22	4.34	4.68	4.61	3.93	4.02	4.82	4.59	4.47	5.19	---
20	5.26	4.43	4.39	4.70	4.74	4.21	4.27	4.72	4.69	4.31	5.13	4.91
21	5.20	4.61	4.22	---	4.57	---	4.34	4.77	4.80	4.50	5.06	5.12
22	5.32	4.70	4.50	4.63	4.42	---	4.25	4.85	5.00	4.89	5.04	4.92
23	5.08	4.42	4.47	4.62	4.09	---	4.22	4.77	5.00	4.78	5.02	5.07
24	5.13	4.55	4.37	4.64	3.60	---	4.22	4.84	---	4.81	4.99	5.19
25	5.21	4.56	4.47	4.71	3.72	---	4.23	5.07	---	4.78	5.17	5.22
26	5.04	4.56	4.51	4.80	3.58	---	4.31	5.07	5.23	4.80	5.15	4.93
27	5.00	4.70	4.47	4.63	3.87	4.32	4.50	4.94	5.04	5.02	5.05	4.81
28	5.11	4.57	4.39	4.75	3.76	4.21	4.35	4.84	5.00	4.89	5.02	5.08
29	5.12	4.63	4.23	4.82	---	3.76	4.65	4.75	5.15	5.09	4.91	5.03
30	4.83	4.63	4.02	4.79	---	3.69	4.34	4.86	5.06	5.06	4.94	5.22
31	4.83	---	3.90	4.66	---	3.56	---	4.85	---	4.81	4.83	---
MEAN	5.04	4.46	4.47	4.54	4.47	3.83	3.97	4.79	4.83	4.83	5.04	5.00
MAX	5.36	5.11	4.86	4.83	4.97	4.32	4.65	5.40	5.23	5.15	5.19	5.22
MIN	4.79	3.86	3.90	3.90	3.58	3.42	3.33	4.39	4.48	4.30	4.83	4.62

WTR YR 1985 MEAN 4.61 HIGH 3.33 Apr 4 LOW 5.40 May 7

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, from topographic map. Measuring point: Top of casing, 1.43 ft above land-surface datum.

REMARKS.--Missing record Jan. 8-21, Jan. 26 to Feb. 7, and July 23-26. Water level affected by pumping of nearby well Aug. 17 to Sept. 30.

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, 38.85 ft below land-surface datum, Sept. 9, 1985 (affected by pumping of nearby well).

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	32.37	32.43	31.86	31.56	---	31.53	31.02	31.16	31.28	31.87	31.83	37.97
2	32.37	32.44	31.86	31.55	---	31.57	31.08	31.15	31.34	31.87	31.86	38.28
3	32.37	32.43	31.86	31.45	---	31.58	31.07	31.02	31.37	31.86	31.88	38.40
4	32.37	32.43	31.92	31.50	---	31.51	31.08	31.10	31.39	31.86	31.89	38.45
5	32.45	32.23	31.92	31.48	---	31.57	31.06	31.09	31.39	31.87	31.89	38.45
6	32.48	32.28	31.84	31.51	---	31.61	31.08	31.09	31.42	31.87	31.89	38.45
7	32.49	32.33	31.80	31.45	---	31.58	31.09	31.10	31.42	31.90	31.89	38.33
8	32.48	32.28	31.82	---	31.44	31.51	31.09	31.13	31.41	31.90	31.87	38.26
9	32.48	32.19	31.82	---	31.44	31.52	31.09	31.15	31.41	31.72	31.89	38.85
10	32.50	32.19	31.82	---	31.44	31.52	31.09	31.15	31.43	31.71	31.89	38.31
11	32.52	32.19	31.79	---	31.47	31.47	31.09	31.16	31.43	31.77	31.92	38.17
12	32.53	32.15	31.77	---	31.47	31.36	31.11	31.15	31.42	31.80	31.93	38.24
13	32.51	32.19	31.76	---	31.43	31.36	31.12	31.17	31.43	31.87	31.98	38.25
14	32.50	32.18	31.78	---	31.36	31.37	31.09	31.18	31.48	31.87	32.01	38.22
15	32.50	32.16	31.76	---	31.37	31.38	31.07	31.19	31.51	31.78	32.01	38.15
16	32.50	32.13	31.76	---	31.38	31.38	31.06	31.18	31.48	31.80	32.07	38.01
17	32.53	32.13	31.76	---	31.47	31.37	31.09	31.15	31.50	31.87	33.43	37.91
18	32.50	32.11	31.77	---	31.48	31.38	31.09	31.09	31.50	31.87	34.09	37.76
19	32.49	32.09	31.74	---	31.51	31.38	31.09	31.17	31.52	31.90	34.52	37.65
20	32.49	32.12	31.64	---	31.53	31.39	31.09	31.19	31.55	31.90	34.83	37.53
21	32.49	32.13	31.64	---	31.54	31.40	31.11	31.23	31.62	31.88	35.00	37.40
22	32.49	32.14	31.59	31.30	31.53	31.40	31.11	31.30	31.64	31.78	35.15	37.28
23	32.49	32.13	31.61	31.34	31.51	31.34	31.11	31.28	31.64	---	35.15	37.15
24	32.50	32.09	31.65	31.33	31.44	31.25	31.11	31.27	31.67	---	35.19	37.02
25	32.49	32.08	31.65	31.29	31.45	31.33	31.10	31.27	31.68	---	35.17	36.89
26	32.48	32.07	31.64	---	31.48	31.36	31.10	31.28	31.70	---	35.11	36.77
27	32.47	32.06	31.61	---	31.53	31.34	31.10	31.28	31.77	31.80	35.15	36.64
28	32.45	32.03	31.58	---	31.55	31.27	31.12	31.28	31.77	31.85	35.50	36.58
29	32.46	31.86	31.57	---	---	31.22	31.17	31.30	31.80	31.86	36.09	36.57
30	32.46	31.86	31.57	---	---	31.05	31.17	31.34	31.86	31.86	36.74	36.52
31	32.46	---	31.52	---	---	31.04	---	31.32	---	31.85	36.48	---
MEAN	32.47	32.17	31.73	31.43	31.47	31.40	31.10	31.19	31.53	31.84	33.49	37.75
MAX	32.53	32.44	31.92	31.56	31.55	31.61	31.17	31.34	31.86	31.90	36.74	38.85
MIN	32.37	31.86	31.52	31.29	31.36	31.04	31.02	31.02	31.28	31.71	31.83	36.52

WTR YR 1985 TOTAL 10811.50 MEAN 32.37 HIGH 31.02 Apr 1, May 3 LOW 38.85 Sept 9

WARREN COUNTY

163

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.--Continuous strip-chart recorder.

DATUM.--Elevation of land-surface datum is 1,170 ft, from topographic map. Measuring point: Top of casing, 2.0 ft above land-surface datum.

REMARKS.--Missing record Aug. 29, 30. Well also sampled for water quality.

PERIOD OF RECORD.--August 1972 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 39.79 ft below land-surface datum, Apr. 6, 1985; lowest, 45.42 ft below land-surface datum, Nov. 2, 1984.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	40.75	42.00	41.78	41.00	41.96	41.68	40.24	41.32	42.70	42.98	42.49	42.00
2	40.78	42.01	41.91	40.96	42.02	41.59	40.12	41.40	42.76	42.96	42.59	42.05
3	40.74	42.07	41.91	41.00	42.20	41.71	40.09	41.50	42.85	42.90	42.67	42.06
4	40.91	41.97	41.97	40.93	42.24	41.69	39.99	41.60	42.94	42.89	42.70	42.05
5	41.06	41.74	41.99	40.68	42.24	41.45	39.93	41.59	42.89	42.89	42.73	42.08
6	41.14	41.82	41.85	40.74	42.00	41.65	39.79	41.59	42.96	42.81	42.73	42.17
7	41.15	41.96	41.75	40.73	42.11	41.65	40.03	41.67	43.01	42.83	42.72	42.26
8	41.11	42.00	41.78	40.83	42.19	41.47	40.10	41.83	42.95	42.84	42.50	42.28
9	41.20	41.96	41.88	41.07	42.27	41.24	40.20	41.93	42.92	42.71	42.53	42.29
10	41.28	41.83	41.89	41.10	42.31	41.18	40.29	41.95	43.00	42.59	42.58	42.34
11	41.29	41.60	41.83	41.05	42.30	41.11	40.29	41.96	43.03	42.58	42.58	42.50
12	41.30	41.53	41.83	41.01	42.15	40.76	40.40	41.96	42.97	42.59	42.59	42.64
13	41.26	41.65	41.75	41.01	41.87	40.68	40.41	42.04	42.95	42.62	42.58	42.78
14	41.21	41.70	41.82	40.89	42.01	40.65	40.40	42.14	43.06	42.61	42.61	42.84
15	41.25	41.72	41.82	41.11	42.12	40.73	40.32	42.17	43.09	42.50	42.60	42.85
16	41.39	41.52	41.82	41.28	42.15	40.73	40.28	42.17	43.05	42.32	42.63	42.84
17	41.44	41.64	41.65	41.22	42.25	40.59	40.48	42.12	43.01	42.33	42.68	42.82
18	41.50	41.64	41.63	41.00	42.35	40.63	40.50	42.12	42.95	42.33	42.69	42.91
19	41.51	41.64	41.62	41.06	42.35	40.66	40.48	42.25	42.92	42.29	42.71	42.94
20	41.57	41.83	41.55	41.27	42.36	40.72	40.57	42.36	42.95	42.23	42.74	42.94
21	41.58	41.97	41.54	41.32	42.38	40.83	40.65	42.50	42.99	42.19	42.80	42.93
22	41.70	41.97	41.39	41.40	42.34	40.86	40.71	42.56	42.99	42.14	42.83	42.98
23	41.78	41.92	41.42	41.43	42.28	40.81	40.76	42.57	42.92	42.20	42.86	42.98
24	41.83	41.79	41.42	41.43	42.09	40.67	40.76	42.61	42.90	42.24	42.87	43.05
25	41.89	41.79	41.52	41.42	41.91	40.76	40.79	42.64	42.90	42.26	42.79	43.10
26	41.82	41.86	41.64	41.72	41.89	40.84	40.86	42.64	42.89	42.25	42.87	43.10
27	41.79	41.86	41.64	41.72	41.75	40.80	40.97	42.64	42.91	42.28	42.98	43.09
28	41.76	41.71	41.49	41.76	41.74	40.59	41.10	42.67	42.89	42.34	43.03	43.30
29	41.82	41.70	41.22	41.90	---	40.43	41.27	42.77	42.87	42.39	---	43.35
30	41.85	41.71	41.13	41.96	---	40.49	41.29	42.79	42.92	42.42	---	43.35
31	42.00	---	41.13	41.93	---	40.49	---	42.77	---	42.43	41.94	---
MEAN	41.41	41.80	41.66	41.22	42.14	40.97	40.47	42.16	42.94	42.51	42.68	42.70
MAX	42.00	42.07	41.99	41.96	42.38	41.71	41.29	42.79	43.09	42.98	43.03	43.35
MIN	40.74	41.52	41.13	40.68	41.74	40.43	39.79	41.32	42.70	42.14	41.94	42.00

WTR YR 1985 MEAN 41.88 HIGH 39.79 Apr 6 LOW 43.35 Sept 29, 30

WASHINGTON COUNTY

400233080261301. Local number, WS 155.

LOCATION.--Lat 40°02'33", long 80°26'13", Hydrologic Unit 05030106, 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.--Continuous strip-chart recorder.

DATUM.--Elevation of land-surface datum is 1,110 ft, from topographic map. Measuring point: Top of casing, 2.0 ft above land-surface datum.

REMARKS.--Missing record Nov. 26, Jan. 5-23, Jan. 25 to Feb. 26, and July 28.

PERIOD OF RECORD.--July 1971 to current year.

EXTREMES FOR PERIOD OF RECORD.--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 1984 TO SEPTEMBER 1985
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	37.01	36.16	36.04	35.50	---	35.01	34.50	35.93	35.12	36.05	36.01	36.06
2	36.89	36.18	36.04	35.42	---	35.27	34.40	35.91	34.89	36.03	35.83	36.09
3	36.64	36.15	35.99	35.55	---	35.30	34.52	35.73	34.92	36.01	35.88	36.10
4	36.54	36.04	36.05	35.55	---	35.26	34.63	35.58	34.62	36.01	35.96	36.10
5	36.49	35.90	36.05	---	---	35.50	34.76	35.52	34.44	36.03	35.97	36.10
6	36.50	36.00	35.96	---	---	35.58	35.04	35.54	34.66	36.00	35.98	36.14
7	36.47	36.07	36.02	---	---	35.56	35.10	35.70	34.79	36.05	36.00	36.18
8	36.43	36.07	36.01	---	---	35.52	35.10	35.78	34.94	36.05	36.03	36.19
9	36.41	36.05	36.01	---	---	35.53	35.05	35.80	35.13	36.02	36.08	36.16
10	36.39	35.96	35.97	---	---	35.54	35.04	35.81	35.28	36.06	36.09	36.20
11	36.38	35.86	35.97	---	---	35.53	35.02	35.85	35.30	36.11	36.15	36.30
12	36.35	35.89	35.74	---	---	35.30	35.09	35.90	35.40	36.13	36.18	36.38
13	36.28	35.98	35.69	---	---	35.21	35.12	35.97	35.51	36.19	36.20	36.45
14	36.23	36.00	35.70	---	---	35.06	35.14	35.99	35.59	36.19	36.24	36.48
15	36.21	35.96	35.64	---	---	35.22	35.15	36.01	35.60	36.14	36.21	36.49
16	36.25	36.03	35.54	---	---	35.23	35.36	35.94	35.66	36.20	36.20	36.51
17	36.24	36.08	35.53	---	---	35.34	35.45	35.85	35.70	36.24	36.20	36.63
18	36.25	36.04	35.63	---	---	35.47	35.42	35.90	35.71	36.23	36.20	36.72
19	36.15	36.10	35.60	---	---	35.48	35.49	35.95	35.79	36.26	36.25	36.75
20	36.21	36.18	35.65	---	---	35.63	35.55	35.98	35.84	36.27	36.26	36.78
21	36.22	36.19	35.50	---	---	35.68	35.60	36.05	35.90	36.26	36.27	36.80
22	36.20	36.18	35.36	---	---	35.64	35.63	36.06	35.90	36.16	36.30	36.88
23	36.12	36.10	35.19	---	---	35.57	35.65	36.04	35.83	36.17	36.34	36.90
24	36.12	36.09	35.44	35.92	---	35.62	35.62	36.06	35.71	36.20	36.31	36.99
25	36.14	36.11	35.42	---	---	35.73	35.68	36.08	35.76	36.21	36.25	37.01
26	36.10	---	35.42	---	---	35.75	35.72	36.09	35.81	36.20	35.88	36.94
27	36.13	36.08	35.43	---	34.86	35.63	35.76	36.13	35.86	36.14	35.92	37.00
28	36.11	36.05	35.55	---	34.92	35.61	35.89	36.08	35.91	---	35.94	37.04
29	36.14	36.05	35.55	---	---	35.67	35.93	36.01	35.96	36.19	35.95	37.03
30	36.14	36.00	35.40	---	---	35.62	35.91	35.98	36.02	36.20	35.95	36.93
31	36.19	---	35.50	---	---	35.01	---	35.89	---	36.19	36.05	---
MEAN	36.32	36.05	35.70	35.59	34.89	35.45	35.28	35.91	35.45	36.14	36.10	36.54
MAX	37.01	36.19	36.05	35.92	34.92	35.75	35.93	36.13	36.02	36.27	36.34	37.04
MIN	36.10	35.86	35.19	35.42	34.86	35.01	34.40	35.52	34.44	36.00	35.83	36.06

WTR YR 1985 MEAN 35.88 HIGH 34.40 Apr 2 LOW 37.04 Sept 28

WESTMORELAND COUNTY

165

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, from topographic map. Measuring point: Top of plywood cover, 3.05 ft above land-surface datum.

REMARKS.--None.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 13.61 ft below land-surface datum, Apr. 24, 1984; lowest, 29.22 ft below land-surface datum, July 3, 1968.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20.20	20.91	19.69	18.40	19.32	17.76	16.51	17.26	17.62	18.50	18.69	19.36
2	20.22	20.93	19.72	18.49	19.45	17.92	16.47	17.29	17.62	18.49	18.78	19.36
3	20.27	20.91	19.53	18.47	19.57	17.98	16.53	17.30	17.61	18.54	18.80	19.37
4	20.25	20.84	19.58	18.17	19.58	17.80	16.59	17.30	17.62	18.58	18.83	19.35
5	20.42	20.75	19.57	18.45	19.36	18.08	16.40	17.12	17.39	18.66	18.87	19.35
6	20.45	20.75	19.24	18.45	19.05	18.23	16.64	16.93	17.36	18.68	18.89	19.37
7	20.47	20.76	19.34	18.43	19.20	18.16	16.74	16.98	17.33	18.75	18.91	19.39
8	20.49	20.68	19.35	18.83	19.22	17.87	16.74	17.05	17.08	18.75	18.99	19.40
9	20.55	20.58	19.38	18.85	19.21	17.89	16.84	17.09	17.12	18.74	19.03	19.39
10	20.58	20.46	19.26	18.75	19.20	17.87	16.85	17.01	17.28	18.60	19.05	19.39
11	20.61	20.42	19.32	18.70	19.03	17.78	16.77	16.95	17.27	18.56	19.14	19.45
12	20.62	20.42	19.11	18.70	18.59	17.62	16.84	16.90	17.27	18.53	19.16	19.48
13	20.62	20.43	19.26	18.60	18.60	17.66	16.75	16.96	17.54	18.48	19.17	19.50
14	20.64	20.40	19.29	18.74	18.63	17.50	16.57	17.05	17.70	18.42	19.17	19.54
15	20.70	20.24	19.24	19.11	18.63	17.66	16.36	17.11	17.73	18.30	19.16	19.56
16	20.74	20.20	19.13	19.13	18.62	17.66	16.47	17.01	17.72	18.38	19.16	19.54
17	20.77	20.20	18.90	18.64	18.74	17.39	16.63	16.91	17.79	18.35	19.16	19.53
18	20.79	20.08	18.95	18.66	18.86	17.61	16.57	17.12	17.78	18.31	19.16	19.56
19	20.80	20.12	18.87	18.98	18.67	17.61	16.48	17.27	17.93	18.29	19.19	19.56
20	20.84	20.16	18.78	19.14	18.68	17.66	16.54	17.30	18.07	18.29	19.22	19.51
21	20.87	20.16	18.74	19.08	18.71	17.66	16.63	17.35	18.02	18.29	19.24	19.47
22	20.88	20.07	18.73	19.13	18.53	17.55	16.67	17.41	18.04	18.39	19.29	19.47
23	20.89	19.89	18.73	19.13	18.45	17.38	16.69	17.28	18.06	18.45	19.32	19.48
24	20.90	19.85	18.77	19.03	18.10	17.23	16.71	17.29	18.14	18.49	19.30	19.51
25	20.91	19.86	18.94	19.23	18.18	17.48	16.79	17.39	18.15	18.48	19.29	19.52
26	20.89	19.88	18.94	19.49	17.96	17.51	16.87	17.44	18.18	18.43	19.37	19.50
27	20.88	19.90	18.65	19.41	17.99	17.26	16.91	17.47	18.20	18.54	19.39	19.54
28	20.88	19.75	18.43	19.33	17.99	16.96	17.13	17.59	18.24	18.56	19.40	19.58
29	20.90	19.73	18.49	19.43	---	16.89	17.22	17.67	18.35	18.54	19.38	19.58
30	20.92	19.64	18.53	19.43	---	16.97	17.22	17.66	18.46	18.58	19.34	19.58
31	20.94	---	18.40	19.26	---	16.84	---	17.53	---	18.54	19.33	---
MEAN	20.67	20.30	19.06	18.89	18.79	17.59	16.70	17.23	17.76	18.50	19.13	19.47
MAX	20.94	20.93	19.72	19.49	19.58	18.23	17.22	17.67	18.46	18.75	19.40	19.58
MIN	20.20	19.64	18.40	18.17	17.96	16.84	16.36	16.90	17.08	18.29	18.69	19.35

WTR YR 1985 MEAN 18.68 HIGH 16.36 Apr 15 LOW 20.94 Oct 31

GROUND-WATER LEVELS

GREENE COUNTY

394343080195201. Local number, GR 543.

LOCATION.--Lat 39°43'43", long 80°19'52", Hydrologic Unit 05020005, near Jollytown.

Owner: Diane Renner.

AQUIFER.--Washington Formation of Early Permian age.

WELL CHARACTERISTICS.--Drilled artesian and water-table well, depth 127 ft, cased to 18 ft with 4 in. casing, open hole.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 1,016 ft, from topographic map. Measuring point: Top of casing, 0.8 ft above land surface datum.

REMARKS.--Maximum values were published from October 1981 to September 1982.

PERIOD OF RECORD.--October 1981 to September 1985 (discontinued). Records from April 1980 to September 1981 were unpublished.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 0.75 ft below land-surface datum, Mar. 30, 1985; lowest, 18.66 ft below land-surface datum, Mar. 19, 1982.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.44	4.73	3.06	---	4.69	3.46	1.31	4.91	4.07	---	8.99	
2	9.47	---	3.17	---	4.33	3.59	1.86	4.35	4.49	---	8.99	
3	9.48	---	3.23	---	4.12	3.71	2.25	4.04	4.72	7.99	9.03	
4	9.51	---	3.43	---	4.06	3.76	2.48	4.22	4.96	8.11	9.09	
5	9.53	3.27	---	---	3.99	3.94	2.49	4.34	5.20	8.17	9.10	
6	9.53	2.73	---	---	3.94	4.04	2.60	4.49	5.43	8.31	9.12	
7	9.56	3.09	---	---	3.94	4.08	2.71	4.63	5.63	8.25	9.14	
8	9.57	3.09	---	---	4.06	4.08	2.76	4.78	5.81	8.36	9.15	
9	9.49	3.09	3.60	---	4.16	4.11	2.83	4.95	5.97	8.36	9.15	
10	9.45	3.06	3.11	---	4.24	4.11	2.84	5.11	6.13	7.93	9.16	
11	9.36	2.46	2.36	---	4.18	3.44	2.84	5.27	6.16	---	9.19	
12	9.35	2.43	2.51	---	3.63	3.44	2.92	5.29	6.13	---	9.22	
13	9.17	2.89	2.85	---	3.33	3.45	2.97	5.44	6.32	---	9.24	
14	9.00	3.27	3.01	---	3.33	3.42	3.01	5.60	6.40	---	9.25	
15	8.66	3.79	3.18	---	3.29	3.35	3.01	5.64	6.39	7.32	9.19	
16	8.66	---	3.31	---	3.27	3.37	3.00	5.56	6.51	7.45	8.68	
17	---	---	3.45	---	3.35	3.42	3.20	5.62	6.77	7.73	---	
18	---	---	3.65	---	3.34	3.53	3.38	5.69	6.90	7.99	---	
19	---	---	3.26	---	---	3.65	3.51	5.87	7.00	8.30	---	
20	---	---	2.78	---	---	3.83	3.50	6.03	7.01	8.60	---	
21	---	---	2.49	---	---	3.86	3.49	6.20	7.07	8.60	---	
22	---	---	2.34	---	---	3.76	3.57	6.16	7.05	8.63	---	
23	---	---	2.55	---	---	3.77	3.77	4.93	6.76	8.68	---	
24	---	---	---	---	---	3.87	3.88	5.15	6.97	8.70	---	
25	8.79	---	---	4.99	---	3.99	3.95	5.44	7.11	8.71	---	
26	8.87	---	---	5.06	---	4.02	4.08	5.69	7.23	8.83	---	
27	8.94	---	---	5.11	3.36	---	4.24	5.84	7.32	8.83	---	
28	8.70	3.59	---	5.14	3.40	3.84	4.32	5.98	7.39	8.86	---	
29	5.77	3.10	---	5.23	---	3.51	4.60	6.14	---	8.94	---	
30	4.68	3.13	---	5.29	---	.97	4.76	5.86	---	8.96	---	
31	4.59	---	---	5.21	---	1.11	---	3.61	---	8.97	---	
MEAN	---	---	---	---	---	---	3.20	5.25	---	---	---	

WTR YR 1985 MEAN 5.38 HIGH .97 MAR 30 LOW 9.57 OCT 8

GREENE COUNTY

167

395259080270601. Local number, GR 801.

LOCATION.--Lat 39°52'59", long 80°27'06", Hydrologic Unit 05030106, at Ryerson Station State Park.

Owner: U.S. Geological Survey.

AQUIFER.--Sandstone and shale of Waynesburg Formation of Late Pennsylvanian and Early Permian age.

WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 6.25 in., depth 163 ft, cased to 159 ft with 4 in. casing, perforated plastic casing from 90 to 155 ft at various 5 ft intervals. Well casing back-filled and cemented to 69 ft.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 1,011 ft, from topographic map. Measuring point: Top of casing, 1.50 ft above land-surface datum.

REMARKS.--Water level affected by pumpage from public water-supply well 435 ft southeast. Maximum values were published from October 1981 to September 1982.

PERIOD OF RECORD.--October 1981 to September 1985 (discontinued). Records from October 1980 to September 1981 were unpublished.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 46.42 ft below land-surface datum, Apr. 16, 1983; lowest 69.89 ft below land-surface datum, Aug. 6, 7, 1982.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	49.22	48.32	52.44	48.78	47.50	47.02	48.33	50.06	50.07	59.71	55.70	52.40
2	49.03	48.39	52.69	49.89	47.32	49.13	48.05	49.81	49.92	60.59	55.21	52.53
3	48.40	49.76	52.89	48.82	47.45	48.45	47.45	49.54	50.79	61.30	54.94	53.75
4	48.99	48.79	53.16	48.03	49.82	48.55	48.82	49.47	50.51	62.61	54.85	55.50
5	50.29	48.68	53.23	47.73	49.02	48.32	48.37	48.61	51.13	63.98	54.25	58.01
6	51.08	48.82	53.26	47.67	48.31	48.38	48.47	48.62	50.70	63.42	53.55	59.09
7	49.60	48.45	53.65	48.35	47.71	47.98	48.24	50.51	50.69	63.42	51.81	59.30
8	49.65	48.05	53.77	49.69	47.50	47.53	48.00	49.51	51.60	63.72	49.82	59.33
9	49.42	48.38	54.94	49.28	47.39	47.31	48.06	50.70	51.40	64.06	50.96	59.45
10	49.40	49.54	55.39	48.77	47.96	47.16	48.33	52.68	51.32	63.74	49.76	59.80
11	48.72	48.52	56.50	48.12	49.35	48.98	47.78	53.23	51.43	---	51.25	59.81
12	50.14	48.60	57.20	47.67	47.92	48.60	47.58	51.72	52.25	---	51.07	59.31
13	49.18	49.82	58.15	47.33	47.44	48.16	49.29	51.63	51.23	---	51.86	59.58
14	48.44	49.77	60.93	47.08	47.23	47.75	48.74	51.62	51.35	---	51.86	60.05
15	48.31	50.26	63.42	47.12	48.65	47.46	49.73	52.43	51.87	---	51.32	58.24
16	49.84	50.46	64.36	49.31	48.88	47.17	49.17	52.48	51.95	---	51.05	58.67
17	48.90	51.45	64.89	48.58	48.02	47.04	48.37	50.88	52.24	54.82	50.30	58.79
18	48.68	50.74	65.54	47.68	47.65	48.92	48.63	49.52	52.53	54.71	50.16	58.12
19	49.92	51.12	65.70	47.30	48.85	48.70	49.39	50.22	53.13	55.15	50.60	58.44
20	48.92	50.51	65.67	47.25	48.36	48.01	49.91	50.42	52.62	54.05	50.23	59.24
21	48.30	51.44	65.67	48.27	47.67	47.58	51.68	51.01	53.10	53.91	50.75	57.82
22	49.98	51.07	60.92	49.14	47.30	47.26	52.45	50.65	53.73	53.93	49.88	58.42
23	49.58	50.78	53.38	48.05	46.98	48.78	51.85	50.60	54.16	53.89	51.01	57.97
24	50.37	50.41	51.73	47.46	48.40	48.42	51.78	51.47	54.96	54.34	51.62	59.15
25	49.66	51.08	50.89	47.64	48.78	50.23	51.59	52.12	55.23	53.27	51.16	60.13
26	50.37	50.91	50.29	49.61	47.82	49.58	50.41	52.02	55.81	54.40	50.94	59.86
27	49.17	51.69	49.66	48.43	47.49	48.59	49.61	51.41	56.20	54.02	51.49	60.03
28	48.47	52.55	50.92	47.75	47.24	47.99	50.50	52.32	56.92	54.55	50.99	60.23
29	48.18	51.99	50.20	48.46	---	48.68	49.34	51.42	57.96	55.16	51.55	60.08
30	49.86	52.10	49.27	49.28	---	49.69	48.81	51.72	58.77	55.58	50.79	60.06
31	49.00	---	48.72	48.03	---	48.20	---	50.98	---	56.08	51.67	---
MEAN	49.32	50.08	56.11	48.28	48.00	48.25	49.29	50.95	52.85	---	51.69	58.44

WTR YR 1985 MEAN 51.67 HIGH 46.98 FEB 23 LOW 65.70 DEC 19

GREENE COUNTY

395812080264902. Local number, GR 803.

LOCATION.--Lat 39°58'12", long 80°26'49", Hydrologic Unit 05030106, near Burdette.

Owner: U.S. Geological Survey.

AQUIFER.--Sandstone and shale of Waynesburg Formation of Late Pennsylvanian and Early Permian age.

WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 8 to 6.25 in., depth 218 ft, cased to 218 ft with 4 in. casing, perforated plastic casing from 98.3 to 198.3 ft. Well casing back-filled and cemented to 91 ft.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 944 ft, from topographic map. Measuring point: Top of casing, 2.00 ft above land-surface datum.

REMARKS.--Maximum values were published from October 1981 to September 1982.

PERIOD OF RECORD.--October 1981 to September 1985 (discontinued). Records from October 1980 to September 1981 were unpublished.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 6.45 ft below land-surface datum, Mar. 28, 29, 1984; lowest 9.37 ft below land-surface datum, Sept. 15, 24, 1983.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.80	8.25	---	7.39	8.00	7.38	7.33	7.86	7.56	8.25	8.11	8.50
2	8.88	8.27	---	7.74	8.04	7.45	7.37	7.83	7.56	8.18	8.29	8.54
3	8.69	8.23	---	7.78	8.33	7.69	7.14	7.88	7.57	8.12	8.35	8.50
4	8.78	7.91	---	7.28	8.33	7.35	7.21	7.90	7.64	8.11	8.34	8.45
5	8.86	7.75	---	7.42	7.87	7.56	7.04	7.75	7.57	8.07	8.33	8.43
6	8.95	7.92	---	7.60	7.71	8.05	7.22	7.64	7.67	8.07	8.29	8.45
7	8.93	8.15	---	7.35	7.79	7.91	7.54	7.72	7.66	8.12	8.23	8.56
8	8.82	8.14	---	7.59	7.95	7.68	7.58	7.85	7.56	8.04	8.23	8.57
9	8.81	7.95	---	7.99	8.16	7.75	7.69	7.87	7.53	7.95	8.29	8.50
10	8.86	7.68	---	7.87	8.12	7.79	7.76	7.80	7.72	7.94	8.29	8.49
11	8.86	7.57	---	7.72	7.89	7.53	7.69	7.73	7.68	8.06	8.34	8.69
12	8.78	7.78	---	7.81	7.15	7.34	7.80	7.66	7.58	8.07	8.44	8.84
13	8.66	7.89	---	7.66	7.39	7.65	7.75	7.71	7.80	8.14	8.45	9.04
14	8.53	8.03	---	7.35	7.61	7.60	7.60	7.75	7.96	8.11	8.47	9.10
15	8.47	---	---	7.74	7.68	7.78	7.41	7.75	7.98	8.01	8.45	9.02
16	8.54	---	---	7.98	7.66	7.72	7.41	7.61	7.84	8.09	8.48	8.89
17	8.59	---	---	7.45	7.76	7.55	7.78	7.38	7.91	8.21	8.48	8.86
18	8.62	---	---	7.38	7.98	7.75	7.66	7.53	7.80	8.22	8.45	8.98
19	8.45	---	---	7.42	7.88	7.78	7.64	7.72	7.87	8.21	8.45	9.01
20	8.50	8.16	---	7.75	7.89	7.74	7.70	7.78	8.01	8.19	8.50	8.94
21	8.39	8.34	7.36	7.90	7.88	7.97	7.75	7.83	8.15	8.13	8.52	8.85
22	8.48	---	7.23	7.90	7.75	7.83	7.74	7.91	8.15	8.09	8.54	8.84
23	8.58	---	---	7.84	7.57	7.65	7.71	7.78	8.13	8.23	8.56	8.82
24	8.55	---	---	7.63	7.28	7.57	7.63	7.80	8.11	8.26	8.47	8.82
25	8.52	---	---	7.55	7.49	7.89	7.67	7.80	8.12	8.21	8.40	8.95
26	8.39	---	---	8.09	7.41	8.06	7.73	7.79	8.06	8.11	8.47	8.75
27	8.31	---	---	7.99	7.46	7.75	7.77	7.76	8.06	8.20	8.60	8.75
28	8.20	---	7.60	7.91	7.59	7.59	7.81	7.74	8.04	8.23	8.60	9.12
29	8.24	---	7.53	8.07	---	7.60	8.01	7.88	8.06	8.20	8.51	9.13
30	8.32	---	7.74	8.08	---	7.76	7.93	7.84	8.15	8.20	8.28	8.98
31	8.41	---	7.68	7.90	---	7.44	---	7.60	---	8.13	8.38	---
MEAN	8.61	---	---	7.71	7.77	7.68	7.60	7.76	7.85	8.13	8.41	8.78

WTR YR 1985 MEAN 8.02 HIGH 7.04 APR 5 LOW 9.13 SEP 29

GREENE COUNTY

169

395807080265201. Local number, GR 804.

LOCATION.--Lat 39°58'07", long 80°26'52", Hydrologic Unit 05030106, near Burdette.

Owner: U.S. Geological Survey.

AQUIFER.--Sand, gravel and clay (alluvium) of Holocene deposits of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 8 to 6.25 in., depth 19 ft, cased to 19 ft with 4 in. casing, perforated plastic casing from 4 ft to 14 ft. Well casing back-filled and cemented to 3 ft.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 939 ft, from topographic map. Measuring point: Top of casing, 1.50 ft above land-surface datum.

REMARKS.--Maximum values were published from October 1981 to September 1982.

PERIOD OF RECORD.--October 1981 to September 1985 (discontinued). Records from October 1980 to September 1981 were unpublished.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 1.81 ft above land-surface datum, May 28, 1984; lowest 6.52 ft below land-surface datum, June 29, 30, 1984.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		---	4.84	4.34	4.72	4.50	---	4.95	---	5.26	4.97	5.32
2		---	4.81	4.47	4.62	4.56	3.64	4.85	3.83	5.27	5.06	5.36
3		---	4.83	4.54	4.55	4.62	3.98	4.25	4.18	5.25	5.16	5.38
4		---	4.92	4.55	4.54	4.62	4.22	4.45	4.09	4.93	5.25	5.40
5		---	4.98	4.57	4.53	4.62	4.30	4.59	4.46	4.96	5.29	5.42
6		---	4.95	4.63	4.51	4.66	4.43	4.67	4.61	4.76	5.30	5.45
7		---	4.97	4.64	4.53	4.68	4.50	4.73	4.70	4.72	5.32	5.48
8		---	4.97	4.66	4.61	4.67	4.33	4.80	4.76	4.82	5.33	5.50
9		---	4.97	4.75	4.68	4.66	4.30	4.85	4.82	4.88	5.35	5.50
10		---	4.93	4.76	4.70	4.66	4.35	4.86	4.88	4.94	5.38	5.50
11		---	4.49	4.75	4.68	4.65	4.39	4.88	4.92	4.92	5.41	5.50
12		---	4.28	4.74	4.39	4.18	4.47	4.89	4.92	5.00	5.45	5.53
13		---	4.41	4.72	3.59	4.07	4.52	4.92	4.96	5.10	5.49	5.58
14		---	4.24	4.70	3.63	4.30	4.53	4.95	5.01	5.15	5.52	5.63
15		---	4.11	4.74	3.79	4.48	4.55	4.98	5.03	4.70	5.53	5.64
16		---	4.31	4.80	4.02	4.55	4.58	4.94	5.03	4.74	5.39	5.65
17		---	4.47	4.82	4.12	4.59	4.66	4.91	5.05	4.98	5.23	5.66
18		---	4.60	4.82	4.27	4.67	4.69	4.89	5.03	5.10	5.27	5.68
19		---	4.65	4.81	4.29	4.73	4.72	4.90	5.04	5.18	5.33	5.71
20		---	4.54	4.81	4.20	4.75	4.75	4.95	5.06	5.23	5.38	---
21		---	4.38	4.89	3.98	4.80	4.78	4.99	5.08	5.25	5.40	---
22		---	3.63	4.91	3.56	4.81	4.79	5.03	5.05	4.98	5.45	---
23		---	3.99	4.84	---	4.75	4.80	4.98	4.72	4.84	5.47	---
24		---	4.26	4.79	---	4.70	4.80	4.94	4.83	4.96	5.48	---
25		---	4.45	4.75	3.44	4.66	4.81	4.97	4.96	5.08	4.80	---
26		---	4.55	4.78	---	4.68	4.85	5.02	5.03	5.06	4.52	---
27		---	4.56	4.79	---	4.68	4.86	5.04	5.08	4.65	4.91	---
28		---	4.59	4.79	4.46	4.68	4.88	4.99	5.12	4.87	5.11	---
29	4.88		4.62	4.80	---	4.68	4.93	4.85	5.17	5.02	5.18	---
30	4.88		4.52	4.83	---	4.05	4.95	4.90	5.22	5.11	5.22	---
31		---	4.30	4.82	---	---	---	4.35	---	5.16	5.27	---
MEAN		---	4.55	4.73	---	---	---	4.85	---	5.00	5.27	---

WTR YR 1985 MEAN 4.81 HIGH 3.44 FEB 25 LOW 5.71 SEP 19

GREENE COUNTY

394908080211002. Local number, GR 806.

LOCATION.--Lat 39°49'08", long 80°21'10", Hydrologic Unit 05020005, near Holbrook.

Owner: U.S. Geological Survey.

AQUIFER.--Sandstone and shale of Greene Formation of Early Permian age.

WELL CHARACTERISTICS.--Drilled artesian well, diameter 6.25 in., depth 158 ft, cased to 158 ft with 4 in. casing, perforated plastic casing from 112 ft to 152 ft. Well casing back-filled and cemented to 99.5 ft.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 1,433 ft, from topographic map. Measuring point: Top of casing, 2.00 ft above land-surface datum.

REMARKS.--Maximum values were published from October 1981 to September 1982.

PERIOD OF RECORD.--October 1981 to September 1985 (discontinued). Records from February 1981 to September 1981 were unpublished.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 86.74 ft below land-surface datum, Apr. 15, 1982; lowest 97.94 ft below land-surface datum, Sept. 14, 1985.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	96.43	96.88	96.69	96.21	96.47	96.55	97.00	96.88	97.08	97.08	97.15	97.50
2	96.55	96.92	96.84	96.50	96.52	96.57	97.09	96.84	97.16	96.98	97.31	97.55
3	96.40	96.92	96.73	96.54	96.82	96.73	96.93	96.93	97.21	96.93	97.38	97.51
4	96.53	96.67	96.98	96.09	96.87	96.43	97.01	97.02	97.29	96.92	97.37	97.46
5	96.64	96.57	96.90	96.19	96.52	96.55	96.81	96.94	97.21	96.89	97.35	97.42
6	96.74	96.76	96.55	96.35	96.38	96.97	96.80	96.88	97.31	96.92	97.31	97.42
7	96.74	97.02	96.81	96.10	96.62	96.87	96.99	96.95	97.28	96.99	97.24	97.50
8	96.65	97.03	96.73	96.26	96.79	96.66	96.95	97.09	97.15	96.96	97.23	97.50
9	96.67	96.88	96.82	96.51	96.85	96.74	97.00	97.14	97.11	96.89	97.26	97.42
10	96.74	96.65	96.64	96.33	96.83	96.75	97.05	97.10	97.23	96.89	97.25	97.38
11	96.76	96.56	96.74	96.21	96.56	96.50	96.96	97.04	97.17	96.99	97.27	97.52
12	96.70	96.77	96.57	96.30	95.98	96.31	97.06	96.99	97.02	97.02	97.34	97.66
13	96.59	96.93	96.70	96.14	96.19	96.59	97.00	97.01	97.18	97.10	97.34	97.82
14	96.49	97.04	96.93	95.86	96.43	96.58	96.85	97.05	97.04	97.09	97.35	97.89
15	96.45	96.82	97.01	96.19	96.50	96.73	96.65	97.06	96.83	97.00	97.30	97.82
16	96.54	96.79	96.93	96.40	96.53	96.71	96.63	96.92	96.67	97.08	97.30	97.68
17	96.62	96.95	96.85	95.94	96.65	96.51	96.92	96.69	96.72	97.20	97.34	97.65
18	96.69	96.79	96.89	95.85	96.88	96.68	96.82	96.82	96.62	97.21	97.33	97.73
19	96.57	96.73	96.69	95.86	96.81	96.71	96.79	96.99	96.68	97.19	97.33	97.74
20	96.65	97.05	96.79	96.16	96.84	96.67	96.82	97.09	96.80	97.16	97.38	97.67
21	96.61	97.21	96.60	96.25	96.87	96.85	96.84	97.13	96.93	97.07	97.40	97.59
22	96.71	97.19	96.60	96.26	96.80	96.70	96.81	97.19	96.94	97.02	97.43	97.58
23	96.84	96.99	96.86	96.23	96.70	96.55	96.77	97.08	96.96	97.16	97.44	97.53
24	96.87	96.89	96.67	96.06	96.49	96.48	96.68	97.10	96.96	97.21	97.34	97.55
25	96.92	96.87	97.01	95.99	96.71	96.77	96.72	97.10	96.98	97.19	97.29	97.60
26	96.85	96.88	97.16	96.45	96.64	96.94	96.77	97.09	96.94	97.10	97.41	97.41
27	96.80	96.80	96.90	96.38	96.66	96.68	96.80	97.06	96.94	97.19	97.57	97.42
28	96.72	96.57	96.65	96.33	96.78	96.83	96.83	97.03	96.91	97.24	97.60	97.74
29	96.77	96.63	96.42	96.49	---	97.01	97.00	97.17	96.82	97.23	97.54	97.76
30	96.87	96.53	96.51	96.51	---	97.16	96.95	97.13	96.99	97.24	97.34	97.64
31	97.00	---	96.46	96.37	---	97.01	---	96.99	---	97.17	97.40	---
MEAN	96.68	96.84	96.76	96.24	96.63	96.70	96.88	97.02	97.01	97.07	97.35	97.59

WTR YR 1985 MEAN 96.90 HIGH 95.85 JAN 18 LOW 97.89 SEP 14

GREENE COUNTY

171

394755080102602. Local number, GR 808.

LOCATION.--Lat 39°47'55", long 80°10'26", Hydrologic Unit 05020005, near Kirby.

Owner: U.S. Geological Survey.

AQUIFER.--Sandstone and shale of Washington Formation of Early Permian age.

WELL CHARACTERISTICS.--Drilled artesian well, diameter 8 to 6.25 in., depth 169 ft, cased to 167 ft with 4 in. casing, perforated plastic casing from 36 ft to 166 ft. Well casing back-filled and cemented to 32.5 ft.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 1,096 ft, from topographic map. Measuring point: Top of casing, 2.00 ft above land-surface datum.

REMARKS.--Maximum values were published from October 1981 to September 1982.

PERIOD OF RECORD.--October 1981 to September 1985 (discontinued). Records from February 1981 to September 1981 were unpublished.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 4.07 ft below land-surface datum, May 22, 23, 1983; lowest 12.20 ft below land-surface datum, Aug. 7, 1982.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.15	5.55	5.60	5.47	6.15	5.95	5.39	6.08	5.43	6.40	---	6.48
2	6.09	5.58	5.68	5.59	6.09	6.01	5.49	6.02	5.53	6.33	---	6.53
3	5.99	5.60	5.63	5.64	6.16	6.13	5.52	5.87	5.61	6.31	---	6.54
4	6.05	5.53	5.77	5.49	6.17	6.03	5.61	5.84	5.70	6.24	---	6.55
5	6.12	5.35	5.77	5.59	6.04	6.08	5.58	5.81	5.75	6.24	---	6.57
6	6.18	5.39	5.63	5.72	5.99	6.27	5.66	5.82	5.86	6.19	---	6.59
7	6.19	5.53	5.79	5.65	6.12	6.25	5.82	5.89	5.91	6.13	---	6.65
8	6.16	5.61	5.79	5.77	6.20	6.15	5.83	5.99	5.88	6.08	---	6.70
9	6.21	5.60	5.83	5.94	6.24	6.17	5.88	6.05	5.92	6.05	---	6.70
10	6.24	5.43	5.73	5.94	6.27	6.18	5.93	6.06	6.00	6.05	---	6.70
11	6.26	5.33	5.65	5.91	6.18	6.10	5.91	6.07	6.04	6.03	---	6.75
12	6.23	5.44	5.66	5.96	5.92	5.87	5.96	6.07	5.93	6.08	6.69	6.85
13	6.21	5.54	5.62	5.95	5.89	5.89	5.98	6.11	5.95	6.15	6.71	6.92
14	6.19	5.65	5.73	5.87	5.97	5.87	5.94	6.18	6.03	6.19	6.74	6.94
15	6.19	5.63	5.75	6.01	6.05	5.96	5.88	6.20	6.03	6.02	6.70	6.94
16	6.23	5.66	5.73	6.14	6.08	5.98	5.90	6.07	5.95	5.96	6.56	6.93
17	6.27	5.79	5.70	5.96	6.14	5.94	6.03	5.93	6.00	6.02	6.39	6.97
18	6.13	5.77	5.74	5.96	6.23	6.04	6.02	5.97	5.99	6.08	6.33	7.03
19	5.97	5.75	5.67	5.96	6.13	6.10	6.03	6.04	6.04	6.14	6.32	7.00
20	5.88	5.86	5.62	5.95	6.06	6.11	6.07	6.09	6.06	6.18	6.36	6.95
21	5.74	5.92	5.46	5.93	6.03	6.20	6.08	6.13	6.08	6.19	6.40	6.94
22	5.75	5.93	5.31	5.92	5.92	6.16	6.08	6.19	6.08	6.16	6.45	6.96
23	5.70	5.85	5.43	6.05	5.79	6.02	6.08	5.98	6.01	6.20	6.52	6.98
24	5.65	5.82	5.41	6.19	5.71	5.93	5.98	5.81	5.97	6.23	6.50	6.94
25	5.67	5.83	5.57	6.16	5.84	6.01	5.93	5.80	6.00	---	6.42	6.97
26	5.67	5.84	5.68	6.33	5.86	6.09	5.95	5.84	6.05	---	6.37	6.93
27	5.69	5.84	5.65	6.31	5.91	6.01	5.97	5.89	6.10	---	6.39	6.87
28	5.70	5.71	5.63	6.25	5.99	5.96	6.01	5.91	6.13	---	6.41	6.94
29	5.52	5.62	5.62	6.31	---	5.96	6.10	5.87	6.13	---	6.41	6.96
30	5.45	5.57	5.65	6.32	---	5.68	6.10	5.84	6.28	---	6.37	6.92
31	5.53	---	5.59	6.21	---	5.48	---	5.32	---	---	6.40	---
MEAN	5.97	5.65	5.64	5.95	6.04	6.02	5.89	5.96	5.95	---	---	6.82

WTR YR 1985 MEAN 6.03 HIGH 5.31 DEC 22 LOW 7.03 SEP 18

GREENE COUNTY

394903080021501. Local number, GR 810.

LOCATION.--Lat 39°49'03", long 80°02'15", Hydrologic Unit 05020005, near Garards Fort.

Owner: U.S. Geological Survey.

AQUIFER.--Limestone of upper member of Pittsburgh Formation of Late Pennsylvanian age.

WELL CHARACTERISTICS.--Drilled artesian well, diameter 6.25 in., depth 278 ft, cased to 271 ft with 4 in. casing, perforated plastic casing from 195 to 271 ft. Well casing back-filled and cemented to 194 ft.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 1,017 ft, from topographic map. Measuring point: Top of casing, 1.50 ft above land-surface datum.

REMARKS.--None.

PERIOD OF RECORD.--October 1981 to September 1985 (discontinued). Records from January 1981 to September 1981 are unpublished and are available in files of the Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 65.38 ft below land-surface datum, May 4, 5, 1984; lowest, 68.12 ft below land-surface datum, Nov. 27, 28, 1982.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	66.94	67.05		---	65.96	66.04	65.74	65.65	---	65.67	65.76	66.13
2	66.95	67.03		---	65.96	65.99	65.74	65.65	---	65.69	65.78	66.15
3	66.94	67.04		---	66.03	66.01	65.69	65.65	---	65.69	65.82	66.15
4	66.93	66.99		---	66.11	65.98	65.65	65.66	---	65.69	65.84	66.15
5	66.96	66.91		---	66.11	65.95	65.60	65.66	---	65.69	65.85	66.15
6	67.00	66.90		---	66.04	66.00	65.53	65.66	---	65.69	65.86	66.15
7	67.02	66.93		---	66.05	66.04	65.57	65.66	---	65.70	65.86	66.15
8	67.03	66.96		---	66.11	66.02	65.59	65.69	---	65.71	65.86	66.16
9	67.03	66.95		---	66.15	66.01	65.61	65.72	---	65.71	65.86	66.16
10	67.05	66.90		---	66.19	66.01	65.66	65.74	---	65.71	65.86	66.16
11	67.07	---		---	66.18	65.98	65.66	65.74	---	65.71	65.86	66.17
12	67.07	---		---	66.02	65.86	65.70	65.74	65.60	65.71	65.89	66.24
13	67.07	---		---	65.95	65.86	65.72	65.73	65.59	65.72	65.90	66.31
14	67.04	---		---	65.96	65.86	65.72	65.73	65.58	65.73	65.90	66.38
15	67.01	---		---	65.97	65.87	65.71	65.73	65.56	65.73	65.90	66.40
16	66.99	---		---	65.99	65.90	65.63	65.72	65.55	65.73	65.90	66.40
17	66.99	---		---	66.00	65.87	65.64	65.68	65.54	65.74	65.90	66.40
18	67.00	---		---	66.08	65.87	65.65	65.61	65.51	65.75	65.91	66.42
19	67.00	---		---	66.10	65.89	65.65	65.62	65.50	65.75	65.91	66.46
20	66.99	---		---	66.10	65.89	65.65	65.64	65.50	65.75	65.94	66.46
21	66.99	---		---	66.13	65.90	65.65	65.65	65.53	65.75	65.97	66.46
22	66.99	---		---	66.13	65.90	65.65	65.69	65.56	65.73	66.00	66.46
23	67.01	---		---	66.12	65.88	65.65	---	65.57	65.73	66.02	66.46
24	67.03	---		---	66.06	65.85	65.62	---	65.58	65.74	66.02	66.46
25	67.07	---		---	66.05	65.85	65.60	---	65.61	65.75	66.02	66.47
26	67.08	---		---	66.06	65.90	65.60	---	65.62	65.75	66.02	66.47
27	67.08	---		---	66.04	65.89	65.60	---	65.62	65.75	66.07	66.45
28	67.05	---		65.89	66.06	65.85	65.60	---	65.62	65.75	66.11	66.48
29	67.03	---		65.90	---	65.81	65.63	---	65.62	65.75	66.13	66.53
30	67.03	---		65.94	---	65.81	65.65	---	65.64	65.76	66.12	66.54
31	67.04	---		65.96	---	65.79	---	---	---	65.76	66.11	---
MEAN	67.02	---		---	66.06	65.91	65.65	---	---	65.73	65.93	66.33

WTR YR 1985 MEAN 66.05 HIGH 65.50 JUN 19 AND OTHERS LOW 67.08 OCT 26 AND OTHERS

GREENE COUNTY

173

394902080021302. Local number, GR 811.

LOCATION.--Lat 39°49'02", long 80°02'13", Hydrologic Unit 05020005, near Garards Fort.

Owner: U.S. Geological Survey.

AQUIFER.--Sandstone and shale of lower member of Waynesburg Formation of Late Pennsylvanian and Early Permian age.

WELL CHARACTERISTICS.--Drilled artesian and water-table well, diameter 6.25 in., depth 102 ft, cased to 102 ft with 4 in. casing, perforated plastic casing from 42 to 102 ft. Well casing back-filled and cemented to 38 ft.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 1,013 ft, from topographic map. Measuring point: Top of casing, 2.00 ft above land-surface datum.

REMARKS.--Maximum values were published from October 1981 to September 1982.

PERIOD OF RECORD.--October 1981 to September 1985 (discontinued). Records from June 1981 to September 1981 were unpublished.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 34.98 ft below land-surface datum, Apr. 1, 1985; lowest 45.80 ft below land-surface datum, Oct. 16, 17, 19, 1981.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		---	38.12	36.96	38.12	36.39	35.01	38.02	35.93	39.17	38.71	40.29
2		---	38.14	37.20	37.87	36.49	35.08	38.10	36.03	39.19	38.97	40.38
3		---	37.90	37.24	37.91	36.82	35.15	37.85	36.21	39.18	39.12	40.41
4		---	38.18	36.87	37.79	36.69	35.40	37.51	36.30	38.85	39.18	40.44
5		---	38.13	37.05	37.33	36.83	35.32	37.33	36.25	38.32	39.25	40.50
6		---	37.83	37.32	37.17	37.32	35.54	37.28	36.44	38.22	39.29	40.58
7		---	38.18	37.16	37.29	37.28	35.97	37.46	36.69	38.21	39.35	40.74
8		---	38.12	37.37	37.29	37.13	36.08	37.72	36.78	37.93	39.46	40.78
9		---	38.19	37.74	37.53	37.19	36.23	37.88	---	37.18	39.61	40.77
10		---	38.16	37.67	37.64	37.26	36.35	37.98	---	36.72	39.67	40.77
11		---	38.07	37.56	37.46	37.20	36.27	38.07	---	36.57	39.79	40.95
12		---	37.68	37.70	---	37.13	36.39	38.16	---	36.68	39.95	41.10
13		---	37.73	37.66	---	37.13	36.43	38.28	---	36.95	39.99	41.24
14		---	37.93	37.48	---	36.73	36.41	38.41	37.78	37.15	40.05	41.30
15		---	37.96	37.85	---	36.72	36.34	38.51	37.78	37.12	40.05	41.27
16		---	37.87	38.15	---	36.73	36.41	38.48	37.69	37.04	39.95	41.22
17		---	37.84	37.72	---	36.62	36.82	38.28	37.87	37.22	39.69	41.22
18		---	37.95	37.73	---	36.88	36.87	38.34	37.90	37.37	39.54	41.36
19		---	37.87	37.81	---	37.04	36.96	38.44	38.10	37.53	39.50	41.31
20		---	37.84	38.18	---	37.08	37.13	38.52	38.29	37.69	39.57	41.25
21		---	37.54	38.31	---	37.39	37.32	38.59	38.45	37.80	39.63	41.28
22		---	37.01	38.30	---	37.39	37.42	38.76	38.52	37.78	39.70	41.35
23		---	37.03	38.30	---	37.18	37.51	38.53	38.49	37.80	39.79	41.46
24		---	36.85	38.18	---	36.81	37.54	37.70	38.40	37.90	39.78	41.53
25		---	37.19	38.14	---	36.77	37.54	37.34	38.45	37.96	39.78	41.65
26		---	37.40	38.58	---	36.87	37.57	37.29	38.47	37.97	39.89	41.56
27		---	37.27	38.47	---	36.63	37.61	37.40	38.61	38.14	40.04	41.59
28		---	37.24	38.37	36.37	36.53	37.71	37.52	38.68	38.27	40.07	41.88
29		---	37.23	38.46	---	36.62	37.98	37.48	38.83	38.37	40.06	41.90
30	38.06	---	37.44	38.46	---	36.37	38.02	37.25	39.01	38.51	39.98	41.83
31	---	---	37.28	38.22	---	35.45	---	36.54	---	38.59	40.11	---
MEAN		---	37.72	37.81	---	36.86	36.61	37.90	---	37.85	39.66	41.13

WTR YR 1985 MEAN 38.11 HIGH 35.01 APR 1 LOW 41.90 SEP 29

GREENE COUNTY

395403080110002. Local number, GR 813.

LOCATION.--Lat 39°54'03", long 80°11'00", Hydrologic Unit 05020005, at Waynesburg.

Owner: U.S. Geological Survey.

AQUIFER.--Sandstone and shale of lower member of Waynesburg Formation of Late Pennsylvanian and Early Permian age.

WELL CHARACTERISTICS.--Drilled artesian well, diameter 6.25 in., depth 159 ft, cased to 159 ft with 4 in. casing, perforated plastic casing from 49 to 69 ft and 99 to 149 ft. Well casing back-filled and cemented to 44 ft.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 947 ft, from topographic map. Measuring point: Top of casing, 1.50 ft above land-surface datum.

REMARKS.--Maximum values were published from October 1981 to September 1982.

PERIOD OF RECORD.--October 1981 to July 1985 (discontinued). Records from April 1981 to September 1981 were unpublished.

EXTREMES FOR PERIOD OF RECORD.--Highest water level 6.58 ft below land-surface datum, Jan. 23, 1982; lowest 10.32 ft below land-surface datum, Oct. 6, 1984.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10.16	9.96	---	9.16		---	8.78	9.61	9.32			
2	10.19	10.07	---	9.34		---	8.81	9.58	9.32			
3	10.07	9.92	---	9.38		---	8.73	9.55	9.30			
4	10.18	9.74	---	9.13		---	8.78	9.56	9.27			
5	10.25	9.73	---	9.19		---	8.68	9.51	9.20			
6	10.30	9.86	---	9.31		---	8.81	9.47	9.27			
7	10.28	9.94	---	9.20		---	9.00	9.51	9.27			
8	10.21	9.87	---	9.31		---	9.01	9.60	9.22			
9	10.25	9.72	---	9.52		---	9.10	9.64	9.21			
10	10.29	9.56	---	9.51		---	9.14	9.63	9.33			
11	10.29	9.64	---	9.46		---	9.12	9.61	9.29			
12	10.25	9.74	---	9.50		---	9.20	9.60	9.25			
13	10.18	9.85	---	9.49		---	9.19	9.64	9.36			
14	10.14	9.85	---	9.37		---	9.13	9.69	9.45			
15	10.13	9.70	---	9.50		---	9.05	9.72	---			
16	10.20	9.82	---	9.70		---	9.07	9.64	---			
17	10.22	9.87	---	9.48		---	9.29	9.53	---			
18	10.22	9.73	---	9.44		---	9.24	9.64	---			
19	10.13	9.85	---	9.43		---	9.26	9.76	---			
20	10.18	10.02	---	9.46		---	9.31	9.81	---			
21	10.16	10.07	9.19	9.56		---	9.36	9.86	---			
22	10.20	10.00	9.14	9.76		---	9.37	9.92	---			
23	10.22	9.89	9.26	9.73		---	9.37	9.83	---			
24	10.21	9.87	9.15	9.65		---	9.35	9.83	---			
25	10.17	9.87	9.35	9.64		---	9.37	9.83	---			
26	10.12	9.90	9.44	---		---	9.43	9.84	---			
27	10.08	9.92	9.44	---		---	9.46	9.84	---			
28	10.03	---	9.35	---		9.28	9.52	9.83	---			
29	10.04	---	9.26	---		9.34	9.66	9.85	---			
30	10.04	---	9.35	---		9.23	9.65	9.81	---			
31	10.09	---	9.31	---		8.90	---	9.45	---			
MEAN	10.18	---	---	---		---	9.17	9.68	---			

WTR YR 1985 MEAN 9.61 HIGH 8.68 APR 5 LOW 10.30 OCT 6

GREENE COUNTY

175

395841080042101. Local number, GR 814.

LOCATION.--Lat 39°58'41", long 80°04'21", Hydrologic Unit 05020005, near Clarksville.

Owner: U.S. Geological Survey.

AQUIFER.--Sandstone and shale of lower member of Waynesburg Formation of Late Pennsylvanian and Early Permian age.

WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 8 to 6.25 in., depth 58 ft cased to 58 ft with 4 in. casing, perforated plastic casing from 8 to 58 ft. Well casing back-filled and cemented to 6 ft.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 1,030 ft, from topographic map. Measuring point: Top of casing, 1.50 ft above land-surface datum.

REMARKS.--Maximum values were published from October 1981 to September 1982.

PERIOD OF RECORD.--October 1981 to September 1985 (discontinued). Records from December 1980 to September 1981 were unpublished.

EXTREMES FOR PERIOD OF RECORD.--Highest water level 1.34 ft above land-surface datum, Apr. 1, 1985; lowest 20.34 ft below land-surface datum, Nov. 22, 1982.

WATER LEVEL, IN FEET (-) ABOVE OR BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14.62	---	4.11	1.19	4.37	1.38	-1.34	---	---	6.64	9.65	12.25
2	14.66	---	3.90	1.39	4.00	1.61	-1.33	---	---	6.80	9.79	12.26
3	14.74	---	3.71	1.51	3.84	1.82	---	---	---	6.92	9.92	---
4	14.81	---	3.77	1.51	3.68	1.86	---	---	---	6.95	10.08	---
5	14.89	---	3.81	1.69	3.46	1.99	---	---	---	7.03	10.25	---
6	14.97	---	3.76	1.85	3.37	2.20	---	---	---	7.08	10.40	---
7	15.04	---	3.89	1.88	3.43	2.22	---	---	---	7.11	10.57	---
8	15.13	---	3.93	2.05	3.49	2.22	---	---	---	7.02	10.73	---
9	15.19	---	3.95	2.25	3.57	2.31	---	---	---	6.98	10.90	---
10	15.26	---	3.57	2.29	3.66	2.36	---	---	---	6.75	11.05	---
11	15.34	---	2.63	2.36	3.62	2.34	---	---	---	6.71	11.22	---
12	15.42	---	2.18	2.49	2.96	1.69	---	---	---	6.83	11.42	---
13	15.49	---	2.22	2.56	2.16	1.12	---	---	---	7.02	11.61	---
14	15.56	---	2.17	2.59	1.88	.91	---	---	---	7.24	11.76	---
15	15.64	---	1.96	2.84	1.97	1.08	---	---	---	7.01	11.90	---
16	15.71	---	1.89	3.01	2.11	1.24	---	---	---	7.10	11.91	---
17	15.74	---	1.97	2.99	2.27	1.34	---	---	---	7.29	11.88	---
18	15.10	---	2.17	3.07	2.34	1.55	---	---	---	7.48	11.97	---
19	15.12	---	1.92	3.18	2.07	1.68	---	---	---	7.69	12.10	---
20	15.14	---	1.40	3.43	1.47	1.79	---	---	---	7.90	12.19	---
21	15.13	---	.76	3.69	.80	1.93	---	---	---	8.12	12.23	---
22	15.06	---	-0.77	3.91	-0.09	1.96	---	---	---	8.05	12.25	---
23	---	---	-0.62	4.01	-0.86	1.81	---	---	---	8.21	12.27	---
24	---	---	-0.07	4.05	-0.68	1.79	---	---	---	8.37	12.27	---
25	13.77	---	.53	4.10	-0.03	1.83	---	---	5.40	8.55	11.88	---
26	13.72	---	1.01	4.32	.43	1.83	---	---	5.55	8.72	11.63	---
27	13.67	---	1.25	4.38	.84	1.73	---	---	5.77	8.87	11.83	---
28	13.63	---	1.46	4.47	1.21	1.71	---	---	5.97	9.02	11.96	---
29	13.06	---	1.66	4.61	---	1.74	---	---	6.20	9.20	12.07	---
30	12.51	4.37	1.57	4.69	---	-0.86	---	---	6.42	9.40	12.17	---
31	---	---	1.33	4.68	---	-1.33	---	---	---	9.55	12.22	---
MEAN	--	---	2.16	3.00	2.19	1.58	---	---	---	7.66	11.42	---

WTR YR 1985 MEAN 6.03 HIGH -1.34 APR 1 LOW 15.74 OCT 17

GREENE COUNTY

395609080135301. Local number, GR 815.

LOCATION.--Lat 39°56'09", long 80°13'53", Hydrologic Unit 05020005, near Sycamore.

Owner: U.S. Geological Survey.

AQUIFER.--Sandstone and shale of middle member of Washington Formation of Early Permian age.

WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 8 to 6.25 in., depth 78 ft, cased to 23.5 ft with 4 in. casing, open hole. Well casing back-filled and cemented to 23 ft.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 1,035 ft, from topographic map. Measuring point: Top of casing, 1.50 ft above land-surface datum.

REMARKS.--Water level affected by pumpage of nearby domestic well. Maximum values were published from October 1981 to September 1982.

PERIOD OF RECORD.--October 1981 to September 1985 (discontinued). Records from May 1981 to September 1981 were unpublished.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 11.09 ft below land-surface datum, Dec. 14, 1983; lowest 14.77 ft below land-surface datum, Sept. 7, 1985.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		---		---					---	13.12	13.20	13.47
2		---		---					---	13.13	13.24	13.57
3		---		---					---	13.06	13.14	13.69
4		---		---					---	12.79	13.09	13.64
5		---		---					---	12.79	13.31	13.65
6		---		---					---	12.63	13.44	13.72
7		---		---					---	12.50	13.48	13.99
8		---		---					---	12.29	13.44	14.07
9		---		---					---	12.20	13.46	13.92
10		---		---					---	12.16	13.60	13.80
11		---		---					---	12.15	13.51	13.83
12		---		---					---	12.43	13.42	13.88
13		---		---					---	12.57	13.26	13.89
14		---		---					---	12.68	13.46	13.97
15		---		---					---	12.71	13.59	14.02
16		---		---					---	12.77	13.59	13.98
17		---		---					---	12.84	13.45	13.96
18		---		---					---	12.79	13.47	13.96
19		---		---					---	12.73	13.36	14.05
20		---		---					---	12.75	13.37	14.12
21		---		---					---	12.67	13.44	14.26
22		---		---					---	12.47	13.58	14.28
23		---		---					---	12.56	13.71	14.31
24		---		---					---	12.62	13.69	14.40
25		---		13.03					13.09	12.77	13.57	14.44
26		---		13.04					13.00	12.85	13.50	14.33
27		---		---					13.01	12.76	13.56	14.26
28		---		---					13.09	12.71	13.60	14.39
29		12.75		---					13.03	12.86	13.79	14.45
30		12.68		---					13.03	13.05	13.69	14.34
31		---		---					---	13.11	13.57	---
MEAN		---		---					---	12.69	13.47	14.02

WTR YR 1985 MEAN 13.35 HIGH 12.15 JUL 11 LOW 14.45 SEP 29

GROUND-WATER LEVELS

177

WASHINGTON COUNTY

401312080195801. Local number, WS 182.

LOCATION.--Lat 40°13'12", long 80°19'58", Hydrologic Unit 05030106, near Buffalo.

Owner: William Calvert.

AQUIFER.--Lower member of Waynesburg Formation of Late Pennsylvanian and Early Permian age.

WELL CHARACTERISTICS.--Drilled artesian well, diameter 8 in., depth 74.2 ft, cased to 20 ft, open hole.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 1,195 ft, from topographic map. Measuring point: Top of casing, 1.75 ft above land-surface datum.

REMARKS.--None.

PERIOD OF RECORD.--October 1983 to September 1985 (discontinued).

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 19.83 ft below land-surface datum, Apr. 24, 1984; lowest, 26.12 ft below land-surface datum, Sept. 27, 1984.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25.41	23.47	22.59	21.35	23.69	21.68	20.65	23.55	22.29	24.37	24.03	23.60
2	25.00	23.39	22.51	21.48	23.65	21.86	20.83	23.05	22.34	24.39	24.13	23.69
3	24.95	23.34	22.48	21.52	23.67	22.08	20.90	22.19	22.34	24.22	24.24	23.78
4	25.07	23.23	22.58	21.46	23.62	22.09	21.05	22.08	22.32	24.23	24.33	23.89
5	25.20	22.79	22.61	21.67	23.57	22.15	21.16	22.06	22.43	24.23	24.42	23.99
6	25.27	22.72	22.55	21.82	23.58	22.32	21.47	22.08	22.54	23.94	24.49	24.10
7	25.32	22.68	22.66	21.86	23.59	22.32	21.71	22.14	22.71	23.75	24.56	24.26
8	25.24	22.67	22.67	22.07	23.60	22.21	21.61	22.30	22.87	23.55	24.62	24.31
9	24.85	22.62	22.69	22.25	23.64	22.24	21.58	22.48	23.02	23.48	24.75	24.35
10	24.84	22.10	22.41	22.27	23.66	22.30	21.41	22.67	23.19	23.29	24.84	24.42
11	24.86	21.82	22.06	22.36	23.61	22.27	21.31	22.87	23.30	23.14	24.98	24.49
12	24.89	21.74	21.98	22.47	23.28	21.83	21.35	23.02	23.29	23.23	25.10	24.56
13	24.94	21.72	22.01	22.46	22.81	21.78	21.42	23.17	23.23	23.40	25.20	24.60
14	24.98	21.77	21.82	22.48	22.75	21.80	21.40	23.35	23.31	23.48	25.28	24.67
15	25.04	21.75	21.61	22.72	22.69	21.95	21.26	23.44	23.43	22.83	24.92	24.70
16	24.93	21.80	21.55	22.84	22.66	22.02	21.40	23.45	23.47	22.64	24.32	24.75
17	24.86	21.99	21.62	22.78	22.74	22.11	21.68	23.51	23.54	22.72	24.26	24.83
18	24.83	22.05	21.80	22.85	22.76	22.32	21.83	23.41	23.56	22.89	24.33	24.94
19	24.81	22.07	21.75	22.94	22.55	22.46	22.08	23.27	23.67	23.09	24.41	25.08
20	24.86	22.27	21.67	23.08	22.27	22.51	22.31	23.34	23.78	23.25	24.48	25.17
21	24.89	22.39	21.43	23.19	21.96	22.51	22.50	23.46	23.90	23.36	24.52	25.28
22	24.54	22.38	21.00	23.33	21.54	22.54	22.66	23.54	23.92	23.16	24.56	25.38
23	24.16	22.41	21.07	23.40	21.27	22.53	22.80	23.59	23.51	23.31	24.63	25.46
24	24.10	22.51	21.13	23.41	21.20	22.49	22.89	23.65	23.51	23.48	24.66	25.53
25	24.06	22.63	21.34	23.46	21.33	22.54	22.92	23.74	23.64	23.59	24.30	25.59
26	23.98	22.79	21.47	23.59	21.26	22.62	23.05	23.82	23.82	23.64	24.02	25.61
27	23.96	22.90	21.51	23.59	21.39	22.59	23.21	23.83	23.98	23.64	24.05	25.69
28	23.95	22.89	21.60	23.66	21.57	22.60	23.34	23.38	24.04	23.75	24.13	25.83
29	23.69	22.74	21.72	23.72	---	22.12	23.45	23.12	24.16	23.82	24.17	25.90
30	23.54	22.74	21.61	23.72	---	21.50	23.49	23.16	24.27	23.91	23.97	25.93
31	23.53	---	21.40	23.72	---	20.51	---	22.41	---	23.98	23.60	---
MEAN	24.66	22.48	21.90	22.69	22.71	22.16	21.96	23.07	23.31	23.54	24.46	24.81

WTR YR 1985 MEAN 23.15 HIGH 20.51 MAR 31 LOW 25.93 SEP 30

WASHINGTON COUNTY

401323080231901. Local number, WS 205.

LOCATION.--Lat 40°13'23", long 80°23'19", Hydrologic Unit 05030106, near Buffalo.

Owner: David Smith.

AQUIFER.--Lower member of Waynesburg Formation of Late Pennsylvanian and Early Permian age.

WELL CHARACTERISTICS.--Drilled water-table well, diameter 6 in., depth 90.9 ft cased to 15 ft, open hole.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 1,115 ft, from topographic map. Measuring point: Top of casing, 1.0 ft above land-surface datum.

REMARKS.--None.

PERIOD OF RECORD.--October 1983 to September 1985 (discontinued).

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 0.28 ft below land-surface datum, Feb. 15, 1985; lowest, 7.85 ft below land-surface datum, Oct. 3, 4, 1983.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.11	5.51	4.98	4.80	6.06	4.09	---	6.16	2.56	5.92	---	5.30
2	6.01	5.53	5.07	4.97	6.05	3.67	---	3.51	4.01	5.91	---	5.51
3	5.98	5.51	5.37	5.16	6.05	4.76	---	1.50	3.59	5.08	---	5.56
4	6.06	4.11	5.58	5.33	6.05	4.76	---	3.22	3.32	5.28	---	5.60
5	6.20	2.10	5.69	5.26	6.05	4.72	3.36	4.01	4.62	5.68	---	5.65
6	6.22	3.57	5.78	5.28	5.96	4.86	3.99	4.60	4.78	5.41	---	5.69
7	6.23	4.80	5.82	5.53	2.20	4.98	3.87	4.78	4.79	5.17	---	5.71
8	6.20	5.24	4.86	5.68	3.13	---	2.05	4.79	4.79	2.29	---	5.74
9	6.10	5.38	.69	5.77	4.65	---	2.70	4.79	5.49	4.31	5.85	5.76
10	6.08	1.39	1.81	5.84	4.76	---	2.39	4.79	5.75	2.27	5.87	5.78
11	6.08	1.29	2.31	5.91	4.76	---	1.93	5.31	5.80	3.03	5.88	5.82
12	6.08	2.86	---	5.95	4.76	---	2.66	5.71	5.79	4.72	5.89	5.85
13	6.08	4.28	2.51	5.92	4.76	---	3.78	5.73	5.76	4.79	5.92	5.91
14	6.07	4.86	1.53	5.93	1.57	---	4.24	5.76	5.79	4.79	5.96	5.96
15	6.07	5.18	1.92	5.95	.42	---	4.43	5.82	5.84	1.84	5.87	5.99
16	5.99	5.22	3.48	6.03	1.32	---	4.66	5.82	5.84	3.10	5.62	6.03
17	5.94	5.32	4.52	6.00	1.75	---	---	5.77	5.85	4.58	5.60	6.07
18	5.92	5.50	5.06	5.98	---	---	---	5.68	5.85	---	5.66	6.10
19	5.93	5.49	4.46	---	---	---	---	5.67	5.86	---	5.70	6.15
20	5.99	5.44	3.35	---	---	---	---	5.75	5.92	---	5.74	6.19
21	6.04	5.49	3.10	---	---	---	---	5.79	5.96	---	5.76	6.20
22	4.08	5.55	1.21	---	---	---	---	5.84	5.95	---	5.79	6.23
23	4.27	5.61	3.29	---	---	---	5.90	5.84	3.75	---	5.81	6.24
24	5.04	5.66	4.54	---	---	---	5.96	5.84	5.18	---	5.83	6.27
25	5.42	5.71	4.72	---	---	---	6.00	5.89	5.65	---	5.56	6.28
26	5.52	5.78	4.96	---	---	---	6.00	5.92	5.75	---	5.11	6.29
27	5.64	5.83	5.26	---	2.30	---	6.03	5.92	5.81	---	5.48	6.31
28	5.70	5.68	5.45	6.06	3.40	---	6.04	4.27	5.85	---	5.57	6.34
29	5.26	5.41	5.52	6.06	---	---	6.10	2.88	5.89	---	5.61	6.38
30	4.93	5.35	2.21	6.07	---	---	6.16	4.62	5.90	---	5.57	6.39
31	5.35	---	3.67	6.06	---	---	---	1.39	---	---	4.99	---
MEAN	5.76	4.82	---	---	---	---	---	4.95	5.26	---	---	5.98

WTR YR 1985 MEAN 5.03 HIGH .42 FEB 15 LOW 6.39 SEP 30

WASHINGTON COUNTY

179

401744080185001. Local number, WS 265.

LOCATION.--Lat 40°17'44", long 80°18'50", Hydrologic Unit 05030101, at Hickory.

Owner: Mount Pleasant Township.

AQUIFER.--Uniontown Formation of Late Pennsylvanian age.

WELL CHARACTERISTICS.--Drilled artesian well, diameter 6 in., depth 99.2 ft, cased to 21 ft, open hole.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 1,230 ft, from topographic map. Measuring point: Top of casing, 1.5 ft above land-surface datum.

REMARKS.--None.

PERIOD OF RECORD.--October 1983 to September 1985 (discontinued).

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 7.51 ft below land-surface datum, Apr. 5, 1985; lowest, 19.59 ft below land-surface datum, Sept. 30, 1985.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1			---	15.47	15.21	11.68	8.01	9.98	10.52	13.50	15.50	16.45
2			---	15.54	15.37	11.19	7.88	9.93	10.46	13.49	15.75	16.48
3			---	15.54	15.51	10.88	7.66	9.46	10.40	13.52	15.87	16.48
4			---	11.18	15.48	10.26	7.69	9.16	10.44	13.55	16.01	16.62
5			17.74	11.35	15.33	9.98	7.58	8.95	10.47	13.58	16.10	17.30
6			17.61	11.43	15.51	10.05	7.81	8.84	10.57	13.64	16.16	17.55
7			17.77	11.16	15.69	9.75	8.22	8.91	10.64	13.76	16.21	17.76
8			17.76	11.33	15.73	10.44	8.21	9.06	10.66	13.69	16.34	17.98
9			17.77	11.59	15.74	10.77	8.14	9.13	10.78	13.59	16.42	18.06
10			17.64	11.48	15.74	10.48	8.05	9.15	11.01	13.57	16.51	18.19
11			17.54	11.50	15.66	10.15	7.88	9.23	11.13	13.59	16.69	18.41
12			17.22	11.70	15.51	9.85	7.85	9.40	11.08	13.61	16.75	18.55
13			17.19	11.72	15.78	9.79	7.79	9.65	11.23	13.69	16.81	18.51
14			17.18	11.71	15.89	9.46	7.71	9.85	11.37	13.79	16.93	18.10
15			17.03	12.19	15.80	9.34	7.65	10.03	11.41	13.72	16.96	18.11
16			16.83	12.50	15.79	9.28	7.77	10.11	11.39	13.82	16.38	18.20
17			16.72	12.23	---	9.09	8.16	10.10	11.52	13.96	15.52	18.34
18			16.77	12.38	---	9.31	8.19	10.18	11.56	14.02	15.31	18.48
19			16.68	12.56	---	9.32	8.35	10.33	11.74	14.15	15.24	18.58
20			16.62	12.81	---	9.31	8.53	10.39	11.97	14.28	15.30	18.65
21			16.36	12.80	---	9.46	8.73	10.51	12.15	14.51	15.41	18.75
22			16.16	12.80	---	9.33	8.86	10.57	12.38	14.69	15.57	18.83
23			15.93	12.85	---	9.37	9.02	10.55	12.50	14.90	15.82	18.96
24			15.69	12.82	---	9.37	9.14	10.64	12.61	15.02	15.94	19.10
25			15.75	12.99	---	9.40	9.34	10.70	12.74	15.08	16.05	19.22
26			---	13.26	---	9.40	9.44	10.80	12.87	15.09	16.07	19.22
27			---	13.03	13.51	9.22	9.59	10.92	13.05	15.21	16.04	19.33
28			---	13.13	12.58	9.15	9.74	11.06	13.14	15.26	16.26	19.45
29			---	13.39	---	9.11	9.95	11.18	13.19	15.23	16.23	19.50
30			---	---	---	8.92	9.97	11.17	13.38	15.30	16.14	19.57
31			15.67	---	---	8.36	---	10.85	---	15.35	16.27	---
MEAN			---	---	---	9.72	8.43	10.03	11.61	14.20	16.08	18.29

WTR YR 1985 MEAN 13.12 HIGH 7.58 APR 5 LOW 19.57 SEP 30

WASHINGTON COUNTY

401849080194501. Local number, WS 271.

LOCATION.--Lat 40°18'49", long 80°19'45", Hydrologic Unit 05030101, near Hickory.

Owner: John Pritts.

AQUIFER.--Lower member of Washington Formation of Early Permian age.

WELL CHARACTERISTICS.--Drilled artesian well, diameter 6.5 in., depth 176 ft, cased to 24 ft, open hole.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 1,315 ft, from topographic map. Measuring point: Top of casing 1.5 ft above land-surface datum.

REMARKS.--None.

PERIOD OF RECORD.--October 1983 to September 1985 (discontinued).

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 39.30 ft below land-surface datum, Apr. 29, 30, 1984; lowest, 47.10 ft below land-surface datum, Oct. 23-25, 1983.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	46.76	47.63	---	42.33	43.27	42.08	41.30	40.91	42.60	43.94	44.99	46.12
2	46.81	47.64	---	42.19	43.36	42.01	40.98	41.02	42.57	44.00	45.04	46.14
3	46.83	47.65	---	41.99	43.48	41.94	40.69	41.04	42.53	44.06	45.08	46.18
4	46.86	47.68	---	41.79	43.57	41.84	40.50	40.93	42.50	44.12	45.12	46.19
5	46.88	47.70	46.76	41.72	43.61	41.84	40.33	40.81	42.47	44.18	45.15	46.22
6	46.90	47.71	46.71	41.63	43.69	41.85	40.27	40.72	42.46	44.25	45.18	46.27
7	46.93	47.71	46.70	41.54	43.79	41.80	40.21	40.68	42.46	44.31	45.21	46.29
8	46.96	47.72	46.69	41.53	43.87	41.77	40.15	40.65	42.46	44.36	45.26	46.32
9	46.99	47.73	46.67	41.54	43.97	41.77	40.14	40.64	42.47	44.41	45.29	46.35
10	47.01	47.73	46.65	41.52	44.04	41.76	40.10	40.65	42.52	44.45	45.32	46.38
11	47.05	47.68	46.62	41.52	44.09	41.71	40.06	40.68	42.55	44.50	45.36	46.42
12	47.07	47.56	46.56	41.54	44.10	41.70	40.01	40.72	42.58	44.52	45.41	46.44
13	47.10	47.45	46.49	41.55	44.18	41.68	39.91	40.78	42.63	44.53	45.44	46.46
14	47.13	47.27	46.34	41.58	44.24	41.62	39.81	40.86	42.71	44.54	45.48	46.50
15	47.16	47.13	46.16	41.69	44.29	41.58	39.74	40.92	42.76	44.54	45.53	46.53
16	47.22	47.03	45.93	41.76	44.33	41.50	39.73	40.99	42.80	44.56	45.55	46.56
17	47.25	46.96	45.69	41.78	44.38	41.46	39.74	41.05	42.86	44.58	45.58	46.59
18	47.28	46.94	45.46	41.84	44.43	41.44	39.74	41.16	42.91	44.60	45.62	46.62
19	47.32	46.88	45.21	41.92	44.46	41.40	39.77	41.28	42.99	44.62	45.65	46.65
20	47.35	46.85	45.00	42.04	44.48	41.40	39.83	41.39	43.07	44.63	45.69	46.66
21	47.37	46.82	44.74	42.14	44.50	41.41	39.89	41.52	43.14	44.64	45.72	46.69
22	47.40	46.79	44.52	42.24	44.47	41.40	39.98	41.63	43.23	44.68	45.78	46.70
23	47.43	46.76	44.20	42.33	44.14	41.40	40.05	41.74	43.30	44.71	45.82	46.72
24	47.45	46.76	43.83	42.41	43.61	41.44	40.13	41.84	43.37	44.75	45.84	46.78
25	47.47	46.74	43.61	42.51	43.18	41.52	40.24	41.96	43.44	44.78	45.88	46.79
26	47.49	46.74	43.36	42.65	42.79	41.56	40.33	42.07	43.55	44.80	45.91	46.83
27	47.50	---	43.12	42.74	42.47	41.58	40.44	42.18	43.64	44.83	45.94	46.86
28	47.54	---	42.92	42.85	42.25	41.62	40.56	42.29	43.70	44.86	45.98	46.90
29	47.56	---	42.76	42.98	---	41.70	40.69	42.40	43.78	44.89	46.02	46.92
30	47.58	---	42.69	43.07	---	41.72	40.79	42.51	43.86	44.93	46.06	46.94
31	47.60	---	42.52	43.16	---	41.56	---	42.56	---	44.95	46.09	---
MEAN	47.20	---	---	42.07	43.82	41.65	40.20	41.31	42.93	44.53	45.55	46.53

WTR YR 1985 MEAN 43.97 HIGH 39.73 APR 16 LOW 47.73 NOV 9 AND OTHERS

WASHINGTON COUNTY

401806080181001. Local number, WS 277.

LOCATION.--Lat 40°18'06", long 80°18'10", Hydrologic Unit 05030101, at Hickory.

Owner: Margaret Brown.

AQUIFER.--Upper member of Pittsburgh Formation of Late Pennsylvanian age.

WELL CHARACTERISTICS.--Drilled artesian well, diameter 5.7 in., depth 125.9 ft, cased to 20 ft, open hole.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 1,260 ft, from topographic map. Measuring point: Top of casing, 2.20 ft above land-surface datum.

REMARKS.--None.

PERIOD OF RECORD.--October 1983 to September 1985 (discontinued).

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 43.96 ft below land-surface datum, Dec. 12, 1983; lowest, 91.15 ft below land-surface datum, Sept. 30, 1985.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985												
DAY	MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	89.29	89.08	83.74	---	---	48.28	53.94	80.97	---	88.43	89.20	90.52
2	89.37	88.97	83.88	---	---	47.97	50.52	82.20	---	88.40	89.10	90.54
3	89.33	88.83	83.84	---	---	54.58	45.24	82.30	---	88.37	89.13	90.51
4	89.32	88.78	84.05	44.13	---	53.47	45.19	82.30	---	88.42	89.29	90.51
5	89.39	88.68	83.88	45.00	---	52.40	44.32	82.30	---	88.60	89.37	90.49
6	89.46	88.78	83.54	47.99	---	61.49	44.95	82.30	---	88.75	89.41	90.42
7	89.54	88.46	83.50	44.92	---	67.21	49.84	82.27	---	88.78	89.43	90.43
8	89.49	88.10	83.53	50.47	---	61.78	53.97	---	---	88.74	89.37	90.50
9	89.40	87.71	83.66	63.01	---	63.39	57.12	---	---	88.67	89.28	90.51
10	89.40	87.36	83.73	65.33	---	64.99	58.59	---	---	88.62	89.25	90.53
11	89.37	87.01	83.71	60.69	---	64.55	52.46	---	---	88.57	89.41	90.56
12	89.27	86.68	83.27	62.68	---	61.26	50.45	---	---	88.60	89.74	90.60
13	89.34	86.14	82.83	60.81	---	64.23	47.87	---	---	88.63	89.96	90.61
14	89.48	84.96	82.61	56.19	---	60.39	44.48	---	---	88.65	90.04	90.64
15	89.50	84.05	82.40	60.85	---	59.60	44.20	---	---	88.57	90.00	90.65
16	89.48	83.48	81.83	68.80	---	59.63	44.20	---	---	88.46	89.92	90.72
17	89.67	83.13	80.50	63.98	---	52.60	45.19	---	---	88.42	89.94	90.71
18	89.64	82.40	79.48	59.50	---	54.45	44.56	82.27	---	88.27	89.96	90.74
19	89.59	81.62	78.58	60.60	---	57.32	46.59	83.29	---	88.22	89.95	90.78
20	89.56	81.66	78.41	68.53	---	55.65	49.19	84.80	---	88.33	90.01	90.81
21	89.57	82.01	78.24	74.65	---	61.08	53.43	85.44	---	88.45	90.08	90.75
22	89.67	82.28	75.52	76.29	---	60.65	55.76	---	---	88.46	90.04	90.71
23	89.80	81.75	69.51	78.45	---	56.38	56.72	---	---	88.56	89.99	90.69
24	89.71	81.53	59.27	78.52	---	54.83	58.32	---	---	88.60	90.06	90.68
25	89.54	82.08	---	79.48	---	61.98	62.05	---	---	88.76	90.23	90.70
26	89.47	82.88	---	83.81	---	72.62	65.29	---	87.81	89.08	90.28	90.72
27	89.45	83.33	---	85.74	52.11	70.32	67.87	---	87.91	89.11	90.27	90.73
28	89.53	83.32	---	86.20	51.63	62.32	70.56	---	88.07	89.05	90.30	90.77
29	89.49	83.43	---	---	---	62.50	76.28	---	88.16	89.10	90.40	90.91
30	89.46	83.48	---	---	---	68.84	79.48	---	88.36	89.20	90.44	91.07
31	89.30	---	---	---	---	65.22	---	---	---	89.29	90.47	---
MEAN	89.48	85.07	---	---	---	60.06	53.95	---	---	88.65	89.82	90.65

WTR YR 1985 MEAN 78.55 HIGH 44.13 JAN 4 LOW 91.07 SEP 30

WASHINGTON COUNTY

400348080055902. Local number, WS 303.

LOCATION.--Lat 40°03'48", long 80°05'59", Hydrologic Unit 05020005, near Scenery Hill.

Owner: Ralph Barnhart.

AQUIFER.--Middle member of Waynesburg Formation of Late Pennsylvanian and Early Permian age.

WELL CHARACTERISTICS.--Drilled artesian well, diameter 8 in., depth 64.6 ft, cased to 16 ft, open hole.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 1,020 ft, from topographic map. Measuring point: Top of plywood covering, 1.30 ft above land-surface datum.

REMARKS.--None.

PERIOD OF RECORD.--October 1983 to September 1985 (discontinued).

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 23.83 ft below land-surface datum, Dec. 28, 1983; lowest, 28.58 ft below land-surface datum, Sept. 28, 1985.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	28.23	28.13	27.71	27.17	28.17	27.45	26.30	27.99	27.20	28.13	28.18	28.27
2	28.24	28.14	27.66	27.45	28.16	27.63	26.33	27.90	27.44	28.13	28.18	28.28
3	28.21	28.09	27.64	27.45	28.19	27.73	26.41	27.26	27.47	28.13	28.18	28.29
4	28.23	28.02	27.74	27.27	28.19	27.66	26.64	27.45	27.50	28.13	28.18	28.29
5	28.24	27.90	27.67	27.54	28.09	27.80	26.80	27.45	27.52	28.13	28.18	28.30
6	28.25	27.83	27.62	27.57	28.08	27.93	27.13	27.51	27.66	28.13	28.18	28.32
7	28.26	27.83	27.76	27.51	28.12	27.78	27.25	27.65	27.68	28.14	28.18	28.34
8	28.26	27.83	27.73	27.68	28.16	27.74	26.91	27.75	27.71	28.14	28.18	28.35
9	28.26	27.81	27.75	27.80	28.19	27.82	27.06	27.78	27.76	28.14	28.19	28.35
10	28.27	27.72	27.63	27.74	28.19	27.80	27.08	27.80	27.85	28.13	28.20	28.35
11	28.28	27.64	27.35	27.75	28.16	27.67	27.15	27.83	27.85	28.12	28.22	28.39
12	28.28	27.71	27.23	27.79	28.10	27.41	27.31	27.84	27.85	28.12	28.24	28.40
13	28.26	27.75	27.44	27.75	27.75	27.17	27.34	27.89	27.91	28.13	28.25	28.45
14	28.25	27.80	27.18	27.70	27.78	27.30	27.36	27.92	27.95	28.13	28.26	28.47
15	28.25	27.70	26.99	27.89	27.81	27.54	27.36	27.95	27.95	28.12	28.26	28.48
16	28.26	27.78	27.10	27.91	27.81	27.56	27.49	27.96	27.94	28.12	28.27	28.48
17	28.26	27.83	27.27	27.79	27.91	27.55	27.66	27.93	27.98	28.13	28.27	28.47
18	28.29	27.80	27.39	27.80	27.95	27.74	27.62	27.95	27.98	28.13	28.27	28.49
19	28.27	27.82	27.34	27.85	27.88	27.73	27.70	28.01	27.99	28.13	28.27	28.49
20	28.29	27.89	27.37	27.96	27.66	27.80	27.73	28.02	28.00	28.13	28.27	28.49
21	28.28	27.89	27.17	27.99	27.42	27.89	27.77	28.03	28.03	28.13	28.27	28.49
22	28.29	27.87	26.78	28.01	27.15	27.81	27.79	28.06	28.03	28.13	28.27	28.49
23	28.30	27.82	26.85	28.03	26.85	27.77	27.81	28.05	28.03	28.13	28.30	28.49
24	28.27	27.79	26.97	28.00	26.77	27.70	27.82	28.05	28.03	28.13	28.31	28.49
25	28.26	27.83	27.36	27.99	27.09	27.77	27.87	28.06	28.04	28.13	28.30	28.53
26	28.24	27.86	27.48	28.15	27.10	27.73	27.89	28.06	28.06	28.13	28.30	28.52
27	28.21	27.87	27.42	28.15	27.37	27.60	27.92	28.08	28.06	28.16	28.30	28.52
28	28.18	27.83	27.43	28.14	27.48	27.63	27.95	28.09	28.06	28.18	28.30	28.57
29	28.19	27.74	27.47	28.17	---	27.71	28.01	28.09	28.06	28.18	28.29	28.58
30	28.18	27.66	27.44	28.18	---	26.74	28.00	28.06	28.11	28.18		

WTR YR 1985 MEAN 27.88 HIGH 26.30 APR 1 LOW 28.58 SEP 29

WASHINGTON COUNTY

183

400627080015201. Local number, WS 322.

LOCATION.--Lat 40°06'27", long 80°01'52", Hydrologic Unit 05030101, near Lagonda.

Owner: Jason Maloy.

AQUIFER.--Middle member of Washington Formation of Early Permian age.

WELL CHARACTERISTICS.--Drilled artesian well, diameter 6 in., depth 127.4 ft, cased to 20 ft, open hole.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 1,295 ft, from topographic map. Measuring point: Top of plywood cover, 1.0 ft above land-surface datum.

REMARKS.--None.

PERIOD OF RECORD.--May 1984 to September 1985 (discontinued).

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 20.49 ft below land-surface datum, May 30, 31, 1984; lowest, 25.72 ft below land-surface datum, Aug. 10, 11, 1984.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	34.89	36.36	---	23.36	25.07	22.80	18.30		---	25.04	25.72	29.67
2	34.90	35.40	---	23.37	25.06	23.15	---		---	25.09	25.80	29.40
3	34.95	34.54	---	23.43	25.05	23.44	---		---	25.21	25.89	29.19
4	34.90	33.81	---	23.46	25.02	23.61	---		---	25.36	26.01	29.05
5	34.98	32.96	---	23.58	24.97	23.78	---		---	25.42	26.18	28.98
6	35.16	31.81	---	23.72	24.93	23.92	---		---	25.49	26.42	28.95
7	35.26	29.97	---	23.81	24.91	23.99	---		---	25.56	26.73	28.96
8	35.34	---	---	23.95	24.91	24.04	---		---	25.51	27.05	28.99
9	35.69	---	---	24.10	24.91	24.09	---		---	25.21	27.42	29.04
10	36.02	---	---	24.20	24.92	24.11	---		---	25.06	27.77	29.12
11	36.41	---	---	24.29	24.92	24.10	---		---	25.03	28.08	29.25
12	36.82	---	---	24.38	24.86	23.92	---		---	25.01	28.36	29.39
13	37.12	---	22.68	24.43	24.33	23.57	---		---	25.01	28.63	29.56
14	37.46	---	22.62	24.47	23.86	23.35	---		---	25.01	28.83	29.74
15	37.85	---	22.34	24.53	23.75	23.28	---		---	25.03	28.96	30.00
16	38.17	---	22.14	24.62	23.81	23.29	---		---	25.05	29.09	30.29
17	38.43	---	22.11	24.65	23.98	23.36	---		---	25.05	29.24	30.66
18	38.66	---	22.22	24.68	24.14	23.51	---		---	25.06	29.41	31.21
19	38.98	---	22.39	24.72	24.22	23.64	---		---	25.10	29.65	31.73
20	39.31	---	22.54	24.79	24.15	23.77	---		---	25.19	29.93	32.18
21	39.46	---	22.51	24.84	23.94	23.91	---		---	25.31	30.24	32.79
22	---	---	21.86	24.89	23.13	24.02	---		---	25.38	30.56	33.49
23	---	---	21.39	24.92	21.34	24.10	---		---	25.43	30.93	34.16
24	40.34	---	21.28	24.94	20.99	24.14	---		---	25.48	31.31	34.83
25	40.23	---	21.52	24.96	21.28	24.15	---		24.96	25.52	31.63	35.64
26	39.92	---	21.81	24.99	21.60	24.10	---		24.95	25.55	31.80	36.39
27	39.44	---	22.06	25.01	22.01	24.04	---		24.95	25.60	31.75	37.09
28	38.88	---	22.78	25.02	22.44	24.02	---		24.97	25.64	31.40	37.93
29	38.46	---	23.48	25.04	---	24.05	---		24.99	25.64	30.87	38.38
30	38.03	---	23.63	25.06	---	23.13	---		25.02	25.66	30.37	38.71
31	37.25	---	23.50	25.06	---	20.10	---		---	25.67	29.99	---
MEAN	---	---	---	24.43	23.87	23.63	---		---	25.30	28.90	31.83

WTR YR 1985 MEAN 27.48 HIGH 18.30 APR 1 LOW 40.34 OCT 24

WASHINGTON COUNTY

402419080250301. Local number, WS 324.

LOCATION.--Lat 40°24'19", long 80°25'03", Hydrologic Unit 05030101, near Florence.

Owner: U.S. Geological Survey.

AQUIFER.--Middle member of Washington Formation of Early Permian age. Sandstone of Casselman Formation of Late Pennsylvanian age

WELL CHARACTERISTICS.--Drilled artesian well, diameter 4.5 to 3.0 in., depth 301 ft, cased to 301 ft with 2 in. casing, perforated plastic casing from 130 to 180 ft and 240 to 260 ft. Well back-filled and cemented to 103 ft.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 1,110 ft, from topographic map. Measuring point: Top of casing, 2.00 ft above land-surface datum.

REMARKS.--Well pumped on August 29, affecting water levels thru September 25.

PERIOD OF RECORD.--November 1984 to September 1985 (discontinued).

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 32.10 ft below land-surface datum, Aug. 30, 31, 1985; lowest, 36.69 ft below land-surface datum, Aug. 27, 28, 1985.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1				---	36.53	36.74	36.87	37.16	37.75	38.10	38.88	32.17
2				35.28	36.59	36.73	36.87	37.13	37.78	38.06	38.94	32.23
3				35.28	36.64	36.71	36.86	37.11	37.60	38.05	38.99	32.29
4				35.28	36.71	36.67	36.87	37.12	37.62	38.05	39.05	32.34
5				35.33	36.71	36.60	36.90	37.13	37.64	38.05	39.09	32.40
6				35.45	36.69	36.71	36.93	37.13	37.66	38.05	39.13	32.47
7				35.46	36.72	36.73	37.04	37.14	37.67	38.09	39.14	32.58
8				35.53	36.84	36.67	37.06	37.20	37.67	38.12	39.13	32.66
9				35.69	36.86	36.67	37.08	37.25	37.67	38.12	39.15	32.72
10				35.72	36.87	36.67	37.13	37.27	37.78	38.14	39.18	32.75
11				35.72	36.81	36.67	37.13	37.27	37.80	38.18	39.24	32.88
12				35.72	36.65	36.55	37.13	37.28	37.77	38.23	39.33	32.97
13				35.72	36.60	36.57	37.14	37.31	37.75	38.33	39.39	33.08
14				35.72	36.63	36.57	37.10	37.36	37.75	38.37	39.42	33.18
15				35.78	36.68	36.61	37.04	37.42	37.78	38.39	39.35	33.23
16				35.88	36.70	36.69	37.02	37.42	37.78	38.41	39.27	33.24
17				35.88	36.74	36.69	37.11	37.41	37.79	38.50	39.28	33.29
18				35.89	36.83	36.72	37.14	37.41	37.79	38.58	39.30	33.38
19				35.96	36.89	36.79	37.16	37.42	37.78	38.65	39.33	33.44
20				36.08	36.92	36.80	37.20	37.48	37.81	38.69	39.39	33.49
21				36.20	36.96	36.87	37.23	37.54	37.87	38.68	39.42	33.57
22				36.30	36.95	36.87	37.21	37.58	37.91	38.65	39.44	33.63
23				36.36	36.93	36.87	37.21	37.63	37.92	38.68	39.50	33.69
24				36.33	36.80	36.85	37.16	37.65	37.96	38.69	39.54	34.51
25				36.28	36.76	36.93	37.15	37.66	38.03	38.77	39.54	35.03
26				36.36	36.76	37.08	37.13	37.72	38.07	38.79	39.55	35.10
27				36.40	36.75	37.06	37.11	37.77	38.09	38.79	39.67	35.18
28				36.42	36.74	37.01	37.10	37.77	38.10	38.79	39.69	35.32
29				36.48	---	36.95	37.12	37.77	38.13	38.81	32.28	35.43
30				36.49	---	36.94	37.14	37.77	38.16	38.84	32.13	35.46
31				36.51	---	36.90	---	37.75	---	38.86	32.12	---
MEAN				---	36.76	36.77	37.08	37.42	37.83	38.44	38.61	33.46

WTR YR 1985 MEAN 36.93 HIGH 32.12 AUG 31 LOW 39.69 AUG 28

QUALITY OF GROUND WATER

185

WATER-QUALITY DATA, AUGUST 1984 TO SEPTEMBER 1985

LOCAL IDENT- IFIER	STATION NUMBER	DATE OF SAMPLE	TIME	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET)	DEPTH OF WELL, TOTAL (FEET)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	ACIDITY (MG/L AS H)
219	401328080213801	09-04-85	1350	56.40	100	605	7.7	19.0	.2
324	402419080250301	08-29-85	1025	--	301	1500	7.4	12.5	.5
879	401246080114901	09-05-85	0855	63.10	165	1650	8.6	16.0	--
886	401439080041601	09-05-85	1015	76.50	130	520	7.1	19.5	.4
950	402742080291601	09-04-85	1115	--	210	650	8.2	19.5	--
952	402212080281901	09-04-85	1540	--	60	1210	8.9	14.5	--
955	402653080095401	09-06-85	0935	83.40	150	650	7.4	13.0	.5
966	400816080042701	09-05-85	1120	68.50	130	690	7.4	16.5	.5
972	400658080564001	09-05-85	1430	55.30	90	835	7.4	18.5	.8

LOCAL IDENT- IFIER	DATE OF SAMPLE	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE FET-FLD (MG/L AS HCO3)	ALKA- LINITY FIELD (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)
219	09-04-85	80	25	5.8	1.3	320	260	36	3.1	.10
324	08-29-85	130	48	120	6.1	280	230	530	16	.20
879	09-05-85	4.2	2.7	350	1.2	840	720	92	70	2.5
886	09-05-85	63	15	11	1.3	160	130	83	15	.10
950	09-04-85	12	3.4	130	1.5	360	290	31	4.0	.40
952	09-04-85	4.6	1.6	250	.50	390	360	5.1	160	1.9
955	09-06-85	93	20	5.6	1.4	320	260	54	8.5	.10
966	09-05-85	64	20	47	2.1	300	240	84	9.7	.20
972	09-05-85	100	35	13	1.6	--	340	55	27	.10

LOCAL IDENT- IFIER	DATE OF SAMPLE	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ARSENIC DIS- SOLVED (UG/L AS AS)	BORON, DIS- SOLVED (UG/L AS B)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, HEXA- VALENT, DIS. (UG/L AS CR)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, DIS- SOLVED (UG/L AS CU)
219	09-04-85	13	332	--	--	20	--	--	--	--
324	08-29-85	12	1000	<10	<1	--	<1	<1	2	3
879	09-05-85	7.8	948	--	--	420	--	--	--	--
886	09-05-85	13	301	--	--	30	--	--	--	--
950	09-04-85	11	373	--	--	150	--	--	--	--
952	09-04-85	7.0	682	--	--	350	--	--	--	--
955	09-06-85	13	302	--	--	30	--	--	--	--
966	09-05-85	9.8	381	--	--	80	--	--	--	--
972	09-05-85	14	381	--	--	30	--	--	--	--

QUALITY OF GROUND WATER
WATER-QUALITY DATA, AUGUST 1984 TO SEPTEMBER 1985

LOCAL IDENT- I- FIER	DATE OF SAMPLE	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)
219	09-04-85	20	7	--	10	5	--	--	--
324	08-29-85	1700	900	1	160	140	.1	5	<1
879	09-05-85	70	18	--	10	6	--	--	--
886	09-05-85	90	10	--	20	6	--	--	--
950	09-04-85	50	18	--	50	32	--	--	--
952	09-04-85	160	18	--	10	5	--	--	--
955	09-06-85	60	12	--	20	15	--	--	--
966	09-05-85	50	43	--	90	85	--	--	--
972	09-05-85	400	12	--	80	49	--	--	--

LOCAL IDENT- I- FIER	DATE OF SAMPLE	STRON- TIUM, DIS- SOLVED (UG/L AS SR)	ZINC, DIS- SOLVED (UG/L AS ZN)
219	09-04-85	--	--
324	08-29-85	6700	54
879	09-05-85	--	--
886	09-05-85	--	--
950	09-04-85	--	--
952	09-04-85	--	--
955	09-06-85	--	--
966	09-05-85	--	--
972	09-05-85	--	--

QUALITY OF GROUND WATER

187

SPRINGS

WATER-QUALITY DATA, AUGUST 1984 TO SEPTEMBER 1985

LOCAL IDENT- I- FIER	STATION	NUMBER	DATE OF SAMPLE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	ACIDITY (MG/L AS H)	CALCIUM DIS- SOLVED (MG/L AS CA)
72	400331079550501		09-05-85	1340	.03	1500	7.4	12.0	.6	140
LOCAL IDENT- I- FIER	DATE OF SAMPLE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE FET-FLD (MG/L AS HCO3)	ALKA- LINITY FIELD (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	
72	09-05-85	55	92	3.4	350	280	440	19	.20	
LOCAL IDENT- I- FIER	DATE OF SAMPLE	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	BORON, DIS- SOLVED (UG/L AS B)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)		
72	09-05-85		6.4	984	90	50	4	10	3	

INDEX

	Page		Page
ABERS CREEK NEAR MURRYSVILLE.....	105	CONTROL, DEFINITION OF.....	6
ACRE-FOOT, DEFINITION OF.....	5	CONTROL STRUCTURE, DEFINITION OF.....	6
ACCESS TO WATSTORE DATA.....	19	COOKSBURG, CLARION RIVER AT.....	46
ALGAE, DEFINITION OF.....	5	COOPERATION.....	1
ALGAL GROWTH POTENTIAL, DEFINITION OF.....	5	CORRY, HARE CREEK NEAR.....	136
ALLEGHENY RIVER, AT ELDRED.....	25	CROOKED CREEK, AT CROOKED CREEK DAM.....	55
AT FRANKLIN.....	41	AT IDAHO.....	54
AT KINZUA DAM.....	29	CROOKED CREEK DAM, CROOKED CREEK AT.....	55
AT KITTANNING.....	53	CROSS CREEK, NEAR HICKORY.....	144
AT NATRONA.....	73	NORTH FORK AT AVELLA.....	144
AT NEW KENSINGTON.....	74	CUBIC FEET PER SECOND PER SQUARE MILE,	
AT PARKER.....	48	DEFINITION OF.....	6
AT PORT ALLEGANY.....	23	CUBIC FOOT PER SECOND, DEFINITION OF.....	6
AT SALAMANCA, NY.....	27		
AT WEST HICKORY.....	32	DAISYTOWN, PIKE RUN AT.....	140
AMITY, TENMILE CREEK NEAR.....	140	DANIELS RUN, AT WEST ZOLLARVILLE.....	140
AQUIFER, DEFINITION OF.....	5	NEAR WEST ZOLLARVILLE.....	90
ARTESIAN, DEFINITION OF.....	5	DEFINITION OF TERMS.....	5
ARTIFICIAL SUBSTRATE, DEFINITION OF.....	9	DIATOMS, DEFINITION OF.....	8
ASH MASS, DEFINITION OF.....	5	DISCHARGE, DEFINITION OF.....	6
AUNT CLARA FORK NEAR PARIS.....	142	DISCHARGE AT PARTIAL-RECORD STATIONS AND	
AVELLA, NORTH FORK CROSS CREEK AT.....	144	MISCELLANEOUS SITES.....	135
		DISSOLVED, DEFINITION OF.....	6
BACTERIA, DEFINITION OF.....	5	DIVERSITY INDEX, DEFINITION OF.....	6
BARRONVALE, COLE RUN NEAR.....	100	DOWNSTREAM ORDER AND STATION NUMBER.....	11
GARYS RUN NEAR.....	99	DRAINAGE AREA, DEFINITION OF.....	6
BEAVER RIVER, AT BEAVER FALLS.....	123	DRAINAGE BASIN, DEFINITION OF.....	6
AT WAMPUM.....	119	DRY MASS, DEFINITION OF.....	5
BEAVER RIVER BASIN, LAKES AND RESERVOIRS IN.	125	DUNKARD CREEK AT SHANNOPIN.....	88
BED MATERIAL, DEFINITION OF.....	5	DUTCH FORK CREEK NEAR CLAYSVILLE.....	144
BENTLYVILLE, NORTH BRANCH PIGEON CREEK AT...	140		
BIG PINEY RUN NEAR SALISBURY.....	136	EAST BRANCH CLARION RIVER, AT EAST BRANCH	
BIOCHEMICAL OXYGEN DEMAND, DEFINITION OF...	5	CLARION RIVER DAM.....	43
BIOMASS, DEFINITION OF.....	5	EAST CONEMAUGH, LITTLE CONEMAUGH RIVER AT...	62
BLACKLICK CREEK AT JOSEPHINE.....	64	ELDRED, ALLEGHENY RIVER AT.....	25
BLOOMING VALLEY, WOODCOCK CREEK AT.....	38	ELIZABETH, MONONGAHELA RIVER AT.....	94
BLUE-GREEN ALGAE, DEFINITION OF.....	8	ELLIOTTSTOWN, STONY FORK AT BETHEL CHAPEL	
BOTTOM MATERIAL, DEFINITION OF, SEE BED		NEAR.....	82
MATERIAL.....		STONY FORK NEAR.....	84
BRADDOCK, MONONGAHELA RIVER AT.....	106	STONY FORK TRIBUTARY NO. 4 NEAR.....	83
BROKENSTRAW CREEK AT YOUNGSHVILLE.....	31	ENLOW FORK NEAR WEST FINLEY.....	129
BROWNS CREEK NEAR NINEVEH.....	136	ERIE, MILL CREEK AT.....	136
BRUSH RUN NEAR BUFFALO.....	127	ETNA, LITTLE PINE CREEK NEAR.....	76
BUFFALO, BRUSH RUN NEAR.....	127	PINE CREEK AT.....	135
BUFFALO CREEK, NEAR FREEPORT.....	72	EXPLANATION OF GROUND-WATER LEVEL RECORDS...	18
AT TAYLORTOWN.....	144	OF STAGE AND WATER-DISCHARGE RECORDS.....	11
		OF WATER-QUALITY RECORDS.....	15
CALLensburg, CLARION RIVER AT.....	137		
CARNEGIE, CHARTIERS CREEK AT.....	113	FARMINGTON, STONY FORK NEAR.....	77
CASSELMAN RIVER, AT GRANTSVILLE, MD.....	97	FECAL COLIFORM BACTERIA, DEFINITION OF.....	5
AT MARKLETON.....	98	FECAL STREPTOCOCCAL BACTERIA, DEFINITION OF...	5
CECIL, MILLERS RUN AT.....	142	FERNDALE, STONEYCREEK RIVER AT.....	61
CELLS/VOLUME, DEFINITION OF.....	5	FLORENCE, KINGS CREEK NEAR.....	142
CFS-DAY, DEFINITION OF.....	6	FRANKLIN, ALLEGHENY RIVER AT.....	41
CHARTIERS CREEK, AT CARNEGIE.....	113	FREEPORT, BUFFALO CREEK NEAR.....	72
AT HOUSTON.....	142	FRENCH CREEK, AT UTICA.....	40
AT LAGONDA.....	108	NEAR UNION CITY.....	37
NEAR WASHINGTON AT RESERVOIR NO. 3.....	140	NEAR WATTSBURG.....	35
CHARTIERS RUN AT HOUSTON.....	142	NEAR LOWVILLE.....	36
CHEMICAL OXYGEN DEMAND, DEFINITION OF.....	6	FRIENDSVILLE, MD, YOUGHIOGHENY RIVER AT.....	95
CHLOROPHYLL, DEFINITION OF.....	6	FROGTOWN, SUGARCAMP RUN AT.....	144
CLARION, OLD FORTY MINE OUTFLOW NEAR.....	138		
CLARION RIVER, AT CALLENSBURG.....	137	GAGE HEIGHT, DEFINITION OF.....	6
AT COOKSBURG.....	46	GAGING STATION, DEFINITION OF.....	6
AT JOHNSONBURG.....	45	GAGING STATION RECORDS.....	23
AT RIDGWAY.....	137	GARYS RUN NEAR BARRONVALE.....	99
EAST BRANCH AT EAST BRANCH CLARION		GASTONVILLE, PETERS CREEK AT.....	140
RIVER DAM.....	43	GIBBON GLADE, STONY FORK TRIBUTARY NEAR.....	78
NEAR PINEY.....	47	GRACETON, TWO LICK CREEK AT.....	67
WEST BRANCH, AT WILCOX.....	44	GRANTSVILLE, MD, CASSELMAN RIVER AT.....	97
CLAYSVILLE, DUTCH FORK NEAR.....	144	GREEN ALGAE, DEFINITION OF.....	8
COLE RUN NEAR BARRONVALE.....	100	GREENE COUNTY, GROUND WATER LEVEL DATA.....	166
COLOR UNIT, DEFINITION OF.....	6	GREENSBORO, MONONGAHELA RIVER AT.....	89
CONEMAUGH RIVER, AT SEWARD.....	63	GREENVILLE, LITTLE SHENANGO RIVER AT.....	116
AT TUNNELTON.....	68	GROUND WATER, LEVEL DATA.....	146
CONEWANGO CREEK AT RUSSELL.....	30	GREENE COUNTY.....	166
CONFLUENCE, YOUGHIOGHENY RIVER BELOW.....	102	WASHINGTON COUNTY.....	177
CONNEAUT CREEK AT CONNEAUT, OH.....	133	GROUND WATER, QUALITY OF (WASHINGTON CO.)...	185
CONNELLSVILLE, YOUGHIOGHENY RIVER AT.....	103	SPRINGS.....	187
CONNOQUENESSING CREEK NEAR ZELIENOPLE.....	120	GUFFEY, KINZUA CREEK NEAR.....	28
CONTENTS, DEFINITION OF.....	6		

	Page		Page
HANLIN STATION, HARMON CREEK NEAR.....	144	NATIONAL GEODETIC VERTICAL DATUM OF 1929	
HARDNESS, DEFINITION OF.....	6	(NGVD), DEFINITION OF.....	7
HARE CREEK NEAR CORRY.....	136	NATIONAL STREAM-QUALITY ACCOUNTING NETWORK	
HARMON CREEK NEAR HANLIN STATION.....	144	(NASQAN) STATIONS.....	10, 74, 106, 123
HAZEL HURST, PIGEON CREEK AT.....	140	NATRONA, ALLEGHENY RIVER AT.....	73
HICKORY, RACCOON CREEK NEAR.....	142	NATURAL SUBSTRATE, DEFINITION OF.....	9
CROSS CREEK NEAR.....	144	NEW KENSINGTON, ALLEGHENY RIVER AT.....	74
HOMER CITY, YELLOW CREEK NEAR.....	66	NINEVEH, BROWNS CREEK NEAR.....	136
HOUSTON, CHARTIERS CREEK AT.....	142	NORTH BRANCH PIGEON CREEK AT BENTLYVILLE...	140
CHARTIERS RUN AT.....	142	NORTH BRANCH QUEMAHONING CREEK AT ROYTOWN...	56
HYDROLOGIC CONDITIONS.....	2	NORTH FORK BENS CREEK AT NORTH FORK	
HYDROLOGIC UNIT, DEFINITION OF.....	7	RESERVOIR.....	57
IDAHO, CROOKED CREEK AT.....	54	NORTH FORK CROSS CREEK AT AVELLA.....	144
INSTANTANEOUS DISCHARGE, DEFINITION OF.....	6	NUMBERING SYSTEM FOR WELLS AND MISCELLANEOUS	
INTRODUCTION.....	1	SITES.....	11
JACOBS CREEK AT JACOBS CREEK.....	135	OHIO RIVER AT SEWICKLEY.....	114
JEFFERSON, SOUTH FORK TENMILE CREEK AT.....	92	OLD FORTY MINE OUTFLOW NEAR CLARION.....	138
JOHNSONBURG, CLARION RIVER AT.....	45	OIL CREEK AT ROUSEVILLE.....	34
JOSEPHINE, BLACKLICK CREEK AT.....	64	ORGANIC MASS, DEFINITION OF.....	5
KEYSTONE STATE PARK, McCUNE RUN AT.....	135	ORGANISM, DEFINITION OF.....	7
KINGS CREEK NEAR FLORENCE.....	142	ORGANISM COUNT/AREA, DEFINITION OF.....	7
KINGSTON, LOYALHANNA CREEK AT.....	69	ORGANISM COUNT/VOLUME, DEFINITION OF.....	7
KINZUA CREEK NEAR GUFFEY.....	28	OSWAYO CREEK AT SHINGLEHOUSE.....	26
KINZUA DAM, ALLEGHENY RIVER AT.....	29	PARIS, AUNT CLARA FORK NEAR.....	142
KISKIMINETAS RIVER AT VANDERGRIFT.....	71	PARKER, ALLEGHENY RIVER AT.....	48
KISKIMINETAS RIVER BASIN, LAKES IN.....	65	PARTIAL-RECORD STATION, DEFINITION OF.....	7
KITTANNING, ALLEGHENY RIVER AT.....	53	PARTICLE SIZE, DEFINITION OF.....	7
LAGONDA, CHARTIERS CREEK AT.....	108	PARTICLE-SIZE CLASSIFICATION, DEFINITION OF...	7
UNNAMED TRIBUTARY NO. 1 TO CHARTIERS		PERCENT COMPOSITION, DEFINITION OF.....	7
CREEK AT.....	112	PESTICIDES, DEFINITION OF.....	7
UNNAMED TRIBUTARY NO. 2b TO CHARTIERS		PETERS CREEK AT GASTONVILLE.....	140
CREEK AT.....	110	PHYTOPLANKTON, DEFINITION OF.....	8
LAKE ARTHUR.....	125	PICOCURIE, DEFINITION OF.....	7
LAKES AND RESERVOIRS		PIGEON CREEK, AT HAZEL HURST.....	140
LAKE ARTHUR.....	125	NORTH BRANCH AT BENTLYVILLE.....	140
PYMATUNING RESERVOIR.....	125	PIKE RUN AT DAISYTOWN.....	140
YELLOW CREEK LAKE.....	65	PINE CREEK AT ETNA.....	135
LAUREL HILL CREEK AT URSINA.....	101	PINEY, CLARION RIVER NEAR.....	47
LINDEN, LITTLE CHARTIERS CREEK AT.....	142	PINEY CREEK AT PINEY.....	135
LITTLE CHARTIERS CREEK, AT LINDEN.....	142	PLANKTON, DEFINITION OF.....	7
NEAR McMURRAY, RESERVOIR NO. 2.....	142	POLYCHLORINATED BIPHENYLS, DEFINITION OF....	8
LITTLE CONEMAUGH RIVER AT EAST CONEMAUGH...	62	PORT ALLEGANY, ALLEGHENY RIVER AT.....	23
LITTLE MAHONING CREEK AT McCORMICK.....	51	PORTERSVILLE, MUDDY CREEK NEAR.....	121
LITTLE PINE CREEK NEAR ETNA.....	76	PORTLAND MILLS, LITTLE TOBY CREEK AT.....	135
LITTLE SHENANGO RIVER AT GREENVILLE.....	116	POTATO CREEK AT SMETHPORT.....	24
LITTLE TENMILE CREEK NEAR TENMILE.....	140	PROSPERITY, TENMILE CREEK AT.....	140
LITTLE TOBY CREEK AT PORTLAND MILLS.....	135	PUBLICATIONS ON TECHNIQUES OF WATER-	
LOWVILLE, WEST BRANCH FRENCH CREEK NEAR....	36	RESOURCES INVESTIGATIONS.....	20
LOYALHANNA CREEK, AT KINGSTON.....	69	PUNXSUTAWNEY, MAHONING CREEK AT.....	50
AT LOYALHANNA DAM.....	70	PYMATUNING DAM, SHENANGO RIVER AT.....	115
McCORMICK, LITTLE MAHONING CREEK AT.....	51	PYMATUNING RESERVOIR.....	125
McCUNE RUN AT KEYSTONE STATE PARK.....	135	RACCOON CREEK, NEAR HICKORY.....	142
McDONALD, ROBINSON RUN AT.....	142	AT MOFFATS MILL.....	126
McMURRAY, RESERVOIR NO. 2 LITTLE CHARTIERS		AT RACCOON.....	142
CREEK NEAR.....	142	NEAR WEST SPRINGFIELD.....	134
MAHONING CREEK, AT MAHONING CREEK DAM.....	52	RASSELAS, SEVENMILE RUN NEAR.....	42
AT PUNXSUTAWNEY.....	50	RECOVERABLE FROM, BOTTOM MATERIAL,	
MAHONING CREEK DAM, MAHONING CREEK AT.....	52	DEFINITION OF.....	8
MARKELTON, CASSELMAN RIVER AT.....	98	REDBANK CREEK AT ST. CHARLES.....	49
MEAN CONCENTRATION, DEFINITION OF.....	8	REDSTONE CREEK AT WALTERSBURG.....	93
MEAN DISCHARGE, DEFINITION OF.....	6	RESERVOIRS, SEE LAKES AND RESERVOIRS	
METHYLENE BLUE ACTIVE SUBSTANCE, DEFINITION		RIDGWAY, CLARION RIVER AT.....	137
OF.....	7	RIVER VIEW, MINGO CREEK AT.....	140
MICROGRAMS PER GRAM, DEFINITION OF.....	7	ROBINSON FORK AT WEST FINLEY.....	144
MICROGRAMS PER LITER, DEFINITION OF.....	7	ROBINSON RUN AT McDONALD.....	142
MIDDLE WHEELING CREEK NEAR WEST ALEXANDER...	144	ROUSEVILLE, OIL CREEK AT.....	34
MILL CREEK AT ERIE.....	136	ROYTOWN, NORTH BRANCH QUEMAHONING CREEK AT..	56
MILLERS RUN AT CECIL.....	142	RUNOFF IN INCHES, DEFINITION OF.....	8
MILLIGRAMS PER LITER, DEFINITION OF.....	7	RUSSEL, CONEWANGO CREEK AT.....	30
MINGO CREEK AT RIVER VIEW.....	140	SALAMANCA, NY, ALLEGHENY RIVER AT.....	27
MOFFATS MILL, RACCOON CREEK AT.....	126	SALISBURY, BIG PINEY RUN NEAR.....	136
MONONGAHELA RIVER, AT BRADDOCK.....	106	ST. CHARLES, REDBANK CREEK AT.....	49
AT ELIZABETH.....	94	SEDIMENT, DEFINITION OF.....	8
AT GREENSBORO.....	89	SEVENMILE RUN AT RASSELAS.....	42
MUDDY CREEK NEAR PORTERSVILLE.....	121	SEWARD, CONEMAUGH RIVER AT.....	63
MURRYSVILLE, ABERS CREEK NEAR.....	105	SEWICKLEY, OHIO RIVER AT.....	114
		SHANNOPIN, DUNKARD CREEK AT.....	88

	Page		Page
SHARPSVILLE, SHENANGO RIVER AT.....	118	TUNNELTON, CONEMAUGH RIVER AT.....	68
SHENANGO RIVER, AT PYMATUNING DAM.....	115	TWO-LICK CREEK AT GRACETON.....	67
AT SHARPSVILLE.....	118		
NEAR TRANSFER.....	117	UNION CITY, FRENCH CREEK NEAR.....	37
SHINGLEHOUSE, OSWAYO CREEK AT.....	26	UNNAMED TRIBUTARY NO. 1 TO CHARTIERS CREEK	
SLIPPERY ROCK CREEK AT WURTEMBURG.....	122	AT LAGONDA.....	112
SMETHPORT, POTATO CREEK AT.....	24	UNNAMED TRIBUTARY NO. 2b TO CHARTIERS CREEK	
SOLUTE, DEFINITION OF.....	8	AT LAGONDA.....	110
SOUTH FORK BENS CREEK NEAR THOMASDALE.....	59	URSINA, LAUREL HILL CREEK AT.....	101
SOUTH FORK TENMILE CREEK AT JEFFERSON.....	92	UTICA, FRENCH CREEK AT.....	40
SPECIAL NETWORKS AND PROGRAMS.....	10		
SPECIFIC CONDUCTANCE, DEFINITION OF.....	8	VANDERGRIFF, KISKIMINETAS RIVER AT.....	71
STAGE-DISCHARGE RELATION, DEFINITION OF.....	9		
STONYCREEK RIVER AT FERNDALE.....	61	WRD, DEFINITION OF.....	10
STONY FORK, AT BETHEL CHAPEL, NEAR		WSP, DEFINITION OF.....	10
ELLIOTTSVILLE.....	82	WALTERSBURG, REDSTONE CREEK AT.....	93
NEAR ELLIOTTSVILLE.....	84	WAMPUM, BEAVER RIVER AT.....	119
NEAR FARMINGTON.....	77	WASHINGTON COUNTY STUDY.....	140
TRIBUTARY NEAR GIBBON GLADE.....	78	GROUND WATER LEVELS.....	177
TRIBUTARY NO. 4 NEAR ELLIOTTSVILLE.....	83	QUALITY OF.....	185
STREAMFLOW, DEFINITION OF.....	9	SPRINGS.....	187
SUBSTRATE, DEFINITION OF.....	9	WASHINGTON, RESERVOIR NO. 3	
SUGARCAMP RUN AT FROGTOWN.....	144	CHARTIERS CREEK NEAR.....	140
SURFACE AREA, DEFINITION OF.....	9	WATTSBURG, FRENCH CREEK NEAR.....	35
SURFICIAL BED MATERIAL, DEFINITION OF.....	9	WEIGHTED AVERAGE, DEFINITION OF.....	10
SUSPENDED, RECOVERABLE, DEFINITION OF.....	9	WEST ALEXANDER, MIDDLE WHEELING CREEK NEAR..	144
SUSPENDED SEDIMENT, DEFINITION OF.....	8	WEST BRANCH CLARION RIVER AT WILCOX.....	44
SUSPENDED-SEDIMENT CONCENTRATION, DEFINITION		WEST BRANCH FRENCH CREEK NEAR LOWVILLE.....	36
OF.....	8	WEST FINLEY, ENLOW FORK NEAR.....	129
SUSPENDED-SEDIMENT DISCHARGE, DEFINITION OF.	8	ROBINSON FORK AT.....	144
SUSPENDED-SEDIMENT LOAD, DEFINITION OF.....	8	TEMPLETON FORK NEAR.....	144
SUSPENDED, TOTAL, DEFINITION OF.....	9	WEST HICKORY, ALLEGHENY RIVER AT.....	32
SUTERSVILLE, YOUGHIOGHENY RIVER AT.....	104	WEST SPRINGFIELD, RACCOON CREEK NEAR.....	134
		WEST ZOLLARSVILLE, DANIELS RUN NEAR.....	90
TAXONOMY, DEFINITION OF.....	9	DANIELS RUN AT.....	140
TAYLORTOWN, BUFFALO CREEK AT.....	144	WET MASS, DEFINITION OF.....	5
TENMILE, LITTLE TENMILE CREEK NEAR.....	140	WILCOX, WEST BRANCH CLARION RIVER AT.....	44
TEMPELTON FORK NEAR WEST FINLEY.....	144	WOODCOCK CREEK, AT BLOOMING VALLEY.....	38
TENMILE CREEK, NEAR AMITY.....	140	AT WOODCOCK CREEK DAM.....	39
AT PROSPERITY.....	140	WURTEMBURG, SLIPPERY ROCK CREEK AT.....	122
SOUTH FORK, AT JEFFERSON.....	92		
THOMASDALE, SOUTH FORK BENS CREEK NEAR.....	59	YELLOW CREEK LAKE.....	65
TIME-WEIGHTED AVERAGE, DEFINITION OF.....	9	YELLOW CREEK NEAR HOMER CITY.....	66
TIONESTA CREEK AT TIONESTA DAM.....	33	YOUGHIOGHENY RIVER, AT CONNELLSVILLE.....	103
TONS PER ACRE-FOOT, DEFINITION OF.....	10	AT FRIENDSVILLE, MD.....	95
TONS PER DAY, DEFINITION OF.....	10	AT SUTERSVILLE.....	104
TOTAL, DEFINITION OF.....	10	AT YOUGHIOGHENY RIVER DAM.....	96
TOTAL COLIFORM BACTERIA, DEFINITION OF.....	5	BELOW CONFLUENCE.....	102
TOTAL IN BOTTOM MATERIAL, DEFINITION OF.....	10	YOUGHIOGHENY RIVER DAM, YOUGHIOGHENY	
TOTAL LOAD, DEFINITION OF.....	10	RIVER AT.....	96
TOTAL ORGANISM COUNT, DEFINITION OF.....	7	YOUNGSVILLE, BROKENSTRAW CREEK AT.....	31
TOTAL, RECOVERABLE, DEFINITION OF.....	10		
TOTAL SEDIMENT DISCHARGE, DEFINITION OF.....	8	ZELIENOPLE, CONNOQUENESSING CREEK NEAR.....	120
TRANSFER, SHENANGO RIVER NEAR.....	117	ZOOPLANKTON, DEFINITION OF.....	8

FACTORS FOR CONVERTING INCH-POUND UNITS TO INTERNATIONAL SYSTEM UNITS (SI)

The following factors may be used to convert the inch-pound units published herein to the International System of Units (SI). This report contains both the inch-pound and SI unit equivalents in the station manuscript descriptions.

Multiply inch-pound units	By	To obtain SI units
<i>Length</i>		
inches (in)	2.54×10^1	millimeters (mm)
	2.54×10^{-2}	meters (m)
feet (ft)	3.048×10^{-1}	meters (m)
miles (mi)	1.609×10^0	kilometers (km)
<i>Area</i>		
acres	4.047×10^3	square meters (m ²)
	4.047×10^{-1}	square hectometers (hm ²)
	4.047×10^{-3}	square kilometers (km ²)
square miles (mi ²)	2.590×10^0	square kilometers (km ²)
<i>Volume</i>		
gallons (gal)	3.785×10^0	liters (L)
	3.785×10^0	cubic decimeters (dm ³)
	3.785×10^{-3}	cubic meters (m ³)
million gallons	3.785×10^3	cubic meters (m ³)
	3.785×10^{-3}	cubic hectometers (hm ³)
cubic feet (ft ³)	2.832×10^1	cubic decimeters (dm ³)
	2.832×10^{-2}	cubic meters (m ³)
acre-feet (acre-ft)	1.233×10^3	cubic meters (m ³)
	1.233×10^{-3}	cubic hectometers (hm ³)
	1.233×10^{-6}	cubic kilometers (km ³)
<i>Flow</i>		
cubic feet per second (ft ³ /s)	2.832×10^1	liters per second (L/s)
	2.832×10^1	cubic decimeters per second (dm ³ /s)
	2.832×10^{-2}	cubic meters per second (m ³ /s)
gallons per minute (gal/min)	6.309×10^{-2}	liters per second (L/s)
	6.309×10^{-2}	cubic decimeters per second (dm ³ /s)
	6.309×10^{-5}	cubic meters per second (m ³ /s)
million gallons per day	4.381×10^1	cubic decimeters per second (dm ³ /s)
	4.381×10^{-2}	cubic meters per second (m ³ /s)
<i>Mass</i>		
tons (short)	9.072×10^{-1}	megagrams (Mg) or metric tons

U.S. DEPARTMENT OF THE INTERIOR
Geological Survey
P.O. Box 1107
Harrisburg, PA 17108

OFFICIAL BUSINESS
PENALTY FOR PRIVATE USE \$300
SPECIAL 4TH CLASS BOOK RATE

