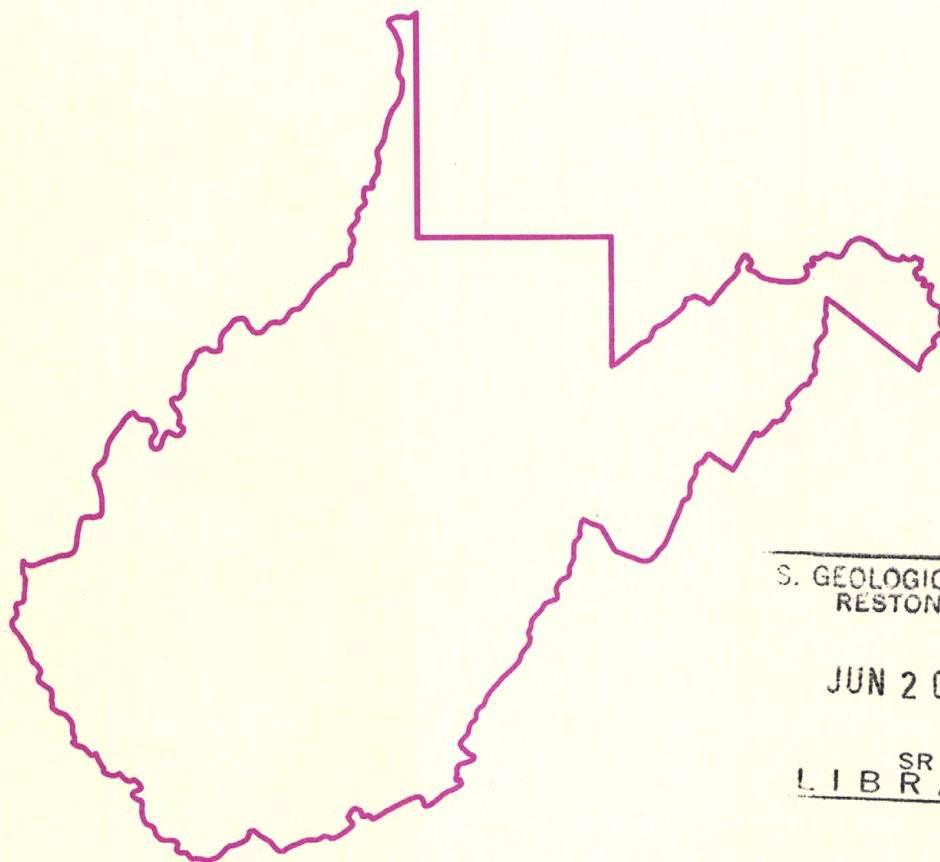


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Water Resources Data West Virginia Water Year 1994



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CALENDAR FOR WATER YEAR 1994

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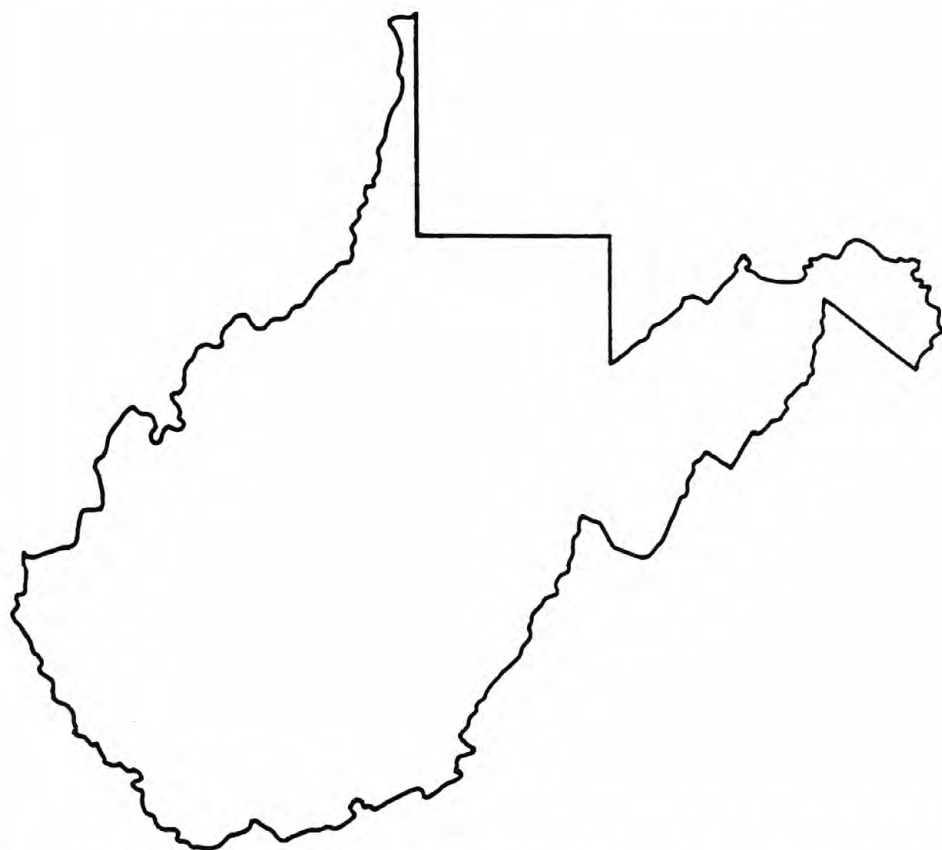
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Water Resources Data West Virginia Water Year 1994

by S.M. Ward, B.C. Taylor, and M.V. Mathes, Jr.



U.S. GEOLOGICAL SURVEY WATER-DATA REPORT WV-94-1
Prepared in cooperation with the State of West Virginia
and with other agencies

U.S. DEPARTMENT OF THE INTERIOR

BRUCE BABBITT, Secretary

U.S. GEOLOGICAL SURVEY

Gordon P. Eaton, Director

For information on the water program in West Virginia write to:
District Chief, Water Resources Division
U.S. Geological Survey
11 Dunbar Street
Charleston, West Virginia 25301

1995

PREFACE

This volume of the annual hydrologic data report for West Virginia 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 Trust Territories. These records of streamflow, ground-water levels, and water quality 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.

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. The authors had primary responsibility for assuring that the information contained herein is accurate, complete, and adheres to Geological Survey policy and established guidelines. The following individuals contributed significantly to the collection, processing, and tabulation of the data:

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This report was prepared in cooperation with the State of West Virginia and with other agencies under the general supervision of Herbert J. Freiburger, Area Assistant Regional Hydrologist, Mid Atlantic Programs, and David P. Brown, District Chief.

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CONTENTS

	Page
Preface.....	iii
List of surface-water stations, in downstream order, for which records are published in this volume	vii
List of ground-water wells, by county, for which records are published in this volume.....	x
List of discontinued surface-water discharge stations	xi
List of discontinued surface-water-quality stations	xvii
Introduction.....	1
Cooperation.....	1
Summary of hydrologic conditions.....	2
Special networks and programs	6
Explanation of records	6
Station identification numbers	7
Downstream order system.....	7
Latitude-longitude system.....	7
Records of stage and water discharge	8
Data collection and computation.....	8
Data presentation.....	9
Station manuscript	9
Data table of daily mean values.....	11
Statistics of monthly mean data.....	11
Summary statistics	11
Identifying estimated daily discharge	12
Accuracy of the records	13
Other records available	13
Records of surface-water quality.....	13
Classification of records.....	13
Arrangement of records.....	14
On-site measurements and sample collection	14
Water temperature	14
Sediment.....	15
Laboratory measurements	15
Data presentation.....	15
Remarks codes	16
Records of ground-water levels.....	16
Data collection and computation.....	17
Data presentation.....	17
Records of ground-water quality.....	18
Data collection and computation.....	18
Data presentation.....	18
Access to WATSTORE data	19
Definition of terms	20
Publications on Techniques of Water-Resources Investigations	29
Station records, surface water	36
Discharge at partial-record station and miscellaneous sites.....	208
Crest-stage partial-record stations.....	208
Miscellaneous field determinations.....	218
Analyses of samples collected at partial-record, special study, and miscellaneous sites	222
Station records, ground-water	249
Ground-water levels	249
Index	279

ILLUSTRATIONS

Figure 1. Discharge at the South Branch Potomac River and the Hughes River index gaging stations during the 1994 water year compared to median discharge for the period 1961-90	3
2. Discharge at the Greenbrier River and the Bluestone River index gaging stations during the 1994 water compared to median discharge for the period 1961-90	4
3. System for numbering wells and miscellaneous sites.....	7
4. Map of West Virginia showing location of streamflow, stage, and water-quality stations.....	33
5. Map of West Virginia showing location of ground-water observation wells.....	248

TABLES

Table 1. Mean, maximum, and minimum streamflow for water year 1994 and recurrence interval at selected stations	5
---	---

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

NOTE.--Data for partial-record stations and miscellaneous sites for both
surface-water discharge and quality are published in separate sections
of the data report. See references at the end of this list for page
numbers for these sections.

[Letters after station name designate type of data collected: (d) discharge, (c) chemical, (b) biological,
(m) microbiological, (t) water temperature, (s) sediment, (a) annual maximum]

	Station number	Page
<u>NORTH ATLANTIC SLOPE BASINS</u>		
<u>POTOMAC RIVER BASIN</u>		
North Branch Potomac River at Steyer, Md (d).....	01595000	*36
Stony River near Mount Storm (d,t).....	01595200	*38
North Branch Potomac River at Luke, Md (d).....	01598500	*42
North Branch Potomac River near Cumberland, Md (d,c)	01603000	*44
Patterson Creek near Headsville (d).....	01604500	*48
South Branch Potomac River at Franklin (d)	01605500	**50
South Branch Potomac River near Petersburg (d,c).....	01606500	*52
South Fork South Branch Potomac River at Brandywine (d).....	01607500	**56
South Fork South Branch Potomac River near Moorefield (d,c)	01608000	*58
South Branch Potomac River near Springfield (d).....	01608500	*64
Potomac River at Paw Paw (d).....	01610000	*66
Cacapon River near Great Cacapon (d,c)	01611500	*68
Potomac River at Hancock, Md (d).....	01613000	*72
Opequon Creek near Martinsburg (d,c).....	01616500	*74
Shenandoah River at Millville (d,c)	01636500	*78
Potomac River at Point of Rocks, Md (d)	01638500	*84
<u>OHIO RIVER BASIN</u>		
<u>MONONGAHELA RIVER BASIN</u>		
Tygart Valley River near Dailey (d).....	03050000	86
Tygart Valley River near Elkins (d)	03050500	88
Tygart Valley River at Belington (d).....	03051000	90
Middle Fork River at Audra (d).....	03052000	92
Buckhannon River		
Sand Run near Buckhannon (d)	03052500	94
Buckhannon River at Hall (d).....	03053500	96
Tygart Valley River at Philippi (d).....	03054500	98
Three Fork Creek near Grafton (d).....	03056250	100
Tygart Valley River at Colfax (d).....	03057000	102
West Fork River at Walkersville (a)	03057300	208
West Fork River at Butcherville (d)	03058500	104
West Fork River near Mount Clare (d).....	03058975	106
West Fork River at Enterprise (d).....	03061000	108
Monongahela River:		
Buffalo Creek at Barrackville (d)	03061500	110
Cobun Creek at Morgantown (d)	03062400	112
Dry Fork at Hendricks (a).....	03065000	208

* Records furnished by Maryland District, U.S. Geological Survey.

** Records furnished by Virginia District, U.S. Geological Survey.

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

[Letters after station name designate type of data collected: (d) discharge, (c) chemical, (b) biological,
(m) microbiological, (t) water temperature, (s) sediment, (a) annual maximum]

	Station number	Page
<u>OHIO RIVER BASIN--Continued</u>		
<u>MONONGAHELA RIVER BASIN--Continued</u>		
Monongahela River--Continued		
Blackwater River near Davis (d).....	03065400	114
Blackwater River at Davis (d).....	03066000	116
Black Fork (continuation of Dry Fork):		
Cheat River (continuation of Black Fork) near Parsons (d)	03069500	118
Cheat River at Rowlesburg (d)	03070000	120
Big Sandy Creek at Rockville (d)	03070500	122
Ohio River at Martins Ferry, Oh (d)	03111534	124
<u>WHEELING CREEK BASIN</u>		
Wheeling Creek at Elm Grove (d).....	03112000	126
Ohio River at Benwood near Wheeling (c,m).....	03112510	128
<u>MIDDLE ISLAND CREEK BASIN</u>		
Middle Island Creek at Little (d).....	03114500	130
Ohio River near Marietta, Oh (a)	03150800	209
<u>LITTLE KANAWHA RIVER BASIN</u>		
Little Kanawha River near Wildcat (d)	03151400	132
Little Kanawha River below Burnsville Dam (a).....	03151520	209
Little Kanawha River at Burnsville (a).....	03151600	209
Little Kanawha River at Glenville (d)	03152000	134
Little Kanawha River at Grantsville (a)	03153500	209
West Fork Little Kanawha River at Rocksedale (a)	03154000	210
Little Kanawha River at Palestine (d,c,m).....	03155000	136
Hughes River at Cisco (d).....	03155500	140
<u>KANAWHA RIVER BASIN</u>		
New River at Glen Lyn, Va (d,c,m,s).....	03176500	**142
Bluestone River near Pipestem (d)	03179000	146
East Fork Greenbrier River at Frank (d).....	03180300	148
Greenbrier River at Durbin (d)	03180500	150
Greenbrier River at Buckeye (d).....	03182500	152
Greenbrier River at Alderson (d)	03183500	154
Greenbrier River at Hildale (d).....	03184000	156
New River at Hinton (d)	03184500	158
New River at Thurmond (d)	03185400	160
Gauley River:		
Williams River at Dyer (d).....	03186500	162
Gauley River at Camden-on-Gauley (a)	03187000	210
Cranberry River near Richwood (d).....	03187500	164
Gauley River near Craigsville (d).....	03189100	166
Gauley River below Summersville Dam (d).....	03189600	168
Meadow River near Mount Lookout (d)	03190400	170
Gauley River above Belva (d)	03192000	172

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

[Letters after station name designate type of data collected: (d) discharge, (c) chemical, (b) biological, (m) microbiological, (t) water temperature, (s) sediment, (a) annual maximum]

	Station number	Page
<u>OHIO RIVER BASIN--Continued</u>		
<u>KANAWHA RIVER BASIN--Continued</u>		
Kanawha River at Kanawha Falls (d).....	03193000	174
Elk River below Webster Springs (d).....	03194700	176
Elk River at Sutton (a).....	03195500	210
Elk River near Frametown (a).....	03196600	210
Elk River at Clay (a).....	03196800	211
Elk River at Queen Shoals (d).....	03197000	178
Kanawha River at Charleston (d).....	03198000	180
Coal River:		
Big Coal River at Ashford (d).....	03198500	182
Coal River at Tornado (d).....	03200500	184
Kanawha River at Winfield Dam, at Winfield (c,m).....	03201300	186
Ohio River at Point Pleasant (a).....	03201500	211
<u>GUYANDOTTE RIVER BASIN</u>		
Guyandotte River near Baileysville (d).....	03202400	188
Clear Fork at Clear Fork (d).....	03202750	190
Guyandotte River below R. D. Bailey Dam (a).....	03202915	211
Guyandotte River at Man (a).....	03203000	211
Guyandotte River at Logan (d).....	03203600	194
Guyandotte River at Branchland (d,c,m).....	03204000	198
Ohio River at Huntington (a).....	03206000	212
<u>TWELVEPOLE CREEK BASIN</u>		
East Fork Twelvepole Creek near Dunlow (d).....	03206600	202
East Fork Twelvepole Creek below East Lynn Dam (a).....	03206790	212
Twelvepole Creek below Wayne (a).....	03207020	212
Beech Fork below Beech Fork Dam (a).....	03207057	212
<u>BIG SANDY RIVER BASIN</u>		
Tug Fork at Welch (a).....	03212750	213
Dry Fork at Beartown (a).....	03212980	213
Tug Fork at Williamson (d).....	03213700	204
Tug Fork at Kermit (d).....	03214500	206
Tug Fork at Glenhayes (a).....	03214900	213
Discharge at partial-record stations and miscellaneous sites.....		208
Crest-stage partial-record stations.....		208
Miscellaneous field determinations.....		218
Analyses of samples collected at partial-record, special study, and miscellaneous sites.....		222

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

County	Well number	Local number	Location	Page
BERKELEY	392725077582401	20-5-7	Martinsburg	*249
BROOKE	401216080362703		Bethany	250
FAYETTE	380154080571301		Clifftop	251
GILMER	385604080495901	33-3-1	Glenville	252
GRANT	391652079181401		Mount Storm	*253
GREENBRIER	374804080174001	45-8-2	White Sulphur Springs	254
HAMPSHIRE	391257078404601	23-6-46	Augusta	*255
HARDY	385714078441301	25-4-5	Trout Pond Recreation Area	*256
JEFFERSON	391142077551701		Rippon	*257
	392104077554801		Leetown	*258
LEWIS	390553080280802	16-1-9	Jackson's Mill	259
MARION	393101080150501		Farmington	260
MERCER	372149081055001	48-5-1	Princeton	261
MINERAL	392114079081101	22-5-23	Sulphur City	*262
MINGO	373554081493401		Justice	263
MONONGALIA	392923079571801	9-7-33	Halleck	264
	394006080194801	9-1-47	Wadestown	265
MORGAN	393043078174001	19-5-14	Berkeley Springs	*266
NICHOLAS	381513081094201		Belva	267
POCAHONTAS	380653080155301		Droop Mountain State Park	268
PRESTON	393306079474501	11-3-8	Masontown	269
RANDOLPH	385100079522901		Beverly	270
	385341079575401	18-3-110	Coaltown	271
RITCHIE	391226081024901	28-3-3	Harrisville	272
TUCKER	390135079275601	15-6-17	Canaan Valley State Park	273
TYLER	393211081021201		Sistersville	274
WAYNE	375827082211501	50-6-5	Cabwaylingo State Forest	275
WEBSTER	382008080292801		Dyer	276
WYOMING	373839081255201	54-2-12	Twin Falls State Park	277

* Records furnished by Maryland District, U.S. Geological Survey.

DISCONTINUED SURFACE-WATER DISCHARGE STATIONS,
LISTED IN DOWNSTREAM ORDER

The following continuous-record surface-water discharge (gaging stations) in West Virginia have been discontinued. Daily streamflow records (discharge) were collected and published for the period of record, expressed in water years, shown for each station.

	Station number	Drainage area (mi ²)	Period of record
<u>NORTH ATLANTIC SLOPE BASINS</u>			
<u>POTOMAC RIVER BASIN</u>			
Abram Creek at Oakmont.....	01595300	42.6	1956-82
New Creek near Keyser.....	01599500	45.7	1930-31 1948-63
South Branch Potomac River:			
Friends Run near Franklin	01605600	4.55	1969-77
North Fork South Branch Potomac River at Cabins.....	01606000	314	1940-61 1979-80
South Mill Creek:			
Spring Run:			
Big Spring at Masonville.....	01607000	---	1946-59 1968-69
Fort Run near Moorefield	01608050	4.92	1969-77
Buffalo Creek near Romney	01608400	4.37	1969-77
Potomac River:			
Little Cacapon River near Levels	01609800	108	1967-77
Lost River at McCauley near Baker	01610200	155	1972-80
Cacapon River above Wardensville	01610300	181	1972-73
Cacapon River at Yellow Spring.....	01610500	306	1940-52
Back Creek near Jones Springs	01614000	243	1929-31 1939-75
Tuscarora Creek above Martinsburg.....	01617000	11.3	1949-63 1968-77
<u>OHIO RIVER BASIN</u>			
<u>MONONGAHELA RIVER BASIN</u>			
Roaring Creek at Norton	03050800	29.2	1965-69
Grassy Run at Norton	03050900	2.86	1965-69
Middle Fork River at Midvale	03051500	122	1915-42
Tygart Valley River at Tygart Dam near Grafton	03056000	1,184	1938-83 1987-91
Tygart Valley River at Fetterman.....	03056500	1,304	1907-39
West Fork River at Walkersville	03057300	28.9	1984-92
Skin Creek near Brownsville.....	03057500	25.7	1946-60
West Fork River below Stonewall Jackson Dam near Weston	03058000	102	1991
(Formerly West Fork River at Brownsville).....	"	102	1946-84
(Formerly West Fork River at Bendale.....	03058006	105	1985-90
West Fork River at Clarksburg.....	03059000	384	1923-83
Elk Creek at Quiet Dell.....	03059500	84.6	1944-70
Tennile Creek:			
Salem Fork:			
Salem Fork at Salem	03060500	8.32	1951-69

DISCONTINUED SURFACE-WATER DISCHARGE STATIONS,
LISTED IN DOWNSTREAM ORDER--Continued

	Station number	Drainage area (mi ²)	Period of record
<u>OHIO RIVER BASIN</u> --Continued			
<u>MONONGAHELA RIVER BASIN</u> --Continued			
Monongahela River:			
Buffalo Creek:			
Owen Davy Fork:			
Laurel Run at Curtisville.....	03061410	1.11	1978-80
Dents Run:			
Hibbs Run near Mannington.....	03061435	1.42	1978-79
Davy Run at Katy.....	03061495	1.76	1978-79
Monongahela River at Lock 15, at Hoult.....	03062000	2,388	1915-26 1939-65 1967
Indian Creek:			
Stewart Run at Crown.....	03062213	2.43	1978-79
Indian Creek at Crown.....	03062215	11.8	1978-80
Cobun Creek at Morgantown.....	03062400	10.9	1965-94
Deckers Creek at Morgantown.....	03062500	63.2	1946-69
Dry Fork (head of Cheat River):			
Horsecamp Run at Harman.....	03063600	6.57	1969-77
Dry Fork at Hendricks.....	03065000	345	1941-93
Blackwater River at Canaan Valley State Park.....	03065050	9.48	1992
Blackwater River at Cortland.....	03065200	18.5	1992-93
Tub Run near Douglas.....	03066630	1.17	1980-84
Big Run near Douglas.....	03066720	1.30	1980-82
West Fork Big Run near Douglas.....	03066730	1.07	1980-82
Black Fork (continuation of Dry Fork):			
Shavers Fork:			
Shavers Fork at Bemis.....	03068000	115	1922-26 1974-79
Shavers Fork at Flint.....	03068500	124	1925-32
Shavers Fork above Bowden.....	03068600	138	1975-80
Taylor Run near Alpena.....	03068604	1.06	1979-80
Stalnaker Run near Bowden.....	03068607	1.55	1979-80
Taylor Run at Bowden.....	03068610	5.06	1973-82
North Spring at Bowden.....	03068690	---	1975-81
South Spring at Bowden.....	03068710	---	1975-80
Shavers Fork below Bowden.....	03068800	151	1973-81
Shavers Fork at Parsons.....	03069000	214	1911-26 1941-93
Buffalo Creek near Rowlesburg.....	03069880	12.2	1967-77
Conner Run near Valley Point.....	03070310	0.38	1982-83
Cheat River near Pisgah.....	03071000	1,354	1928-58
Cheat River near Morgantown.....	03071500	1,380	1902-06 1909-19 1923-26
Youghiogheny River:			
Muddy Creek:			
Hayes Run near Cranesville.....	03075650	0.93	1980-82
Muddy Creek near Cranesville.....	03075670	5.09	1980-82
White Oak Springs Run:			
Cupp Run near Cranesville.....	03075680	1.42	1980-82

DISCONTINUED SURFACE-WATER DISCHARGE STATIONS,
LISTED IN DOWNSTREAM ORDER--Continued

	Station number	Drainage area (mi ²)	Period of record
<u>OHIO RIVER BASIN</u> --Continued			
<u>KINGS CREEK BASIN</u>			
Kings Creek at Weirton	03110830	49.0	1977-78
<u>LITTLE GRAVE CREEK BASIN</u>			
Little Grave Creek near Glendale	03113700	4.97	1970-77
<u>MIDDLE ISLAND CREEK BASIN</u>			
Buffalo Run near Little	03114650	4.21	1969-77
Ohio River at St. Marys	03115000	26,850	1938-72
Ohio River at Parkersburg	03151000	5,600	1940-68
<u>LITTLE KANAWHA RIVER BASIN</u>			
Little Kanawha River near Burnsville	03151500	155	1938-74
Little Kanawha River below Burnsville Dam	03151520	163	1976-82 1987-93
Little Kanawha River at Burnsville	03151600	248	1974-78
Leading Creek:			
Buck Run near Leopold	03152200	2.91	1970-77
Leading Creek near Glenville	03152500	144	1938-52
Steer Creek near Grantsville	03153000	166	1938-75
Little Kanawha River at Grantsville	03153500	913	1929-78
West Fork Little Kanawha River at Rocksedale	03154000	205	1929-31 1938-75
Spring Creek:			
Tanner Run at Spencer	03154250	2.82	1969-77
Reedy Creek near Reedy	03154500	79.4	1952-78
South Fork Hughes River at MacFarlan	03155200	210	1915-16 1938-52
North Bend Run near Cairo	03155410	0.14	1985-87
Robinson Run near Petroleum	03155520	0.07	1985-87
Ohio River at Belleville Dam	03159530	39,300	1975-85
Ohio River at Racine Dam	03159870	40,100	1980
Ohio River at Pomeroy, Oh	03160000	40,500	1940-68
<u>KANAWHA RIVER BASIN</u>			
New River:			
Rich Creek near Peterstown	03177000	50.6	1942-51
Indian Creek at Indian Mills	03177500	189	1942-51
Bluestone River:			
Bluestone River near Spanishburg	03178000	199	1945-52
Camp Creek near Camp Creek	03178500	32.0	1947-71
Bluestone River at Lilly	03179500	438	1908-16 1930-48
New River at Bluestone Dam	03180000	4,602	1924-69 1976-83
Stoney Creek:			
Indian Draft near Marlinton	03181200	3.06	1968-77
Greenbrier River at Marlinton	03181500	408	1909-16
Knapp Creek at Marlinton	03182000	108	1946-58

DISCONTINUED SURFACE-WATER DISCHARGE STATIONS,
LISTED IN DOWNSTREAM ORDER--Continued

	Station number	Drainage area (mi ²)	Period of record
<u>OHIO RIVER BASIN</u> --Continued			
<u>KANAWHA RIVER BASIN</u> --Continued			
New River--Continued			
Spring Creek at Spring Creek	03182650	120	1972-73
Anthony Creek near Anthony	03182700	144	1972-82
Howard Creek at Caldwell	03182950	84.4	1972-78
Second Creek Near Second Creek	03183000	80.8	1946-73
Davis Spring at Fort Spring	03183200	---	1972-73
Big Creek near Bellepoint	03184200	8.27	1969-77
Piney Creek at Raleigh	03185000	52.2	1951-82
New River at Caperton	03185500	6,826	1929-58
New River at Fayette	03186000	6,850	1895-01 1903-04 1908-16
Gauley River:			
Gauley River at Camden-on-Gauley	03187000	236	1909-16 1930-75
Cranberry River:			
North Fork Cranberry River near Hillsboro	03187300	9.78	1969-82
Cherry River at Richwood	03188500	85.0	1908-16
Cherry River at Fenwick	03189000	150	1930-69 1980-82
Gauley River near Summersville	03189500	680	1909-16 1929-65
Collison Creek near Nallen	03189650	2.78	1967-77
Meadow River at McRoss	03189890	163	1980-82
Meadow River at Nallen,	03190000	287	1909-16 1929-71
Peters Creek near Lockwood,	03191500	40.2	1946-71 1980-82
Gauley River at Belva	03192500	1,402	1908-16
Slaughter Creek:			
Right Fork Little Creek near Chelyan,	03193776	0.91	1983
Little Creek near Chelyan	03193778	1.44	1982-84
Elk River:			
Gilmer Run near Marlinton,	03193830	1.80	1968-77
Elk River at Webster Springs	03194000	168	1908-16
Elk River Below Back Fork at Webster Springs	03194500	242	1930-34
Elk River at Centralia	03195000	281	1935-63
Right Fork Holly River at Guardian	03195100	51.9	1974-78 1986-87
Left Fork Holly River near Replete	03195250	46.5	1974-78 1986-87
Elk River at Sutton	03195500	542	1939-92
Granny Creek at Sutton	03195600	6.98	1967-77
Elk River at Gassaway	03196000	578	1908-16
Birch River at Herold	03196500	124	1974-75 1976 1979-84
Elk River at Frametown	03196600	751	1959-81

DISCONTINUED SURFACE-WATER DISCHARGE STATIONS,
LISTED IN DOWNSTREAM ORDER--Continued

	Station number	Drainage area (mi ²)	Period of record
<u>OHIO RIVER BASIN</u> --Continued			
<u>KANAWHA RIVER BASIN</u> --Continued			
Elk River--Continued			
Buffalo Creek at Clay	03196750	114	1974-75
Elk River at Clay	03196800	992	1959-78
Big Sandy Creek:			
Left Hand Creek near Clendenin	03197440	27.8	1974-75
Elk River at Clendenin	03197500	1,290	1908-16
Elk River at Blue Creek	03197680	1,336	1985-86
Little Sandy Creek near Elkview	03197790	43.6	1985-87
Davis Creek:			
Trace Fork at Ruth	03198020	2.73	1980-84
Track Fork downstream Dryden Hollow at Ruth	03198022	4.72	1980-84
Coal River:			
Big Coal River:			
Drawdy Creek near Peytona	03198450	7.75	1969-77
Big Coal River near Alum Creek	03198550	445	1975-82
Little Coal River at Danville	03199000	269	1930-84
Rock Creek near Danville	03199300	12.2	1979-84
Little Coal River at Julian	03199400	318	1975-84
Coal River at Alum Creek	03199700	835	1975-79
Coal River at Fuqua	03200000	849	1912-16
Pocatalico River at Sissonville	03201000	238	1908-16 1930-31 1937-78 1979-80
Hurricane Creek:			
Poplar Fork at Teays	03201410	8.71	1967-78
Ohio River at Point Pleasant	03201500	52,760	1940-77
<u>GUYANDOTTE RIVER BASIN</u>			
Guyandotte River:			
Allen Creek at Allen Junction	03202240	8.43	1978-79
Slab Fork:			
Marsh Fork at Maben	03202245	4.85	1978-80
Still Run at Itmann	03202255	7.12	1978-79
Cabin Creek:			
Black Fork above Black Fork Falls near Mullens	03202260	2.68	1981-83
Black Fork at Mouth near Mullens	03202262	2.76	1981-83
Rockcastle Creek:			
Bearhole Fork at Pineville	03202310	6.27	1978-79
Indian Creek:			
Brier Creek at Fanrock	03202480	7.20	1969-77
Indian Creek at Fanrock	03202490	41.3	1974-81
Clear Fork:			
Laurel Fork:			
Milam Fork at McGraws	03202695	6.64	1978-79
Guyandotte River near Justice	03202900	512	1963-68
Guyandotte River below R.D. Bailey Dam	03202915	535	1979-82 1987-91

DISCONTINUED SURFACE-WATER DISCHARGE STATIONS,
LISTED IN DOWNSTREAM ORDER--Continued

	Station number	Drainage area (mi ²)	Period of record
<u>GUYANDOTTE RIVER BASIN--Continued</u>			
Guyandotte River--Continued			
Guyandotte River at Man	03203000	758	1929-62
Island Creek:			
Coperas Mine Fork:			
Whitman Creek at Whitman	03203670	10.9	1969-77
Mud River near Milton	03204500	256	1938-80
Ohio River at Huntington.....	03206000	55,900	1935-86
<u>TWELVEPOLE CREEK BASIN</u>			
Fourpole Creek at Huntington.....	03206500	20.9	1940-48
East Fork Twelvepole Creek below East Lynn Dam	03206790	138	1968-82
East Fork Twelvepole Creek near East Lynn.....	03206800	139	1962-67
West Fork Twelvepole Creek above Wayne at Echo.....	03206980	108	1979-81
Twelvepole Creek at Wayne	03207000	291	1915-17 1927-31 1947-54 1956-66
Twelvepole Creek below Wayne	03207020	300	1915-17 1927-31 1947-54 1956-82
Beech Fork below Beech Fork Dam.....	03207057	79.2	1976-82
<u>BIG SANDY RIVER BASIN</u>			
Tug Fork:			
Indian Creek:			
Puncheoncamp Branch at Leckie.....	03212558	1.36	1980-82
South Fork:			
Freeman Branch near Skygusty	03212567	0.30	1980-82
Sandlick Creek:			
Left Fork Sandlick Creek at Elbert.....	03212580	1.78	1980-82
Right Fork Sandlick Creek near Gary.....	03212585	1.21	1980-82
Tug Fork at Welch.....	03212600	85.9	1979-81
Tug Fork at Welch.....	03212750	174	1985-93
Tug Fork at Vulcan.....	03213620	778	1985-93
Elkhorn Creek at Maitland.....	03212700	69.9	1979-80
Elkhorn Creek Tributary at Welch.....	03212703	0.63	1980-82
Dry Fork at Beartown	03212980	209	1985-93
Dry Fork at Avondale.....	03212985	225	1979-81
Tug Fork at Litwar.....	03213000	504	1930-84
Panther Creek:			
Crane Creek near Panther	03213495	0.54	1981-82
Panther Creek near Panther.....	03213500	31.0	1946-86
Pigeon Creek near Lenore.....	03213800	93.9	1979-81
Tug Fork near Kermit	03214000	1,188	1934-85
Rockcastle Creek at Inez, KY.....	03214700	63.1	1980-81
Tug Fork at Glenhayes	03214900	1,507	1976-82 1991-92

**DISCONTINUED CONTINUOUS-RECORD SURFACE-WATER QUALITY STATIONS,
LISTED IN DOWNSTREAM ORDER**

The following continuous-record surface-water-quality stations in West Virginia have been discontinued. Daily records of specific conductance (sK), pH, water temperature (t), dissolved oxygen (DO), sediment (s), and turbidity (U) were collected for the period (in water years) shown for each station.

	Station number	Drainage area (mi ²)	Type of record	Period of record
<u>NORTH ATLANTIC SLOPE BASINS</u>				
<u>POTOMAC RIVER BASIN</u>				
North Fork South Branch Potomac River at Cabins	01606000	314	t	1961
South Branch Potomac River near Petersburg	01606500	642	t	1947-53 1955-73 1968-69
South Branch Potomac River near Springfield	01608500	1,471	sK, t	1968-69
Lost River at McCauley near Baker	01610200	155	t	1975-76
Cacapon River near Great Cacapon.....	01611500	677	t	1949-53 1961
Cacapon River at Great Cacapon.....	01611600	---	t	1959-64
Opequon Creek near Martinsburg	01616500	272	sK, t	1969-70
Shenandoah River at Millville.....	01636500	3,040	sK, t	1980-83
<u>OHIO RIVER BASIN</u>				
<u>MONONGAHELA RIVER BASIN</u>				
Tygart Valley River at Elkins.....	03050400	268	t	1947-92
Roaring Creek at Norton	03050800	29.2	t, s	1965-67
Grassy Run at Norton	03050900	2.86	t, s	1965-67
Tenmile Creek:				
Salem Fork:				
Salem F Subwatershed #11A Varner Hollow near Salem	03060000	---	t, s	1961
Salem Fork at Salem	03060500	8.32	s	1956-58 1962
Monongahela River:				
Buffalo Creek at Barrackville.....	03061500	115	sK, t, s	1979-81
Black Fork (continuation of Dry Fork):				
Shavers Fork above Bowden	03068600	138	sK, s, U pH t	1975-80 1978-79 1976-79
Taylor Run at Bowden	03068610	5.06	sK pH	1973-80 1973-74 1978-79 t 1973-74 1976-79
North Spring at Bowden	03068690	---	s, U t	1975-80 1977-81
South Spring at Bowden	03068710	---	U t	1975-80 1977-80
Shavers Fork below Bowden	03068800	151	U sK pH t	1975-80 1973-81 1973-74 1973-79 1981
			s, U	1975-81

DISCONTINUED CONTINUOUS-RECORD SURFACE-WATER QUALITY STATIONS,
LISTED IN DOWNSTREAM ORDER--Continued

	Station number	Drainage area (mi ²)	Type of record	Period of record
<u>OHIO RIVER BASIN--Continued</u>				
<u>MONONGAHELA RIVER BASIN--Continued</u>				
Shavers Fork at Parsons.....	03069000	214	t	1956-64 1974-75
Cheat River at Lake Lynn, Pa.....	03071600	1,411	t	1949-57 1959-92
<u>LITTLE KANAWHA RIVER BASIN</u>				
Little Kanawha River near Wildcat.....	03151400	112	sK, t, s	1979-81
Little Kanawha River near Burnsville.....	03151500	155	t	1971-74
Little Kanawha River at Glenville	03152000	386	t	1956-63
Leading Creek:				
Leading Creek near Glenville	03152500	144	sK, t	1971-74
West Fork Little Kanawha River at Rocksedale	03154000	205	t	1970-74
Little Kanawha River at Parkersburg	03155600	---	t	1960-61
<u>KANAWHA RIVER BASIN</u>				
New River at Bluestone Dam	03180000	4,602	t	1956-67 1971-83
Knapp Creek at Marlinton	03182000	108	t	1956-83 1985-87
Piney Creek at Raleigh	03185000	52.2	sK s	1979-81 1981
New River at Thurmond	03185400	6,687	sK,pH,t,DO	1991-93
Cranberry River:				
Cranberry River near Richwood.....	03187500	80.4	sK pH t s	1979-80 1989 1982 1980-81
Gauley River:				
Gauley River near Craigsville	03189100	529	sK t	1981-82 1975-77 1981-82
Gauley River below Summersville Dam	03189600	806	sK t	1981-82 1975-77 1981-82
Kanawha River at Kanawha Falls	03193000	8,371	t	1958-66 1968-83
Kanawha River at Glasgow	03193742	8,631	t	1977-92
Kanawha River at Cabin Creek	03193770	8,661	t	1956 1958-77
Elk River below Webster Springs	03194700	266	t U	1974-83 1974-75
Right Fork Holly River at Guardian	03195100	51.9	t U	1974 1974-75
Left Fork Holly River near Replete	03195250	46.5	t U	1974 1974-75

DISCONTINUED CONTINUOUS-RECORD SURFACE-WATER QUALITY STATIONS,
LISTED IN DOWNSTREAM ORDER--Continued

	Station number	Drainage area (mi ²)	Type of record	Period of record
<u>OHIO RIVER BASIN--Continued</u>				
<u>KANAWHA RIVER BASIN--Continued</u>				
Elk River at Sutton	03195500	542	sK t	1985-87 1960-83 1985-87
			s U	1985-87 1974-75 1985-87
Elk River near Frametown.....	03196600	751	t	1961-67 1972-75
Elk River at Clay	03196800	992	t	1961-70
Elk River at Queen Shoals.....	03197000	1,145	sK, s, U t	1985-86 1961-75 1985-86
Elk River at Blue Creek.....	03197680	1,336	sK, t, s, U	1985-86
Kanawha River at Charleston.....	03198000	10,448	t	1953-70 1972-85
Davis Creek:				
Trace Fork at Ruth	03198020	2.73	sK t, s	1980-83 1980-84
Trace Fork downstream Dryden Hollow at Ruth.....	03198022	4.72	sK t, s	1980-83 1980-84
Coal River:				
Big Coal River near Alum Creek	03198550	445	sK, s t	1975-82 1975-80
Little Coal River at Danville.....	03199000	269	sK t, s	1973-83 1973-84
Rock Creek near Danville	03199300	12.2	sK, t s	1979-82 1979-81
Rock Creek at Rock Creek.....	03199320	13.3	sK, t s	1979-82 1979-81
Little Coal River at Julian.....	03199400	318	sK, t s	1975-82 1975-81
Coal River at Alum Creek	03199700	835	sK, t s	1975-81 1975-80
Coal River at Tornado	03200500	862	sK t s U	1973-83 1974-84 1973-84 1981-91
Kanawha River at Poca	03200650	11,435	t	1976-92
Kanawha River at Winfield.....	03201300	11,809	sK	1965-70 1974-80
			pH, DO t	1976-80 1957-67 1969-71 1974-80
<u>GUYANDOTTE RIVER BASIN</u>				
Guyandotte River:				
Allen Creek at Allen Junction	03202240	8.43	sK, t, s, U pH	1978-80 1978-79

DISCONTINUED CONTINUOUS-RECORD SURFACE-WATER QUALITY STATIONS,
LISTED IN DOWNSTREAM ORDER--Continued

	Station number	Drainage area (mi ²)	Type of record	Period of record
<u>OHIO RIVER BASIN</u> --Continued				
<u>GUYANDOTTE RIVER BASIN</u> --Continued				
Slab Fork:				
Marsh Fork at Maben.....	03202245	4.85	sK,t,s,U	1978-80
			pH	1978-79
Still Run at Itmann.....	03202255	7.12	sK,t,s,U	1978-80
			pH	1978-79
Rockcastle Creek:				
Bearhole Fork at Pineville	03202310	6.27	sK,t,s,U	1978-80
			pH	1978-79
Guyandotte River near Baileysville	03202400	306	sK	1971-79
			t	1971-82
			s	1973-79
Indian Creek at Fanrock	03202490	41.3	sK, s	1974-78
			t	1975-81
Clear Fork:				
Laurel Fork:				
Milam Fork at McGraws.....	03202695	6.64	sK, U	1978-80
			pH, t	1978-79
			s	1979-80
Clear Fork at Clear Fork.....	03202750	124	sK, s	1974-78
			t	1975-81
Guyandotte River at Logan	03203600	833	sK, t	1976
			s	1975-76
Island Creek:				
Island Creek at Logan.....	03203700	---	sK,pH,t,U	1976-77
			s	1977
Guyandotte River at Branchland	03204000	1,224	sK,t,s,U	1976-77
Guyandotte River at Barboursville.....	03204200	1,309	sK, t, U	1976-77
Mud River near Milton.....	03204500	256	sK, t	1976-77
			s	1975-77
Mud River at Barboursville	03205180	---	sK, t, U	1976-77
Guyandotte River at Huntington	03205200	---	t	1960-61
<u>TWELVEPOLE CREEK BASIN</u>				
East Fork Twelvepole Creek near Dunlow	03206600	38.5	sK, t	1974-76
West Fork Twelvepole Creek above Wayne at Echo.....	03206980	108	sK	1979-80
			t	1980
			s	1980-81
<u>BIG SANDY RIVER BASIN</u>				
Tug Fork:				
Indian Creek:				
Puncheoncamp Branch at Leckie.....	03212558	1.36	s	1981
South Fork:				
Freeman Branch near Skygusty	03212567	0.30	s	1981
Sandlick Creek:				
Left Fork Sandlick Creek at Elbert.....	03212580	1.78	s	1981
Right Fork Sandlick Creek near Gary.....	03212585	1.21	s	1981
Tug Fork at Welch.....	03212600	85.9	sK	1979-80
			t	1974-76
			s	1979-81

DISCONTINUED CONTINUOUS-RECORD SURFACE-WATER QUALITY STATIONS,
LISTED IN DOWNSTREAM ORDER--Continued

	Station number	Drainage area (mi ²)	Type of record	Period of record
<u>OHIO RIVER BASIN</u> --Continued				
<u>BIG SANDY RIVER BASIN</u> --Continued				
Elkhorn Creek at Maitland.....	03212700	69.9	sK	1979
			s	1979-80
Elkhorn Creek Tributary at Welch.....	03212703	0.63	s	1981
Dry Fork at Avondale	03212985	225	sK, s	1979-81
			t	1979
Tug Fork at Litwar.....	03213000	504	sK	1980
Panther Creek:				
Crane Creek near Panther	03213495	0.54	s	1981
Panther Creek near Panther.....	03213500	31.0	sK	1975
				1980-81
			t	1973-75
Pigeon Creek near Lenore.....	03213800	93.9	sK, t, s	1979-81
Tug Fork near Kermit.....	03214000	1,188	t	1956
Tug Fork at Kermit	03214500	1,280	t	1947-81
Rockcastle Creek at Inez, Ky.....	03214700	63.1	s	1980-81
Tug Fork at Glenhayes	03214900	1,507	sK, s	1977-80
			t	1979-80

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WATER RESOURCES DATA - WEST VIRGINIA, 1994

INTRODUCTION

The Water Resources Division of the U.S. Geological Survey, in cooperation with State agencies, obtains a large amount of data pertaining to the water resources of West Virginia 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 - West Virginia."

This report includes records on both surface and ground water in the State. Specifically, it contains: Discharge records for 70 streamflow-gaging stations; annual maximum discharge at 18 crest-stage partial-record stations; change in contents for 1 reservoir; water-quality records for 12 stations; and water-level records for 29 observation wells. 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 sites. These data represent that part of the National Water Data System collected by the U.S. Geological Survey and cooperating State and Federal agencies in West Virginia.

This series of annual reports for West Virginia began with the 1961 water year with a 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 introduction of this series and for several water years concurrent with it, water resources data for West Virginia 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, Parts 6A and 6B." For the 1961 through 1970 water years, the data were published in two 5-year reports. 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 the U. S. Geological Survey, Books and Open-File Reports, Federal Center, Box 25425, Denver, Colorado 80225.

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 WV-94-1." 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, Virginia 22161. Beginning with the 1990 water year, all water-data reports will also be available on Compact Disc - Read Only Memory (CD-ROM). All data reports published for the current water year for the entire Nation, including Puerto Rico and the Trust Territories, will be reproduced on a single CD-ROM disc.

Additional information, including current prices, for ordering specific reports may be obtained from the District Chief at the address given on the back of the title page or by telephone (304) 347-5130. A limited number of CD-ROM discs will be available for sale by the Books and Open-File Reports Section, U.S. Geological Survey, Federal Center, Box 25425, Denver, Colorado 80225.

COOPERATION

The U.S. Geological Survey and agencies of the State of West Virginia have had joint-funding agreements for the collection of water-resource records since 1930. Organizations that assisted in collecting the data in this report through joint-funding agreement with the Survey are:

West Virginia Division of Environmental Protection, David C. Callaghan, Director through Office of Water Resources, Mark A. Scott, Chief.

West Virginia Geological and Economic Survey, Larry D. Woodfork, Director.

WATER RESOURCES DATA - WEST VIRGINIA, 1994

West Virginia Division of Highways, Fred VanKirk, Acting Commissioner.

Morgantown Utility Board, Thomas E. Urquhart, General Manager.

Assistance with funds or services was given by the U.S. Army Corps of Engineers, Natural Resources Conservation Service, National Park Service, Federal Power Commission, and U.S. Environmental Protection Agency.

Assistance was also furnished by the National Weather Service of the U.S. Department of Commerce.

Organizations that provided data are acknowledged in station descriptions.

SUMMARY OF HYDROLOGIC CONDITIONS

Surface Water

Monthly and annual streamflow for the 1994 water year and the period of record are shown in figures 1 and 2 for four representative streamflow-gaging stations on streams in West Virginia. Annual mean streamflow was generally above the long term average throughout the State for the entire year. Many streams flowed greater than 150 percent above normal (table 1).

A storm system produced up to 30 inches of snow over northwest West Virginia February 2-5, 1994. A storm system from the lower Mississippi Valley produced up to 1.5 inches of rainfall over this area on February 7-8 resulting in snowmelt. The subsequent runoff produced peak flows at several streams in the Monongahela River basin that exceeded the 50-year recurrence interval. Several streams in the Kanawha River basin had peak flows that exceeded the 10-year recurrence interval during this mid February period. A storm system on May 6-9 produced up to 4.5 inches of rainfall in the central part of the State and resulted in peak flow on the Little Kanawha River near Wildcat in excess of the 100-year recurrence interval.

Base flows of West Virginia streams in the 1994 water year were far above the 7-day minimum mean streamflow for the 10-year recurrence interval (table 1). This is the base flow level used as the low-flow design criteria for the State. Lowest base flows occurred in streams in the eastern parts of the State.

Ground-Water Levels

Ground-water levels throughout the State were generally above average during the winter months and below average during the summer months. In the northern part of West Virginia, ground-water levels were below average except during November, January, February, April, and August when they were above average. In the eastern part of the State, ground-water levels were above average except for April to July, and September when they were below average. In the central part of the State, ground-water levels were below average except for October, November, March, and August when they were above average. In the southern part of the State, ground-water-levels were below average except during March when they were above average. Data were not available in the western part of the State for assessment of ground-water level trends.

Quality of Water

Data on quality of surface waters of West Virginia were obtained at four National Stream Quality Accounting Network (NASQAN) stations during the year. A National Water Quality Assessment (NAWQA) program was active in the Potomac River basin. A program to assess the quality of ground-water resources throughout West Virginia was conducted during the 1993 water year and data were published in the 1993 state report. The state of West Virginia has continued this program during the 1994 water year but the data were not available for publication in this report.

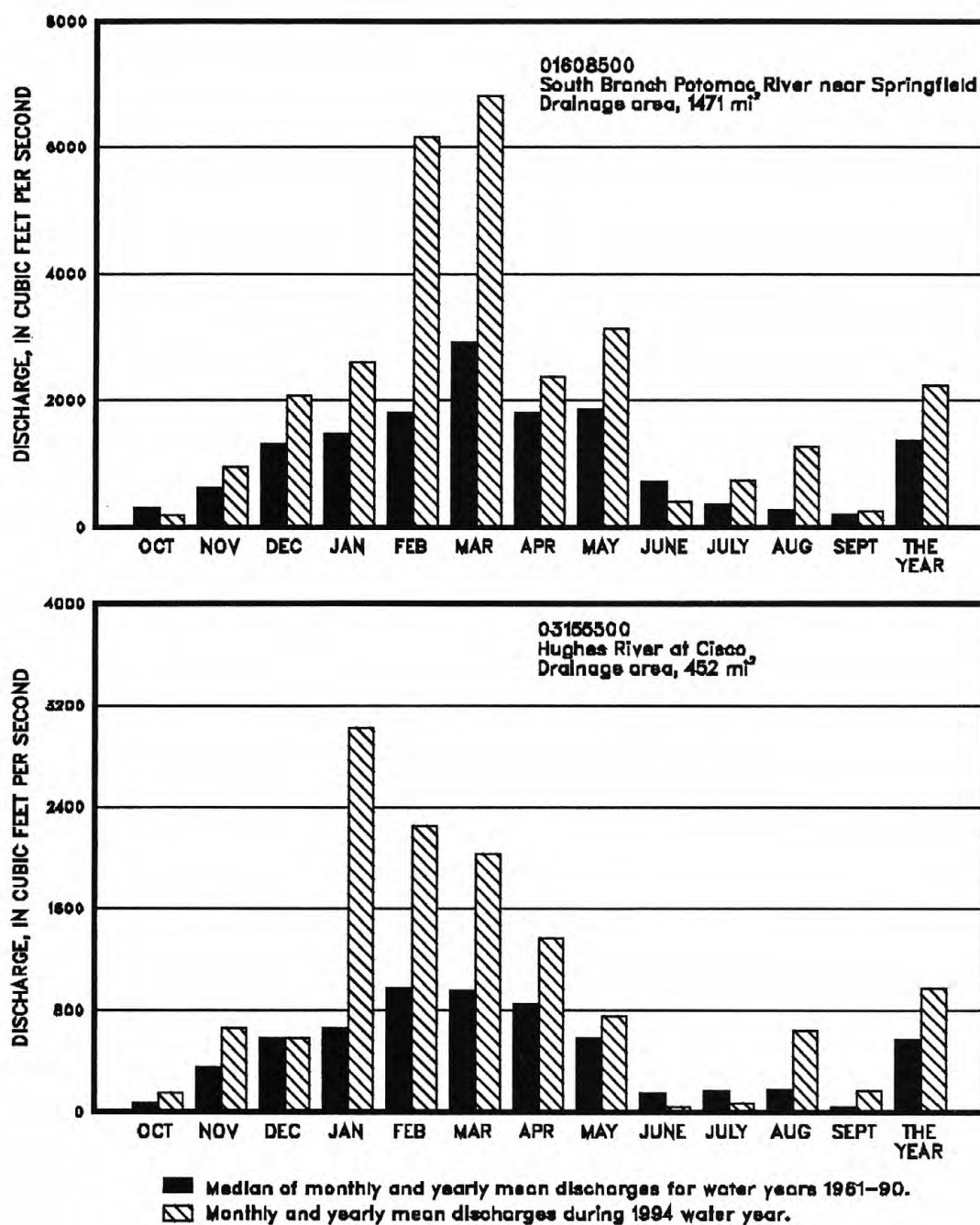


Figure 1.--Discharge at the South Branch Potomac River and the Hughes River index gaging stations during the 1994 water year compared to median discharge for the period 1961-1990.

WATER RESOURCES DATA - WEST VIRGINIA, 1994

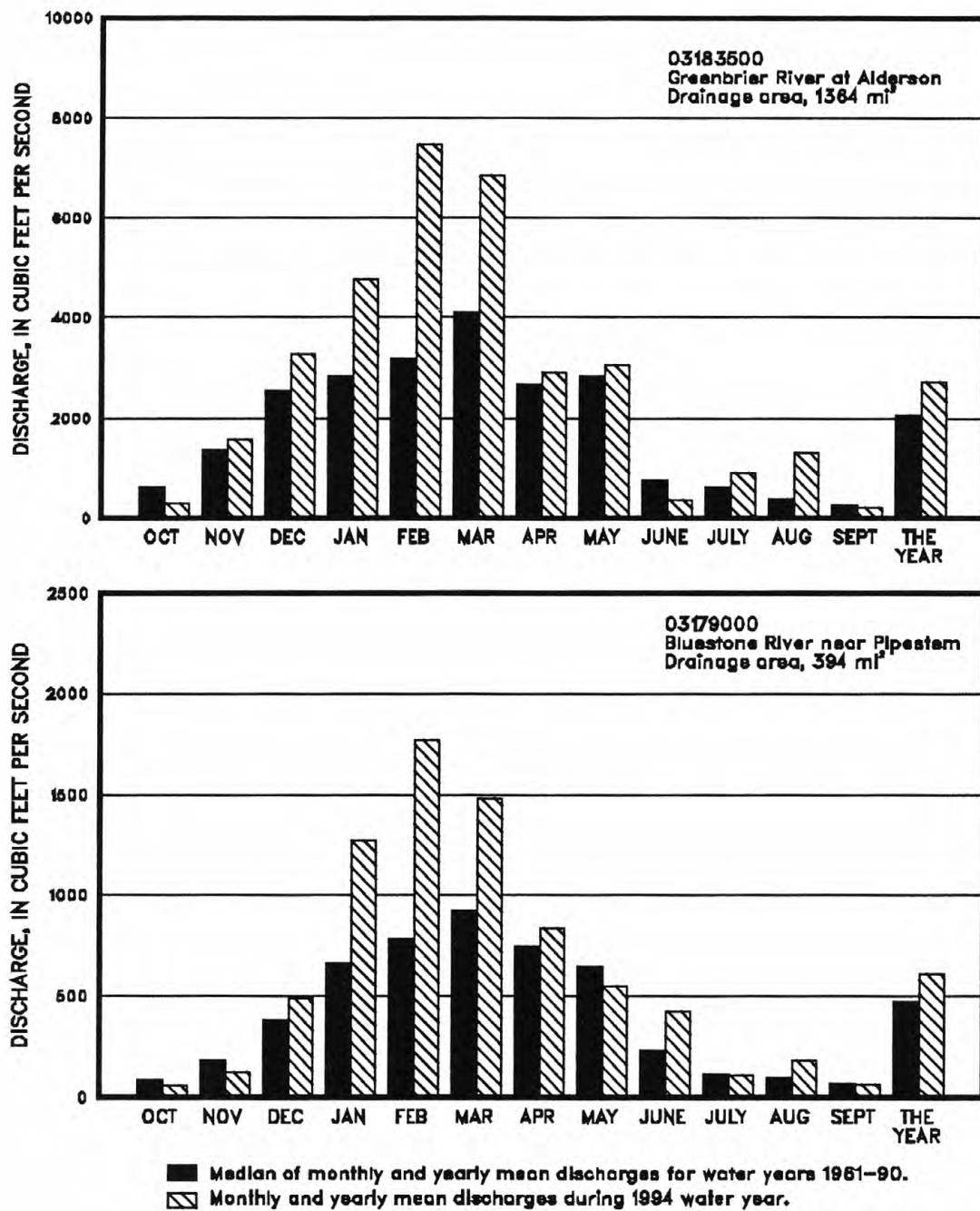


Figure 2.-- Discharge at the Greenbrier River and the Bluestone River index gaging stations during the 1994 water year compared to median discharge for the period 1961-1990.

WATER RESOURCES DATA - WEST VIRGINIA, 1994

Table 1. Mean, maximum, and minimum streamflow for water year 1994 and recurrence interval at selected stations.

[ft³/s, cubic feet per second; 7Q₁₀, 7-day minimum mean streamflow for 10-year recurrence interval; ---, unknown.]

Station number	-----Mean-----		-----Maximum-----		-----Minimum-----	
	Daily streamflow (ft ³ /s)	Percent of average	Peak streamflow (ft ³ /s)	Recurrence interval (years)	Instantaneous streamflow (ft ³ /s)	Percent of 7Q ₁₀ streamflow
<u>POTOMAC RIVER BASIN</u>						
01595000	250	145	7,290	---	21	500
01605500	270	157	5,850	<5	32	175
01606500	1,313	181	---	---	71	137
01611500	999	169	13,600	2	68	180
01616500	418	177	7,510	5	72	211
<u>MONONGAHELA RIVER BASIN</u>						
03050000	560	158	13,000	25	13	812
03052000	524	149	11,600	50	13	1,440
03053500	913	152	13,300	50	13	430
03056250	256	145	5,860	---	3.8	---
03069500	2,481	145	78,300	>50	142	---
03070500	598	143	6,440	<2	20	792
<u>LITTLE KANAWHA RIVER BASIN</u>						
03151400	357	155	12,000	>100	4.1	151
03155500	972	167	23,000	10	10	1,360
<u>KANAWHA RIVER BASIN</u>						
03179000	607	128	6,890	<2	33	248
03182500	1,340	152	27,400	<10	30	216
03186500	480	143	12,200	<10	11	480
03189100	1,869	129	39,600	<10	55	---
03190400	950	128	12,300	<5	35	207
03194700	976	139	21,900	25	36	263
03198500	864	165	13,900	<5	43	909
<u>GUYANDOTTE RIVER BASIN</u>						
03202400	492	116	6,870	<2	46	138
03202750	263	137	---	---	13	183
<u>BIG SANDY RIVER BASIN</u>						
03213700	1,642	145	24,700	<5	108	---

WATER RESOURCES DATA - WEST VIRGINIA, 1994

SPECIAL NETWORKS AND PROGRAMS

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

National Stream Quality Accounting Network (NASQAN) is a nationwide data-collection network designed by the U.S. Geological Survey to meet many of the information needs of government agencies and other groups involved in natural or regional water-quality planning and management. The 284 sites in NASQAN are generally located at the downstream ends of hydrologic accounting units designated by the U.S. Geological Survey Office of Water Data Coordination in consultation with the Water Resources Council. The objectives of NASQAN are (1) to obtain information on the quality and quantity of water moving within and from the United States through a systematic and uniform process of data collection, summarization, analysis, and reporting such that the data may be used for, (2) description of the areal variability of water quality in the Nation's rivers through analysis of data from this and other programs, (3) detection of changes or trends with time in the pattern of occurrence of water-quality characteristics, and (4) providing a nationally consistent data base useful for water-quality assessment and hydrologic research.

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

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

Assessment activities have begun in about two-thirds of the study units and ultimately will be conducted in 60 study units (major watersheds and aquifer systems) that represent a wide range of environmental settings nationwide and that account for a large percentage of the Nation's water use. A wide array of chemical constituents will be measured in ground water, surface water, streambed sediments, and fish tissues. The coordinated application of comparative hydrologic studies at a wide range of spatial and temporal scales will provide information for decision making by water-resources managers and a foundation for aggregation and comparison of findings to address water-quality issues of regional and national interest.

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

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

EXPLANATION OF THE RECORDS

The surface-water and ground-water records published in this report are for the 1994 water year that began October 1, 1993, and ended September 30, 1994. A calendar of the water year is provided on the inside of the front cover. The records contain streamflow data, stage and content data for lakes and reservoirs, water-quality data for surface and ground water, and ground-water-level data. The locations of the stations and wells where the data were collected are shown in figures 4 and 5. The following sections of the introductory text are presented to provide users with a more detailed explanation of how the hydrologic data published in this report were collected, analyzed, computed, and arranged for presentation.

WATER RESOURCES DATA - WEST VIRGINIA, 1994

Station Identification Numbers

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

Downstream Order System

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

The station-identification number is assigned according to 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. The complete eight-digit number for each station, such as 03198000, which appears just to the left of the station name, includes the two-digit Part number "03" plus the six-digit downstream-order number "198000." The Part number designates the major river basin; for example, Part "03" is the Kanawha River basin.

Latitude-Longitude System

The identification numbers for wells and miscellaneous surface-water sites are assigned according to the grid system of latitude and longitude. The number consists of 15 digits. The first six digits denote the degrees, minutes, and seconds of latitude, the next seven digits denote degrees, minutes, and seconds of longitude, and the last two digits (assigned sequentially) identify the wells or other sites within a 1-second grid. This site-identification number, once assigned, is a pure number and has no locational significance. In the rare instance where the initial determination of latitude and longitude are found to be in error, the station will retain its initial identification number; however, its true latitude and longitude will be listed in the LOCATION paragraph of the station description. (See figure 3 below.)

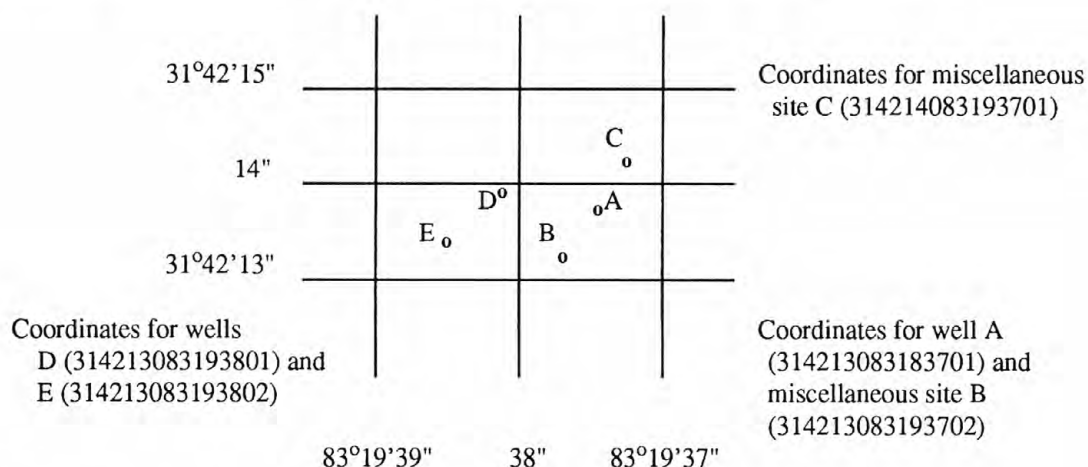


Figure 3. System for numbering wells and miscellaneous sites (latitude and longitude).

Well records furnished by the State of West Virginia also include the well number that is based on an indexing system used by the West Virginia State Water Control Board.

Records of Stage and Water Discharge

Records of stage and water discharge may be complete or partial. Complete 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. Complete records of lake or reservoir content, similarly, are those for which stage or content may be computed or estimated with reasonable accuracy for any time, or period of time. They may be obtained using a continuous stage-recording device, but need not be. Because daily mean discharges and end-of-day contents commonly are published for such stations, they are referred to as "daily 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 complete-record and crest-stage 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 complete-record gaging station on a stream or canal 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. The data obtained at a complete-record gaging station on a lake or reservoir consist of a record of stage and of notations regarding factors that may affect the relationship between stage and lake content. These data are used with stage-area and stage-capacity curves or tables to compute water-surface areas and lake storage.

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 adopted by the Geological Survey as a result of experience accumulated since 1880. These methods are described in standard textbooks, Water-Supply Paper 2175, and the U.S. Geological Survey Techniques of Water-Resources Investigations (TWRI's), Book 3, Chapter A1 through A19 and Book 8, Chapters A2 and B2. The methods are consistent with the American Society for Testing and Materials (ASTM) standards and generally follow the standards of the International Organization for Standards (ISO).

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

Daily mean discharges are computed by applying 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.

WATER RESOURCES DATA - WEST VIRGINIA, 1994

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 a 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 the lapsed 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

Streamflow data in this report are presented in a new format that is considerably different from the format in data reports prior to the 1992 water year. The major changes are that statistical characteristics of discharge now appear in tabular summaries following the water-year data table and less information is provided in the text or station manuscript above the table. These changes represent the results of a pilot program to reformat the annual water-data report to meet current user needs and data preferences.

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

Station manuscript

The manuscript provides, under various headings, descriptive information, such as station location; period of record; historical extremes outside the period of record; record accuracy; and other remarks pertinent to station operation and regulation. The following information, as appropriate, is provided with each continuous record of discharge or lake content. Comments 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 gaging station with respect to the cultural and physical features in the vicinity and with respect to the reference place mentioned in the station name is given. River mileages, given for only a few stations, were determined by methods given in "River Mileage Measurement," Bulletin 14, Revision of October 1968, prepared by the Water Resources Council or were provided by the U.S. Army Corps of Engineers.

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

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

WATER RESOURCES DATA - WEST VIRGINIA, 1994

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

GAGE.--The type of gage in current use, the datum of the current gage referred to sea level (see glossary), 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 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 paragraph 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. In addition, information may be presented pertaining to average discharge data for the period of record; to extremes data for the period of record and the current year; and, possibly, to other pertinent items. For reservoir stations, information is given on the dam forming the reservoir, the capacity, outlet works and spillway, and purpose and use of the reservoir.

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

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

PEAK DISCHARGES 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 equal to or greater than a selected base discharge are presented under this heading. The peaks equal to or 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 (address given on the back of the title page of this report) to determine if the published records were ever revised after the station was discontinued. Of course, if the data for a discontinued station were obtained by computer retrieval, the data would be current and 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.

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

Headings for AVERAGE DISCHARGE and EXTREMES FOR PERIOD OF RECORD have been deleted and the information contained in these paragraphs is now presented in the tabular summaries following the discharge table or in the REMARKS paragraph, as appropriate. No changes have been made to the data presentation of lake contents.

WATER RESOURCES DATA - WEST VIRGINIA, 1994

Data table of daily mean values

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

Statistics of monthly mean data

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

Summary statistics

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

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

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

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

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

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

WATER RESOURCES DATA - WEST VIRGINIA, 1994

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Identifying Estimated Daily Discharge

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 foot-note, "e Estimated," or by listing the dates of the estimated record in the REMARKS paragraph of the station description.

WATER RESOURCES DATA - WEST VIRGINIA, 1994

Accuracy of the Records

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

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

Daily mean discharges in this report are given to the nearest hundredth of a cubic foot per second for values less than 1 ft³/s; 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 used in the preparation of the records in this publication, such as discharge-measurement notes, gage-height records, temperature measurements, and rating tables is on file in the West Virginia District Office of the Mid-Atlantic Programs. Also, most of the daily mean discharges are in computer-readable form and have been analyzed statistically. Information on the availability of the unpublished information or on the results of statistical analyses of the published records may be obtained from the District office (address given on the back of the title page of this report).

Records of Surface-Water Quality

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

Classification of records

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

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

WATER RESOURCES DATA - WEST VIRGINIA, 1994

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 detailed in the TWRI Book 1, Chapter D2; Book 3, Chapter C2; and Book 5, Chapters A1, A3, and A4. These references are listed in the PUBLICATIONS ON TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS section of this report. These methods are consistent with ASTM standards and generally follow ISO standards.

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 based upon hourly punches beginning at 0100 hours and ending at 2400 hours for the day of record. More detailed records (hourly values) may be obtained from the West Virginia 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. In addition, water temperatures are taken at time of discharge measurements for water-discharge stations. For stations where water temperatures are taken manually once or twice daily, the water temperatures are taken at about the same time each day. Large streams have a small diurnal temperature change; shallow streams may have a daily range of several degrees and may follow closely the changes in air temperature. Some streams may be affected by waste-heat discharges.

At stations where recording instruments are used, either mean temperatures or maximum and minimum temperatures for each day are published. Water temperatures measured at the time of water-discharge measurements are on file in the West Virginia District Office.

WATER RESOURCES DATA - WEST VIRGINIA, 1994

Sediment

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

During periods of rapidly changing flow or rapidly changing concentration, samples may have been collected more frequently (twice daily or, in some instances, hourly). The published sediment discharges for days of rapidly changing flow or concentration were computed by the subdivided-day method (time-discharge weighted average). Therefore, for those days when the published sediment discharge value differs from the value computed as the product of discharge times mean concentration times 0.0027, the reader can assume that the sediment discharge for that day was computed by the subdivided-day method. For periods when no samples were collected, daily discharges of suspended sediment were estimated on the basis of water discharge, sediment concentrations observed immediately before and after the periods, and suspended-sediment loads for other periods of similar discharge. Methods used in the computation of sediment records are described in the TWRI Book 3, Chapters C1 and C3. These methods are consistent with ASTM standards and generally follow ISO standards.

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

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

Laboratory Measurements

Sediment samples, samples for biochemical-oxygen demand (BOD), samples for indicator bacteria, and daily samples for specific conductance are analyzed locally. All other samples are analyzed in the Geological Survey laboratory in Arvada, Colorado or Doraville, Georgia. Methods used to analyze sediment samples and to compute sediment records are described in TWRI Book 5, Chapter C1. Methods used by the U.S. Geological Survey laboratories are given in the TWRI Book 1, Chapter D2; Book 3, Chapter C2; and Book 5, Chapters A1, A3, A4, and A5. These methods are consistent with ASTM standards and generally follow ISO standards.

Data Presentation

For continuing-record stations, information pertinent to the history of station operation is provided in descriptive headings preceding the tabular data. These descriptive headings give details regarding location, drainage area, period of record, type of data available, instrumentation, general remarks, cooperation, and extremes for 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.

WATER RESOURCES DATA - WEST VIRGINIA, 1994

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

Only water-level data from a national network of observation wells are given in this report. These data are intended to provide a sampling and historical record of water-level changes in the Nation's most important aquifers. Locations of the observation wells in this network in West Virginia are shown in figure 5.

WATER RESOURCES DATA - WEST VIRGINIA, 1994

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 township-range 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 every fifth day and the end of each month (eom).

Water levels are reported to as many significant figures as can be justified by the local conditions. For example, in a measurement of a depth to water of several hundred feet, the error of determining the absolute value of the total depth to water may be a few tenths of a foot, whereas the error in determining the net change of water level between successive measurements may be only a hundredth or a few hundredths of a foot. For lesser depths to water, the accuracy is greater. Accordingly, most measurements are reported to a hundredth of a foot, but some are given 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); a landline location designation; the hydrologic-unit number; the distance and direction from a geographic point of reference; and the owner's name.

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

WELL CHARACTERISTICS.--This entry describes the well in terms of depth, diameter, casing depth 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) sea level; 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.

WATER RESOURCES DATA - WEST VIRGINIA, 1994

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 and all taped measurements of water level are listed. For wells equipped with recorders, only abbreviated tables are published; generally, only water level lows are listed for every fifth day and at the end of the month (eom). The highest and lowest water levels of the water year and their dates of occurrence are shown on a line below the abbreviated table. Because all values are not published for wells with recorders, the extremes may be values that are not listed in the table. Missing records are indicated by dashes in place of the water level.

Records of Ground-Water Quality

Records of ground-water quality in this report differ from other types of records in that, for most sampling sites they consist of only one set of measurements for the water year. The quality of ground water ordinarily changes only slowly; therefore, for most general purposes, one annual sampling, or only a few samples taken at infrequent intervals during the year, is sufficient. Frequent measurement of the same constituents is not necessary unless one is concerned with a particular problem, such as monitoring for trends in nitrate concentration. In the special cases where the quality of ground water may change more rapidly, more frequent measurements are made to identify the nature of the changes.

Data Collection and Computation

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

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

Data Presentation

The records of ground-water quality are published in a section titled QUALITY OF GROUND WATER immediately following the ground-water-level records. Data for quality of ground water are listed alphabetically by County and are identified by well number. The prime identification number for wells sampled is the 15-digit number derived from the latitude-longitude locations. No descriptive statements are given for ground-water-quality records; however, the well number, depth of well, date of sampling, and other pertinent data are given in the table containing the chemical analyses of the ground water. The REMARK codes listed for surface-water-quality records are also applicable to ground-water-quality records.

WATER RESOURCES DATA - WEST VIRGINIA, 1994

ACCESS TO WATSTORE DATA

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

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

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

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

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

DEFINITION OF TERMS

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

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

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

Algae are mostly aquatic single-celled, colonial, or multicelled 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, while 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 all the organisms that produce colonies with a golden-green metallic sheen within 24 hours when incubated at 35°C plus or minus 1.0°C on M-Endo medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample.

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

Fecal streptococcal bacteria are bacteria found also in the intestine 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 plus or minus 1.0°C on KF-streptococcus medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample.

Bed material is the sediment mixture 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 micro-organisms, 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.

WATER RESOURCES DATA - WEST VIRGINIA, 1994

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 mile (g/m^2).

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

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

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

Bottom material: See Bed material.

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

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

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

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

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

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

Cubic foot per second day (ft^3/d) is the volume of water represented by a flow of 1 cubic foot per second for 24 hours. It is equivalent to 86,400 cubic feet, approximately 1.9835 acre-feet, about 646,000 gallons, or 2,445 cubic meters.

Cubic feet per second per square mile [$(\text{ft}^3/\text{s})/\text{mi}^2$] 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.

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.

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

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

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

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

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

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

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

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

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

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

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

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

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

WATER RESOURCES DATA - WEST VIRGINIA, 1994

Methylene blue active substances (MBAS) are apparent detergents. The determination depends on the formation of a blue color when methylene blue dye reacts with synthetic anionic detergent compounds. (See note on page 35).

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

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

Microsiemens per centimeter ($\mu\text{S/CM}$) at 25°C are the units of measure for specific conductance. The microsiemen is numerically the same as the micromho.

Milligrams per liter (MG/L , mg/L) is a unit for expressing the concentration of chemical constituents in solution. Milligrams per liter represents 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 dry sediment per liter of water-sediment mixture.

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

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

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

Nephelometric turbidity units (NTU) are the unit of measure of turbidity. It is based on use of a standard suspension of Formazin.

Organism is any living entity.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

WATER RESOURCES DATA - WEST VIRGINIA, 1994

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

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

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

Milligrams of oxygen per area or volume per unit time [$\text{mg O}_2/(\text{m}^2\text{-time})$] for periphyton and macrophytes and [$\text{mg O}_2/(\text{m}^3\text{-time})$] for phytoplankton are the units for expressing primary productivity. They define production and respiration rates as estimated from changes in the measured dissolved-oxygen concentration. The oxygen light and dark bottle method is preferred if the rate of primary production is sufficient for accurate measurements to be made within 24 hours. Unit time may be either the hour or day, depending on the incubation period.

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

Recoverable from bottom material is the amount of a given constituent that is in solution after a representative sample of bottom material has been digested by a method (usually using an acid or mixture of acids) that results in dissolution of 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.

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

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.

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

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

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

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

WATER RESOURCES DATA - WEST VIRGINIA, 1994

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

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

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

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

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

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

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

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

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

Solute is any substance that is dissolved in water.

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

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

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

Substrate is the physical surface upon which an organism lives.

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

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

WATER RESOURCES DATA - WEST VIRGINIA, 1994

Surface area of a lake is that area outlined on the latest U.S.G.S. 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 the part (0.1 to 0.2 ft) of the bed material that is sampled using U.S. Series Bed-Material Samplers.

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

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

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

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

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

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

Kingdom.....Animal
Phylum.....Arthropoda
ClassInsecta
Order.....Ephemeroptera
Family.....Ephemeridae
Genus.....Hexagenia
Species.....Hexagenia limbata

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

Time-weighted average is computed by multiplying the number of days in the sampling period by the concentrations of individual constituents for the corresponding period and dividing the sum of the products by the total number of days. A time-weighted average represents the composition of water 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 of the constituent, in milligrams per liter, by 0.00136.

Tons per day (T/DAY) is the quantity of a 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 determined all of the constituent in the sample.)

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

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

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

Turbidity is a measurement of the intensity of light scattered by a water sample. Suspended particulate matter in the sample causes scattering of light passing through the sample. Turbidity is measured by comparison of the light scattering intensity of a water sample to that of a standard reference suspension. The greater the intensity of the scattered light, the greater the turbidity. Turbidity is expressed in nephelometric turbidity units (NTU).

Water year in Geological Survey reports dealing with surface-water supply is the 12-month period October 1 through September 30. The water year is designated by the calendar year in which it ends and which includes 9 of the 12 months. Thus, the year ending September 30, 1992, is called the "1992 water year."

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

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

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

PUBLICATIONS ON TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS

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

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

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- 2-D2. *Application of seismic-refraction techniques to hydrologic studies*, by F. P. Haeni: USGS--TWRI Book 2, Chapter D2. 1988. 86 pages.
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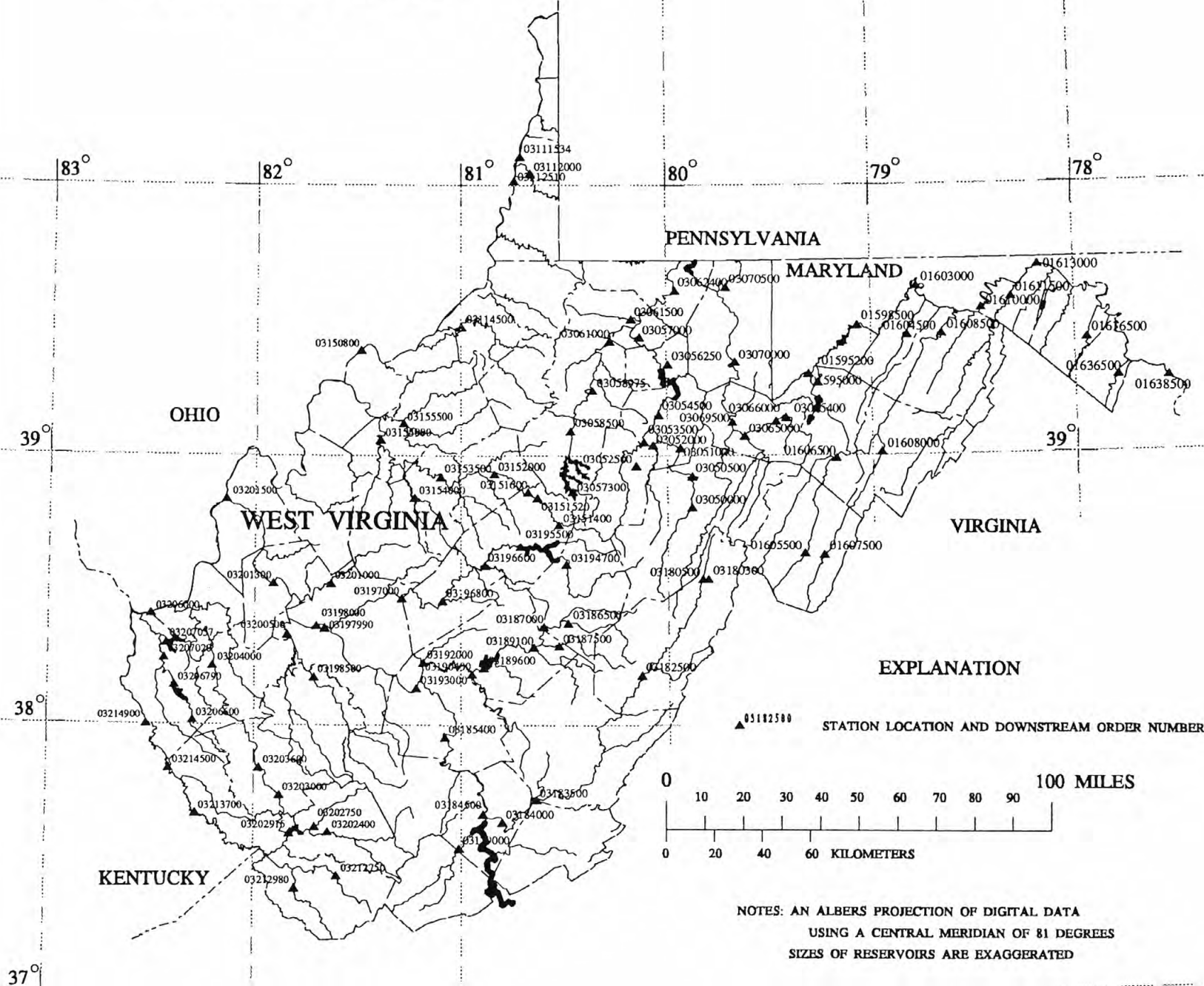
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- 5-C1. *Laboratory theory and methods for sediment analysis*, by H. P. Guy: USGS--TWRI Book 5, Chapter C1. 1969. 58 pages.
- 6-A1. *A modular three-dimensional finite-difference ground-water flow model*, by M. G. McDonald and A. W. Harbaugh: USGS--TWRI Book 6, Chapter A1. 1988. 586 pages.
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- 6-A3. *A modular finite-element model (MODFE) for areal and axisymmetric ground-water-flow problems, Part 1: Model Description and User's Manual*, by L. J. Torak: USGS--TWRI Book 6, Chapter A3. 1993. 136 pages.
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- 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.
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- 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.
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Figure 4.—Location of surface-water gaging, stage, and water-quality stations in West Virginia



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WATER RESOURCES DATA - WEST VIRGINIA 1994

SURFACE-WATER-DISCHARGE AND SURFACE-WATER-QUALITY RECORDS

Remarks Codes

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

<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

Dissolved Trace-Element Concentrations

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

POTOMAC RIVER BASIN

01595000 NORTH BRANCH POTOMAC RIVER AT STEYER, MD

LOCATION.--Lat 39°18'07", long 79°18'26", Garrett County, Hydrologic Unit 02070002, on left bank 0.3 mi southeast of Steyer, 0.4 mi downstream from Steyer Run, 2.0 mi northeast of Gorman, and at mile 81.8.

DRAINAGE AREA.--73.0 mi².

PERIOD OF RECORD.--July 1956 to current year.

GAGE.--Water-stage recorder. Datum of gage is 2,276.01 ft above sea level.

REMARKS.--Records fair except those for estimated daily discharges (ice effect, missing record), which are poor. Several measurements of water temperature were made during the year. Water-quality records for some prior periods have been collected at this location.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Oct. 15, 1954, reached a stage of 13.0 ft, from floodmarks; discharge, 11,300 ft³/s, from rating curve extended as explained above.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,200 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage Height (ft)	Date	Time	Discharge (ft ³ /s)	Gage Height (ft)
Feb. 9	0645	*7,290	*10.40	May 9	0045	2,740	6.78

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	41	87	147	333	260	e290	e390	402	125	71	138	221
2	30	68	140	215	218	e260	e360	237	81	59	123	140
3	36	81	123	155	216	e240	e330	192	93	109	107	114
4	36	126	139	158	202	e230	e290	291	87	221	69	124
5	25	214	925	192	165	e220	e270	299	78	106	230	77
6	24	281	466	191	146	e210	e260	402	64	61	196	64
7	24	170	305	774	136	e500	e380	770	60	71	141	70
8	27	130	240	760	312	e1300	e280	1400	63	110	124	63
9	24	104	207	387	4530	e750	e250	571	60	60	125	59
10	28	90	205	324	e1500	e1100	e600	378	58	70	108	62
11	27	81	226	317	e700	e530	e520	284	47	47	81	57
12	52	73	192	300	e450	e450	e460	269	54	37	74	41
13	52	86	178	293	e370	e430	e1300	218	53	32	65	43
14	37	166	167	235	e320	e500	e680	190	51	44	80	39
15	33	125	165	171	e290	e740	e550	181	47	79	96	31
16	31	110	248	222	e275	e700	e650	363	59	60	64	32
17	26	144	217	309	e265	e470	e480	231	114	45	234	33
18	40	344	195	286	e260	e480	e350	202	40	46	227	45
19	39	219	251	298	e300	e450	e280	181	30	38	157	32
20	39	184	209	340	e450	e400	e220	171	40	35	131	35
21	71	148	198	291	e900	e650	e190	156	63	102	122	38
22	93	124	170	340	e850	e1200	172	142	87	70	360	39
23	58	106	168	263	e1000	e900	163	136	47	126	223	36
24	49	98	154	e300	e970	e1100	152	122	79	70	167	42
25	45	93	135	e340	e650	e700	146	150	105	63	145	33
26	37	88	140	e370	e470	e480	140	338	53	220	154	34
27	33	170	184	405	e380	e700	151	307	84	346	134	36
28	32	451	166	941	e340	e1100	154	194	113	460	106	32
29	31	227	220	856	---	e750	139	167	71	237	91	30
30	65	176	221	447	---	e550	161	152	138	224	72	30
31	126	---	349	329	---	e440	---	138	---	162	88	---
TOTAL	1311	4564	7050	11142	16925	18820	10468	9234	2144	3481	4232	1732
MEAN	42.3	152	227	359	604	607	349	298	71.5	112	137	57.7
MAX	126	451	925	941	4530	1300	1300	1400	138	460	360	221
MIN	24	68	123	155	136	210	139	122	30	32	64	30
CFSM	.58	2.08	3.12	4.92	8.28	8.32	4.78	4.08	.98	1.54	1.87	.79
IN.	.67	2.33	3.59	5.68	8.62	9.59	5.33	4.71	1.09	1.77	2.16	.88

e Estimated

POTOMAC RIVER BASIN

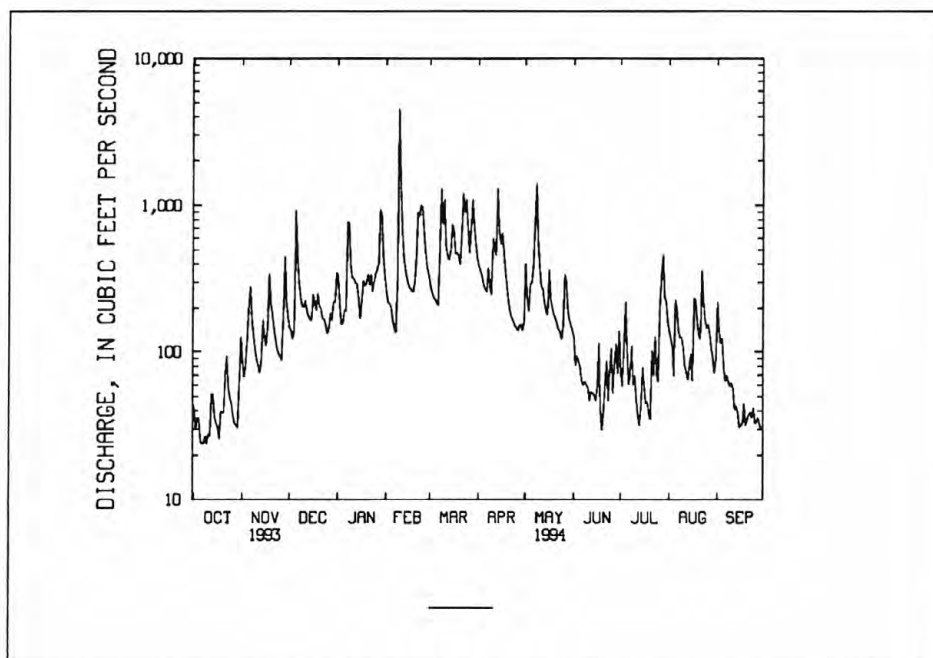
01595000 NORTH BRANCH POTOMAC RIVER AT STEYER, MD--Continued

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

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	73.5	137	232	233	262	346	285	192	118	89.7	71.3	49.7
MAX	316	588	527	569	604	885	573	419	442	340	334	238
(WY)	1977	1986	1973	1974	1994	1963	1958	1967	1981	1978	1956	1971
MIN	12.8	26.2	56.7	41.8	65.9	112	106	62.5	15.5	14.3	6.72	5.99
(WY)	1964	1966	1966	1977	1993	1990	1968	1965	1965	1965	1965	1959

SUMMARY STATISTICS	FOR 1993 CALENDAR YEAR		FOR 1994 WATER YEAR		WATER YEARS 1956 - 1994	
ANNUAL TOTAL	52841.4		91103			
ANNUAL MEAN	145		250		173	
HIGHEST ANNUAL MEAN					250	
LOWEST ANNUAL MEAN					115	
HIGHEST DAILY MEAN	1420	Mar 24	4530	Feb 9	4530	Feb 9 1994
LOWEST DAILY MEAN	7.2	Aug 27	24	(a)	3.1	Sep 9 1965
ANNUAL SEVEN-DAY MINIMUM	9.7	Aug 23	26	Oct 5	3.6	Sep 23 1959
INSTANTANEOUS PEAK FLOW			7290	Feb 9	(b) 11500	Nov 5 1985
INSTANTANEOUS PEAK STAGE			10.40	Feb 9	13.14	Nov 5 1985
INSTANTANEOUS LOW FLOW			21	Sep 12	2.9	Sep 10 1965
ANNUAL RUNOFF (CFSM)	1.98		3.42		2.37	
ANNUAL RUNOFF (INCHES)	26.93		46.43		32.24	
10 PERCENT EXCEEDS	281		524		386	
50 PERCENT EXCEEDS	73		162		102	
90 PERCENT EXCEEDS	22		39		20	

a Oct. 6, 7, 9.

b From rating curve extended above 3,000 ft³/s on basis of slope-area measurement at gage height 10.30 ft.

POTOMAC RIVER BASIN

.01595200 STONY RIVER NEAR MOUNT STORM, WV

LOCATION.--Lat 39°16'10", long 79°15'45", Grant County, Hydrologic Unit 02070002, on left bank 100 ft downstream from highway bridge on U.S. Highway 50, 1.0 mi west of Mount Storm, and at mile 6.4.

DRAINAGE AREA.--48.8 mi².

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Datum of gage is 2,554.54 ft above sea level.

REMARKS.--Water-discharge records fair except those for estimated daily discharges (backwater from leaves and beaverdams), which are poor. Prior to June 1987, flow regulated by Stony River Reservoir, 14.0 mi upstream from station. Regulation since 1963 by Virginia Electric and Power Company dam (Mount Storm Lake), 4.0 mi upstream from station.

PEAK DISCHARGE FOR CURRENT YEAR.--Peak discharge, 4,500 ft³/s, Feb. 9, gage height, 9.89 ft.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e10	e13	69	32	265	86	199	94	36	10	70	37
2	e8.0	e12	57	27	158	86	186	73	33	9.3	68	31
3	e9.0	e13	59	29	62	88	200	95	29	11	57	27
4	e9.0	e15	61	46	68	128	177	576	29	15	44	28
5	e7.0	e22	391	51	60	529	148	230	22	10	99	26
6	e6.5	e35	414	43	39	51	161	176	21	9.0	66	27
7	e6.4	25	375	134	39	112	609	767	22	18	44	28
8	e7.4	20	332	221	111	280	129	1480	19	18	38	27
9	e6.3	19	266	815	3210	545	66	255	18	14	36	22
10	e7.5	22	192	61	737	644	122	310	17	14	32	21
11	e9.0	19	54	55	581	264	172	456	16	10	28	20
12	e14	22	45	63	482	244	425	254	14	8.8	31	19
13	e12	21	40	63	400	222	515	105	13	8.5	24	20
14	e10	28	41	58	810	175	304	83	17	9.4	16	19
15	e9.0	21	45	55	305	199	144	76	14	10	14	19
16	e8.0	25	76	55	50	194	165	125	14	8.9	12	19
17	e7.5	36	64	60	43	231	185	93	15	8.8	162	19
18	e9.0	59	58	63	52	358	187	83	12	9.3	131	20
19	e11	34	74	63	66	289	180	75	12	8.5	119	19
20	e10	27	89	63	110	138	117	69	10	8.0	159	22
21	e13	21	106	63	201	259	96	82	15	11	384	22
22	e17	19	91	63	217	416	84	84	16	15	135	19
23	e11	20	86	65	959	396	74	78	18	26	91	20
24	e9.0	20	96	81	657	858	59	71	20	15	66	16
25	e8.0	20	110	357	127	725	56	68	21	11	50	13
26	e7.4	15	96	708	107	400	63	74	12	32	46	13
27	e7.1	97	85	79	95	1350	57	65	14	66	41	17
28	e7.0	176	79	211	86	1130	47	51	13	76	32	15
29	e6.9	63	71	215	---	886	49	43	12	50	29	14
30	e15	62	36	323	---	303	44	38	13	101	27	14
31	e24	---	39	311	---	189	---	36	---	65	29	---
TOTAL	302.0	1001	3697	4533	10097	11775	5020	6165	537	686.5	2180	633
MEAN	9.74	33.4	119	146	361	380	167	199	17.9	22.1	70.3	21.1
MAX	24	176	414	815	3210	1350	609	1480	36	101	384	37
MIN	6.3	12	36	27	39	51	44	36	10	8.0	12	13

e Estimated

POTOMAC RIVER BASIN

01595200 STONY RIVER NEAR MOUNT STORM, WV--Continued

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

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	50.1	89.3	113	113	141	221	162	118	69.5	45.4	29.6	29.9
MAX	234	669	301	239	361	537	371	271	237	205	104	140
(WY)	1977	1986	1973	1974	1994	1963	1987	1988	1981	1978	1975	1979
MIN	3.36	7.00	10.8	20.9	21.3	46.9	62.8	28.3	9.91	4.36	3.92	3.89
(WY)	1992	1992	1966	1981	1978	1990	1967	1964	1964	1968	1988	1985

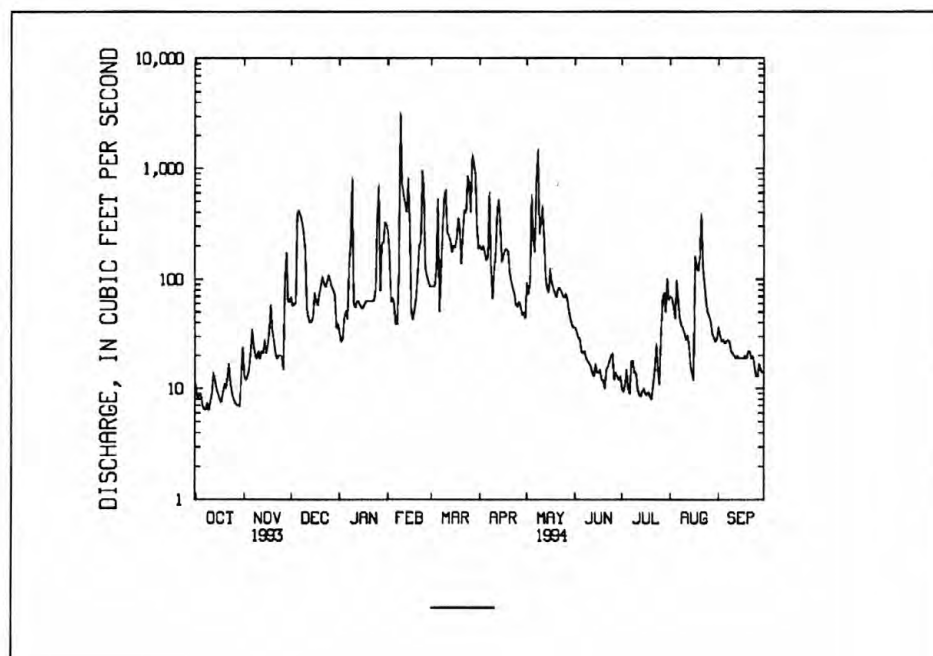
SUMMARY STATISTICS	FOR 1993 CALENDAR YEAR		FOR 1994 WATER YEAR		WATER YEARS 1962 - 1994	
ANNUAL TOTAL	33435.4		46626.5			
ANNUAL MEAN	(a) 91.6		(a) 128		(a) 98.3	
HIGHEST ANNUAL MEAN					134	
LOWEST ANNUAL MEAN					42.0	
HIGHEST DAILY MEAN	1460		3210		9880	
LOWEST DAILY MEAN	1.7		6.3		1.3	
ANNUAL SEVEN-DAY MINIMUM	2.9		7.2		1.7	
INSTANTANEOUS PEAK FLOW			4500		(b) 14000	
INSTANTANEOUS PEAK STAGE			9.88		(c) 16.41	
INSTANTANEOUS LOW FLOW			UNKNOWN		1.3	
10 PERCENT EXCEEDS	199		316		230	
50 PERCENT EXCEEDS	25		51		48	
90 PERCENT EXCEEDS	5.7		10		8.6	

a Unadjusted.

b From rating curve extended above 7,500 ft³/s on basis of slope-area measurement of peak flow.

c From floodmarks.

d Aug. 22, 23, 28, 29, 1988.



POTOMAC RIVER BASIN

01595200 STONY RIVER NEAR MOUNT STORM, WV--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1962 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: December 1961 to March 1974, September 1974 to current year.

INSTRUMENTATION.--Temperature recorder (continuous ethyl alcohol - actuated thermograph) since December 1961.

REMARKS.--Upstream reservoir regulation defined on page 38 REMARKS sections.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 27.5°C, Aug. 14, 1984, July 19, 1990; minimum, 0.0°C on many days during winter periods.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 25.0°C, Aug. 21-22; minimum, 0.0°C, Jan. 20-25.

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
DAILY MAXIMUM VALUES

[illegible]

POTOMAC RIVER BASIN

01595200 STONY RIVER NEAR MOUNT STORM, WV--Continued

WATER-QUALITY RECORDS

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
DAILY MINIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.5	5.0	4.5	2.0	6.5	2.5	7.0	13.0	18.5	18.0	21.5	21.5
2	10.0	4.5	4.5	2.0	3.0	1.5	7.5	12.0	17.5	18.0	23.0	21.0
3	12.0	4.5	5.5	2.0	1.5	1.5	9.0	12.5	15.5	19.0	22.0	19.0
4	10.0	5.0	7.5	2.0	1.5	3.0	8.5	13.0	17.0	18.0	22.5	18.5
5	11.5	5.5	7.5	2.0	2.0	5.5	7.5	12.5	17.5	19.0	21.5	18.5
6	10.0	6.0	9.5	1.5	2.0	4.0	9.5	12.5	18.5	20.5	19.0	18.5
7	10.5	6.0	10.5	1.0	1.5	3.5	9.5	12.5	e19.0	20.5	19.0	19.0
8	11.5	4.0	10.5	1.0	1.5	3.5	8.0	13.0	e19.0	20.5	20.0	19.0
9	12.0	4.0	10.5	2.0	1.5	4.0	7.5	12.5	15.5	21.0	20.5	18.5
10	10.0	4.0	10.0	2.0	4.0	6.0	9.0	15.0	15.0	21.0	21.5	18.5
11	7.5	4.0	4.0	1.5	4.0	6.0	8.5	16.0	16.0	19.0	20.5	18.0
12	8.5	4.0	3.5	2.0	5.0	6.5	9.5	15.5	16.5	17.5	20.0	17.0
13	8.5	5.0	3.5	2.5	5.0	7.5	10.5	13.0	16.5	18.5	21.0	17.5
14	8.5	6.0	3.5	2.0	7.0	6.0	11.5	13.0	19.0	20.5	20.0	18.5
15	8.5	9.0	3.5	1.5	4.5	5.0	11.0	15.5	19.0	20.5	19.5	18.5
16	9.0	9.5	4.0	1.5	3.0	4.0	11.0	16.0	19.5	20.5	17.0	18.5
17	10.0	9.0	3.5	1.5	3.0	4.0	11.0	13.5	18.0	20.0	17.0	18.5
18	11.5	8.0	3.5	.5	3.0	6.5	11.0	13.5	19.5	19.5	17.0	17.5
19	11.5	7.0	4.5	.5	3.0	6.0	11.5	13.5	20.0	20.0	19.0	15.0
20	11.5	4.0	4.0	.0	3.5	4.5	11.5	13.5	20.0	20.5	23.0	15.0
21	11.5	3.5	4.5	.0	4.0	5.5	11.5	14.0	21.0	20.0	24.0	15.0
22	9.5	3.5	4.5	.0	4.0	5.5	11.0	15.5	21.0	19.5	20.5	15.5
23	8.0	3.5	4.5	.0	3.5	6.0	10.5	17.0	21.5	20.0	20.0	15.5
24	7.0	3.5	5.0	.0	3.5	7.5	11.0	17.0	21.5	20.0	20.0	15.5
25	7.0	3.5	6.0	.0	3.0	7.5	13.0	18.0	18.5	20.5	21.0	16.0
26	8.0	3.5	5.5	5.0	3.0	7.5	14.5	17.5	17.0	20.0	21.5	16.5
27	8.0	4.0	5.5	1.5	2.0	10.5	15.5	16.0	18.0	18.0	21.5	15.5
28	8.0	4.5	5.5	1.5	2.0	9.5	15.5	14.5	17.5	18.0	21.5	15.0
29	6.5	4.5	3.5	2.0	---	9.5	17.0	15.0	18.5	18.0	22.0	13.5
30	7.0	4.5	2.5	2.0	---	7.5	16.0	16.5	18.0	18.5	21.5	13.5
31	6.0	---	2.5	6.0	---	7.0	---	17.5	---	20.0	21.5	---
MIN	6.0	3.5	2.5	.0	1.5	1.5	7.0	12.0	15.0	17.5	17.0	13.5

WTR YR 1994 MIN .0

e Estimated

POTOMAC RIVER BASIN

01598500 NORTH BRANCH POTOMAC RIVER AT LUKE, MD

LOCATION.--Lat 39°28'45", long 79°03'55", Mineral County, W. Va., Hydrologic Unit 02070002, on right bank 0.2 mi downstream from Savage River, 0.5 mi northwest of Luke, and at mile 53.3.

DRAINAGE AREA.--404 mi².

PERIOD OF RECORD.--June 1899 to July 1906 (published as "at Piedmont, W. Va."), October 1949 to current year.

REVISED RECORDS.--WSP 192: 1899-1904. WSP 1432: 1905-6, drainage area at former site.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 946.22 ft above sea level. June 27, 1899, to July 15, 1906, nonrecording gage at bridge 1.1 mi downstream at datum about 35 ft lower.

REMARKS.--No estimated daily discharges. Records good. Flow regulated prior to July 1981 by Stony River Reservoir, 45 mi upstream from station, since December 1950 by Savage River Reservoir, 5 mi upstream from station (see station 01597500), and since July 1981 by Jennings Randolph Lake, 9 mi upstream from station. Some regulation at low flow by West Virginia Pulp and Paper Company at site used 1899-1906. U.S. Army Corps of Engineers satellite telemeter at station. Upper Potomac River Commission gage height telemeter at station. Several measurements of water temperature were made during the year. Water-quality records for some prior periods have been collected at this location.

PEAK DISCHARGE FOR CURRENT YEAR.--Peak discharge, 8,140 ft³/s, Mar. 28, gage height, 8.70 ft.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	212	227	1270	640	2400	907	3450	762	482	261	243	495
2	216	226	1250	640	2150	835	4740	1710	354	262	242	489
3	214	224	1240	643	1570	982	3210	998	353	264	240	489
4	214	234	1240	648	1390	1230	1950	1330	352	264	240	488
5	213	257	1470	638	1100	1670	1380	2250	352	264	267	486
6	215	266	1360	636	1070	1830	1210	1900	351	267	869	440
7	207	255	1330	654	1040	1230	1140	2290	349	273	567	351
8	211	250	1110	778	1050	1200	1130	5070	348	273	238	353
9	213	266	967	1350	4240	1440	1420	4090	331	270	236	358
10	211	309	1060	1750	4950	2400	2010	3470	306	267	267	361
11	211	308	1130	1770	3790	2850	1960	3350	306	266	301	358
12	231	306	1120	1780	3720	3670	1830	2920	306	265	301	356
13	213	308	1110	1440	3650	3630	3930	1620	305	253	301	356
14	210	301	1030	1030	3590	2790	4650	729	305	239	310	355
15	216	286	980	1010	2510	2900	3660	666	304	237	305	353
16	216	283	988	1010	2070	2890	4160	953	306	236	303	353
17	220	293	977	1010	1720	2810	2740	1660	307	236	679	355
18	222	341	977	1000	1500	2740	1270	1220	305	236	903	354
19	219	396	995	853	1920	3340	1220	666	309	236	380	352
20	223	409	984	736	2450	2760	995	571	311	237	378	350
21	219	407	988	732	2640	2030	836	786	308	239	377	349
22	219	426	1030	729	3160	2310	666	769	305	242	510	349
23	898	442	1030	725	3270	3220	733	516	306	239	529	350
24	1060	442	923	753	3220	4180	671	490	307	236	512	1040
25	209	440	851	1200	2660	5560	495	439	303	237	506	1120
26	208	438	800	1910	2790	7550	463	486	297	246	502	357
27	208	532	702	1900	2550	7740	479	547	301	258	497	353
28	207	1060	672	2030	1460	6210	544	499	298	256	495	353
29	206	1440	668	2180	---	5980	548	497	301	249	493	346
30	234	1390	653	2150	---	5180	547	496	282	261	490	341
31	242	---	640	2310	---	3300	---	553	---	244	493	---
TOTAL	8217	12762	31545	36635	69630	97364	54037	44303	9650	7813	12974	12810
MEAN	265	425	1018	1182	2487	3141	1801	1429	322	252	419	427
MAX	1060	1440	1470	2310	4950	7740	4740	5070	482	273	903	1120
MIN	206	224	640	636	1040	835	463	439	282	236	236	341
CFSM	.66	1.05	2.52	2.93	6.16	7.77	4.46	3.54	.80	.62	1.04	1.06
IN.	.76	1.18	2.90	3.37	6.41	8.97	4.98	4.08	.89	.72	1.19	1.18

POTOMAC RIVER BASIN

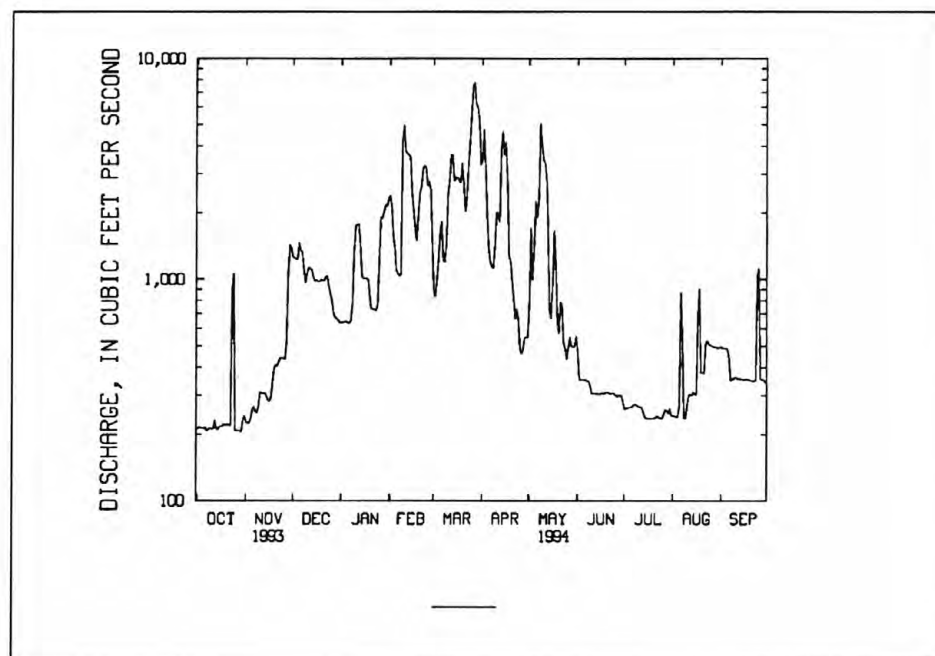
01598500 NORTH BRANCH POTOMAC RIVER AT LUKE, MD--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1950 - 1994, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	363	479	829	903	1131	1553	1204	914	503	320	310	271
MAX	1423	2806	2536	2276	2487	3414	3098	2238	1493	1294	1401	737
(WY)	1955	1986	1973	1952	1994	1963	1993	1988	1981	1990	1955	1971
MIN	45.5	91.8	131	166	322	467	374	165	108	91.4	61.4	66.9
(WY)	1952	1954	1954	1977	1978	1988	1990	1982	1969	1953	1951	1951

SUMMARY STATISTICS	FOR 1993 CALENDAR YEAR				FOR 1994 WATER YEAR				WATER YEARS 1950 - 1994			
ANNUAL TOTAL	316210				397740							
ANNUAL MEAN	866				1090				730			
ANNUAL MEAN (Z)	839				1112				725			
HIGHEST ANNUAL MEAN									1090			
LOWEST ANNUAL MEAN									412			
HIGHEST DAILY MEAN	9820				Apr 1				18400			
LOWEST DAILY MEAN	206				Oct 29				36			
ANNUAL SEVEN-DAY MINIMUM	212				Oct 5				38			
INSTANTANEOUS PEAK FLOW									(a) 39400			
INSTANTANEOUS PEAK STAGE									17.15			
INSTANTANEOUS LOW FLOW									UNKNOWN			
ANNUAL RUNOFF (CFSM)	2.14				2.70				1.81			
ANNUAL RUNOFF (CFSM) (Z)	2.08				2.75				1.79			
ANNUAL RUNOFF (INCHES)	29.12				36.62				24.55			
ANNUAL RUNOFF (INCHES) (Z)	28.19				37.36				24.37			
10 PERCENT EXCEEDS	1460				2830				1640			
50 PERCENT EXCEEDS	412				544				412			
90 PERCENT EXCEEDS	216				236				114			

Z Adjusted for change in reservoir contents since October 1949.

a From rating curve extended above 25,000 ft³/s on basis of slope-area measurement of peak flow.

POTOMAC RIVER BASIN

01603000 NORTH BRANCH POTOMAC RIVER NEAR CUMBERLAND, MD

LOCATION.--Lat 39°37'16", long 78°46'24", Allegany County, Hydrologic Unit 02070002, on left bank at downstream side of Wiley Ford Bridge, 2.0 mi south of Cumberland, 2.1 mi downstream from Wills Creek, and at mile 19.6.

DRAINAGE AREA.--875 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1929 to current year. Gage-height records collected at various sites about 2.0 mi upstream from September 1901 to December 1932 and thereafter at present site, are contained in reports of National Weather Service.

REVISED RECORDS.--WSP 726: Drainage area. WSP 781: 1932(M).

GAGE.--Water-stage recorder. Datum of gage is 585.22 ft above sea level. Prior to June 18, 1929, nonrecording gage at same site and datum.

REMARKS.--No estimated daily discharges. Water-discharge records good. Prior to July 1981 some regulation at low flow by Stony River Reservoir, 79 mi upstream from station. Low-flow regulation since December 1950 by Savage River Reservoir, 39 mi upstream from station (see station 01597500). Flow regulated by Jennings Randolph Lake, 43 mi upstream from station since July 1981. Prior to July 1957, small amount of inflow from industrial wastes and sewage from city of Cumberland from water diverted from Evitts Creek, mouth of which is downstream from station. Diversion to Chesapeake and Ohio Canal prior to 1935. National Weather Service gage height telemeter at station. U.S. Army Corps of Engineers satellite telemeter at gage. Water-quality records for some prior periods have been collected at this location.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known, 29.2 ft June 1, 1889, discharge, about 89,000 ft³/s. Flood of Mar. 29, 1924, reached a stage of 28.4 ft, discharge, about 82,000 ft³/s.

PEAK DISCHARGE FOR CURRENT YEAR.--Peak discharge, 14,900 ft³/s, Mar. 25, gage height, 12.96 ft.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	304	677	1890	857	3060	1880	4600	1290	824	360	475	774
2	289	546	1710	882	2750	1710	6410	2010	628	344	355	706
3	283	489	1610	913	2100	1670	4940	1450	582	344	330	660
4	276	471	1600	925	1860	2040	4060	1370	573	365	319	646
5	270	501	3710	899	1590	2770	2760	2850	562	360	386	624
6	263	574	3320	883	1530	3210	2360	2460	553	348	540	605
7	264	542	2480	955	1480	2800	2150	2710	544	346	1100	513
8	259	489	2020	1180	1510	4980	1890	7740	534	397	371	452
9	261	450	1620	1320	4260	4660	1820	6660	526	366	328	445
10	260	452	1660	1790	7660	6720	2320	4570	486	351	314	444
11	257	462	1800	1840	4710	6360	3340	4100	465	341	347	442
12	315	446	1650	1930	4270	5770	2500	3810	513	332	365	430
13	329	448	1580	1920	4040	5630	6420	2580	480	328	361	425
14	288	525	1520	1440	3850	5220	8720	1390	453	351	366	419
15	275	492	1420	1280	3340	6090	6120	1290	439	355	395	420
16	275	465	1430	e1100	2740	7370	5560	1290	487	314	373	420
17	280	471	1350	e1050	2380	5490	4630	2030	573	303	875	421
18	308	616	1310	e1000	2220	4740	2490	1710	487	304	2190	427
19	315	661	1410	e980	2760	4970	2200	1150	450	296	999	416
20	385	689	1370	e960	4340	4310	1850	981	446	292	703	408
21	509	659	1420	e940	7780	4450	1630	1010	444	571	650	403
22	430	622	1390	e940	8350	6910	1390	1090	450	687	1170	404
23	395	628	1390	e960	7240	8680	1290	997	443	752	1370	424
24	1350	617	1300	e1000	6190	10900	1260	851	445	426	982	505
25	636	602	1190	e1050	5070	12700	1190	816	515	365	829	1320
26	322	584	1130	e1150	4060	10800	1020	856	431	371	757	662
27	314	1480	1040	3320	3720	11800	982	943	420	398	720	421
28	304	9380	961	3430	2940	12500	1010	842	422	540	708	412
29	294	3620	911	4410	---	11200	1000	795	407	417	661	406
30	372	2520	909	3620	---	9060	990	774	405	376	633	393
31	713	---	851	3170	---	6140	---	757	---	368	627	---
TOTAL	11395	31178	48952	48094	107800	193530	88902	63172	14987	12068	20599	15447
MEAN	368	1039	1579	1551	3850	6243	2963	2038	500	389	664	515
MAX	1350	9380	3710	4410	8350	12700	8720	7740	824	752	2190	1320
MIN	257	446	851	857	1480	1670	982	757	405	292	314	393
CF5M	.42	1.19	1.80	1.77	4.40	7.13	3.39	2.33	.57	.44	.76	.59
IN.	.48	1.33	2.08	2.04	4.58	8.23	3.78	2.69	.64	.51	.88	.66

e Estimated

POTOMAC RIVER BASIN

01603000 NORTH BRANCH POTOMAC RIVER NEAR CUMBERLAND, MD--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1929 - 1994, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	603	758	1297	1541	1995	2924	2397	1710	876	511	436	388
MAX	3791	5350	4652	5115	4125	8763	5866	3902	2375	2270	2028	2036
(WY)	1943	1986	1973	1937	1961	1936	1993	1988	1981	1989	1955	1945
MIN	28.9	44.8	134	269	393	789	723	374	209	89.7	57.7	40.3
(WY)	1931	1931	1931	1940	1934	1990	1968	1934	1965	1930	1930	1932

SUMMARY STATISTICS	FOR 1993 CALENDAR YEAR		FOR 1994 WATER YEAR		WATER YEARS 1929 - 1994	
ANNUAL TOTAL	590342		656124			
ANNUAL MEAN	1617		1798		1284	
ANNUAL MEAN (Z)	1590		1820		1285	
HIGHEST ANNUAL MEAN					1801	
LOWEST ANNUAL MEAN					632	
HIGHEST DAILY MEAN	17700	Apr 17	12700	Mar 25	47400	Mar 18 1936
LOWEST DAILY MEAN	245	(a)	257	Oct 11	13	(b)
ANNUAL SEVEN-DAY MINIMUM	248	Aug 25	262	Oct 5	16	Sep 20 1932
INSTANTANEOUS PEAK FLOW			14900	Mar 25	(c) 88200	Mar 17 1936
INSTANTANEOUS PEAK STAGE			12.96	Mar 25	29.10	Mar 17 1936
INSTANTANEOUS LOW FLOW			254	(d)	12	Sep 22 1932
ANNUAL RUNOFF (CFSM)	1.85		2.05		1.47	
ANNUAL RUNOFF (CFSM) (Z)	1.82		2.08		1.47	
ANNUAL RUNOFF (INCHES)	25.10		27.89		19.94	
ANNUAL RUNOFF (INCHES) (Z)	24.67		28.23		19.94	
10 PERCENT EXCEEDS	3110		4720		2970	
50 PERCENT EXCEEDS	786		899		667	
90 PERCENT EXCEEDS	271		344		166	

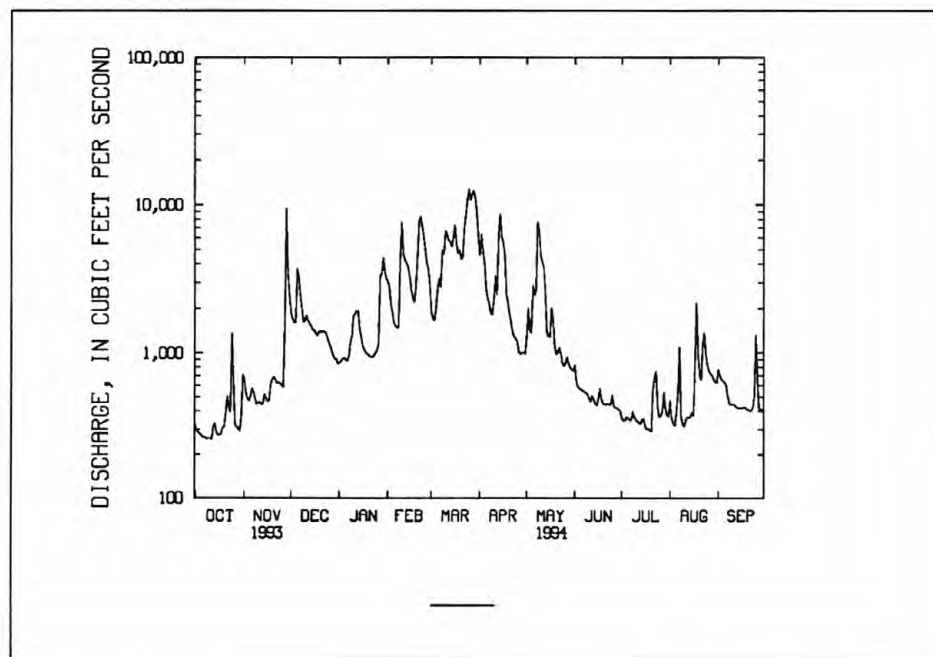
Z Adjusted for change in reservoir contents since October 1981.

a Aug. 28, 30.

b Sept. 21-24, 1932.

c From rating curve extended above 33,000 ft³/s on basis of slope-area measurement of peak flow.

d Oct. 6, 8, 11.



POTOMAC RIVER BASIN

01603000 NORTH BRANCH POTOMAC RIVER NEAR CUMBERLAND, MD--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	TEMPER-ATURE AIR (DEG C) (00020)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, (PER-CENT SATUR-ATION) (00301)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	
OCT 1993													
07...	1130	272	725	7.3	13.5	11.0	753	8.8	86	240	72	15	
NOV													
04...	1300	467	512	7.4	8.0	13.0	749	11.5	99	200	57	13	
DEC													
07...	1145	2480	262	7.1	7.0	6.0	752	10.4	87	97	28	6.6	
JAN 1994													
10...	1000	1760	420	7.0	0.5	-10.0	766	14.2	98	170	49	11	
FEB													
07...	1215	1450	349	7.0	3.5	7.5	750	13.8	106	130	36	9.0	
MAR													
10...	1515	7940	222	7.1	3.5	4.0	743	13.1	101	86	24	6.3	
APR													
06...	1130	2770	299	7.0	9.5	15.0	738	10.8	98	120	31	9.7	
JUN													
06...	1015	590	528	7.5	21.5	31.0	743	8.5	99	--	--	--	
DATE		SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	BICAR-BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS NO3) (71851)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)
OCT 1993													
07...	47	4.7	52	63	180	57	0.20	3.9	473	--	<0.010	0.600	
NOV													
04...	24	2.8	48	59	160	30	0.20	5.2	335	--	<0.010	0.740	
DEC													
07...	7.9	1.6	20	24	78	9.1	<0.10	5.8	160	--	<0.010	1.00	
JAN 1994													
10...	11	2.1	17	22	140	13	<0.10	5.0	262	4.2	0.010	0.960	
FEB													
07...	13	2.2	21	26	110	17	<0.10	5.2	222	4.2	0.040	1.00	
MAR													
10...	7.9	1.5	20	24	62	12	<0.10	5.2	133	5.3	0.010	1.20	
APR													
06...	8.0	1.3	22	27	94	11	<0.10	5.3	182	3.7	0.030	0.860	
JUN													
06...	--	--	45	55	--	--	--	--	--	4.4	0.010	1.00	
DATE		NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C) (00681)	CARBON, ORGANIC SUS-PENDED TOTAL (MG/L AS C) (00689)	
OCT 1993													
07...	0.600	0.020	0.40	<0.20	0.100	0.040	0.020	100	300	11	0.4		
NOV													
04...	0.740	0.050	0.20	<0.20	0.060	0.020	0.010	66	290	6.8	0.4		
DEC													
07...	1.00	0.040	0.20	<0.20	0.020	<0.010	<0.010	32	190	3.0	0.6		
JAN 1994													
10...	0.960	0.110	0.30	<0.20	0.060	0.010	<0.010	26	450	2.8	1.1		
FEB													
07...	1.00	0.070	0.20	<0.20	0.010	0.020	<0.010	42	370	3.3	0.3		
MAR													
10...	1.20	0.070	0.30	<0.20	0.050	<0.010	<0.010	31	200	1.8	1.2		
APR													
06...	0.860	0.070	0.20	<0.20	0.030	<0.010	<0.010	42	270	2.4	0.5		
JUN													
06...	1.00	0.020	<0.20	<0.20	<0.010	<0.010	<0.010	--	--	--	--		

POTOMAC RIVER BASIN

01603000 NORTH BRANCH POTOMAC RIVER NEAR CUMBERLAND, MD--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

	DIMETH- OATE WATER FLTRD 0.7 U GG, REC (UG/L) (82662)	ETHAL- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82663)	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L) (82664)	TER- BACIL WATER FLTRD 0.7 U GF, REC (UG/L) (82665)	TRI- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82661)	2,6-DI- ETHYL ANILINE WAT FLT 0.7 U GF, REC (UG/L) (82660)	ALA- CHLOR, WATER, DISS, REC, (UG/L) (46342)	ALPHA BHC DIS- SOLVED (UG/L) (34253)	ATRA- ZINE, WATER, DISS, REC (UG/L) (39632)	BEN- FLUR- ALIN WAT FLD 0.7 U GF, REC (UG/L) (82673)	BUTYL- ATE, WATER, DISS, REC (UG/L) (04028)	CAR- BARYL WATER FLTRD 0.7 U GF, REC (UG/L) (82680)
JUN 1994 06...	<0.02	<0.01	<0.01	0.12	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.05
	CARBO- FURAN WATER FLTRD 0.7 U GF, REC (UG/L) (82674)	CHLOR- PYRIFOS DIS- SOLVED (UG/L) (38933)	CYANA- ZINE, WATER, DISS, REC (UG/L) (04041)	DCPA WATER FLTRD 0.7 U GF, REC (UG/L) (82682)	P,P' DDE DISSOLV (UG/L) (34653)	DEETHYL ATRA- ZINE, WATER, DISS, REC (UG/L) (04040)	DI- AZINON, DIS- SOLVED (UG/L) (39572)	DI- ELDRIN DIS- SOLVED (UG/L) (39381)	DISUL- FOTON WATER FLTRD 0.7 U GF, REC (UG/L) (82677)	EPTC WATER FLTRD 0.7 U GF, REC (UG/L) (82668)	ETHO- PROP WATER FLTRD 0.7 U GF, REC (UG/L) (82672)	FONOFOS WATER DISS REC (UG/L) (04095)
JUN 1994 06...	<0.01	<0.01	<0.01	<0.00	<0.01	<0.00	<0.01	<0.01	<0.06	<0.00	<0.01	<0.01
	LINDANE DIS- SOLVED (UG/L) (39341)	LIN- URON WATER FLTRD 0.7 U GF, REC (UG/L) (82666)	MALA- THION, DIS- SOLVED (UG/L) (39532)	METHYL AZIN- PHOS WAT FLT 0.7 U GF, REC (UG/L) (82686)	METHYL PARA- THION WAT FLT 0.7 U GF, REC (UG/L) (82667)	METO- LACHLOR WATER DISSOLV (UG/L) (39415)	METRI- BUZIN SENCOR WATER DISSOLV (UG/L) (82630)	MOL- INATE WATER FLTRD 0.7 U GF, REC (UG/L) (82671)	NAPROP- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82684)	PEB- ULATE WATER FILTRD 0.7 U GF, REC (UG/L) (82669)	PARA- THION, DIS- SOLVED (UG/L) (39542)	PENDI- METH- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82683)
JUN 1994 06...	<0.01	<0.04	<0.01	<0.05	<0.03	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02
	PER- METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L) (82687)	PRO- METON, WATER, DISS, REC (UG/L) (04037)	PRON- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82676)	PROP- CHLOR, WATER, DISS, REC (UG/L) (04024)	PRO- PARGITE WATER FLTRD 0.7 U GF, REC (UG/L) (82685)	PRO- PANIL WATER FLTRD 0.7 U GF, REC (UG/L) (82679)	SI- MAZINE, WATER, DISS, REC (UG/L) (04035)	TEBU- THIURON WATER FLTRD 0.7 U GF, REC (UG/L) (82670)	TER- BUFOS WATER FLTRD 0.7 U GF, REC (UG/L) (82675)	THIO- BENCARB WATER FLTRD 0.7 U GF, REC (UG/L) (82681)	TRIAL- LATE WATER FLTRD 0.7 U GF, REC (UG/L) (82678)	
JUN 1994 06...	<0.02	<0.01	<0.01	<0.02	<0.01	<0.02	<0.01	<0.02	<0.01	<0.01	<0.01	

POTOMAC RIVER BASIN

01604500 PATTERSON CREEK NEAR HEADSVILLE, WV

LOCATION.--Lat 39°26'35", long 78°49'20", Mineral County, Hydrologic Unit 02070002, on right bank 100 ft downstream from Hazel Run, 1.0 mi downstream from Cabin Run, 4.0 mi northeast of Headsville, 8.0 mi east of Keyser, and at mile 12.5.

DRAINAGE AREA.--219 mi².

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

REVISED RECORDS.--WSP 951: 1939-40.

GAGE.--Water-stage recorder. Datum of gage is 624.90 ft above sea level (levels by U.S. Army Corps of Engineers). Prior to Oct. 11, 1946, nonrecording gage on bridge 1.0 mi upstream at datum 6.14 ft higher. Oct. 11-23, 1946, nonrecording gage at present site and datum.

REMARKS.--Records good except those for estimated daily discharges (backwater from beaver dams), which are fair. The flow from 115 mi² upstream from station is partially controlled, but not diverted, by several floodwater detention reservoirs with a total combined detention capacity of 19,887 acre-ft.

PEAK DISCHARGE FOR CURRENT YEAR.--Peak discharge, 3,460 ft³/s, May 8, gage height, 9.56 ft.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e20	95	267	70	512	656	836	180	47	20	50	38
2	e15	66	187	70	440	607	716	181	43	18	39	32
3	e11	49	135	70	386	573	640	153	39	18	32	29
4	e10	37	111	70	329	642	568	258	36	18	28	27
5	e9.8	34	1330	89	290	1250	509	442	35	18	33	24
6	9.5	32	868	86	271	1200	459	413	34	17	44	23
7	8.9	27	588	95	264	1120	405	438	33	18	42	21
8	8.8	25	472	167	266	1720	344	2630	32	21	34	19
9	8.1	22	389	241	1830	1540	293	1430	31	26	29	18
10	7.4	20	330	212	2170	2380	277	900	30	26	25	17
11	7.3	18	273	184	1310	1910	255	632	29	21	22	16
12	e8.0	17	205	178	1010	1350	226	546	43	18	20	15
13	e10	e17	155	205	713	1100	930	475	35	19	20	14
14	e12	e16	126	230	580	1050	950	416	31	23	19	13
15	e13	e16	120	289	534	1170	670	369	29	31	17	13
16	e14	e50	178	236	621	1140	637	329	28	24	16	12
17	e10	e42	196	196	683	860	535	280	28	21	70	13
18	e8.7	e60	183	e150	719	745	463	238	29	20	337	13
19	e8.2	e75	202	e130	909	698	409	202	25	20	255	12
20	e9.0	e63	185	e120	1100	640	353	170	23	18	187	12
21	e9.7	e54	209	e130	1420	684	308	142	26	18	134	11
22	e10	e48	214	e140	1260	962	269	118	24	25	109	11
23	e10	e40	193	e150	1270	840	228	101	22	34	103	13
24	e11	e38	168	e350	1820	747	198	88	25	29	92	13
25	e11	e34	150	e1000	1540	659	171	87	35	26	71	13
26	e10	e33	126	1320	1180	561	151	94	28	29	55	13
27	e9.4	92	108	906	845	1090	147	87	27	33	46	14
28	e8.6	1140	99	742	719	1740	126	74	26	73	38	13
29	e8.2	532	110	781	---	2210	112	64	24	73	34	12
30	e31	373	76	669	---	1570	107	56	22	56	31	11
31	100	---	65	580	---	1040	---	52	---	42	30	---
TOTAL	427.6	3165	8018	9856	24991	34454	12292	11645	919	853	2062	505
MEAN	13.8	105	259	318	893	1111	410	376	30.6	27.5	66.5	16.8
MAX	100	1140	1330	1320	2170	2380	950	2630	47	73	337	38
MIN	7.3	16	65	70	264	561	107	52	22	17	16	11
CFSM	.06	.48	1.18	1.45	4.08	5.07	1.87	1.72	.14	.13	.30	.08
IN.	.07	.54	1.36	1.67	4.25	5.85	2.09	1.98	.16	.14	.35	.09

e Estimated

POTOMAC RIVER BASIN

01604500 PATTERSON CREEK NEAR HEADSVILLE, WV--Continued

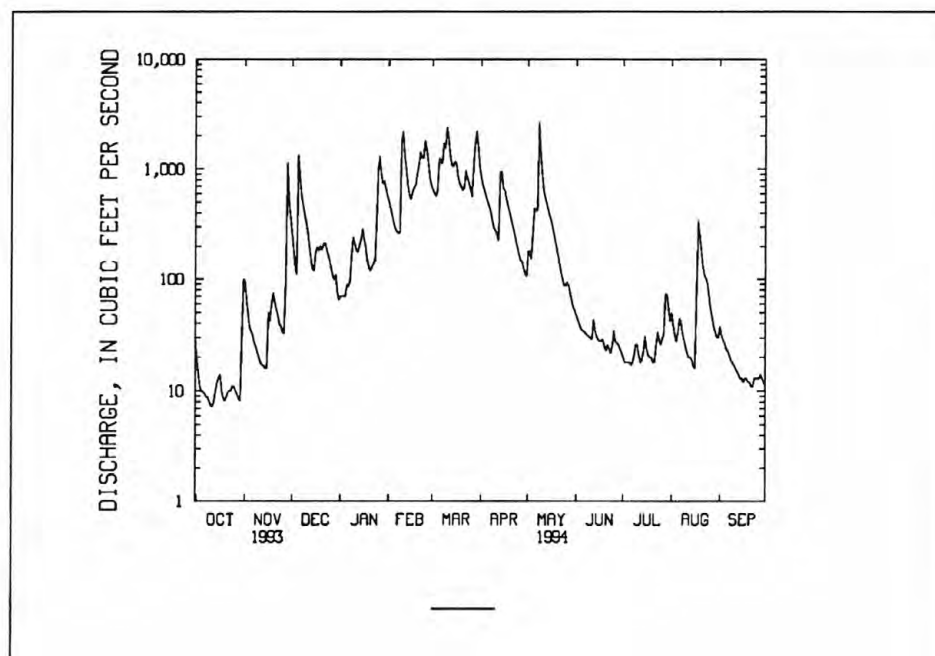
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1938 - 1994, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	76.9	80.7	163	197	308	432	323	222	106	58.9	49.3	38.9
MAX	745	901	825	558	893	1346	1085	763	379	415	475	395
(WY)	1943	1986	1973	1991	1994	1963	1993	1988	1940	1989	1955	1945
MIN	2.24	4.39	9.70	22.0	30.7	58.3	54.1	21.2	13.4	4.45	5.20	2.80
(WY)	1992	1992	1944	1981	1954	1990	1969	1969	1969	1966	1966	1991

SUMMARY STATISTICS	FOR 1993 CALENDAR YEAR		FOR 1994 WATER YEAR		WATER YEARS 1938 - 1994	
ANNUAL TOTAL	91369.8		109187.6			
ANNUAL MEAN	250		299		171	
HIGHEST ANNUAL MEAN					299	
LOWEST ANNUAL MEAN					35.1	
HIGHEST DAILY MEAN	5080	Apr 16	2630	May 8	11100	Oct 15 1942
LOWEST DAILY MEAN	4.8	Aug 29	7.3	Oct 11	1.2	Aug 18 1988
ANNUAL SEVEN-DAY MINIMUM	5.2	Aug 25	8.3	Oct 6	1.7	Sep 5 1965
INSTANTANEOUS PEAK FLOW			3460	May 8	(a) 16000	Aug 19 1955
INSTANTANEOUS PEAK STAGE			9.56	May 8	12.20	Aug 19 1955
INSTANTANEOUS LOW FLOW			6.4	Oct 11	1.1	(b)
ANNUAL RUNOFF (CFSM)	1.14		1.37		.78	
ANNUAL RUNOFF (INCHES)	15.52		18.55		10.59	
10 PERCENT EXCEEDS	809		938		434	
50 PERCENT EXCEEDS	56		87		58	
90 PERCENT EXCEEDS	7.7		13		9.7	

a From rating curve extended above 4,900 ft³/s on basis of contracted-opening measurement of peak flow.

b Aug. 18, 19, 1988.



POTOMAC RIVER BASIN

01605500 SOUTH BRANCH POTOMAC RIVER AT FRANKLIN, WV

LOCATION.--Lat 38°38'14", long 79°20'14", Pendleton County, Hydrologic Unit 02070001, on left bank 0.5 mi southwest of Franklin, 2 mi upstream from Friends Run, 2.5 mi downstream from Thorn Creek, and at mile 109.5.

DRAINAGE AREA.--182 mi².

PERIOD OF RECORD.--April 1940 to September 1969, October 1976 to current year.

GAGE.--Water-stage recorder and improved natural control. Datum of gage is 1,692.5 ft above sea level (U.S. Army Corps of Engineers bench mark).

REMARKS.--Records good except those for periods of estimated daily discharge (ice effect), which are fair.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of March 1936 reached a stage of about 13 ft.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,700 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage Height (ft)	Date	Time	Discharge (ft ³ /s)	Gage Height (ft)
Nov. 28	0030	1,930	4.53	Mar. 10	0600	2,770	5.14
Dec. 5	0600	2,870	5.21	Mar. 27	1315	1,920	4.52
Jan. 28	1200	2,630	5.04	Mar. 29	0815	2,300	4.80
Feb. 9	1700	2,890	5.22	May 8	0230	*5,850	*6.97
Feb. 24	0930	1,850	4.47	Aug. 17	1700	3,660	5.72
Mar. 8	0330	1,890	4.50				

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	53	84	188	e68	418	366	726	145	80	56	170	74
2	49	65	156	82	350	337	574	136	77	52	124	68
3	45	57	135	82	349	295	476	130	73	61	111	67
4	41	54	135	89	310	340	405	278	71	72	117	66
5	39	53	1750	82	202	611	344	449	70	55	104	64
6	37	55	787	79	189	648	316	399	72	55	101	63
7	36	53	485	99	173	1010	389	763	81	72	83	61
8	35	50	334	276	192	1790	306	3250	70	60	76	59
9	35	46	256	211	2280	1300	277	1220	68	57	120	57
10	35	45	216	182	1430	2120	268	750	66	66	84	57
11	34	44	208	158	906	1330	256	538	66	57	73	55
12	44	42	178	471	871	874	246	427	66	51	168	52
13	44	49	160	623	537	701	515	338	62	49	103	51
14	38	156	148	463	401	594	550	278	61	49	86	51
15	36	115	146	e275	350	531	460	244	61	51	79	50
16	34	93	160	e185	347	482	425	225	72	51	72	50
17	33	86	181	e158	358	389	341	198	64	51	1040	49
18	33	184	168	e140	400	358	290	183	63	107	930	52
19	32	148	161	e125	526	347	259	169	59	91	448	49
20	46	120	146	e108	597	294	234	159	65	178	292	47
21	57	97	145	e100	643	311	210	146	66	164	226	46
22	45	84	130	e95	591	588	245	131	66	197	195	46
23	40	76	121	e140	1250	502	212	120	62	132	161	48
24	37	71	108	e155	1620	455	196	113	64	98	130	46
25	36	65	100	e235	1080	511	188	110	68	89	111	46
26	36	61	93	e520	763	434	178	113	61	208	101	48
27	36	224	94	506	554	1100	175	105	69	237	91	48
28	35	971	92	1500	432	1430	164	96	65	422	86	45
29	34	399	e75	1340	---	1940	154	90	60	304	82	44
30	44	251	e65	779	---	1310	155	86	60	211	76	42
31	87	---	e52	555	---	902	---	82	---	159	75	---
TOTAL	1266	3898	7173	9881	18119	24200	9534	11471	2008	3562	5715	1601
MEAN	40.8	130	231	319	647	781	318	370	66.9	115	184	53.4
MAX	87	971	1750	1500	2280	2120	726	3250	81	422	1040	74
MIN	32	42	52	68	173	294	154	82	59	49	72	42
CFSM	.22	.71	1.27	1.75	3.56	4.29	1.75	2.03	.37	.63	1.01	.29
IN.	.26	.80	1.47	2.02	3.70	4.95	1.95	2.34	.41	.73	1.17	.33

e Estimated

POTOMAC RIVER BASIN

01605500 SOUTH BRANCH POTOMAC RIVER AT FRANKLIN, WV--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 1994, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	81.6	136	158	195	255	401	293	221	133	70.5	78.0	66.0
MAX	546	2219	444	474	647	832	797	616	664	381	351	300
(WY)	1977	1986	1949	1979	1994	1963	1987	1942	1940	1949	1984	1950
MIN	20.0	25.5	23.5	32.5	56.0	80.8	90.2	59.3	33.7	27.8	23.3	21.4
(WY)	1964	1966	1966	1981	1963	1981	1988	1941	1964	1964	1966	1963

SUMMARY STATISTICS	FOR 1993 CALENDAR YEAR			FOR 1994 WATER YEAR			WATER YEARS 1940 - 1994		
ANNUAL TOTAL	74077			98428					
ANNUAL MEAN	203			270			172		
HIGHEST ANNUAL MEAN							304		
LOWEST ANNUAL MEAN							88.8		
HIGHEST DAILY MEAN	4340			Apr 16			25000		
LOWEST DAILY MEAN	26			(a)			14		
ANNUAL SEVEN-DAY MINIMUM	28			Aug 20			14		
INSTANTANEOUS PEAK FLOW				5850			May 8		
INSTANTANEOUS PEAK STAGE				6.97			May 8		
INSTANTANEOUS LOW FLOW				32			(f)		
ANNUAL RUNOFF (CFSM)	1.12			1.48			.95		
ANNUAL RUNOFF (INCHES)	15.14			20.12			12.86		
10 PERCENT EXCEEDS	478			616			366		
50 PERCENT EXCEEDS	80			121			87		
90 PERCENT EXCEEDS	31			46			31		

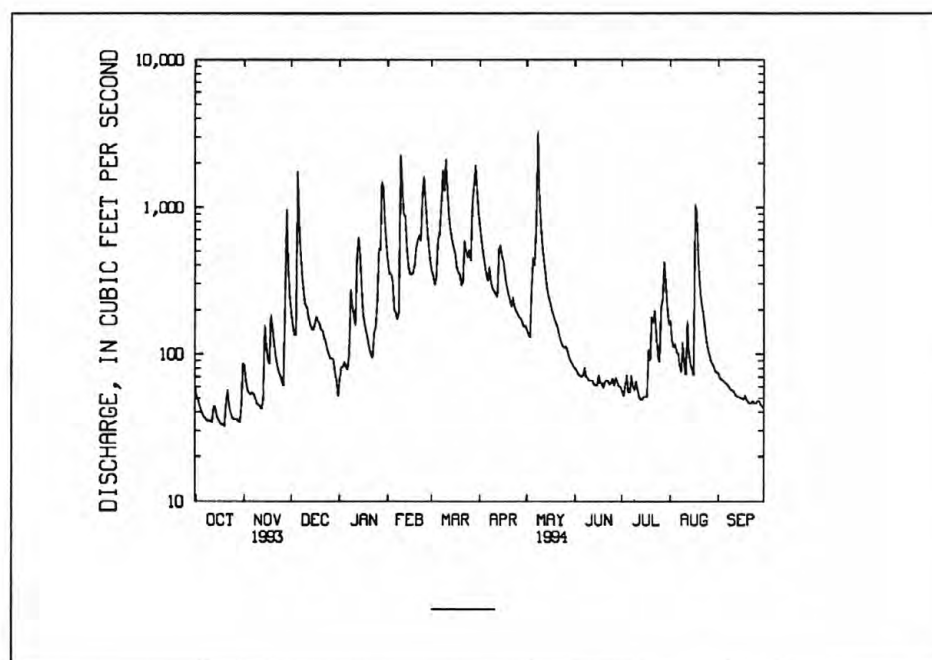
a Aug. 25, Sept. 14.

b Sept. 7-12, 1966.

c From rating curve extended above 15,000 ft³/s, on basis of slope-area measurement of peak flow.

d From floodmarks.

f Oct. 18, 19, 20.



POTOMAC RIVER BASIN

01606500 SOUTH BRANCH POTOMAC RIVER NEAR PETERSBURG, WV

LOCATION (REVISED).--Lat 38°59'28", long 79°10'34", Grant County, Hydrologic Unit 02070001, on right bank 1.1 mi downstream from North Fork South Branch Potomac River, 2.6 mi west of Petersburg, and at mile 72.7.

DRAINAGE AREA.--642 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1928 to current year.

REVISED RECORDS.--WSP 951: 1939-41. WSP 1141: 1932, 1933(M), 1936-38.

GAGE.--Water-stage recorder. Datum of gage is 966.00 ft above sea level. Prior to Dec. 4, 1928, nonrecording gage at site 700 ft downstream and at different datum. June 1928 to Nov. 5, 1985, water-stage recorder at site 700 ft downstream at datum 4.00 ft lower. Nov. 5, 1985, to June 22, 1994, water-stage recorder at site 700 ft downstream at datum 2.34 ft higher.

REMARKS.--Water-discharge records good except those for estimated daily discharges (ice effect, missing record), which are fair. National Weather Service gage-height telemeter at station. Several measurements of water temperature were made during the year.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in 1877 reached a stage of 21.2 ft, from floodmarks at previous site and datum.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 6,000 ft³/s and maximum(*):

Date	Time	Discharge (ft ³ /s)	Gage Height (ft)	Date	Time	Discharge (ft ³ /s)	Gage Height (ft)
Nov. 28	0715	6,930	5.97	Mar. 8	---	UNKNOWN	UNKNOWN
Dec. 5	1215	10,300	7.27	Mar. 10	---	UNKNOWN	UNKNOWN
Jan. 29	0015	9,050	6.80	Mar. 29	---	UNKNOWN	UNKNOWN
Feb. 9	---	*UNKNOWN	*UNKNOWN	May 8	---	UNKNOWN	UNKNOWN
Feb. 23	---	UNKNOWN	UNKNOWN	Aug. 17	2315	6,810	8.83

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	184	257	1320	405	2210	e2200	e3000	e950	e290	165	626	257
2	161	219	1090	495	1770	e2000	e2400	e1100	e280	155	512	256
3	146	187	952	487	1580	e1800	e2100	e1000	e260	149	559	213
4	137	175	836	541	1400	e1800	e1850	e1500	e250	157	450	201
5	119	179	6660	517	1310	e3600	e1700	e2200	e240	178	419	193
6	108	229	6120	452	1210	e3400	e1600	e3100	e230	154	496	182
7	93	264	3340	882	1120	e4800	e1500	e2700	e220	155	396	175
8	90	218	2460	2850	1120	e6200	e1400	e13000	e210	186	329	165
9	91	192	1720	2070	e4500	e6300	e1400	e9000	e210	184	304	154
10	89	177	1400	1580	e14000	e6700	e1300	e5000	e210	176	305	147
11	90	172	1290	1420	e6000	e7000	e1300	e3000	e200	232	248	153
12	110	161	1230	1630	e3500	e5000	e1300	e1800	e480	191	260	149
13	130	158	1090	2940	e3600	e3500	e1600	e1400	e350	166	277	135
14	148	1090	1000	2350	e2100	e2700	e2400	e1200	e300	160	227	126
15	135	1180	982	1830	e1900	e2400	e1800	e1000	e250	159	204	122
16	123	872	1090	e1200	e2000	e2200	e1900	e900	e190	166	195	121
17	103	642	1230	e1000	e2200	e2000	e1500	e800	e230	162	1160	120
18	95	1120	1200	e900	e2500	e1900	e1350	e700	e300	181	3400	121
19	100	1250	1200	e800	e2900	e1900	e1200	e650	e240	242	1550	122
20	106	1090	1150	e680	e3200	e1800	e1100	e600	e170	359	965	118
21	109	853	1130	e640	e3500	e1700	e1000	e560	e190	832	717	112
22	136	605	1040	e610	e4000	e2000	e950	e520	e205	817	644	109
23	134	449	931	e900	e6000	e2900	e920	e490	211	579	562	110
24	130	347	827	e1000	e8400	e2500	e890	e460	231	475	446	108
25	123	290	730	e1700	e6000	e2300	e860	e430	205	378	385	105
26	119	241	635	3400	e4500	e2400	e840	e420	195	823	343	105
27	118	316	563	3250	e3300	e4000	e810	e410	196	980	318	105
28	109	4940	558	4630	e2700	e5500	e800	e400	208	2010	291	105
29	102	2710	491	7210	---	e9000	e790	e370	192	1320	263	100
30	113	1760	408	4230	---	e7000	e780	e340	172	925	243	98
31	153	---	286	2870	---	e4800	---	e320	---	657	228	---
TOTAL	3704	22343	44959	55469	98520	113300	42340	56320	7115	13473	17322	4287
MEAN	119	745	1450	1789	3519	3655	1411	1817	237	435	559	143
MAX	184	4940	6660	7210	14000	9000	3000	13000	480	2010	3400	257
MIN	89	158	286	405	1120	1700	780	320	170	149	195	98
CFM	.19	1.16	2.26	2.79	5.48	5.69	2.20	2.83	.37	.68	.87	.22
IN.	.21	1.29	2.61	3.21	5.71	6.57	2.45	3.26	.41	.78	1.00	.25

e Estimated

POTOMAC RIVER BASIN

01606500 SOUTH BRANCH POTOMAC RIVER NEAR PETERSBURG, WV--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1928 - 1994, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	334	481	711	887	1146	1624	1290	973	527	285	275	221
MAX	1863	5569	2511	2355	3519	4090	2888	2374	2175	1479	1290	1196
(WY)	1977	1986	1973	1937	1994	1936	1993	1989	1949	1949	1955	1950
MIN	49.3	62.7	95.1	143	212	543	398	233	128	70.5	54.1	52.3
(WY)	1931	1931	1966	1981	1934	1990	1986	1930	1991	1930	1930	1930

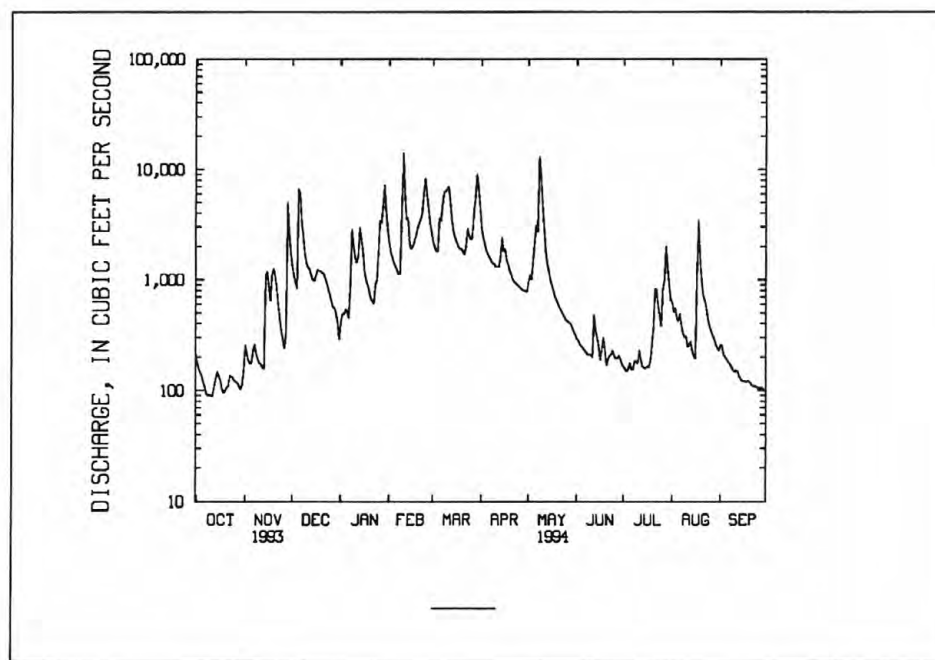
SUMMARY STATISTICS	FOR 1993 CALENDAR YEAR		FOR 1994 WATER YEAR		WATER YEARS 1928 - 1994	
ANNUAL TOTAL	329663		479152			
ANNUAL MEAN	903		1313		727	
HIGHEST ANNUAL MEAN					1313	
LOWEST ANNUAL MEAN					365	
HIGHEST DAILY MEAN	11000	Apr 16	14000	Feb 10	77000	Nov 5 1985
LOWEST DAILY MEAN	46	Aug 26	89	Oct 10	43	(a)
ANNUAL SEVEN-DAY MINIMUM	57	Aug 21	96	Oct 6	44	Sep 6 1966
INSTANTANEOUS PEAK FLOW					(b) 130000	Nov 5 1985
INSTANTANEOUS PEAK STAGE					(c) 21.80	Nov 5 1985
INSTANTANEOUS LOW FLOW			71	Oct 18	42	(d)
ANNUAL RUNOFF (CFSM)	1.41		2.04		1.13	
ANNUAL RUNOFF (INCHES)	19.10		27.76		15.39	
10 PERCENT EXCEEDS	2080		3360		1630	
50 PERCENT EXCEEDS	320		635		372	
90 PERCENT EXCEEDS	73		125		95	

a Sept. 27-29, 1959, Sept. 11, 12, 1966.

b From rating curve extended above 63,000 ft³/s on basis of slope-area measurement of peak flow.

c From floodmarks.

d Sept. 28, 29, 1959, Sept. 11, 12, 1966.



POTOMAC RIVER BASIN

01606500 SOUTH BRANCH POTOMAC RIVER NEAR PETERSBURG, WV--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	TEMPER- ATURE AIR (DEG C) (00020)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS NO3) (71851)	
JUN 1994 05...	1530	226	224	8.5	23.5	30.5	735	9.0	110	95	116	1.3	
DATE		NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	DIMETH- OATE WATER FLTRD 0.7 U GG, REC (UG/L) (82662)	ETHAL- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82663)	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L) (82664)
JUN 1994 05...	0.010	0.310	0.310	0.010	<0.20	<0.20	<0.010	<0.010	<0.010	<0.02	<0.01	<0.01	
DATE		TER- BACIL WATER FLTRD 0.7 U GF, REC (UG/L) (82665)	TRI- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82661)	2, 6-DI- ETHYL ANILINE WAT FLT 0.7 U GF, REC (UG/L) (82660)	ALA- CHLOR, WATER, DISS, REC, (UG/L) (46342)	ALPHA BHC DIS- SOLVED (UG/L) (34253)	ATRA- ZINE, WATER, DISS, REC (UG/L) (39632)	BEN- FLUR- ALIN WAT FLD 0.7 U GF, REC (UG/L) (82673)	BUTYL- ATE, WATER, DISS, REC (UG/L) (04028)	CAR- BARYL WATER FLTRD 0.7 U GF, REC (UG/L) (82680)	CARBO- FURAN WATER FLTRD 0.7 U GF, REC (UG/L) (82674)	CHLOR- PYRIFOS DIS- SOLVED (UG/L) (38933)	
JUN 1994 05...		<0.03	<0.01	<0.01	<0.01	<0.01	0.00	<0.01	<0.01	<0.05	<0.01	<0.01	

POTOMAC RIVER BASIN

01606500 SOUTH BRANCH POTOMAC RIVER NEAR PETERSBURG, WV--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	CYANA- ZINE, WATER, DISS, REC (UG/L) (04041)	DCPA WATER FLTRD 0.7 U GF, REC (UG/L) (82682)	P, P' DDE DISSOLV (UG/L) (34653)	DEETHYL ATRA- ZINE, WATER, DISS, REC (UG/L) (04040)	DI- AZINON, DIS- SOLVED (UG/L) (39572)	DI- ELDRIN DIS- SOLVED (UG/L) (39381)	DISUL- FOTON WATER FLTRD 0.7 U GF, REC (UG/L) (82677)	EPTC WATER FLTRD 0.7 U GF, REC (UG/L) (82668)	ETHO- PROP WATER FLTRD 0.7 U GF, REC (UG/L) (82672)	FONOFOS WATER DISS REC (UG/L) (04095)	LINDANE DIS- SOLVED (UG/L) (39341)
JUN 1994 05...	<0.01	<0.00	<0.01	<0.00	<0.01	<0.01	<0.06	<0.00	<0.01	<0.01	<0.01
DATE	LIN- URON WATER FLTRD 0.7 U GF, REC (UG/L) (82666)	MALA- THION, DIS- SOLVED (UG/L) (39532)	METHYL AZIN- PHOS WAT FLT 0.7 U GF, REC (UG/L) (82686)	METHYL PARA- THION WAT FLT 0.7 U GF, REC (UG/L) (82667)	METO- LACHLOR WATER DISSOLV (UG/L) (39415)	METRI- BUZIN SENCOR WATER DISSOLV (UG/L) (82630)	MOL- INATE WATER FLTRD 0.7 U GF, REC (UG/L) (82671)	NAPROP- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82684)	PEB- ULATE WATER FILTRD 0.7 U GF, REC (UG/L) (82669)	PARA- THION, DIS- SOLVED (UG/L) (39542)	PENDI- METH- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82683)
JUN 1994 05...	<0.04	<0.01	<0.05	<0.03	0.00	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02
DATE	PER- METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L) (82687)	PRO- METON, WATER, DISS, REC (UG/L) (04037)	PRON- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82676)	PROP- CHLOR, WATER, DISS, REC (UG/L) (04024)	PRO- PARGITE WATER FLTRD 0.7 U GF, REC (UG/L) (82685)	PRO- PANIL WATER FLTRD 0.7 U GF, REC (UG/L) (82679)	SI- MAZINE, WATER, DISS, REC (UG/L) (04035)	TEBU- THIURON WATER FLTRD 0.7 U GF, REC (UG/L) (82670)	TER- BUFOS WATER FLTRD 0.7 U GF, REC (UG/L) (82675)	THIO- BENCARB WATER FLTRD 0.7 U GF, REC (UG/L) (82681)	TRIAL- LATE WATER FLTRD 0.7 U GF, REC (UG/L) (82678)
JUN 1994 05...	<0.02	<0.01	<0.01	<0.02	<0.01	<0.02	0.03	<0.02	<0.01	<0.01	<0.01

POTOMAC RIVER BASIN

01607500 SOUTH FORK SOUTH BRANCH POTOMAC RIVER AT BRANDYWINE, WV

LOCATION.--Lat 38°37'53", long 79°14'38", Pendleton County, Hydrologic Unit 02070001, on left bank 50 ft upstream from bridge on U.S. Highway 33, 0.1 mi upstream from Hawes Run, 0.4 mi north of Brandywine, 0.9 mi downstream from Broad Run, and at mile 42.9.

DRAINAGE AREA.--102 mi².

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

REVISED RECORDS.--WSP 1141: 1945(M), 1947(M). WRD WV-84-1: 1983. WRD WV-88-1: 1987.

GAGE.--Water-stage recorder. Datum of gage is 1,558.35 ft above sea level. Prior to Sept. 24, 1956, nonrecording gage at highway bridge 50 ft downstream at same datum.

REMARKS.--Records good except those for periods of estimated daily discharges (ice effect) which are fair. The flow from 41.3 mi² upstream from station is partially controlled, but not diverted, by several floodwater detention reservoirs with a total combined detention capacity of 8,882 acre-ft.

PEAK DISCHARGE FOR CURRENT YEAR.--Maximum discharge, 3,630 ft³/s, Aug. 17, gage height, 5.89 ft.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	31	87	e31	211	139	404	61	24	12	187	27
2	11	23	68	30	134	131	252	62	21	11	105	24
3	11	20	56	30	117	117	160	60	18	17	97	23
4	10	18	54	31	102	156	135	103	18	44	95	22
5	9.5	17	1870	e32	94	525	122	437	18	21	93	20
6	9.1	17	1090	32	87	649	114	396	18	17	93	19
7	8.7	16	348	39	79	1160	137	452	21	39	73	18
8	8.4	14	136	106	83	1850	130	2160	19	20	61	16
9	8.2	14	106	107	1310	1350	126	1120	19	18	84	15
10	8.0	13	89	97	964	1460	121	449	18	20	69	15
11	8.0	13	79	83	538	994	113	202	15	15	58	15
12	11	12	65	406	323	563	105	133	15	13	83	13
13	11	17	56	611	184	414	261	113	14	12	64	12
14	11	48	50	401	141	353	422	99	13	14	51	11
15	9.7	37	49	198	129	302	278	90	12	14	45	11
16	9.1	28	58	130	142	287	198	82	15	14	41	11
17	8.5	29	88	110	185	175	145	72	15	18	1240	11
18	8.3	80	89	e100	255	135	130	65	14	64	2120	11
19	8.2	68	86	e90	413	123	116	60	12	43	1220	11
20	10	54	78	e80	517	108	103	56	18	44	615	9.8
21	13	42	76	e70	567	106	90	51	18	56	129	9.4
22	11	34	67	66	486	235	101	45	17	130	99	9.5
23	11	29	60	57	1020	243	94	41	15	92	81	9.9
24	11	25	53	95	1460	191	87	38	15	64	68	9.7
25	10	22	47	200	946	243	83	37	17	50	61	9.3
26	9.7	21	42	508	534	179	75	38	14	99	54	9.8
27	9.5	72	42	456	343	785	69	36	16	97	47	9.7
28	9.3	1110	38	1150	185	1240	67	33	15	281	43	9.4
29	8.5	346	36	1330	---	2010	62	30	14	910	37	8.9
30	12	121	32	613	---	1340	61	27	14	304	31	8.5
31	24	---	e32	377	---	674	---	25	---	129	28	---
TOTAL	319.7	2391	5127	7666	11549	18237	4361	6673	492	2682	7172	408.9
MEAN	10.3	79.7	165	247	412	588	145	215	16.4	86.5	231	13.6
MAX	24	1110	1870	1330	1460	2010	422	2160	24	910	2120	27
MIN	8.0	12	32	30	79	106	61	25	12	11	28	8.5
CFSM	.10	.78	1.62	2.42	4.04	5.77	1.43	2.11	.16	.85	2.27	.13
IN.	.12	.87	1.87	2.80	4.21	6.65	1.59	2.43	.18	.98	2.62	.15

e Estimated

POTOMAC RIVER BASIN

01607500 SOUTH FORK SOUTH BRANCH POTOMAC RIVER AT BRANDYWINE, WV--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1943 - 1994, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	61.2	84.8	109	120	149	231	167	126	71.6	32.0	40.9	38.4
MAX	340	965	473	311	412	588	583	324	570	220	301	242
(WY)	1973	1986	1974	1979	1994	1994	1987	1960	1949	1949	1984	1945
MIN	4.57	6.73	6.45	7.70	22.2	30.4	34.0	18.3	7.68	4.11	3.39	2.88
(WY)	1964	1954	1956	1981	1977	1988	1981	1977	1977	1966	1957	1968

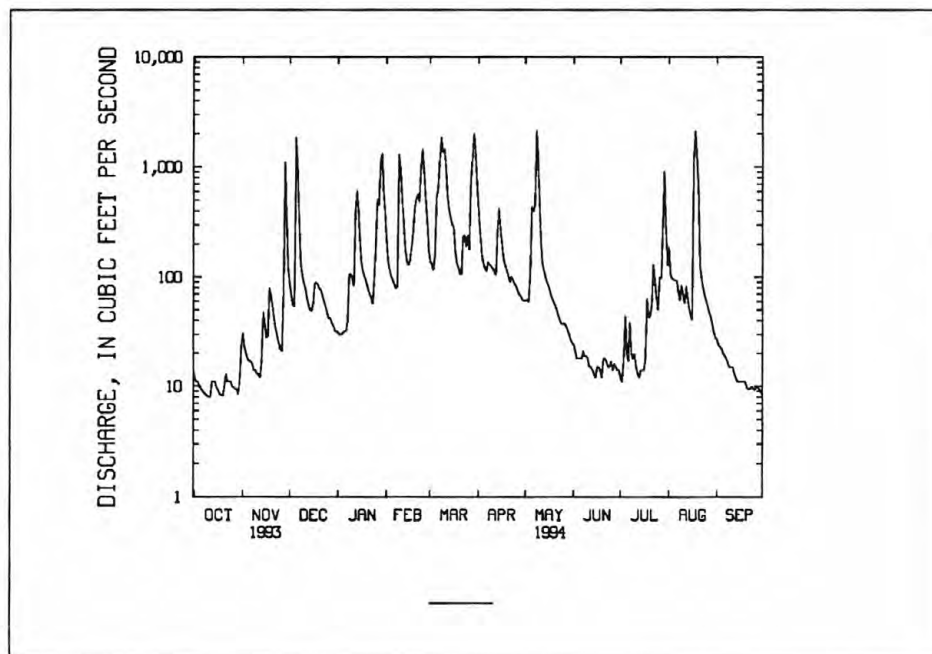
SUMMARY STATISTICS	FOR 1993 CALENDAR YEAR		FOR 1994 WATER YEAR		WATER YEARS 1943 - 1994	
ANNUAL TOTAL	41720.6		67078.6			
ANNUAL MEAN	114		184		102	
HIGHEST ANNUAL MEAN					197	
LOWEST ANNUAL MEAN					38.6	
HIGHEST DAILY MEAN	1920		2160		7500	
LOWEST DAILY MEAN	4.6		8.0		1.3	
ANNUAL SEVEN-DAY MINIMUM	4.9		8.6		1.6	
INSTANTANEOUS PEAK FLOW			3630		(b) 41200	
INSTANTANEOUS PEAK STAGE			5.89		(c) 18.42	
INSTANTANEOUS LOW FLOW			7.6		.30	
ANNUAL RUNOFF (CFSM)	1.12		1.80		1.00	
ANNUAL RUNOFF (INCHES)	15.22		24.46		13.64	
10 PERCENT EXCEEDS	214		512		218	
50 PERCENT EXCEEDS	32		60		39	
90 PERCENT EXCEEDS	6.5		11		7.2	

a Oct. 10, 11.

b From rating curve extended above 5,300 ft³/s on basis of slope-area measurement of peak flow.

c From floodmarks.

d Dec. 1, 10, 1958.



POTOMAC RIVER BASIN

01608000 SOUTH FORK SOUTH BRANCH POTOMAC RIVER NEAR MOOREFIELD, WV

LOCATION.--Lat 39°00'44", long 78°57'23", Hardy County, Hydrologic Unit 02070001, on right bank 0.2 mi downstream from Stony Creek, 3.5 mi south of Moorefield, and at mile 6.0.

DRAINAGE AREA.--283 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1928 to September 1935, August 1938 to current year.

REVISED RECORDS.--WSP 1141: 1933(M), 1940, 1942-43, 1945, 1948(M). WSP 1302: 1931(M), 1935(M).

GAGE.--Water-stage recorder. Datum of gage is 861.51 ft above sea level (U.S. Army Corps of Engineers datum). Prior to Mar. 11, 1940, nonrecording gage at Harness Ford Bridge 2.0 mi upstream at datum about 31 ft higher.

REMARKS.--Water-discharge records good except those for estimated discharges (frozen float), which are fair. The flow from 92.7 mi² upstream from station is partially controlled, but not diverted, by several floodwater detention reservoirs with a total combined detention capacity of 19,870 acre-ft.

PEAK DISCHARGE FOR CURRENT YEAR.--Peak discharge, 5,300 ft³/s, May 8, gage height, 6.79 ft.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	40	29	314	81	590	519	968	191	66	39	377	76
2	35	42	220	75	442	466	717	167	61	36	309	69
3	32	45	176	74	358	419	578	151	58	35	228	61
4	28	41	144	115	298	411	487	231	55	35	207	58
5	26	38	1910	87	254	943	422	546	52	55	205	56
6	24	37	2320	83	228	1270	389	741	50	48	197	52
7	21	34	1030	96	207	1810	408	649	57	45	173	49
8	21	32	560	392	196	3520	451	3830	52	52	141	46
9	21	31	380	444	1850	2570	429	2250	51	47	118	44
10	21	29	280	329	2090	2540	409	1130	46	46	132	44
11	20	27	232	271	1190	2260	379	698	43	45	118	44
12	25	27	192	312	778	1310	339	522	41	40	128	43
13	24	30	155	936	563	930	338	404	38	40	163	40
14	24	44	136	771	459	763	650	314	35	38	124	38
15	24	68	129	569	395	694	567	258	35	42	104	35
16	23	68	154	383	431	696	515	230	35	52	88	32
17	20	64	267	320	516	614	442	198	35	44	384	29
18	20	70	303	335	586	507	382	176	36	45	3060	35
19	19	98	273	e550	761	444	333	158	34	76	1570	29
20	21	98	238	e650	998	373	293	145	42	143	963	26
21	21	85	219	e430	1130	332	255	136	51	152	547	26
22	19	75	194	e350	1080	417	233	123	52	216	341	26
23	20	66	168	e300	1870	561	228	115	46	249	251	29
24	22	58	147	429	2870	524	206	106	69	178	191	27
25	21	50	132	597	2240	593	191	104	57	136	155	26
26	20	44	118	790	1340	607	181	103	53	133	132	27
27	20	71	109	892	897	927	175	97	56	178	116	25
28	19	1220	104	1040	651	2310	166	88	51	247	102	24
29	19	1000	99	2350	---	3640	168	82	45	462	92	23
30	22	508	97	1370	---	2700	182	76	42	656	82	22
31	27	---	88	819	---	1520	---	70	---	477	77	---
TOTAL	719	4129	10888	16240	25268	37190	11481	14089	1444	4087	10875	1161
MEAN	23.2	138	351	524	902	1200	383	454	48.1	132	351	38.7
MAX	40	1220	2320	2350	2870	3640	968	3830	69	656	3060	76
MIN	19	27	88	74	196	332	166	70	34	35	77	22
CFM	.08	.49	1.24	1.85	3.19	4.24	1.35	1.61	.17	.47	1.24	.14
IN.	.09	.54	1.43	2.13	3.32	4.89	1.51	1.85	.19	.54	1.43	.15

e Estimated

POTOMAC RIVER BASIN

01608000 SOUTH FORK SOUTH BRANCH POTOMAC RIVER NEAR MOOREFIELD, WV--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1928 - 1994, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	133	176	210	246	327	488	414	324	165	83.6	105	75.9
MAX	776	2951	879	716	902	1327	1787	946	1071	510	801	497
(WY)	1977	1986	1974	1991	1994	1993	1987	1988	1949	1949	1955	1945
MIN	12.8	17.1	17.4	21.3	25.2	72.2	91.7	51.2	28.1	13.7	10.4	10.2
(WY)	1992	1932	1966	1981	1934	1981	1981	1930	1977	1966	1965	1968

SUMMARY STATISTICS	FOR 1993 CALENDAR YEAR		FOR 1994 WATER YEAR		WATER YEARS 1928 - 1994	
ANNUAL TOTAL	98912		137571			
ANNUAL MEAN	271		377		228	
HIGHEST ANNUAL MEAN					418	1949
LOWEST ANNUAL MEAN					85.9	1934
HIGHEST DAILY MEAN	3770		3830		28000	Nov 5 1985
LOWEST DAILY MEAN	15		19		4.4	Sep 10 1966
ANNUAL SEVEN-DAY MINIMUM	16		20		5.3	Sep 5 1966
INSTANTANEOUS PEAK FLOW			5300		(c) 110000	Nov 5 1985
INSTANTANEOUS PEAK STAGE			6.79		(d) 19.99	Nov 5 1985
INSTANTANEOUS LOW FLOW			18		4.4	(g)
ANNUAL RUNOFF (CFSM)	.96		1.33		.81	
ANNUAL RUNOFF (INCHES)	13.00		18.08		10.96	
10 PERCENT EXCEEDS	799		951		500	
50 PERCENT EXCEEDS	66		145		95	
90 PERCENT EXCEEDS	19		27		21	

a Sept. 1, 2.

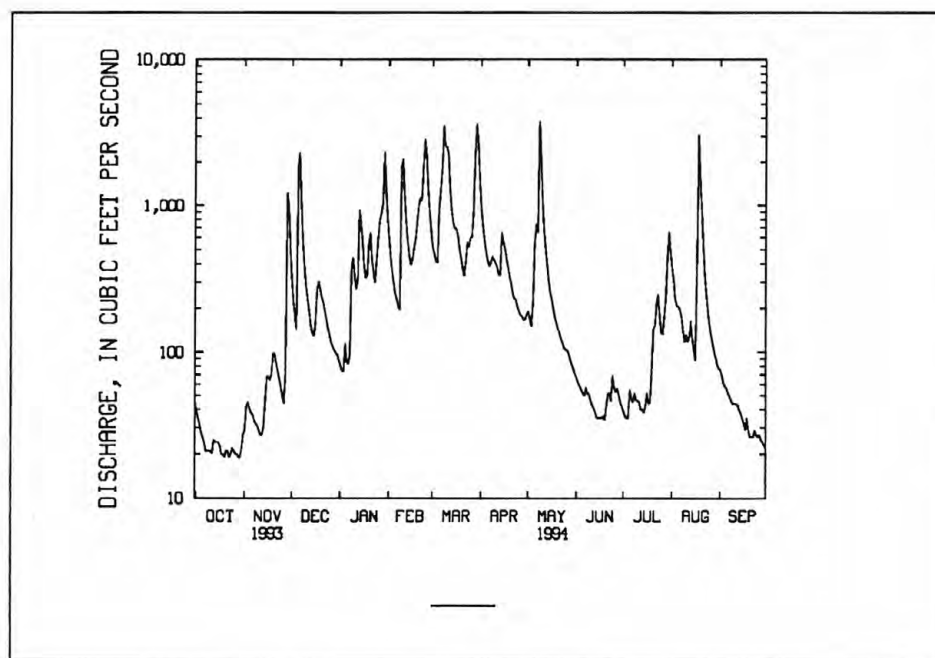
b Oct. 19, 22, 28, 29.

c From rating curve extended above 39,000 ft³/s on basis of slope-area measurement of peak flow.

d From floodmarks.

f Oct. 19, 29, 30.

g Sept. 10, 11, 1965, Sept. 9-11, 1966.



POTOMAC RIVER BASIN

01608000 SOUTH FORK SOUTH BRANCH POTOMAC RIVER NEAR MOOREFIELD, WV--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1969 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	TEMPER- ATURE AIR (DEG C) (00020)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, (PER- CENT SATUR- ATION) (00301)	HARD- NESS TOTAL (MG/L AS CAO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)
OCT 1993												
04...	1145	28	218	8.1	13.5	17.0	739	9.8	97	110	34	5.8
NOV												
01...	1415	30	237	7.8	10.0	7.0	742	11.1	101	110	36	6.0
DEC												
05...	1500	2660	95	7.0	9.0	9.0	730	10.3	93	37	11	2.4
JAN 1994												
03...	1000	74	187	7.5	3.0	1.0	760	12.6	94	80	25	4.3
FEB												
03...	1130	368	130	7.1	2.0	3.5	741	13.3	99	59	18	3.3
24...	1015	2800	98	7.1	5.5	7.5	731	11.5	95	37	11	2.4
MAR												
14...	1045	767	131	7.2	6.0	12.0	737	11.8	98	58	18	3.2
APR												
05...	1115	417	134	7.6	10.0	21.0	736	10.8	99	69	22	3.5
MAY												
03...	1245	150	170	6.8	13.0	15.5	747	9.2	89	85	27	4.2
08...	1315	5230	90	6.8	11.0	14.5	735	9.9	93	37	11	2.2
JUN												
05...	1015	52	215	7.8	21.0	26.5	740	7.9	91	120	40	5.7
JUL												
01...	1300	40	201	8.1	26.0	29.0	741	9.2	117	93	29	5.0
AUG												
03...	1215	237	175	7.9	23.5	28.0	743	8.2	99	77	24	4.2
18...	1115	3400	99	6.9	18.0	22.5	740	8.2	89	41	12	2.6
SEP												
20...	1230	26	218	8.0	19.0	22.0	746	9.5	105	100	32	5.5

POTOMAC RIVER BASIN

01608000 SOUTH FORK SOUTH BRANCH POTOMAC RIVER NEAR MOOREFIELD, WV--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LILITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS NO3) (71851)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)
OCT 1993												
04...	2.6	1.6	88	107	22	2.5	<0.10	5.5	131	--	<0.010	0.200
NOV												
01...	2.0	1.6	93	113	23	2.5	0.10	5.7	135	--	<0.010	0.250
DEC												
05...	1.7	1.7	23	28	14	1.5	<0.10	5.8	71	--	<0.010	0.590
JAN 1994												
03...	2.3	0.70	56	68	19	2.8	<0.10	4.8	97	--	<0.010	1.40
FEB												
03...	2.1	1.1	37	46	15	2.6	<0.10	5.4	83	6.6	0.020	1.50
24...	1.6	1.2	26	32	12	1.7	<0.10	5.9	61	--	<0.010	0.650
MAR												
14...	1.9	1.0	39	48	14	2.1	<0.10	5.4	80	--	<0.010	1.40
APR												
05...	1.8	0.80	48	59	16	2.2	<0.10	4.9	82	5.7	0.020	1.30
MAY												
03...	2.1	1.2	64	78	18	2.2	<0.10	5.7	99	--	<0.010	0.830
08...	1.3	1.6	26	32	11	1.0	<0.10	7.2	65	--	<0.010	0.280
JUN												
05...	3.3	1.8	80	98	25	4.6	<0.10	2.9	133	4.2	0.020	0.980
JUL												
01...	2.4	1.5	76	93	19	2.5	0.10	5.2	111	--	<0.010	0.340
AUG												
03...	2.3	1.6	66	81	13	1.8	<0.10	6.0	112	--	<0.010	0.430
18...	1.6	1.7	30	37	10	1.1	<0.10	7.6	72	--	<0.010	0.310
SEP												
20...	2.6	1.6	84	102	19	2.4	<0.10	5.7	135	--	<0.010	0.640

POTOMAC RIVER BASIN

01608000 SOUTH FORK SOUTH BRANCH POTOMAC RIVER NEAR MOOREFIELD, WV--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681)	CARBON, ORGANIC SUS- PENDE TOTAL (MG/L AS C) (00689)
OCT 1993											
04...	0.200	0.020	<0.20	<0.20	<0.010	<0.010	0.020	7	3	1.0	0.1
NOV											
01...	0.250	0.020	<0.20	<0.20	0.020	<0.010	<0.010	9	3	1.2	0.2
DEC											
05...	0.590	0.030	1.4	<0.20	0.200	<0.010	0.010	31	2	6.2	7.8
JAN 1994											
03...	1.40	<0.010	0.20	<0.20	<0.010	<0.010	<0.010	8	1	0.9	0.1
FEB											
03...	1.50	<0.010	<0.20	<0.20	<0.010	<0.010	<0.010	12	2	1.6	0.1
24...	0.650	0.020	0.20	<0.20	0.030	0.010	<0.010	47	3	3.1	0.2
MAR											
14...	1.40	0.020	<0.20	<0.20	<0.010	<0.010	<0.010	15	2	1.6	0.1
APR											
05...	1.30	0.040	<0.20	<0.20	<0.010	<0.010	<0.010	7	2	1.5	0.1
MAY											
03...	0.830	0.030	<0.20	<0.20	<0.010	<0.010	<0.010	19	3	1.4	0.1
08...	0.280	0.040	0.90	0.30	0.170	0.030	0.010	240	4	4.7	3.3
JUN											
05...	0.980	0.020	<0.20	<0.20	<0.010	<0.010	<0.010	14	3	14	0.3
JUL											
01...	0.340	0.020	<0.20	<0.20	0.020	0.030	<0.010	10	3	1.2	0.1
AUG											
03...	0.430	0.010	<0.20	<0.20	0.010	<0.010	<0.010	30	3	2.1	0.1
18...	0.310	0.020	0.50	<0.20	0.050	0.020	<0.010	200	5	4.8	2.2
SEP											
20...	0.640	0.030	<0.20	<0.20	<0.010	<0.010	<0.010	6	2	2.9	0.1

POTOMAC RIVER BASIN

01608000 SOUTH FORK SOUTH BRANCH POTOMAC RIVER NEAR MOOREFIELD, WV--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

	DIMETH- OATE WATER FLTRD 0.7 U GG, REC (UG/L) (82662)	ETHAL- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82663)	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L) (82664)	TER- BACIL WATER FLTRD 0.7 U GF, REC (UG/L) (82665)	TRI- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82661)	2,6-DI- ETHYL ANILINE WAT FLT 0.7 U GF, REC (UG/L) (82660)	ALA- CHLOR, WATER, DISS, REC, (UG/L) (46342)	ALPHA BHC DIS- SOLVED (UG/L) (34253)	ATRA- ZINE, WATER, DISS, REC (UG/L) (39632)	BEN- FLUR- ALIN WAT FLD 0.7 U GF, REC (UG/L) (82673)	BUTYL- ATE, WATER, DISS, REC (UG/L) (04028)	CAR- BARYL WATER FLTRD 0.7 U GF, REC (UG/L) (82680)
JUN 1994 05...	<0.02	<0.01	<0.01	0.12	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.05
	CARBO- FURAN WATER FLTRD 0.7 U GF, REC (UG/L) (82674)	CHLOR- PYRIFOS DIS- SOLVED (UG/L) (38933)	CYANA- ZINE, WATER, DISS, REC (UG/L) (04041)	DCPA WATER FLTRD 0.7 U GF, REC (UG/L) (82682)	P,P' DDE DISSOLV (UG/L) (34653)	DEETHYL ATRA- ZINE, WATER, DISS, REC (UG/L) (04040)	DI- AZINON, DIS- SOLVED (UG/L) (39572)	DI- ELDRIN DIS- SOLVED (UG/L) (39381)	DISUL- FOTON WATER FLTRD 0.7 U GF, REC (UG/L) (82677)	EPTC WATER FLTRD 0.7 U GF, REC (UG/L) (82668)	ETHO- PROP WATER FLTRD 0.7 U GF, REC (UG/L) (82672)	FONOFOS WATER DISS REC (UG/L) (04095)
JUN 1994 05...	<0.01	<0.01	<0.01	<0.00	<0.01	<0.00	<0.01	<0.01	<0.06	<0.00	<0.01	<0.01
	LINDANE DIS- SOLVED (UG/L) (39341)	LIN- URON WATER FLTRD 0.7 U GF, REC (UG/L) (82666)	MALA- THON, DIS- SOLVED (UG/L) (39532)	METHYL AZIN- PHOS WAT FLT 0.7 U GF, REC (UG/L) (82686)	METHYL PARA- THION WAT FLT 0.7 U GF, REC (UG/L) (82667)	METO- LACHLOR WATER DISSOLV (UG/L) (39415)	METRI- BUZIN SENCOR WATER DISSOLV (UG/L) (82630)	MOL- INATE WATER FLTRD 0.7 U GF, REC (UG/L) (82671)	NAPROP- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82684)	PEB- ULATE WATER FILTRD 0.7 U GF, REC (UG/L) (82669)	PARA- THON, DIS- SOLVED (UG/L) (39542)	PENDI- METH- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82683)
JUN 1994 05...	<0.01	<0.04	<0.01	<0.05	<0.03	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02
	PER- METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L) (82687)	PRO- METON, WATER, DISS, REC (UG/L) (04037)	PRON- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82676)	PROP- CHLOR, WATER, DISS, REC (UG/L) (04024)	PRO- PARGITE WATER FLTRD 0.7 U GF, REC (UG/L) (82685)	PRO- PANIL WATER FLTRD 0.7 U GF, REC (UG/L) (82679)	SI- MAZINE, WATER, DISS, REC (UG/L) (04035)	TEBU- THIURON WATER FLTRD 0.7 U GF, REC (UG/L) (82670)	TER- BUFOS WATER FLTRD 0.7 U GF, REC (UG/L) (82675)	THIO- BENCARB WATER FLTRD 0.7 U GF, REC (UG/L) (82681)	TRIAL- LATE WATER FLTRD 0.7 U GF, REC (UG/L) (82678)	
JUN 1994 05...	<0.02	<0.01	<0.01	<0.02	<0.01	<0.02	<0.01	<0.02	<0.01	<0.01	<0.01	

POTOMAC RIVER BASIN

01608500 SOUTH BRANCH POTOMAC RIVER NEAR SPRINGFIELD, WV

LOCATION.--Lat 39°26'49", long 78°39'16", Hampshire County, Hydrologic Unit 02070001, on left bank at highway bridge, 2.0 mi east of Springfield, and at mile 13.4.

DRAINAGE AREA.--1,471 mi².

PERIOD OF RECORD.--June 1894 to February 1896 (fragmentary), June 1899 to February 1902, August 1903 to July 1906, August 1928 to current year.

REVISED RECORDS.--WSP 1552: 1903-06, 1929-30(M), 1932-33(M), 1935(M), 1937-40(M), 1942-43(M), 1945(M).

GAGE.--Water-stage recorder. Datum of gage is 562.02 ft above sea level. June 1984 to February 1986, nonrecording gage at Baltimore & Ohio Railroad bridge 11.2 mi upstream at different datum. June 26, 1899, to Feb. 2, 1902, nonrecording gage at bridge 10.0 mi upstream at different datum. Aug. 28, 1903, to July 14, 1906, nonrecording gage at present site at different datum. Aug. 8, to Sept. 24, 1928, nonrecording gage at present site and datum.

REMARKS.--Records good except those for estimated daily discharges (ice effect), which are fair. National Weather Service gage-height telemeter and U.S. Army Corps of Engineers satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in November 1877 reached a stage of about 34 ft, from floodmarks, discharge, 140,000 ft³/s.

PEAK DISCHARGES 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)
Dec. 6	0200	19,300	13.69	Mar. 11	0215	18,200	13.24
Jan. 29	1330	14,400	11.64	Mar. 29	2345	19,000	13.56
Feb. 10	0445	*38,500	*19.19	May 8	2200	33,000	17.90
Feb. 24	0700	20,400	14.14	Aug. 18	1345	11,000	9.89
Mar. 8	2215	16,400	12.50				

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	403	276	1930	632	3460	3110	6030	1740	569	307	1430	466
2	314	341	1470	708	2600	2740	4360	1770	527	277	1410	456
3	260	373	1230	712	2100	2540	3460	1500	491	258	1150	451
4	225	329	1100	722	1840	2430	2940	1750	464	275	1110	390
5	194	290	6450	822	1630	5560	2580	3630	439	312	1010	355
6	173	283	13600	801	1540	7420	2290	4490	425	291	1110	337
7	158	296	5730	797	1460	7210	2140	3830	400	441	1060	319
8	149	362	3180	1730	1400	13400	2180	21500	395	319	888	301
9	141	339	2270	3280	10900	13600	1970	17400	411	345	719	282
10	134	306	1840	2210	27300	13500	1880	7710	391	346	610	266
11	129	275	1590	1810	9920	14900	1880	4620	368	292	617	254
12	145	252	1460	1650	5820	9090	1800	3340	506	305	536	243
13	155	239	1290	2900	3900	6180	2640	2710	437	339	504	244
14	177	241	1160	3700	3170	5050	4230	2220	357	301	624	233
15	193	740	1110	2910	2670	4730	3570	1910	323	300	502	216
16	206	948	1270	2080	2780	4460	3720	1740	302	265	425	204
17	182	771	1490	1590	3140	3680	3140	1600	352	274	488	199
18	163	666	1620	1380	3230	3050	2580	1430	398	290	6320	200
19	148	988	1560	1210	3920	2800	2230	1310	348	284	5060	198
20	146	1160	1490	927	5430	2530	1980	1220	305	364	2950	190
21	156	1010	1450	e980	6940	2390	1770	1140	352	852	2080	187
22	173	860	1430	e1050	7130	3770	1590	1060	352	1530	1620	184
23	165	707	1290	e1100	8120	5060	1520	985	379	1540	1430	191
24	186	605	1180	e1200	19100	4190	1460	920	374	1220	1200	179
25	183	535	1080	e3500	14400	3970	1340	892	559	1000	991	179
26	170	481	996	e4500	8910	4050	1260	891	451	813	846	180
27	167	488	919	5940	5540	5120	1220	886	376	1310	727	181
28	156	5380	833	4340	3840	13300	1190	813	369	1850	635	175
29	148	5990	831	11800	---	16500	1160	726	367	2480	571	170
30	161	2860	746	8760	---	15400	1140	658	353	2370	504	161
31	225	---	625	4990	---	9090	---	608	---	1770	463	---
TOTAL	5685	28391	64220	80731	172190	210820	71250	96999	12140	22920	39590	7591
MEAN	183	946	2072	2604	6150	6801	2375	3129	405	739	1277	253
MAX	403	5990	13600	11800	27300	16500	6030	21500	569	2480	6320	466
MIN	129	239	625	632	1400	2390	1140	608	302	258	425	161
CFSM	.12	.64	1.41	1.77	4.18	4.62	1.61	2.13	.28	.50	.87	.17
IN.	.14	.72	1.62	2.04	4.35	5.33	1.80	2.45	.31	.58	1.00	.19

e Estimated

POTOMAC RIVER BASIN

01608500 SOUTH BRANCH POTOMAC RIVER NEAR SPRINGFIELD, WV--Continued

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

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	635	846	1241	1552	2028	3000	2408	1778	1014	519	511	392
MAX	4629	12850	5000	4595	6150	10490	6421	4079	5231	2638	3923	1980
(WY)	1977	1986	1973	1937	1994	1936	1987	1989	1949	1949	1955	1950
MIN	79.4	82.2	147	271	362	791	829	366	225	105	73.5	76.6
(WY)	1931	1905	1966	1981	1934	1981	1976	1977	1991	1930	1930	1930

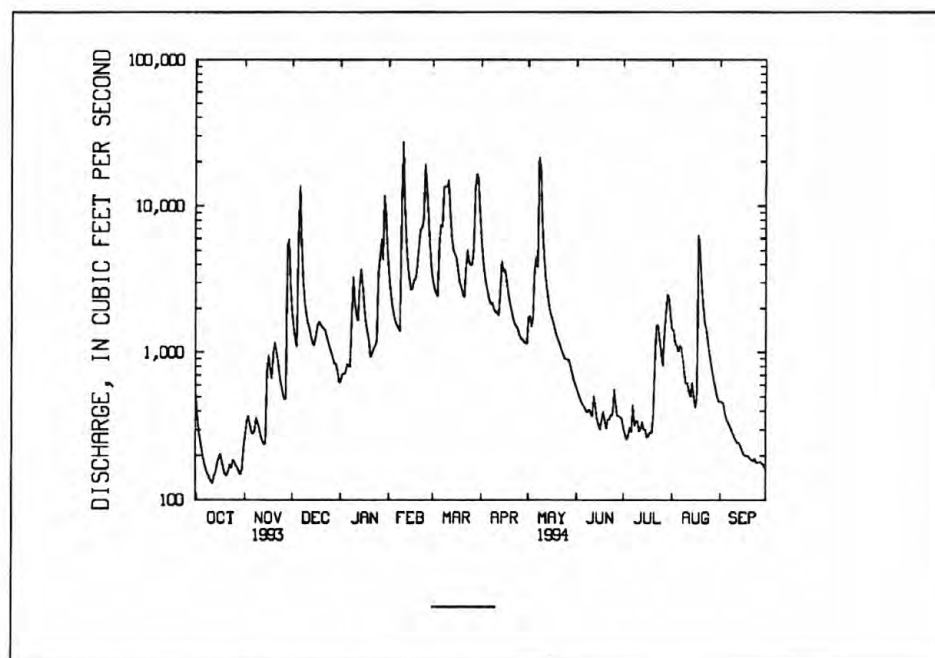
SUMMARY STATISTICS	FOR 1993 CALENDAR YEAR		FOR 1994 WATER YEAR		WATER YEARS 1899 - 1994	
ANNUAL TOTAL	576722		812527			
ANNUAL MEAN	1580		2226		1323	
HIGHEST ANNUAL MEAN					2232	
LOWEST ANNUAL MEAN					566	
HIGHEST DAILY MEAN	24900		27300		145000	
LOWEST DAILY MEAN	77		129		52	
ANNUAL SEVEN-DAY MINIMUM	88		144		54	
INSTANTANEOUS PEAK FLOW			38500		(b) 240000	
INSTANTANEOUS PEAK STAGE			19.19		(c) 44.22	
INSTANTANEOUS LOW FLOW			125		29	
ANNUAL RUNOFF (CFSM)	1.07		1.51		.90	
ANNUAL RUNOFF (INCHES)	14.58		20.55		12.22	
10 PERCENT EXCEEDS	4060		5470		3000	
50 PERCENT EXCEEDS	625		1050		638	
90 PERCENT EXCEEDS	111		196		152	

a Sept. 11, 12, 1966.

b From rating curve extended above 145,000 ft³/s on basis of slope-area measurement of peak flow.

c From floodmarks.

d Jan. 28, 1956 (result of freezeup), July 30, 1966 (result of temporary dam).



POTOMAC RIVER BASIN

01610000 POTOMAC RIVER AT PAW PAW, WV

LOCATION.--Lat 39°32'13", long 78°27'28", Allegany County, Md., Hydrologic Unit 02070003, on left bank 250 ft upstream from bridge on Maryland State Highway 51 at Paw Paw, 3.3 mi downstream from Little Cacapon River, and at mile 277.

DRAINAGE AREA.--3,109 mi².

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

GAGE.--Water-stage recorder. Datum of gage is 487.88 ft above sea level. Prior to Mar. 25, 1939, nonrecording gage at bridge 250 ft downstream at same datum.

REMARKS.--No estimated daily discharges. Records good. Low flow affected by Stony River Reservoir prior to July 1981, since December 1950 by Savage River Reservoir (see station 01597500), and since July 1981 by Jennings Randolph Lake. National Weather Service gage height telemeter at station. U.S. Army Corps of Engineers satellite telemeter at station. Several measurements of water temperature were made during the year. Water-quality records for some prior periods have been collected at this location.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known, 54.0 ft on Mar. 18, 1936, discharge, 240,000 ft³/s, from rating curve extended above 85,000 ft³/s on basis of slope-area measurement of peak flow at site 5.0 mi upstream at Okonoko, W. Va.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 20,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage Height (ft)	Date	Time	Discharge (ft ³ /s)	Gage Height (ft)
Nov. 28	1430	27,500	18.18	Mar. 11	0215	32,200	19.75
Dec. 6	0615	26,100	17.74	Mar. 25	1300	22,000	16.30
Jan. 29	1745	22,000	16.29	Mar. 29	2015	36,900	21.25
Feb. 10	1000	*46,200	*24.03	Apr. 14	0100	22,000	16.28
Feb. 21	2330	23,400	16.79	May 9	0100	42,600	22.97
Feb. 24	1345	32,400	19.79				

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	937	1690	5590	2030	9080	7720	14400	5400	1620	867	2120	1360
2	791	1390	4440	2050	7430	6740	12900	5650	1520	762	1930	1450
3	690	1250	3820	2080	6180	6380	11100	4590	1290	734	1710	1330
4	626	1140	3490	1970	5300	6540	9650	4340	1240	718	1510	1260
5	585	1070	11400	2120	4740	11100	7550	7830	1210	804	1460	1180
6	543	1100	21800	2130	4370	14800	6530	8870	1180	760	1620	1130
7	515	1120	11600	2250	4310	13600	6030	8080	1150	946	2060	1080
8	508	1080	7670	2600	4330	23300	5640	27600	1100	921	1850	930
9	498	1060	5740	5420	11800	25600	5140	32400	1080	879	1220	881
10	498	982	4880	5140	39800	27000	5340	16200	1070	858	1080	857
11	494	963	4930	4700	19500	29500	6950	11400	1020	801	1010	824
12	526	923	4370	4600	13100	20200	5900	9300	1160	734	1050	792
13	624	893	3960	5280	10400	16400	11200	7280	1230	767	988	787
14	623	934	3630	6620	9020	15000	20100	5420	1040	773	1030	788
15	592	1070	3400	5470	8140	16200	13900	4570	970	864	1060	770
16	594	1740	3510	4290	7400	18200	11900	4280	919	758	961	757
17	594	1530	3750	3640	7800	13800	10900	4460	1070	693	1070	747
18	590	1480	3800	3510	7830	11200	7880	4200	1110	725	6500	764
19	598	1660	3940	3310	9330	10400	6450	3490	1020	718	7840	741
20	593	2090	3880	2580	13300	9810	5680	3010	931	676	4670	724
21	763	1940	3900	2340	20400	9850	4980	2760	955	877	3470	706
22	830	1720	3990	2670	22300	14200	4400	2760	967	2140	2830	715
23	748	1540	3750	2830	19200	18200	3960	2580	964	2690	3600	775
24	1180	1430	3450	3100	30100	18800	3830	2200	1000	2000	2770	747
25	1670	1340	3140	8440	26000	20900	3520	2080	1210	1570	2220	1260
26	741	1260	2880	14200	17500	17600	3170	2150	1230	1340	1900	1580
27	635	1330	2580	14000	12900	19300	3010	2270	1010	1420	1700	810
28	615	20900	2320	11200	9960	32000	2940	2120	967	2240	1600	745
29	585	14800	2190	17900	---	34800	2850	1880	949	3240	1480	710
30	613	8070	2130	16400	---	31400	2770	1760	917	3070	1360	690
31	1120	---	1920	11300	---	20200	---	1660	---	2540	1280	---
TOTAL	21519	79495	151850	176170	361520	540740	220570	202590	33099	38885	66949	27890
MEAN	694	2650	4898	5683	12910	17440	7352	6535	1103	1254	2160	930
MAX	1670	20900	21800	17900	39800	34800	20100	32400	1620	3240	7840	1580
MIN	494	893	1920	1970	4310	6380	2770	1660	917	676	961	690
CFSM	.22	.85	1.58	1.83	4.15	5.61	2.36	2.10	.35	.40	.69	.30
IN.	.26	.95	1.82	2.11	4.33	6.47	2.64	2.42	.40	.47	.80	.33

POTOMAC RIVER BASIN

01610000 POTOMAC RIVER AT PAW PAW, WV--Continued

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

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1555	1979	3317	3833	5314	7521	6130	4432	2524	1330	1183	983
MAX	9709	17180	12300	9099	12910	17440	15620	10450	7612	5071	6458	5012
(WY)	1977	1986	1973	1991	1994	1994	1993	1988	1972	1949	1955	1945
MIN	261	327	388	679	1116	2043	2258	1074	544	303	278	252
(WY)	1952	1966	1966	1981	1954	1990	1968	1941	1965	1966	1944	1959

SUMMARY STATISTICS	FOR 1993 CALENDAR YEAR				FOR 1994 WATER YEAR				WATER YEARS 1939 - 1994			
ANNUAL TOTAL	1570838				1921277							
ANNUAL MEAN	4304				5264				3332			
HIGHEST ANNUAL MEAN									5264			
LOWEST ANNUAL MEAN									1499			
HIGHEST DAILY MEAN	62700				Apr 17				125000			
LOWEST DAILY MEAN	395				(a)				172			
ANNUAL SEVEN-DAY MINIMUM	405				Aug 26				179			
INSTANTANEOUS PEAK FLOW					512				Oct 6			
INSTANTANEOUS PEAK STAGE					46200				Feb 10			
INSTANTANEOUS LOW FLOW					24.03				Feb 10			
ANNUAL RUNOFF (CFSM)	1.38				1.69				1.07			
ANNUAL RUNOFF (INCHES)	18.80				22.99				14.56			
10 PERCENT EXCEEDS	11300				14600				7570			
50 PERCENT EXCEEDS	1670				2200				1770			
90 PERCENT EXCEEDS	492				743				434			

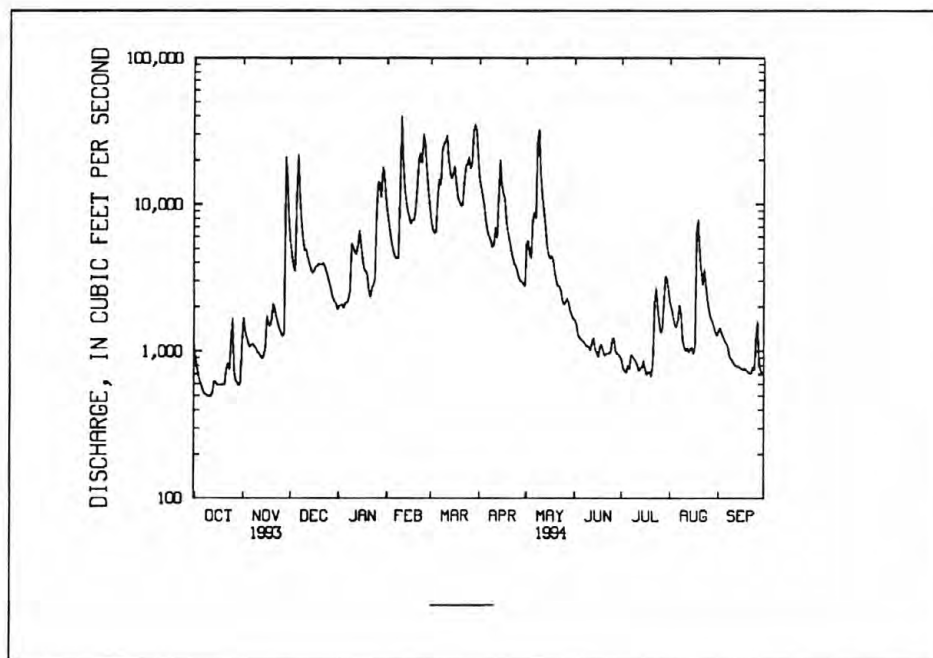
a Aug. 30, 31.

b Sept. 10, 12, 13, 1966.

c From rating curve extended above 85,000 ft³/s on basis of slope-area measurement of peak flow at site 5.0 mi upstream at Okonoko, WV.

d Oct. 11, 12.

f Sept. 10, 11, 1966.



POTOMAC RIVER BASIN

01611500 CACAPON RIVER NEAR GREAT CACAPON, WV

LOCATION.--Lat 39°34'43", long 78°18'34", Morgan County, Hydrologic Unit 02070003, on left bank at Rock Ford, 3.0 mi southwest of Great Cacapon, and at mile 6.5.

DRAINAGE AREA.--677 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--December 1922 to current year.

REVISED RECORDS.--WSP 800: 1924(M). WSP 921: Drainage area. WSP 951: 1936-37. WSP 1552: 1925-26(M), 1928 1929(M), 1932.

GAGE.--Water-stage recorder. Datum of gage is 456.78 ft above sea level. (U.S. Army Corps of Engineers bench mark). Prior to Nov. 10, 1933, nonrecording gage at same site and datum. National Weather Service gage-height telemeter at the station.

REMARKS.--Water-discharge records good except those for estimated daily discharges (ice effect), which are fair. Several measurements of water temperature were made during the year.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in May 1889 reached a stage of about 24.7 ft, from floodmarks, discharge, 57,500 ft³/s.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,900 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage Height (ft)	Date	Time	Discharge (ft ³ /s)	Gage Height (ft)
Nov. 28	2000	*14,400	*12.79	Mar. 8	1645	9,130	10.29
Dec. 6	0100	13,000	12.17	Mar. 11	0600	6,700	8.80
Jan. 27	1045	4,520	7.31	Mar. 16	0815	5,620	8.08
Jan. 29	1430	13,600	12.43	Mar. 29	2030	9,540	10.51
Feb. 10	0545	9,510	10.49	May 8	1945	10,300	10.91
Feb. 22	0330	5,520	8.01	Aug. 18	1530	4,110	7.00
Feb. 25	0600	6700	8.80				

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	138	e110	1100	311	1590	1600	2660	685	198	130	355	168
2	113	e135	761	329	1240	1450	2130	943	183	119	235	176
3	100	e145	595	296	964	1350	1760	831	170	110	197	152
4	90	e130	507	281	910	1250	1520	744	160	107	176	145
5	84	e115	3870	349	849	2150	1330	1320	155	182	158	131
6	78	e110	8360	412	795	3100	1190	1580	151	177	157	122
7	74	e112	2920	366	796	2930	1160	1330	158	207	234	116
8	73	e112	1750	381	834	6700	1340	5480	154	369	266	110
9	71	e105	1230	1090	1390	7160	1090	5040	147	249	200	106
10	70	e99	957	1170	6740	5280	1020	2470	144	179	157	101
11	68	e94	842	913	2790	5960	1080	1760	137	149	136	98
12	78	e90	738	887	1920	3840	1020	1370	141	139	125	95
13	88	e87	595	1110	1530	3090	1090	1150	161	125	137	91
14	e84	e84	503	1500	1260	3220	2000	942	152	124	233	90
15	e80	e85	459	1290	1090	4470	1780	801	150	162	207	89
16	e77	e88	563	1010	1030	5020	1620	729	133	131	157	87
17	e76	e95	1010	868	1160	3300	1570	689	122	109	217	87
18	e74	e103	909	908	1360	2430	1360	600	118	128	1790	90
19	e75	e120	812	1090	2000	2220	1190	535	123	148	1700	116
20	e79	e155	758	1110	3160	2030	1050	491	128	129	938	99
21	e84	e150	691	1030	4680	1990	929	450	127	121	608	91
22	e83	e120	715	955	4640	2960	824	411	162	149	620	93
23	e80	e105	642	941	3240	3180	744	367	179	143	547	117
24	e79	e95	560	834	4240	2660	682	329	154	220	425	123
25	e78	e84	507	e1100	5210	2410	633	302	145	245	323	129
26	e77	e76	455	e3500	3480	2200	593	301	142	228	253	126
27	e77	e90	380	4250	2520	2290	571	302	158	180	213	114
28	e77	6520	343	2760	1900	6300	564	283	154	159	192	106
29	e78	4890	372	5710	---	8830	548	259	146	151	194	97
30	e84	1820	346	3410	---	7300	488	232	149	155	166	91
31	e95	---	320	2070	---	3850	---	213	---	468	149	---
TOTAL	2562	16124	34570	42231	63318	112520	35536	32939	4501	5392	11465	3356
MEAN	82.6	537	1115	1362	2261	3630	1185	1063	150	174	370	112
MAX	138	6520	8360	5710	6740	8830	2660	5480	198	468	1790	176
MIN	68	76	320	281	795	1250	488	213	118	107	125	87
CFSM	.12	.79	1.65	2.01	3.34	5.36	1.75	1.57	.22	.26	.55	.17
IN.	.14	.89	1.90	2.32	3.48	6.18	1.95	1.81	.25	.30	.63	.18

e Estimated

POTOMAC RIVER BASIN

01611500 CACAPON RIVER NEAR GREAT CACAPON, WV--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1923 - 1994, BY WATER YEAR (WY)

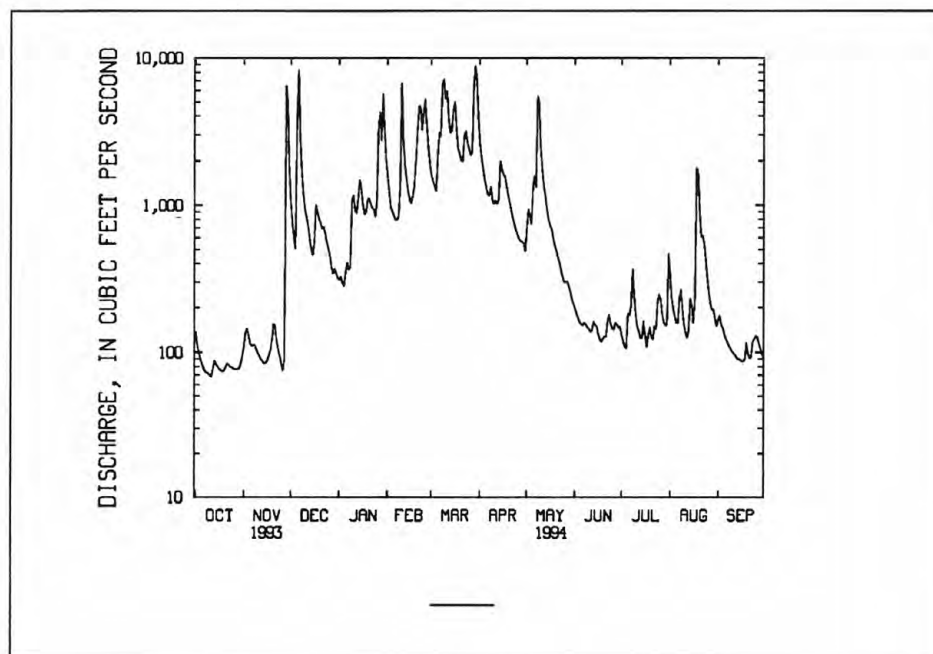
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	332	356	515	634	884	1296	1140	875	432	195	236	179
MAX	2976	2577	2121	1683	2261	5708	2976	3565	3525	936	2791	1636
(WY)	1943	1986	1973	1991	1994	1936	1987	1924	1972	1972	1955	1975
MIN	44.8	51.1	56.5	69.6	89.1	247	242	157	77.0	56.4	39.8	39.4
(WY)	1931	1966	1966	1956	1934	1990	1947	1969	1969	1930	1966	1932

SUMMARY STATISTICS	FOR 1993 CALENDAR YEAR		FOR 1994 WATER YEAR		WATER YEARS 1923 - 1994	
ANNUAL TOTAL	331780		364514			
ANNUAL MEAN	909		999		592	
HIGHEST ANNUAL MEAN					1135	
LOWEST ANNUAL MEAN					180	
HIGHEST DAILY MEAN	19000	Mar 5	8830	Mar 29	67900	Mar 18 1936
LOWEST DAILY MEAN	57	Aug 29	68	Oct 11	26	Sep 12 1966
ANNUAL SEVEN-DAY MINIMUM	60	Aug 25	73	Oct 6	28	Sep 7 1966
INSTANTANEOUS PEAK FLOW			13600	Jan 29	(a) 87600	Mar 18 1936
INSTANTANEOUS PEAK STAGE			12.43	Jan 29	30.10	Mar 18 1936
INSTANTANEOUS LOW FLOW			68	(b)	26	(c)
ANNUAL RUNOFF (CFSM)	1.34		1.48		.87	
ANNUAL RUNOFF (INCHES)	18.23		20.03		11.87	
10 PERCENT EXCEEDS	2680		2920		1340	
50 PERCENT EXCEEDS	251		329		240	
90 PERCENT EXCEEDS	78		90		67	

a From rating curve extended above 52,000 ft³/s.

b Oct. 11, 12.

c Sept. 11-13, 1966.



POTOMAC RIVER BASIN

01611500 CACAPON RIVER NEAR GREAT CACAPON, WV--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	TEMPER- ATURE AIR (DEG C) (00020)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	ALKA- LITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	BICAR- BONATE WATER DIS IT FIELD HCO3 (00453)	
JUN 1994 07...	0830	165	180	7.7	24.0	26.0	745	7.7	94	75	91	
DATE		NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00665)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTH, DIS- SOLVED (MG/L AS P) (00671)	DIMETH- OATE WATER FLTRD 0.7 U GG, REC (UG/L) (82662)	ETHAL- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82663)	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L) (82664)
JUN 1994 07...		<0.010	<0.050	0.030	0.30	<0.20	0.010	<0.010	<0.010	<0.02	<0.01	<0.01
DATE		TER- BACIL WATER FLTRD 0.7 U GF, REC (UG/L) (82665)	TRI- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82661)	2,6-DI- ETHYL ANILINE WAT FLT 0.7 U GF, REC (UG/L) (82660)	ALA- CHLOR, WATER, DISS, REC, (UG/L) (46342)	ALPHA BHC DIS- SOLVED (UG/L) (34253)	ATRA- ZINE, WATER, DISS, REC (UG/L) (39632)	BEN- FLUR- ALIN WAT FLD 0.7 U GF, REC (UG/L) (82673)	BUTYL- ATE, WATER, DISS, REC (UG/L) (04028)	CAR- BARYL WATER FLTRD 0.7 U GF, REC (UG/L) (82680)	CARBO- FURAN WATER FLTRD 0.7 U GF, REC (UG/L) (82674)	CHLOR- PYRIFOS DIS- SOLVED (UG/L) (38933)
JUN 1994 07...		<0.03	<0.01	<0.01	<0.01	<0.01	0.01	<0.01	<0.01	<0.05	<0.01	<0.00

POTOMAC RIVER BASIN

01611500 CACAPON RIVER NEAR GREAT CACAPON, WV--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	CYANA- ZINE, WATER, DISS, REC (UG/L) (04041)	DCPA WATER FLTRD 0.7 U GF, REC (UG/L) (82682)	P,P' DDE DISSOLV (UG/L) (34653)	DEETHYL ATRA- ZINE, WATER, DISS, REC (UG/L) (04040)	DI- AZINON, DIS- SOLVED (UG/L) (39572)	DI- ELDRIN DIS- SOLVED (UG/L) (39381)	DISUL- FOTON WATER FLTRD 0.7 U GF, REC (UG/L) (82677)	EPTC WATER FLTRD 0.7 U GF, REC (UG/L) (82668)	ETHO- PROP WATER FLTRD 0.7 U GF, REC (UG/L) (82672)	FONOFOS WATER DISS REC (UG/L) (04095)	LINDANE DIS- SOLVED (UG/L) (39341)
JUN 1994 07...	<0.01	<0.00	<0.01	<0.01	<0.01	<0.01	<0.01	<0.00	<0.01	<0.01	<0.01
DATE	LIN- URON WATER FLTRD 0.7 U GF, REC (UG/L) (82666)	MALA- THION, DIS- SOLVED (UG/L) (39532)	METHYL AZIN- PHOS WAT FLT 0.7 U GF, REC (UG/L) (82686)	METHYL PARA- THION WAT FLT 0.7 U GF, REC (UG/L) (82667)	METO- LACHLOR WATER DISSOLV (UG/L) (39415)	METRI- BUZIN WATER DISSOLV (UG/L) (82630)	MOL- INATE WATER FLTRD 0.7 U GF, REC (UG/L) (82671)	NAPROP- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82684)	PEB- ULATE WATER FILTRD 0.7 U GF, REC (UG/L) (82669)	PARA- THION, DIS- SOLVED (UG/L) (39542)	PENDI- METH- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82683)
JUN 1994 07...	<0.04	<0.01	<0.04	<0.03	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02
DATE	PER- METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L) (82687)	PRO- METON, WATER, DISS, REC (UG/L) (04037)	PRON- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82676)	PROP- CHLOR, WATER, DISS, REC (UG/L) (04024)	PRO- PARGITE WATER FLTRD 0.7 U GF, REC (UG/L) (82685)	PRO- PANIL WATER FLTRD 0.7 U GF, REC (UG/L) (82679)	SI- MAZINE, WATER, DISS, REC (UG/L) (04035)	TEBU- THIURON WATER FLTRD 0.7 U GF, REC (UG/L) (82670)	TER- BUFOS WATER FLTRD 0.7 U GF, REC (UG/L) (82675)	THIO- BENCARB WATER FLTRD 0.7 U GF, REC (UG/L) (82681)	TRIAL- LATE WATER FLTRD 0.7 U GF, REC (UG/L) (82678)
JUN 1994 07...	<0.02	<0.01	<0.01	<0.02	<0.01	<0.02	0.09	<0.02	<0.01	<0.01	<0.01

POTOMAC RIVER BASIN

01613000 POTOMAC RIVER AT HANCOCK, MD

LOCATION.--Lat 39°41'49", long 78°10'39", Washington County, Hydrologic Unit 02070004, on left bank, 0.2 mi downstream from Little Tonoloway Creek, 0.5 mi downstream from bridge on U.S. Highway 522 at Hancock, 1.1 mi upstream from Tonoloway Creek (formerly called Great or Big Tonoloway Creek), and at mile 239.

DRAINAGE AREA.--4,073 mi².

PERIOD OF RECORD.--October 1932 to current year. Gage-height records collected at same site since June 1925 are contained in reports of National Weather Service.

REVISED RECORDS.--WSP 781: 1933(M). WSP 801: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 383.68 ft above sea level. Oct. 1, 1932, to Jan. 5, 1935, Mar. 18, 1936, to Jan. 20, 1937, nonrecording gage, on former highway bridge just upstream at same datum.

REMARKS.--Records good except those for estimated daily discharges (ice effect), which are fair. Slight regulation at low flow from power plants upstream. Low flow affected slightly by Stony River Reservoir prior to July 1981, since December 1950 by Savage River Reservoir (see station 01597500), and since July 1981 by Jennings Randolph Lake. National Weather Service gage height telemeter at station. U.S. Army Corps of Engineers satellite telemeter at station. Several measurements of water temperature were made during the year. Water-quality records for some prior periods have been collected at this location.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known prior to 1932, about 40 ft in May 1889, discharge, about 220,000 ft³/s.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 23,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage Height (ft)	Date	Time	Discharge (ft ³ /s)	Gage Height (ft)
Nov. 28	2200	41,600	18.15	Mar. 16	0915	25,600	13.92
Dec. 6	1015	33,700	16.16	Mar. 25	1930	24,500	13.57
Jan. 26	0630	41,600	18.15	Mar. 30	0215	45,300	19.03
Feb. 24	2215	36,300	16.84	Apr. 14	0815	25,400	13.87
Mar. 11	0700	38,900	17.50	May 9	0545	*46,800	*19.37

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1370	1670	7700	2310	11100	10100	18500	5270	1750	989	2650	1380
2	1220	2040	5690	2440	9080	8530	15000	8010	1690	925	2240	1520
3	1050	1770	4680	2420	7610	7940	13800	6930	1530	820	2020	1490
4	938	1580	4150	2480	6340	7600	11400	5610	1360	791	1740	1410
5	868	1460	8850	2460	5780	11000	9440	6430	1320	809	1620	1320
6	811	1370	30100	2730	5190	18000	7980	10400	1300	949	1540	1230
7	762	1370	17400	2570	5050	16800	7260	9880	1260	977	1720	1170
8	730	1390	10600	2670	5100	25500	6930	22100	1220	1230	2400	1100
9	718	1340	7730	4600	5760	35000	6380	41300	1180	1170	1740	963
10	703	1300	6160	6270	37600	31600	6040	21400	1150	1010	1310	917
11	691	1240	5800	5820	26000	37300	7080	14200	1140	946	1150	886
12	712	1210	5420	5580	15800	26700	7450	11100	1100	886	1080	860
13	738	1180	4800	5600	12100	20900	9350	9260	1230	808	1110	834
14	844	1160	4310	7540	10200	19200	23900	7320	1260	851	1130	816
15	866	1180	4000	6800	9100	22000	17800	5600	1110	890	1240	809
16	850	1350	3880	e5900	8000	25000	14100	5070	1020	956	1190	796
17	836	1890	4490	e4500	8320	19700	13200	4670	963	817	1580	786
18	844	1820	4570	e4000	8770	14900	10600	5140	1100	778	3500	790
19	829	1790	4560	e3600	10400	13100	8500	4470	1120	859	11300	792
20	843	2010	4620	e3200	15200	12600	7460	3630	1050	813	6680	794
21	852	2340	4490	e2800	24000	12300	6510	3250	997	757	4650	753
22	957	2180	4650	e3000	28800	16600	5730	3030	1000	1260	3840	752
23	1070	1960	4490	e3200	24100	22700	5070	3010	1080	2500	3810	868
24	1000	1800	4170	e3600	29700	22900	4600	2750	1050	2640	3710	836
25	1440	1680	3820	e5000	33100	23900	4340	2400	1100	2010	2870	832
26	1710	1580	3460	e12000	23100	21000	4030	2340	1290	1680	2350	1450
27	1000	1550	3150	e18000	16900	20800	3680	2420	1260	1460	2020	1460
28	884	25000	2830	e14000	12700	35500	3530	2460	1100	1720	1810	865
29	863	26000	2740	e20000	---	43100	3430	2190	1040	2590	1730	795
30	861	11800	2720	22900	---	40700	3320	1980	1020	3290	1560	764
31	969	---	2390	14600	---	26900	---	1850	---	3220	1440	---
TOTAL	28829	106010	188420	202590	414900	669870	266410	235470	35790	41401	78730	30038
MEAN	930	3534	6078	6535	14820	21610	8880	7596	1193	1336	2540	1001
MAX	1710	26000	30100	22900	37600	43100	23900	41300	1750	3290	11300	1520
MIN	691	1160	2390	2310	5050	7600	3320	1850	963	757	1080	752
CFSM	.23	.87	1.49	1.60	3.64	5.31	2.18	1.86	.29	.33	.62	.25
IN.	.26	.97	1.72	1.85	3.79	6.12	2.43	2.15	.33	.38	.72	.27

e Estimated

POTOMAC RIVER BASIN

01613000 POTOMAC RIVER AT HANCOCK, MD--Continued

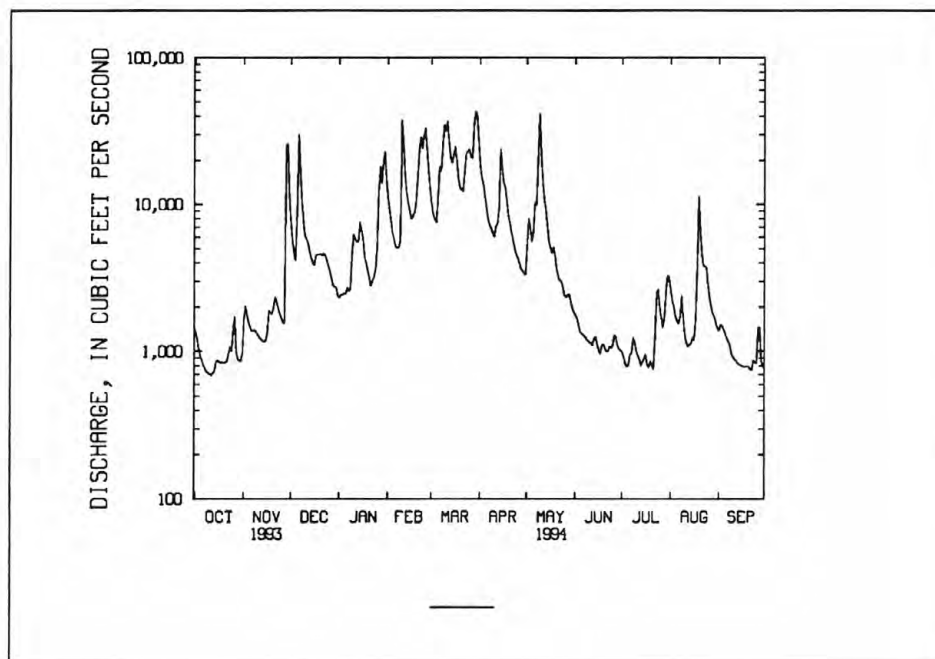
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1933 - 1994, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	2058	2440	4008	4966	6572	9468	7818	5496	3061	1558	1508	1254
MAX	13270	20090	15160	15450	16720	32280	19170	13260	13390	6677	9479	6756
(WY)	1977	1986	1973	1937	1971	1936	1993	1988	1972	1949	1955	1945
MIN	309	399	463	751	1041	2311	2857	1344	622	357	342	329
(WY)	1942	1966	1966	1956	1934	1990	1968	1941	1969	1966	1944	1946

SUMMARY STATISTICS	FOR 1993 CALENDAR YEAR				FOR 1994 WATER YEAR				WATER YEARS 1933 - 1994			
ANNUAL TOTAL	1971929				2298458							
ANNUAL MEAN	5403				6297				4172			
HIGHEST ANNUAL MEAN									6319			
LOWEST ANNUAL MEAN									1770			
HIGHEST DAILY MEAN	65200				43100				261000			
LOWEST DAILY MEAN	527				691				184			
ANNUAL SEVEN-DAY MINIMUM	550				722				215			
INSTANTANEOUS PEAK FLOW					46800				(a) 340000			
INSTANTANEOUS PEAK STAGE					19.37				47.60			
INSTANTANEOUS LOW FLOW					676				180			
ANNUAL RUNOFF (CFSM)	1.33				1.55				1.02			
ANNUAL RUNOFF (INCHES)	18.01				20.99				13.92			
10 PERCENT EXCEEDS	14500				18800				9520			
50 PERCENT EXCEEDS	1970				2640				2140			
90 PERCENT EXCEEDS	688				851				527			

a From rating curve extended above 120,000 ft³/s on basis of slope-area measurement of peak flow.

b Oct. 11, 12.



POTOMAC RIVER BASIN

01616500 OPEQUON CREEK NEAR MARTINSBURG, WV

LOCATION.--Lat 39°25'25", long 77°56'20", Berkeley County, Hydrologic Unit 02070004, on right bank 300 ft upstream from Evans Run, 2.3 mi upstream from Tuscarora Creek, 3.0 mi southeast of Martinsburg, and at mile 11.1.

DRAINAGE AREA.--272 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1905 to July 1906, July 1947 to current year.

REVISED RECORDS.--WSP 1702: 1959.

GAGE.--Water-stage recorder. Datum of gage is 354.89 ft above sea level. Prior to July 1906, nonrecording gage at approximately the same site at different datum. July 23, 1947 to July 22, 1948, nonrecording gage at present site and datum. National Weather Service gage-height telemeter at the station.

REMARKS.--No estimated daily discharges. Water-discharge records good. Several measurements of water temperature were made during the year.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in March 1936 reached a stage of about 17.5 ft, from information by local residents.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,900 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage Height (ft)	Date	Time	Discharge (ft ³ /s)	Gage Height (ft)
Nov. 28	1645	*7,510	*13.26	Mar. 6	0800	2,520	9.73
Dec. 5	2330	5,970	12.45	Mar. 8	1000	2,640	9.94
Feb. 20	0615	1,920	8.30	Mar. 11	0630	4,940	11.87
Feb. 21	0330	2,150	8.88	Mar. 29	2230	4,480	11.58
Feb. 25	0530	3,600	10.94	Aug. 18	1215	3,570	10.91

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	121	186	413	233	481	670	1010	285	168	104	83	282
2	114	140	343	229	400	643	842	271	162	100	81	162
3	111	119	304	235	355	631	740	257	159	97	92	141
4	107	109	298	253	326	752	672	290	158	109	88	132
5	104	109	3830	244	317	1580	609	311	153	104	86	125
6	96	132	2880	228	332	2100	578	276	151	100	102	123
7	92	116	826	229	386	1860	680	277	150	120	88	114
8	90	106	605	287	420	2430	604	976	142	120	81	110
9	86	98	500	327	516	2070	532	573	137	108	80	108
10	78	98	468	267	644	2480	516	384	135	100	74	107
11	77	90	491	242	453	3750	525	318	134	96	75	103
12	110	88	402	254	396	1680	476	292	134	93	93	101
13	135	86	364	424	355	1450	542	272	130	88	84	99
14	105	95	342	427	350	1530	831	251	130	94	81	97
15	97	95	352	384	341	1490	597	247	125	92	77	97
16	92	87	529	257	360	1310	559	262	126	90	74	98
17	87	91	481	258	483	984	498	233	123	96	284	97
18	86	138	399	301	633	888	446	220	120	112	2370	101
19	83	134	383	232	1010	876	421	211	117	109	415	94
20	97	114	344	271	1640	775	396	206	115	100	245	94
21	114	99	384	256	1890	756	368	199	114	103	259	87
22	104	91	441	252	1550	955	349	190	114	123	294	101
23	97	88	390	243	1130	818	338	186	111	127	204	221
24	89	85	367	267	1710	725	327	180	113	111	162	154
25	87	85	347	805	2610	680	320	229	125	96	150	119
26	86	82	321	1040	1370	604	303	255	110	96	154	113
27	84	132	285	717	928	1130	304	244	115	95	155	114
28	81	5410	269	577	741	2190	310	200	144	105	139	103
29	77	1910	263	1070	---	3690	281	184	122	96	135	99
30	90	570	255	718	---	2530	278	176	110	89	132	92
31	173	---	235	545	---	1240	---	174	---	85	151	---
TOTAL	3050	10783	18111	12072	22127	45267	15252	8629	3947	3158	6588	3588
MEAN	98.4	359	584	389	790	1460	508	278	132	102	213	120
MAX	173	5410	3830	1070	2610	3750	1010	976	168	127	2370	282
MIN	77	82	235	228	317	604	278	174	110	85	74	87
CFSM	.36	1.32	2.15	1.43	2.91	5.37	1.87	1.02	.48	.37	.78	.44
IN.	.42	1.47	2.48	1.65	3.03	6.19	2.09	1.18	.54	.43	.90	.49

POTOMAC RIVER BASIN

01616500 OPEQUON CREEK NEAR MARTINSBURG, WV--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1947 - 1994, BY WATER YEAR (WY)

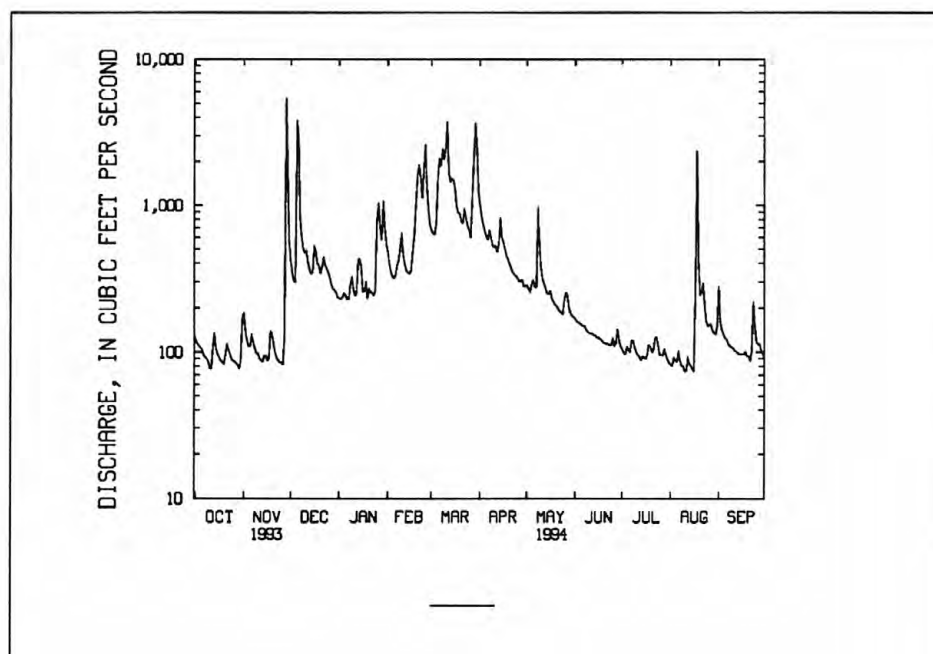
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	143	161	237	259	339	442	384	279	211	136	128	115
MAX	788	504	821	700	1022	1461	1199	1091	1190	456	543	911
(WY)	1977	1971	1973	1979	1984	1993	1984	1988	1972	1972	1978	1975
MIN	30.5	35.1	33.7	39.6	76.6	119	97.8	86.0	65.4	49.4	36.6	35.2
(WY)	1948	1966	1966	1966	1954	1959	1954	1969	1969	1966	1966	1947

SUMMARY STATISTICS	FOR 1993 CALENDAR YEAR				FOR 1994 WATER YEAR				WATER YEARS 1947 - 1994			
ANNUAL TOTAL	152587				152572							
ANNUAL MEAN	418				418				236			
HIGHEST ANNUAL MEAN									464			
LOWEST ANNUAL MEAN									85.7			
HIGHEST DAILY MEAN	8730				Mar 5				5410			
LOWEST DAILY MEAN	77				Aug 29				74			
ANNUAL SEVEN-DAY MINIMUM	79				Aug 27				80			
INSTANTANEOUS PEAK FLOW									7510			
INSTANTANEOUS PEAK STAGE									13.26			
INSTANTANEOUS LOW FLOW									72			
ANNUAL RUNOFF (CFSM)	1.54				1.54				(a) 19000			
ANNUAL RUNOFF (INCHES)	20.87				20.87				(b) 25			
10 PERCENT EXCEEDS	913				939				458			
50 PERCENT EXCEEDS	180				220				137			
90 PERCENT EXCEEDS	88				90				56			

a From rating curve extended above 7,100 ft³/s.

b Aug. 10, 11, 16, 17.

c Observed.



POTOMAC RIVER BASIN

01616500 OPEQUON CREEK NEAR MARTINSBURG, WV--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	TEMPER- ATURE AIR (DEG C) (00020)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, (PER- CENT SATUR- ATION) (00301)	ALKA- LITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS NO3) (71851)	
JUN 1994 07...	1100	153	616	8.0	20.5	32.0	748	8.1	92	241	294	13	

POTOMAC RIVER BASIN

01616500 OPEQUON CREEK NEAR MARTINSBURG, WV--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	CARBO- FURAN WATER FLTRD 0.7 U GF, REC (UG/L) (82674)	CHLOR- PYRIFOS DIS- SOLVED (UG/L) (38933)	CYANA- ZINE, WATER, DISS, REC (UG/L) (04041)	DCPA WATER FLTRD 0.7 U GF, REC (UG/L) (82682)	P, P' DDE (UG/L) (34653)	DEETHYL ATRA- ZINE, WATER, DISS, REC (UG/L) (04040)	DI- AZINON, DIS- SOLVED (UG/L) (39572)	DI- ELDRIN DIS- SOLVED (UG/L) (39381)	DISUL- FOTON WATER FLTRD 0.7 U GF, REC (UG/L) (82677)	EPTC WATER FLTRD 0.7 U GF, REC (UG/L) (82668)	ETHO- PROP WATER FLTRD 0.7 U GF, REC (UG/L) (82672)	FONOFOS WATER DISS REC (UG/L) (04095)
JUN 1994 07...	<0.01	<0.00	0.01	<0.00	<0.01	0.09	<0.01	<0.01	<0.01	<0.00	<0.01	<0.01
DATE	LINDANE DIS- SOLVED (UG/L) (39341)	LIN- URON WATER FLTRD 0.7 U GF, REC (UG/L) (82666)	MALA- THION, DIS- SOLVED (UG/L) (39532)	METHYL AZIN- PHOS WAT FLT GF, REC (UG/L) (82686)	METHYL PARA- THION WAT FLT GF, REC (UG/L) (82667)	METO- LACHLOR WATER DISSOLV (UG/L) (39415)	METRI- BUZIN WATER DISSOLV (UG/L) (82630)	MOL- INATE WATER FLTRD 0.7 U GF, REC (UG/L) (82671)	NAPROP- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82684)	PEB- ULATE WATER FILTRD 0.7 U GF, REC (UG/L) (82669)	PARA- THION, DIS- SOLVED (UG/L) (39542)	PENDI- METH- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82683)
JUN 1994 07...	<0.01	<0.04	<0.01	<0.04	<0.03	0.08	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02
DATE	PER- METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L) (82687)	PRO- METON, WATER, DISS, REC (UG/L) (04037)	PRON- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82676)	PROP- CHLOR, WATER, DISS, REC (UG/L) (04024)	PRO- PARGITE WATER FLTRD 0.7 U GF, REC (UG/L) (82685)	PRO- PANIL WATER FLTRD 0.7 U GF, REC (UG/L) (82679)	SILVEX, DIS- SOLVED (UG/L) (39762)	SI- MAZINE, WATER, DISS, REC (UG/L) (04035)	TEBU- THIURON WATER FLTRD 0.7 U GF, REC (UG/L) (82670)	TER- BUFOS WATER FLTRD 0.7 U GF, REC (UG/L) (82675)	THIO- BENCARB WATER FLTRD 0.7 U GF, REC (UG/L) (82681)	TRIAL- LATE WATER FLTRD 0.7 U GF, REC (UG/L) (82678)
JUN 1994 07...	<0.02	0.03	<0.01	<0.02	<0.01	<0.02	<0.05	0.04	<0.02	<0.01	<0.01	<0.01

POTOMAC RIVER BASIN

01636500 SHENANDOAH RIVER AT MILLVILLE, WV

LOCATION.--Lat 39°16'55", long 77°47'22", Jefferson County, Hydrologic Unit 02070007, on left bank 0.4 mi downstream from Cattail Run, 1.0 mi upstream from Millville, 5.0 mi upstream from Harpers Ferry, and at mile 5.0.

DRAINAGE AREA.--3,040 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1895 to March 1909, August 1928 to current year.

REVISED RECORDS.--WSP 951: 1936(M). WSP 1432: Drainage area at former site, 1895-99, 1901-02, 1905, 1907-08, 1932(M), 1935(M).

GAGE.--Water-stage recorder. Datum of gage is 293.00 ft above sea level. Apr. 15, 1895, to Mar. 31, 1909, nonrecording gage at site 0.8 mi downstream at datum 0.32 ft higher.

REMARKS.--No estimated daily discharges. Water-discharge records good. Regulation by hydroelectric plants, particularly that of Potomac Light and Power Company, 0.5 mi upstream from station. National Weather Service gage-height telemeter and U.S. Army Corps of Engineers satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of 1870 reached practically same stage as flood of Mar. 18, 1936, 26.36 ft, discharge, 151,000 ft³/s.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 15,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage Height (ft)	Date	Time	Discharge (ft ³ /s)	Gage Height (ft)
Nov. 29	1130	19,300	9.31	Mar. 9	0700	35,100	12.56
Dec. 6	1700	19,700	9.41	Mar. 11	0930	35,200	12.58
Jan. 30	0315	25,800	10.77	Mar. 30	1215	*38,600	*13.18
Feb. 25	0130	33,300	12.24	May 9	0815	17,000	8.74
Mar. 7	0915	17,000	8.74	Aug. 19	0800	22,100	9.97

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1020	868	5250	1580	8950	8410	16400	3330	1770	1360	1970	1500
2	995	880	3910	1770	6990	7450	12600	3380	1710	1260	2300	1440
3	889	864	3080	1800	5720	7160	10200	3100	1630	1190	2080	1300
4	805	917	2580	1770	4900	6680	8580	3020	1550	1160	1800	1270
5	773	904	5840	1700	4410	7940	7470	3220	1530	1130	1740	1200
6	722	845	17100	1850	4020	13100	6660	4010	1500	1100	1930	1150
7	706	814	14000	1760	3810	16400	6550	4900	1440	1240	1840	1110
8	688	805	8260	2000	3610	24000	7210	8940	1500	1130	1590	1080
9	704	791	6000	3240	3670	33500	6550	15900	1500	1050	1410	1050
10	684	770	4620	4150	5740	29600	5900	11800	1490	1070	1370	1030
11	662	778	3930	3840	9160	34000	5650	8160	1450	1150	1240	1010
12	778	717	3350	3130	7800	25200	5310	6280	1420	1030	1200	976
13	797	747	2910	3930	6380	17300	5130	5220	1410	1010	1340	958
14	792	712	2600	6480	5330	14100	6380	4500	1410	1030	2000	975
15	793	790	2420	6610	4770	12700	5880	4010	1400	1060	1690	974
16	739	796	2680	5320	4520	11400	5850	3760	1320	929	1470	939
17	771	801	3310	4240	4660	9910	6580	3440	1340	973	1660	917
18	729	871	3080	3580	5590	8560	6100	3160	1380	1070	9520	909
19	707	898	2930	5410	7710	7730	5420	2910	1510	1130	18500	862
20	733	892	2700	5270	11100	6990	4950	2750	1430	1130	9850	858
21	758	916	2590	4160	11800	6360	4560	2620	1930	1300	6560	835
22	775	947	2580	3550	11500	6220	4260	2500	1830	1500	5180	907
23	831	890	2490	3840	10600	6440	4050	2400	1450	1400	4020	1230
24	768	834	2360	4020	19800	6230	3990	2290	1380	1620	3360	1220
25	766	832	2220	5690	29400	5930	3800	2190	1310	2180	2690	1040
26	743	757	2110	7530	20700	5810	3580	2200	1240	1950	2290	1030
27	729	927	2000	7300	14100	6000	3440	2150	1300	1720	1990	1060
28	688	5640	1900	6270	10400	10400	3390	2030	1430	1790	1780	1030
29	680	16200	1840	13300	---	25100	3340	1910	1290	1880	1730	1020
30	729	8740	1740	21300	---	37100	3250	1880	1300	1810	1590	946
31	803	---	1700	12500	---	25700	---	1820	---	1890	1550	---
TOTAL	23757	53143	124080	158890	247140	443420	183030	129780	44150	41242	99240	31826
MEAN	766	1771	4003	5125	8826	14300	6101	4186	1472	1330	3201	1061
MAX	1020	16200	17100	21300	29400	37100	16400	15900	1930	2180	18500	1500
MIN	662	712	1700	1580	3610	5810	3250	1820	1240	929	1200	835
CFSM	.25	.58	1.32	1.69	2.90	4.71	2.01	1.38	.48	.44	1.05	.35
IN.	.29	.65	1.52	1.94	3.02	5.43	2.24	1.59	.54	.50	1.21	.39

POTOMAC RIVER BASIN

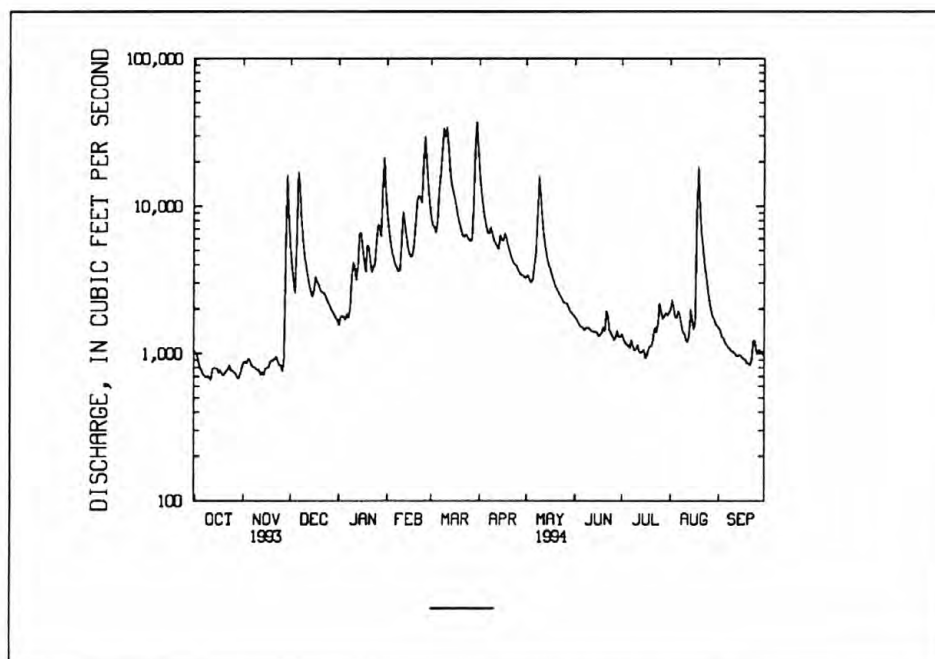
01636500 SHENANDOAH RIVER AT MILLVILLE, WV--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1895 - 1994, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1950	1823	2468	3057	3825	5033	4434	3365	2361	1426	1633	1317
MAX	16250	13350	8164	7925	13100	17540	12840	8700	10380	4809	10390	6701
(WY)	1943	1986	1973	1991	1897	1936	1901	1901	1972	1972	1955	1945
MIN	343	388	410	503	542	929	992	1001	660	402	388	411
(WY)	1931	1932	1966	1966	1931	1931	1981	1969	1977	1966	1930	1963

SUMMARY STATISTICS	FOR 1993 CALENDAR YEAR			FOR 1994 WATER YEAR			WATER YEARS 1895 - 1994		
ANNUAL TOTAL	1423876			1579698					
ANNUAL MEAN	3901			4328			2718		
HIGHEST ANNUAL MEAN							4838		
LOWEST ANNUAL MEAN							1111		
HIGHEST DAILY MEAN	46800			Mar 6			192000		
LOWEST DAILY MEAN	662			Oct 11			194		
ANNUAL SEVEN-DAY MINIMUM	706			Oct 5			240		
INSTANTANEOUS PEAK FLOW				38600			Mar 30		
INSTANTANEOUS PEAK STAGE				13.18			Mar 30		
INSTANTANEOUS LOW FLOW				587			Oct 29		
ANNUAL RUNOFF (CFSM)	1.28			1.42			.89		
ANNUAL RUNOFF (INCHES)	17.42			19.33			12.15		
10 PERCENT EXCEEDS	9750			10000			5510		
50 PERCENT EXCEEDS	1890			2000			1600		
90 PERCENT EXCEEDS	763			804			610		

a From floodmarks.



POTOMAC RIVER BASIN

01636500 SHENANDOAH RIVER AT MILLVILLE, WV--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	TEMPER- ATURE AIR (DEG C) (00020)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (MG/L) (00301)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	
OCT 1993												
06...	1100	705	366	8.7	17.0	18.0	767	9.9	102	160	40	
NOV												
03...	1145	852	365	8.2	8.0	9.0	756	12.2	104	180	47	
30...	1200	8320	230	6.9	11.0	10.5	769	10.9	98	87	24	
DEC												
09...	1200	E5780	177	7.5	7.0	11.5	760	10.6	88	86	25	
JAN 1994												
06...	1200	1870	302	7.5	0.5	1.0	754	13.0	91	150	43	
FEB												
15...	1130	4880	188	7.8	2.0	7.0	755	13.4	98	90	26	
MAR												
10...	1530	29000	93	7.5	5.0	6.5	751	--	--	68	20	
APR												
07...	1130	6440	252	7.7	13.5	8.0	755	9.7	94	120	35	
MAY												
03...	1100	2790	308	7.9	17.5	15.0	764	8.5	89	150	40	
JUN												
05...	1000	1590	343	8.2	23.5	28.5	755	10.0	119	160	42	
08...	1800	1530	337	8.2	26.0	21.5	752	9.4	118	160	41	
13...	1000	1410	350	8.0	25.0	30.0	757	8.4	103	160	42	
JUL												
07...	1000	1240	293	8.2	29.0	30.5	755	9.0	118	140	31	
AUG												
01...	1045	1710	319	7.6	26.5	27.5	757	8.1	102	140	38	
SEP												
14...	1100	963	324	8.2	22.5	29.5	756	8.8	103	150	35	
DATE		MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LITY WAT DIS TOT IT FIELD (MG/L AS CACO3) (39086)	BICAR- BONATE WATER DIS IT FIELD (MG/L AS HCO3) (00453)	CAR- BONATE WATER DIS IT FIELD (MG/L AS CO3) (00452)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)
OCT 1993												
06...	15	14	3.3	148	168	6	20	16	0.20	0.62	207	
NOV												
03...	16	13	3.5	166	195	4	19	15	0.20	1.6	218	
30...	6.5	5.3	3.5	71	87	--	14	6.7	0.10	5.1	122	
DEC												
09...	5.7	3.3	2.3	66	81	--	14	4.9	<0.10	6.6	119	
JAN 1994												
06...	11	6.9	1.8	130	154	2	16	12	0.10	4.5	199	
FEB												
15...	6.2	4.3	1.6	71	87	--	12	7.0	<0.10	6.0	121	
MAR												
10...	4.5	3.3	2.1	55	67	--	12	5.8	<0.10	5.7	95	
APR												
07...	8.4	4.0	1.8	104	127	--	13	6.9	<0.10	5.9	145	
MAY												
03...	11	5.3	1.8	127	154	4	14	9.2	<0.10	1.9	173	
JUN												
05...	13	7.3	2.4	144	161	7	14	11	0.10	2.6	200	
08...	14	7.2	2.5	140	159	6	14	11	0.10	3.0	198	
13...	14	8.7	2.5	146	166	6	16	12	0.10	3.9	214	
JUL												
07...	14	8.6	2.6	122	137	6	14	13	0.20	7.4	165	
AUG												
01...	12	7.7	3.2	112	137	--	15	11	0.10	7.6	184	
SEP												
14...	14	9.8	2.3	108	132	--	18	12	0.10	0.74	182	

POTOMAC RIVER BASIN

01636500 SHENANDOAH RIVER AT MILLVILLE, WV--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS NO3) (71851)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	IRON, DIS- SOLVED (UG/L AS FE) (01046)
OCT 1993											
06...	--	<0.010	0.910	0.910	0.030	<0.20	<0.20	0.010	0.020	0.030	8
NOV											
03...	--	<0.010	1.00	1.00	0.020	0.30	<0.20	0.040	0.030	0.020	10
30...	5.7	0.010	1.30	1.30	0.060	0.60	0.30	0.240	0.060	0.090	60
DEC											
09...	--	<0.010	1.40	1.40	0.080	0.40	0.30	0.120	0.060	0.060	17
JAN 1994											
06...	10	0.020	2.30	2.30	0.040	<0.20	<0.20	0.090	0.050	0.030	10
FEB											
15...	7.4	0.020	1.70	1.70	0.080	<0.20	0.20	0.070	0.060	0.040	26
MAR											
10...	--	<0.010	1.30	1.30	0.040	0.60	0.20	0.150	0.060	0.040	37
APR											
07...	7.9	0.010	1.80	1.80	0.020	0.20	<0.20	0.050	0.020	0.020	23
MAY											
03...	6.6	0.020	1.50	1.50	0.030	0.20	<0.20	<0.010	0.020	0.020	19
JUN											
05...	6.1	0.020	1.40	1.40	0.030	0.40	0.20	0.020	0.020	<0.010	11
08...	5.7	0.020	1.30	1.30	<0.010	0.40	0.20	0.020	0.010	<0.010	10
13...	6.2	0.010	1.40	1.40	<0.010	0.60	0.30	0.040	0.010	<0.010	6
JUL											
07...	2.0	0.010	0.470	0.470	0.040	0.50	0.30	0.040	0.020	<0.010	10
AUG											
01...	6.6	0.020	1.50	1.50	0.050	0.50	0.20	0.110	0.090	0.080	13
SEP											
14...	4.4	0.010	1.00	1.00	0.040	<0.20	0.30	0.030	0.020	0.020	15
DATE	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681)	CARBON, ORGANIC SUS- PENDED TOTAL (MG/L AS C) (00689)	DIMETH- OATE WATER FLTRD 0.7 U GG, REC (UG/L) (82662)	ETHAL- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82663)	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L) (82664)	TER- BACIL WATER FLTRD 0.7 U GF, REC (UG/L) (82665)	TRI- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82661)	2,4-D, DIS- SOLVED (UG/L) (39732)	2,4,5-T DIS- SOLVED (UG/L) (39742)	2,6-DI- ETHYL ANILINE WAT FLT 0.7 U GF, REC (UG/L) (82660)
OCT 1993											
06...	2	2.1	0.2	--	--	--	--	--	--	--	--
NOV											
03...	2	2.1	0.2	--	--	--	--	--	--	--	--
30...	2	6.5	4.1	<0.02	<0.01	<0.02	<0.03	<0.01	<0.05	<0.05	<0.01
DEC											
09...	3	4.6	0.8	--	--	--	--	--	--	--	--
JAN 1994											
06...	4	2.1	0.2	--	--	--	--	--	--	--	--
FEB											
15...	4	5.0	0.8	<0.02	<0.01	<0.02	<0.03	<0.01	<0.05	<0.05	<0.01
MAR											
10...	2	2.8	2.2	--	--	--	--	--	--	--	--
APR											
07...	3	1.8	0.5	<0.02	<0.01	<0.02	<0.03	<0.01	<0.05	<0.05	<0.01
MAY											
03...	2	2.0	0.2	<0.02	<0.01	<0.01	<0.03	<0.01	<0.05	<0.05	<0.01
JUN											
05...	2	2.2	0.3	<0.02	<0.01	<0.01	<0.03	<0.01	<0.05	<0.05	<0.01
08...	2	2.2	0.4	<0.02	<0.01	<0.01	<0.03	<0.01	--	--	<0.01
13...	2	2.1	0.5	<0.02	<0.01	<0.01	<0.03	<0.01	--	--	<0.01
JUL											
07...	3	2.5	1.3	<0.02	<0.01	<0.01	<0.03	<0.01	--	--	<0.01
AUG											
01...	5	2.9	0.8	--	--	--	--	--	--	--	--
SEP											
14...	7	3.1	0.3	--	--	--	--	--	--	--	--

POTOMAC RIVER BASIN

01636500 SHENANDOAH RIVER AT MILLVILLE, WV--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

[illegible]

POTOMAC RIVER BASIN

01636500 SHENANDOAH RIVER AT MILLVILLE, WV--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	METHYL- AZIN- PHOS WAT FLT 0.7 U GF, REC (UG/L) (82686)	METHYL- PARA- THON WAT FLT 0.7 U GF, REC (UG/L) (82667)	METO- LACHLOR WATER DISSOLV (UG/L) (39415)	METRI- BUZIN SENCOR WATER DISSOLV (UG/L) (82630)	MOL- INATE WATER FLTRD 0.7 U GF, REC (UG/L) (82671)	NAPROP- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82684)	PEB- ULATE WATER FILTRD 0.7 U GF, REC (UG/L) (82669)	PARA- THION, DIS- SOLVED (UG/L) (39542)	PENDI- METH- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82683)	PER- METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L) (82687)	PRO- METON, WATER, DISS, REC (UG/L) (04037)
	OCT 1993										
	06...	--	--	--	--	--	--	--	--	--	--
	NOV										
03...	--	--	--	--	--	--	--	--	--	--	
30...	<0.04	<0.03	0.02	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.02	0.02
DEC											
09...	--	--	--	--	--	--	--	--	--	--	
JAN 1994											
06...	--	--	--	--	--	--	--	--	--	--	
FEB											
15...	<0.08	<0.03	0.02	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.02	0.01
MAR											
10...	--	--	--	--	--	--	--	--	--	--	
APR											
07...	<0.05	<0.03	0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.02	0.01
MAY											
03...	<0.05	<0.03	0.19	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.02	0.02
JUN											
05...	<0.04	<0.03	0.06	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.02	0.02
08...	<0.04	<0.03	0.30	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.02	0.02
13...	<0.05	<0.03	0.03	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.02	0.01
JUL											
07...	<0.04	<0.03	0.08	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.02	0.04
AUG											
01...	--	--	--	--	--	--	--	--	--	--	
SEP											
14...	--	--	--	--	--	--	--	--	--	--	
		PRON- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82676)	PROP- CHLOR, WATER, DISS, REC (UG/L) (04024)	PRO- PARGITE WATER FLTRD 0.7 U GF, REC (UG/L) (82685)	PRO- PANIL WATER FLTRD 0.7 U GF, REC (UG/L) (82679)	SILVEX, DIS- SOLVED (UG/L) (39762)	SI- MAZINE, WATER, DISS, REC (UG/L) (04035)	TEBU- THIURON WATER FLTRD 0.7 U GF, REC (UG/L) (82670)	TER- BUFOS WATER FLTRD 0.7 U GF, REC (UG/L) (82675)	THIO- BENCARB WATER FLTRD 0.7 U GF, REC (UG/L) (82681)	TRIAL- LATE WATER FLTRD 0.7 U GF, REC (UG/L) (82678)
OCT 1993											
06...	--	--	--	--	--	--	--	--	--	--	--
NOV											
03...	--	--	--	--	--	--	--	--	--	--	--
30...	<0.01	<0.02	<0.01	<0.02	<0.05	0.03	0.01	<0.01	<0.01	<0.01	
DEC											
09...	--	--	--	--	--	--	--	--	--	--	--
JAN 1994											
06...	--	--	--	--	--	--	--	--	--	--	--
FEB											
15...	<0.01	<0.02	<0.01	<0.02	<0.05	<0.01	<0.02	<0.01	<0.01	<0.01	<0.00
MAR											
10...	--	--	--	--	--	--	--	--	--	--	--
APR											
07...	<0.01	<0.02	<0.01	<0.02	<0.05	0.01	<0.02	<0.01	<0.01	<0.01	<0.01
MAY											
03...	<0.01	<0.02	<0.01	<0.02	<0.05	0.05	<0.02	<0.01	<0.01	<0.01	<0.01
JUN											
05...	<0.01	<0.02	<0.01	<0.02	<0.05	0.06	<0.02	<0.01	<0.01	<0.01	<0.01
08...	<0.01	<0.02	<0.01	<0.02	--	0.11	0.01	<0.01	<0.01	<0.01	<0.01
13...	<0.01	<0.02	<0.01	<0.02	--	0.08	<0.02	<0.01	<0.01	<0.01	<0.01
JUL											
07...	<0.01	<0.02	<0.01	<0.02	--	0.24	0.00	<0.01	<0.01	<0.01	<0.01
AUG											
01...	--	--	--	--	--	--	--	--	--	--	--
SEP											
14...	--	--	--	--	--	--	--	--	--	--	--

POTOMAC RIVER BASIN

01638500 POTOMAC RIVER AT POINT OF ROCKS, MD

LOCATION.--Lat 39°16'25", long 77°32'35", Frederick County, Hydrologic Unit 02070008, on left bank at downstream side of bridge on U.S. Highway 15 at Point of Rocks, 0.3 mi downstream from Catoctin Creek (Virginia), 6 mi upstream from Monocacy River, and at mile 159.5.

DRAINAGE AREA.--9,651 mi².

PERIOD OF RECORD.--February 1895 to current year.

REVISED RECORDS.--WSP 192: 1895-1905. WSP 1432: 1899, 1901-2, 1904-5, 1912, 1914(M), 1915, 1917(M), 1918, 1919(M), 1920, 1921-23(M), 1924, 1925-28(M), 1930(M).

GAGE.--Water-stage recorder. Datum of gage is 200.63 ft above sea level. Prior to Oct. 28, 1929, nonrecording gage at same site. Prior to Sept. 2, 1902, at datum about 0.45 ft higher.

REMARKS.--Records good except those for estimated daily discharges (backwater from grass, ice effect, missing record), which are fair. Low flow affected slightly from 1913 to July 1981 by Stony River Reservoir; since December 1950 by Savage River Reservoir (see station 01597500); and since July 1981 by Jennings Randolph Lake. Low flow affected extensively at times by run-of-the-river hydroelectric plants. National Weather Service gage height telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 2, 1889, reached a stage of 40.2 ft, from floodmarks, discharge, about 460,000 ft³/s from rating curve extended as explained in footnotes.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 35,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage Height (ft)	Date	Time	Discharge (ft ³ /s)	Gage Height (ft)
Nov. 29	1300	*115,000	*19.25	Mar. 11	1700	102,000	17.78
Dec. 6	2100	85,600	15.70	Mar. 16	2100	60,200	12.34
Jan. 30	1300	57,000	11.89	Mar. 23	2300	47,500	10.50
Feb. 11	0830	61,800	12.56	Mar. 30	1230	113,000	19.00
Feb. 22	1800	66,000	13.15	Apr. 15	0030	44,100	9.98
Feb. 25	1100	88,200	16.03	May 9	1930	71,200	13.84

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e3800	e2300	26300	6620	32300	27900	55200	9420	4840	3360	5960	4370
2	e3400	e4500	18300	5760	23900	23800	41300	17700	4570	3020	6350	4190
3	e3200	e4200	14100	6200	19600	21800	34600	15800	4420	2880	5310	3950
4	e2900	e4000	11700	6440	16500	20600	30000	13500	4350	2780	5000	3890
5	e2800	e3600	24500	6110	14300	23300	26000	12100	4020	2600	4670	3630
6	e2500	e3400	66500	5810	13100	36500	22400	14800	3890	2550	4380	3430
7	e2200	e3200	63600	5860	12300	46700	20800	18700	3870	2840	4310	3410
8	e1800	e3100	36100	6560	12000	52700	20400	22500	3850	3010	3930	3080
9	e1700	e3000	24700	e7000	12500	84100	18800	58800	3890	2940	4080	3100
10	e1900	e2900	19100	e7000	19900	84900	17100	55400	3660	3000	4070	2990
11	e1900	e2800	16400	e9000	e58000	97800	16700	33400	3540	2840	3320	2820
12	e1800	e2700	14900	e10500	e38000	84000	17700	24700	3510	2640	3000	2680
13	e1700	e2600	13100	e11000	e26000	58800	17500	20200	3390	2500	3000	2630
14	e2600	e2500	11700	e12000	e21000	50400	29400	16800	3360	2460	3610	2530
15	e2500	e2400	10700	e12000	e18000	52200	40300	14100	3510	2610	3430	2620
16	e2400	e2400	10500	e11000	17100	57500	31100	12100	3410	2600	3190	2620
17	e2300	e2500	10900	e10000	16200	54300	27800	10800	3300	2710	4330	2700
18	e2200	e2800	11200	e9000	18300	40600	25300	9990	3510	2650	14200	2800
19	e2100	e3100	11000	e5500	22000	33500	21100	9920	3530	2610	31500	2750
20	e2100	e3400	10600	e7000	30500	30000	17800	9040	3370	2600	25000	2410
21	e2200	e3300	10900	e8500	44500	29200	15900	8010	3400	2660	15900	2570
22	e2400	e3300	10800	e8000	62400	32000	14200	7400	3900	3030	13000	2680
23	e2300	e3400	10900	e7800	59800	43100	12900	7020	3160	3430	14200	2810
24	e2300	e3500	10300	e8500	59500	47200	12000	6800	3100	5300	12100	3370
25	e2300	e3300	9570	11800	84800	46600	11300	6590	3090	5810	9200	3450
26	e2200	e3100	8870	18300	68000	45000	10600	6430	3090	5180	7440	3280
27	e2300	e3300	8150	35000	47000	40000	10100	6270	3190	4450	6890	2960
28	e2400	20700	7470	37700	34900	58800	9680	6100	3710	4300	6050	3670
29	e2600	97800	6910	37800	---	93500	9220	5830	3250	4020	5270	3320
30	e2500	50900	e6200	55400	---	110000	8920	5530	3320	4490	4780	2920
31	e2400	---	e5900	47500	---	85100	---	5150	---	5800	4450	---
TOTAL	73700	254000	521870	436660	902400	1611900	646120	470900	109000	103670	241920	93630
MEAN	2377	8467	16830	14090	32230	52000	21540	15190	3633	3344	7804	3121
MAX	3800	97800	66500	55400	84800	110000	55200	58800	4840	5810	31500	4370
MIN	1700	2300	5900	5500	12000	20600	8920	5150	3090	2460	3000	2410
CFSM	.25	.88	1.74	1.46	3.34	5.39	2.23	1.57	.38	.35	.81	.32
IN.	.28	.98	2.01	1.68	3.48	6.21	2.49	1.82	.42	.40	.93	.36

e Estimated

POTOMAC RIVER BASIN

01638500 POTOMAC RIVER AT POINT OF ROCKS, MD--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1895 - 1994, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	5037	5517	8497	11140	14320	19770	16690	12320	7937	4490	4209	3484
MAX	37030	39000	32610	31350	42640	68360	43840	41970	40400	16000	23580	17820
(WY)	1943	1986	1973	1937	1897	1936	1993	1924	1972	1949	1955	1975
MIN	706	840	1253	1703	2661	5400	4368	3276	1932	1056	771	834
(WY)	1931	1931	1966	1981	1934	1931	1915	1930	1969	1966	1930	1930

SUMMARY STATISTICS	FOR 1993 CALENDAR YEAR				FOR 1994 WATER YEAR				WATER YEARS 1895 - 1994			
ANNUAL TOTAL	4932270				5465770							
ANNUAL MEAN	13510				14970				9436			
HIGHEST ANNUAL MEAN									15840			
LOWEST ANNUAL MEAN									4366			
HIGHEST DAILY MEAN	141000				Mar 6				434000			
LOWEST DAILY MEAN	(e) 1500				(a)				540			
ANNUAL SEVEN-DAY MINIMUM	1540				Aug 29				593			
INSTANTANEOUS PEAK FLOW					115000				Nov 29			
INSTANTANEOUS PEAK STAGE					19.25				Nov 29			
INSTANTANEOUS LOW FLOW									41.03			
ANNUAL RUNOFF (CFSM)	1.40				1.55				.98			
ANNUAL RUNOFF (INCHES)	19.01				21.07				13.28			
10 PERCENT EXCEEDS	35300				42000				20400			
50 PERCENT EXCEEDS	5430				6350				5380			
90 PERCENT EXCEEDS	2200				2600				1660			

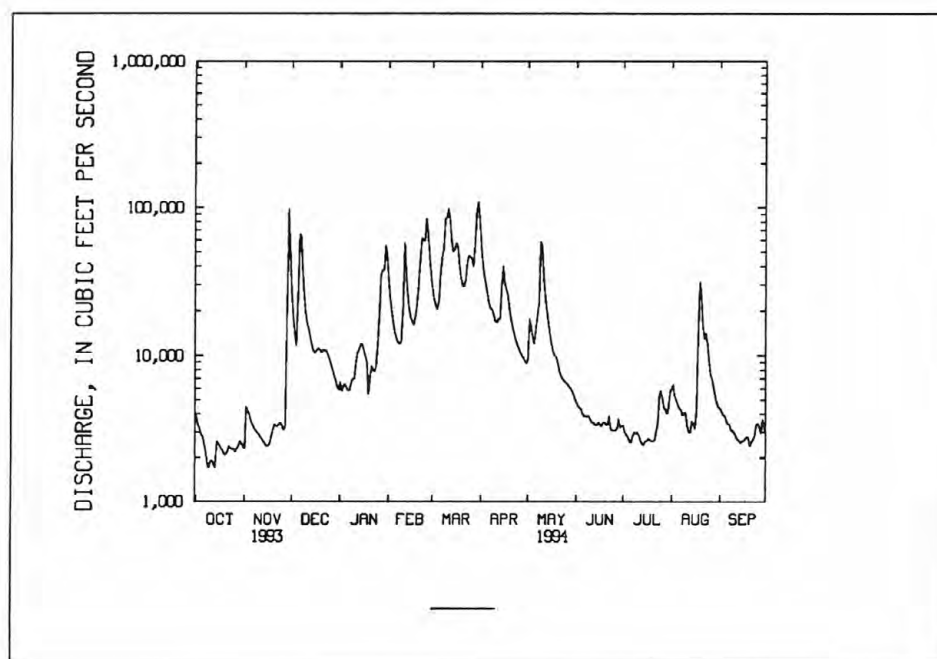
a Sept. 1-4.

b Oct. 9, 13.

c From rating curve extended above 300,000 ft³/s, on the basis of adjustment of figure of peak flow at station near Washington for inflow and storage, and slope-area measurement of peak flow.

d September 11, 12, 1966.

e Estimated.



MONONGAHELA RIVER BASIN

03050000 TYGART VALLEY RIVER NEAR DAILEY, WV

LOCATION.--Lat 38°48'35", long 79°52'55", Randolph County, Hydrologic Unit 05020001, on right bank 50 ft downstream from highway bridge, 1,000 ft upstream from Stalnaker Run, 1.0 mi northeast of Dailey, 2.5 mi south of Beverly, and at mile 95.7.

DRAINAGE AREA.--187 mi².

PERIOD OF RECORD.--April 1915 to September 1975, October 1975 to October 1976 (gage heights only), July 1988 to current year. Prior to October 1960, published as Tygart River near Dailey.

REVISED RECORDS.--WSP 823: Drainage area. WSP 873: 1932(M), WSP 1053: 1918(M), 1928(M), 1932, 1934-38. WSP 1305: 1924(M).

GAGE.--Water-stage recorder. Datum of gage is 1,940.09 ft above sea level, adjustment of 1912. Prior to Sept. 27, 1928, nonrecording gage a few feet upstream at same datum. Sept. 27, 1928 to Dec. 16, 1941, nonrecording gage at site 50 ft upstream at same datum.

REMARKS.--Records good except those for periods of estimated daily discharges (ice effect), which are poor. U.S. Army Corps of Engineers satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Nov. 5, 1985 reached a stage of 16.6 ft, from floodmarks, discharge, about 22,000 ft³/s.

PEAK DISCHARGES 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. 5	2130	7,670	11.77	Feb. 9	1715	*13,000	*13.73
Jan. 8	0300	8,060	11.94	Feb. 23	2345	4,120	9.32
Jan. 26	1745	4,120	9.32	May 8	1045	12,300	13.47
Jan. 29	0530	4,280	9.48				

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	96	191	330	e125	474	378	744	402	54	60	329	396
2	73	183	263	e145	e300	412	564	499	48	51	258	318
3	59	211	229	e250	e250	407	453	358	42	72	444	234
4	50	278	238	e320	e200	394	401	488	37	94	291	198
5	41	475	4280	332	e160	767	337	605	33	80	655	162
6	33	703	3450	329	e150	858	302	627	29	54	955	137
7	26	457	1050	2670	e145	1220	433	1550	28	45	471	116
8	22	298	622	5770	e170	2650	451	8670	27	103	304	97
9	20	230	439	1430	8860	1960	380	2160	24	76	214	81
10	38	194	376	765	5320	2340	342	909	22	663	159	72
11	51	165	655	572	2240	1420	413	541	21	421	123	62
12	73	145	615	1030	2570	783	459	414	21	198	97	53
13	119	547	481	1860	1580	530	1440	328	19	123	82	46
14	96	2580	421	1120	1070	435	1530	258	17	105	70	40
15	74	1040	454	665	710	379	806	218	15	156	76	36
16	57	643	776	e400	503	421	870	322	24	193	72	32
17	47	652	961	e260	390	364	732	288	72	151	434	29
18	41	2200	715	e200	335	380	518	243	96	543	1280	41
19	39	1050	660	e170	312	687	392	212	67	291	586	43
20	55	653	543	e145	338	719	316	187	203	575	333	31
21	145	450	477	e135	474	822	256	155	321	702	256	25
22	189	339	386	e130	547	2430	237	127	250	368	411	23
23	162	273	331	e135	2170	1260	239	108	146	714	481	19
24	126	229	290	e300	2980	776	217	91	111	395	301	17
25	100	194	e250	e1100	1470	706	192	88	82	255	211	16
26	83	162	e220	3280	885	578	171	108	60	688	165	15
27	70	187	e200	2390	554	1380	167	148	50	1290	247	17
28	57	1170	e180	2390	405	2680	196	115	71	2350	386	19
29	51	789	e160	3260	---	2370	166	87	72	924	232	19
30	51	473	e145	1220	---	1650	160	73	62	820	179	16
31	116	---	e135	707	---	1020	---	61	---	507	155	---
TOTAL	2260	17161	20332	33605	35562	33176	13884	20440	2124	13067	10257	2410
MEAN	72.9	572	656	1084	1270	1070	463	659	70.8	422	331	80.3
MAX	189	2580	4280	5770	8860	2680	1530	8670	321	2350	1280	396
MIN	20	145	135	125	145	364	160	61	15	45	70	15
CFSM	.39	3.06	3.51	5.80	6.79	5.72	2.47	3.53	.38	2.25	1.77	.43
IN.	.45	3.41	4.04	6.69	7.07	6.60	2.76	4.07	.42	2.60	2.04	.48

e Estimated

MONONGAHELA RIVER BASIN

03050000 TYGART VALLEY RIVER NEAR DAILEY, WV--Continued

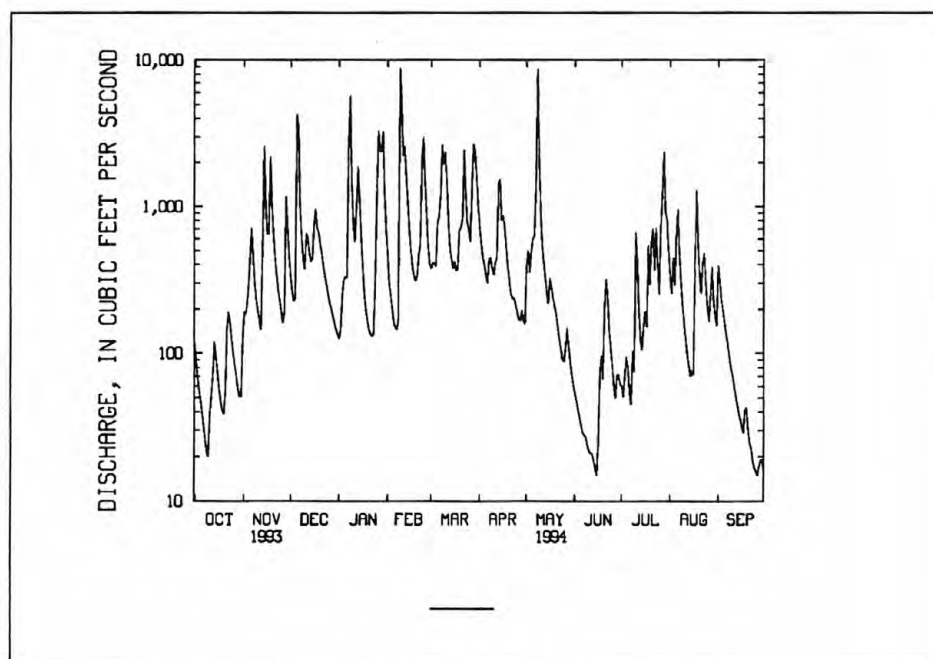
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1915-1975, 1988-1994, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	126	237	460	550	594	724	520	420	231	157	156	81.0
MAX	664	818	1269	1084	1270	1780	1054	1162	1066	548	962	424
(WY)	1938	1973	1973	1994	1994	1963	1972	1924	1928	1992	1942	1971
MIN	.000	.000	60.2	73.3	139	304	155	65.7	13.2	6.72	.50	.19
(WY)	1931	1931	1966	1940	1941	1957	1921	1930	1991	1930	1930	1930
ANNUAL TOTAL				119446.90			204278					
ANNUAL MEAN				327			560			354		
HIGHEST ANNUAL MEAN										560		1994
LOWEST ANNUAL MEAN										182		1941
HIGHEST DAILY MEAN				4790	Mar 24		8860	Feb 9		9370	Dec 31	1969
LOWEST DAILY MEAN				.25	Aug 5		15	(a)		.00	(b)	
ANNUAL SEVEN-DAY MINIMUM				.43	Jul 31		17	Sep 24		.00	Sep 12	1930
INSTANTANEOUS PEAK FLOW							13000	Feb 9		13100	Feb 4	1932
INSTANTANEOUS PEAK STAGE							13.73	Feb 9		(c) 17.20	Feb 4	1932
INSTANTANEOUS LOW FLOW							13	Sep 27		.00	(b)	
ANNUAL RUNOFF (CFSM)				1.75			2.99			1.89		
ANNUAL RUNOFF (INCHES)				23.76			40.64			25.74		
10 PERCENT EXCEEDS				781			1280			835		
50 PERCENT EXCEEDS				146			263			162		
90 PERCENT EXCEEDS				4.1			41			18		

a June 15, Sept. 26.

b Sept. 12 to Nov. 30, 1930, Sept. 29 to Nov. 5, 1953.

c From floodmarks.



MONONGAHELA RIVER BASIN

03050500 TYGART VALLEY RIVER NEAR ELKINS, WV

LOCATION.--Lat 38°55'30", long 79°52'45", Randolph County, Hydrologic Unit 05020001, on left bank 1.4 mi upstream from Leading Creek, 1.5 mi west of Elkins, and at mile 78.3.

DRAINAGE AREA.--272 mi².

PERIOD OF RECORD.--October 1944 to current year. Prior to October 1960, published as Tygart River near Elkins.

GAGE.--Water-stage recorder. Datum of gage is 1,893.95 ft above sea level, adjustment of 1912. Prior to Nov. 16, 1944, nonrecording gage and Nov. 16, 1944, to Sept. 30, 1951, water-stage recorder at site 200 ft upstream at same datum.

REMARKS.--Records good except those for periods of estimated daily discharges (recorder malfunction, ice effect), which are poor. Slight regulation at times by flood-diversion dam upstream from station. U.S. Army Corps of Engineers satellite telemeter at station.

PEAK DISCHARGES 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)
Dec. 6	0930	6,820	13.02	Jan. 29	1200	5,060	11.20
Jan. 8	1445	7,390	13.49	Feb. 10	0200	*11,100	*16.51
Jan. 26	0830	5,010	11.14	May 8	2030	9,550	15.29

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	120	252	473	e220	700	551	1120	546	74	94	437	575
2	75	248	366	e300	e430	608	874	804	65	80	307	445
3	59	277	309	e360	e330	633	697	547	58	88	461	316
4	127	375	322	444	e280	558	608	606	52	200	361	277
5	59	667	3850	487	e240	983	518	853	49	128	661	215
6	48	1090	5780	443	e220	1160	459	970	47	83	1420	172
7	43	696	1720	2720	e230	1610	617	2080	45	62	736	150
8	40	438	898	6860	377	3610	713	8360	42	96	433	135
9	40	316	638	3070	7350	3260	596	5930	40	124	289	112
10	38	261	536	1050	e9060	3550	563	1450	37	715	209	93
11	44	221	805	776	e6000	2370	685	826	34	680	159	85
12	97	189	858	1020	e3800	1180	715	617	37	285	138	76
13	156	590	683	2400	e2400	802	2260	488	34	164	119	72
14	142	3530	587	1500	1500	649	2780	366	29	135	98	49
15	111	1630	643	894	1000	572	1250	304	24	204	90	50
16	90	913	1170	e450	734	621	1340	388	55	308	94	45
17	83	812	1410	e340	572	556	1230	398	78	255	253	44
18	70	3090	1030	e280	488	531	847	318	102	633	1680	51
19	59	1600	908	e240	446	824	619	274	156	442	883	63
20	91	926	778	e210	464	955	480	237	178	285	489	57
21	233	645	677	e190	624	1070	377	202	308	1160	341	45
22	301	465	560	e180	794	3210	316	170	345	508	806	38
23	254	380	467	e190	2320	1970	313	146	231	745	979	34
24	188	314	402	e300	4400	1110	275	127	194	581	528	28
25	147	266	364	e850	2430	909	250	127	135	354	332	26
26	119	220	e300	4040	1310	813	228	146	98	726	246	31
27	101	253	e260	4020	832	1430	213	169	92	1610	240	28
28	84	1530	e240	3340	604	3890	235	156	107	3180	529	27
29	74	1160	e220	4730	---	3750	211	120	138	1330	326	14
30	78	691	e200	1930	---	2630	217	98	119	1010	234	2.9
31	128	---	e190	1020	---	1500	---	84	---	713	200	---
TOTAL	3299	24045	27644	44854	49935	47865	21606	27907	3003	16978	14078	3355.9
MEAN	106	801	892	1447	1783	1544	720	900	100	548	454	112
MAX	301	3530	5780	6860	9060	3890	2780	8360	345	3180	1680	575
MIN	38	189	190	180	220	531	211	84	24	62	90	2.9
CFSM	.39	2.95	3.28	5.32	6.56	5.68	2.65	3.31	.37	2.01	1.67	.41
IN.	.45	3.29	3.78	6.13	6.83	6.55	2.95	3.82	.41	2.32	1.93	.46

e Estimated

MONONGAHELA RIVER BASIN

03050500 TYGART VALLEY RIVER NEAR ELKINS, WV--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1945 - 1994, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	194	415	700	762	896	1049	788	568	336	241	208	126
MAX	954	2184	1787	1504	1783	2579	1506	1511	1314	791	1032	755
(WY)	1980	1986	1973	1952	1994	1963	1972	1967	1974	1992	1984	1971
MIN	2.82	1.93	75.7	174	145	484	264	110	28.8	14.9	6.01	2.58
(WY)	1954	1954	1966	1977	1978	1957	1955	1991	1965	1993	1965	1953

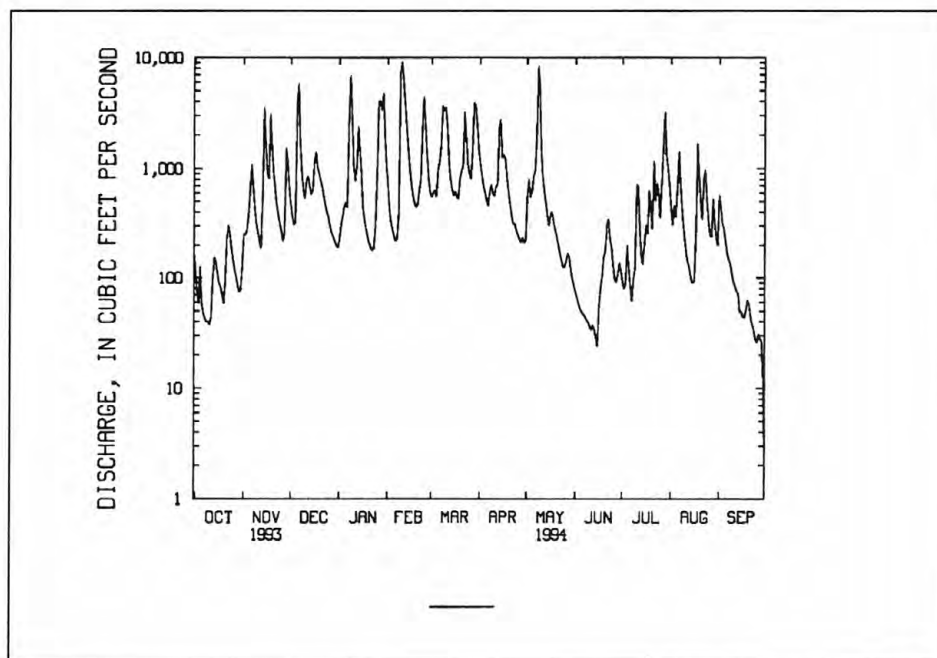
SUMMARY STATISTICS	FOR 1993 CALENDAR YEAR			FOR 1994 WATER YEAR			WATER YEARS 1945 - 1994		
ANNUAL TOTAL	168483.4			284569.9					
ANNUAL MEAN	462			780			522		
HIGHEST ANNUAL MEAN							780		
LOWEST ANNUAL MEAN							312		
HIGHEST DAILY MEAN	5780			Dec 6			16000		
LOWEST DAILY MEAN	2.4			Jul 18			(e) .10		
ANNUAL SEVEN-DAY MINIMUM	6.6			Jul 13			.10		
INSTANTANEOUS PEAK FLOW							(b) 23500		
INSTANTANEOUS PEAK STAGE							(c) 22.81		
INSTANTANEOUS LOW FLOW							(e) .10		
ANNUAL RUNOFF (CFSM)	1.70						1.92		
ANNUAL RUNOFF (INCHES)	23.04						26.07		
10 PERCENT EXCEEDS	1120						1230		
50 PERCENT EXCEEDS	208						247		
90 PERCENT EXCEEDS	11						27		

a Sept. 20-29, 1959.

b From rating curve extended above 13,800 ft³/s on basis of slope-area measurement of peak flow.

c From floodmarks.

e Estimated.



MONONGAHELA RIVER BASIN

03051000 TYGART VALLEY RIVER AT BELINGTON, WV

LOCATION.--Lat 39°01'45", long 79°56'10", Barbour County, Hydrologic Unit 05020001, on left bank opposite mouth of Mill Creek, 0.2 mi downstream from highway bridge at Belington, and mile 61.5.

DRAINAGE AREA.--408 mi², excluding that of Mill Creek.

PERIOD OF RECORD.--June 1907 to current year. Prior to October 1960, published as Tygart River at Belington.

REVISED RECORDS.--WSP 823: Drainage area. WSP 953: 1933(M), 1941(M). WSP 1335: 1912, 1914-15, 1916(M), 1921-22(M), 1925(M), 1928, 1933. WSP 1385: 1909(M), 1913-15(M), 1917-18, 1924(M), 1928(M), 1932, 1934, 1936, 1938-39, 1948-49.

GAGE.--Water-stage recorder. Datum of gage is 1,679.49 ft above sea level, adjustment of 1912. Prior to Apr. 25, 1939, nonrecording gage at site 0.2 mi upstream at same datum.

REMARKS.--Records good except those for periods of estimated daily discharges (well froze, ice effect), which are poor. National Weather Service gage-height telemeter at station. U.S. Army Corps of Engineers satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of July 1888, reached a stage of 21.7 ft, former site, from floodmarks, discharge, 21,200 ft³/s.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 6,200 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage Height (ft)	Date	Time	Discharge (ft ³ /s)	Gage Height (ft)
Dec. 6	1000	8,990	13.05	Feb. 24	1000	6,400	11.00
Jan. 8	1500	10,800	14.37	Mar. 8	2400	6,470	11.06
Jan. 26	1500	7,790	12.12	Mar. 28	1800	6,480	11.07
Jan. 29	0500	7,890	12.20	Apr. 13	2300	6,400	11.00
Feb. 9	1700	*20,000	*19.64	May 8	1000	15,300	17.26

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	217	426	798	e290	1150	879	1810	546	137	335	699	1630
2	152	462	596	e470	e700	982	1360	1110	122	205	459	1070
3	126	488	499	e580	e540	1130	1070	787	110	150	454	603
4	163	676	492	e730	e440	937	960	739	97	224	477	504
5	139	1150	5890	e840	e370	1340	815	1080	86	203	831	402
6	96	2200	8420	774	e350	1810	707	1400	79	148	2410	315
7	76	1380	3060	4240	e390	2360	1040	3850	75	107	1270	261
8	66	803	1520	10500	609	5270	1280	14300	75	98	682	226
9	62	550	1040	e6000	15700	5420	1030	9800	74	157	440	192
10	71	441	902	e3800	16400	5510	1060	2480	70	423	321	164
11	71	376	1380	e2500	6730	4240	1930	1340	64	951	249	166
12	120	323	1460	e1500	5440	2100	1420	1010	59	406	202	146
13	258	549	1130	3570	3800	1360	3680	811	60	242	178	121
14	253	4790	963	2580	2730	1100	4980	609	54	176	158	107
15	201	2920	993	1570	1800	1000	2240	507	48	200	168	83
16	163	1550	1970	e800	1260	1110	2310	829	46	402	159	76
17	139	1240	2350	e600	956	1000	2310	864	209	338	465	71
18	128	4470	1720	e450	792	891	1500	616	174	547	2830	80
19	114	2850	1690	e370	694	1170	1050	500	132	626	1770	95
20	146	1550	1440	e320	698	1450	786	425	235	367	836	95
21	505	1040	1200	e290	952	1610	606	361	320	1090	529	79
22	744	739	992	e280	1340	4550	498	303	466	645	1010	64
23	542	583	808	e290	2890	3400	455	256	377	639	1920	54
24	374	486	681	e600	6150	1810	412	221	347	755	923	48
25	280	415	600	e1840	3870	1300	371	204	254	465	536	43
26	224	351	e500	6140	2200	1150	339	283	181	725	402	41
27	186	416	e450	6330	1380	1450	320	297	153	2000	1090	45
28	160	2830	e400	5810	998	5570	333	284	180	4100	1430	48
29	138	2230	e360	7460	---	5870	320	226	281	2370	670	43
30	141	1220	e330	3480	---	4370	286	185	492	2310	438	37
31	237	---	e310	1740	---	2540	---	157	---	1320	369	---
TOTAL	6292	39504	44944	76744	81329	74679	37278	46380	5057	22724	24375	6909
MEAN	203	1317	1450	2476	2905	2409	1243	1496	169	733	786	230
MAX	744	4790	8420	10500	16400	5870	4980	14300	492	4100	2830	1630
MIN	62	323	310	280	350	879	286	157	46	98	158	37
CFSM	.50	3.23	3.55	6.07	7.12	5.90	3.05	3.67	.41	1.80	1.93	.56
IN.	.57	3.60	4.10	7.00	7.42	6.81	3.40	4.23	.46	2.07	2.22	.63

e Estimated

MONONGAHELA RIVER BASIN

03051000 TYGART VALLEY RIVER AT BELINGTON, WV--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1907 - 1994, BY WATER YEAR (WY)

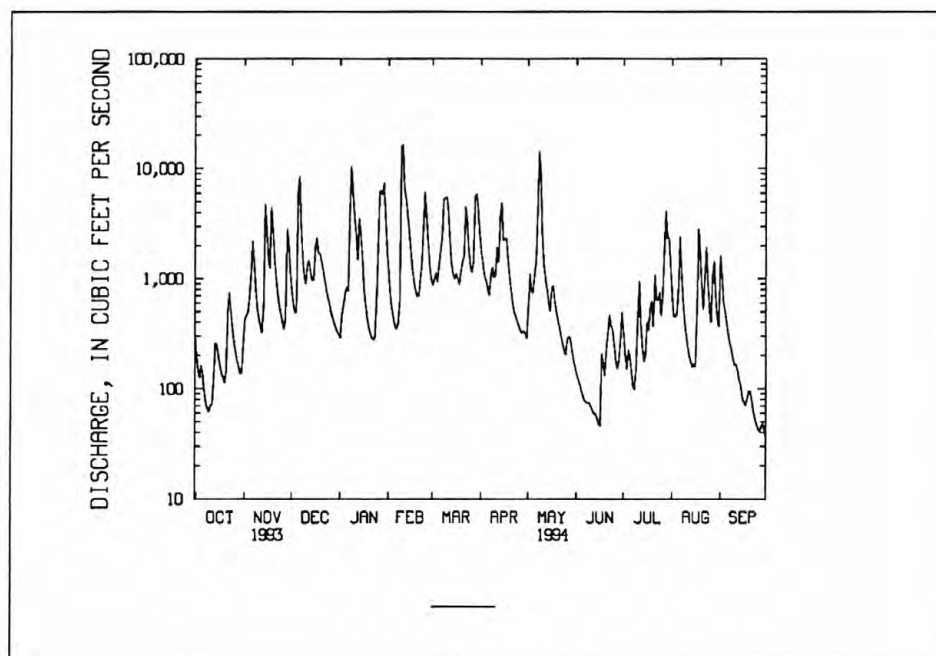
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	336	632	1034	1270	1370	1567	1198	967	553	421	342	206
MAX	1765	3431	2837	2731	2905	3765	2310	2764	2449	1997	1981	1201
(WY)	1912	1986	1973	1911	1994	1963	1972	1924	1910	1912	1942	1971
MIN	1.26	5.74	84.2	245	255	437	383	203	51.5	21.0	2.50	.65
(WY)	1931	1954	1909	1977	1978	1910	1921	1991	1965	1930	1930	1930

SUMMARY STATISTICS	FOR 1993 CALENDAR YEAR			FOR 1994 WATER YEAR			WATER YEARS 1907 - 1994		
ANNUAL TOTAL	275839.1			466215					
ANNUAL MEAN	756			1277			821		
HIGHEST ANNUAL MEAN							1277		
LOWEST ANNUAL MEAN							506		
HIGHEST DAILY MEAN	8790			Mar 24			16400		
LOWEST DAILY MEAN	6.2			Jul 18			37		
ANNUAL SEVEN-DAY MINIMUM	11			Aug 28			44		
INSTANTANEOUS PEAK FLOW							20000		
INSTANTANEOUS PEAK STAGE							19.64		
INSTANTANEOUS LOW FLOW							29		
ANNUAL RUNOFF (CFSM)	1.85			3.13			2.01		
ANNUAL RUNOFF (INCHES)	25.15			42.51			27.33		
10 PERCENT EXCEEDS	1970			3200			1990		
50 PERCENT EXCEEDS	336			596			405		
90 PERCENT EXCEEDS	18			103			47		

a Sept. 13, 16, 1930.

b From rating curve extended above 18,700 ft³/s.

c From floodmarks.



MONONGAHELA RIVER BASIN

03052000 MIDDLE FORK RIVER AT AUDRA, WV

LOCATION.--Lat 39°02'25", long 80°04'10", Barbour County, Hydrologic Unit 05020001, on right bank at Audra, 600 ft upstream from highway bridge, and at mile 2.7.

DRAINAGE AREA.--149 mi².

PERIOD OF RECORD.--February 1942 to September 1979, October 1988 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 1,670 ft, from topographic map.

REMARKS.--Records good except those for periods of estimated daily discharges (ice effect,), which are poor. U.S. Army Corps of Engineers satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Nov. 5, 1985, reached a stage of 15.8 ft, from floodmarks, discharge, about 15,000 ft³/s.

PEAK DISCHARGES 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)
Dec. 5	1600	4,920	8.78	Feb. 9	1400	*11,600	*13.80
Jan. 7	2400	5,980	9.56	Apr. 13	1745	3,230	7.35
Jan. 26	1115	3,730	7.83	May 8	0530	10,300	12.75
Jan. 28	2330	4,630	8.56				

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	103	221	416	e170	551	434	818	187	59	66	282	754
2	82	214	334	e210	e350	512	653	291	50	43	185	487
3	74	250	291	e260	e250	757	532	228	43	31	167	328
4	83	369	269	592	e200	586	547	287	36	25	129	272
5	66	690	2920	548	e165	683	481	350	32	21	575	197
6	51	1250	2140	445	e155	702	430	414	28	18	1110	147
7	40	734	1070	2900	e150	965	724	1470	25	15	598	123
8	34	487	702	3610	310	2440	793	6580	27	22	361	99
9	31	377	511	1330	8660	1950	644	1800	29	27	226	76
10	31	317	462	804	3190	2480	622	948	25	192	149	62
11	89	274	681	619	2270	1440	715	603	25	197	109	54
12	73	237	636	728	2070	881	578	482	24	85	81	44
13	132	299	530	1180	1410	623	1770	397	34	51	60	37
14	118	2030	483	938	1030	525	1790	301	27	50	47	32
15	98	1160	491	649	741	454	1020	243	21	140	50	28
16	82	853	664	e350	557	486	1350	438	21	403	45	25
17	69	687	742	e240	437	421	1150	390	30	237	299	23
18	62	1850	639	e200	358	421	772	324	34	422	1050	25
19	57	1140	681	e180	312	539	556	270	29	262	666	53
20	68	777	584	e160	304	541	415	219	74	172	385	32
21	294	556	532	e150	405	656	316	174	82	263	256	25
22	548	418	443	e145	510	1460	249	138	139	228	446	21
23	351	336	385	e150	1000	1040	199	111	96	193	495	19
24	247	287	333	e290	1600	719	162	89	81	130	349	17
25	183	231	306	e600	1220	605	139	78	58	107	239	16
26	148	191	e240	2900	901	482	122	140	42	542	178	16
27	123	223	e220	2020	646	704	115	179	38	1060	743	15
28	105	1100	e200	3280	484	2230	164	149	52	1500	517	14
29	91	826	e180	2890	---	2040	129	112	80	763	291	15
30	91	567	e165	1250	---	1470	113	89	111	861	205	14
31	181	---	e155	781	---	1000	---	72	---	469	167	---
TOTAL	3805	18951	18405	30569	30236	30246	18068	17553	1452	8595	10460	3070
MEAN	123	632	594	986	1080	976	602	566	48.4	277	337	102
MAX	548	2030	2920	3610	8660	2480	1790	6580	139	1500	1110	754
MIN	31	191	155	145	150	421	113	72	21	15	45	14
CFSM	.82	4.24	3.98	6.62	7.25	6.55	4.04	3.80	.32	1.86	2.26	.69
IN.	.95	4.73	4.60	7.63	7.55	7.55	4.51	4.38	.36	2.15	2.61	.77

e Estimated

MONONGAHELA RIVER BASIN

03052000 MIDDLE FORK RIVER AT AUDRA, WV--Continued

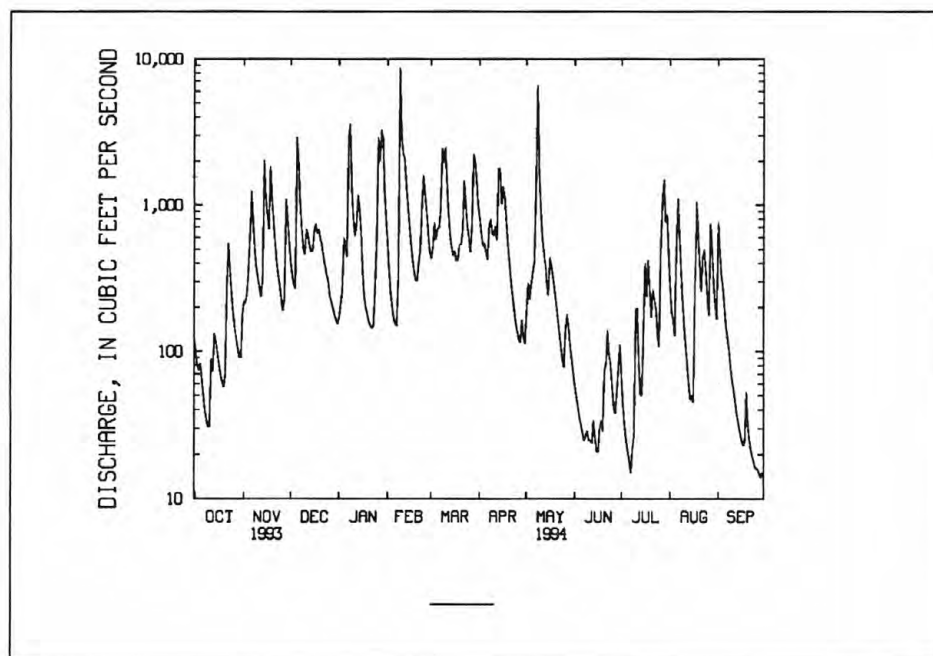
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1942-1979, 1989-1994, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	126	273	501	558	587	679	527	392	215	150	140	88.3
MAX	548	814	1124	986	1080	1443	1012	962	760	612	690	642
(WY)	1955	1973	1973	1994	1994	1963	1973	1967	1972	1958	1942	1971
MIN	.39	2.40	47.5	96.3	134	372	221	90.3	15.4	5.39	2.60	1.40
(WY)	1954	1954	1966	1977	1978	1966	1971	1991	1965	1966	1993	1946

SUMMARY STATISTICS	FOR 1993 CALENDAR YEAR			FOR 1994 WATER YEAR			WATER YEARS 1942 - 1994		
ANNUAL TOTAL	120516.50			191410					
ANNUAL MEAN	330			524			352		
HIGHEST ANNUAL MEAN							524		
LOWEST ANNUAL MEAN							203		
HIGHEST DAILY MEAN	3500			Mar 24			8660		
LOWEST DAILY MEAN	.78			Jul 31			.20		
ANNUAL SEVEN-DAY MINIMUM	1.0			Jul 30			.20		
INSTANTANEOUS PEAK FLOW				(c) 11600			(c) 11600		
INSTANTANEOUS PEAK STAGE				13.80			13.80		
INSTANTANEOUS LOW FLOW				13			.20		
ANNUAL RUNOFF (CFSM)	2.22			3.52			2.36		
ANNUAL RUNOFF (INCHES)	30.09			47.79			32.12		
10 PERCENT EXCEEDS	837			1170			828		
50 PERCENT EXCEEDS	180			290			186		
90 PERCENT EXCEEDS	3.3			32			16		

a Sept. 28, 30.

b Oct. 11-27, 1953.

c From rating curve extended above 6,800 ft³/s, on basis of slope area measurement of peak flow.

MONONGAHELA RIVER BASIN

03052500 SAND RUN NEAR BUCKHANNON, WV

LOCATION.--Lat 38°57'50", long 80°09'10", Upshur County, Hydrologic Unit 05020001, on right bank 300 ft downstream from Left Fork, 4.5 mi southeast of Buckhannon, and at mile 6.0.

DRAINAGE AREA.--14.5 mi².

PERIOD OF RECORD.--October 1946 to current year.

REVISED RECORDS.--WSP 1725: 1955(M).

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 1,530 ft, above sea level, from topographic map. Prior to May 4, 1983, at datum 1.00 ft higher.

REMARKS.--Records good except those for periods of estimated daily discharges (ice effect, recorder malfunction), which are poor.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 400 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage Height (ft)	Date	Time	Discharge (ft ³ /s)	Gage Height (ft)
Dec. 5	0915	662	4.76	Mar. 10	0330	438	4.11
Jan. 7	2045	938	5.37	Mar. 28	0945	468	4.21
Jan. 26	0615	504	4.33	Apr. 13	1415	694	4.84
Feb. 9	0645	2,120	7.18	May 8	---	*UNKNOWN	*UNKNOWN
Feb. 11	1800	450	4.15				

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.5	21	25	e15	31	35	50	20	4.3	6.9	5.8	155
2	2.7	21	20	e18	e25	82	38	16	3.1	3.7	5.4	42
3	e2.4	27	17	e25	e20	114	32	14	2.4	2.4	4.8	23
4	e2.1	33	24	152	e17	76	37	19	2.1	1.6	3.4	17
5	e1.9	54	399	77	e15	97	33	19	1.8	1.2	152	12
6	e1.7	64	123	54	e13	101	32	26	1.6	.96	66	9.0
7	e1.6	33	56	526	e14	87	78	e150	1.5	.75	23	7.5
8	e1.5	22	38	303	89	197	64	e350	1.5	.73	12	6.0
9	e1.4	17	28	89	1320	193	48	e200	1.4	2.3	7.7	4.8
10	e1.5	14	40	57	210	295	64	e80	2.3	6.7	5.6	4.3
11	e1.8	12	55	42	263	107	93	e45	2.1	2.5	4.3	3.6
12	e2.6	11	46	73	195	62	66	e30	1.5	1.4	3.5	2.9
13	e3.3	54	37	105	125	46	372	e23	1.1	.97	2.7	2.6
14	e3.8	100	35	78	89	40	164	e18	.90	2.7	2.8	2.3
15	3.6	55	36	e50	60	37	81	e16	1.5	7.2	4.3	2.1
16	3.1	37	44	e35	44	36	158	e21	1.5	7.8	6.4	1.9
17	2.9	60	44	e25	35	31	108	e30	1.0	4.6	101	2.0
18	2.9	127	40	e21	29	37	61	e26	.75	5.1	148	3.7
19	2.8	57	66	e18	26	42	44	e21	.59	3.1	45	2.4
20	14	36	55	e15	22	45	34	e17	.50	2.0	21	1.8
21	34	24	49	e14	32	74	26	e14	.59	1.4	14	1.5
22	33	19	40	e13	34	152	21	e12	1.1	3.3	26	1.3
23	17	16	35	e14	110	76	18	e10	2.2	8.1	17	1.2
24	11	14	29	e28	179	51	15	e8.5	5.3	3.3	11	1.2
25	8.2	12	27	e60	108	38	14	e7.6	5.1	4.6	8.2	1.1
26	6.5	10	24	348	66	29	12	e17	2.2	29	7.0	1.3
27	5.5	46	e20	148	46	80	13	9.8	3.1	33	22	1.4
28	4.6	135	e18	211	37	356	13	6.7	5.9	34	14	1.2
29	3.8	59	e17	111	---	221	11	5.5	16	15	10	1.0
30	6.7	35	e16	57	---	129	9.5	6.3	15	16	7.8	.86
31	17	---	e14	41	---	72	---	5.3	---	9.0	37	---
TOTAL	208.4	1225	1517	2823	3254	3038	1809.5	1243.7	89.93	221.31	798.7	317.96
MEAN	6.72	40.8	48.9	91.1	116	98.0	60.3	40.1	3.00	7.14	25.8	10.6
MAX	34	135	399	526	1320	356	372	350	16	34	152	155
MIN	1.4	10	14	13	13	29	9.5	5.3	.50	.73	2.7	.86
CFSM	.46	2.82	3.37	6.28	8.01	6.76	4.16	2.77	.21	.49	1.78	.73
IN.	.53	3.14	3.89	7.24	8.35	7.79	4.64	3.19	.23	.57	2.05	.82

e Estimated

MONONGAHELA RIVER BASIN

03052500 SAND RUN NEAR BUCKHANNON, WV--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1947 - 1994, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	10.8	24.7	40.3	41.8	47.7	52.2	41.0	27.2	16.6	13.7	10.7	7.04
MAX	60.3	145	87.3	91.1	116	119	83.9	77.6	75.1	59.4	48.5	30.2
(WY)	1977	1986	1973	1994	1994	1993	1973	1989	1989	1958	1977	1979
MIN	.013	.060	3.52	9.44	11.1	12.3	10.2	4.91	.44	.37	.15	.071
(WY)	1954	1954	1966	1977	1978	1987	1971	1982	1965	1966	1993	1953

SUMMARY STATISTICS	FOR 1993 CALENDAR YEAR		FOR 1994 WATER YEAR		WATER YEARS 1947 - 1994	
ANNUAL TOTAL	10119.37		16546.50			
ANNUAL MEAN	27.7		45.3		27.7	
HIGHEST ANNUAL MEAN					45.3	
LOWEST ANNUAL MEAN					14.8	
HIGHEST DAILY MEAN	487	Mar 29	1320	Feb 9	1320	Feb 9 1994
LOWEST DAILY MEAN	.03	(a)	.50	Jun 20	.00	(b)
ANNUAL SEVEN-DAY MINIMUM	.03	Aug 27	.86	Jun 16	.00	Sep 22 1953
INSTANTANEOUS PEAK FLOW			UNKNOWN	UNKNOWN	(c) 3200	Nov 4 1985
INSTANTANEOUS PEAK STAGE			UNKNOWN	UNKNOWN	8.34	Nov 4 1985
INSTANTANEOUS LOW FLOW			.46	(d)	.00	(f)
ANNUAL RUNOFF (CFSM)	1.91		3.13		1.91	
ANNUAL RUNOFF (INCHES)	25.96		42.45		25.98	
10 PERCENT EXCEEDS	65		108		64	
50 PERCENT EXCEEDS	12		18		13	
90 PERCENT EXCEEDS	.11		1.6		1.0	

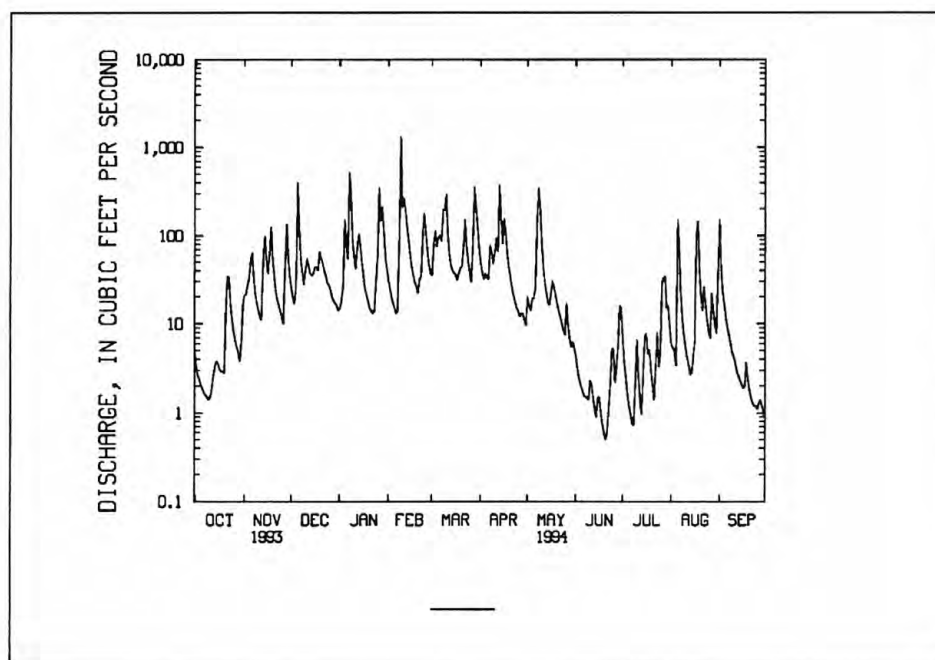
a Aug. 29 to Sept. 2.

b Several days in 1951-56, 1964-66, and July 19, 1986.

c From rating curve extended above 1,560 ft³/s.

d June 20, 21.

f Several days in 1951-56, 1964-66, and parts of July 19, 20, 1986.



MONONGAHELA RIVER BASIN

03053500 BUCKHANNON RIVER AT HALL, WV

LOCATION.--Lat 39°03'05", Long 80°06'50", Barbour County, Hydrologic Unit 05020001, on right bank 0.2 mi upstream from highway bridge at Hall, 1.0 mi upstream from Pecks Run, and at mile 7.5.

DRAINAGE AREA.--277 mi².

PERIOD OF RECORD.--June 1907 to May 1909 (gage heights only), April 1915 to current year. Monthly discharge only for some periods, published in WSP 1305.

REVISED RECORDS.--WSP 783: 1918(M).

GAGE.--Water-stage recorder. Datum of gage is 1,369.15 ft Baltimore & Ohio RR datum. June 1907 to May 25, 1909, nonrecording gage at site 0.2 mi downstream at datum 4.12 ft lower. Apr. 15, 1915, to June 8, 1939, nonrecording gage at site 500 ft downstream at present datum.

REMARKS.--Records good except those for periods of estimated daily discharge (recorder malfunction, ice effect), which are poor. Some regulation at low flow from mine pumpage above station.

PEAK DISCHARGES 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. 6	0045	6,330	10.43	Feb. 12	0200	4,900	9.37
Jan. 9	0530	8,840	12.29	Mar. 10	1315	4,990	9.44
Jan. 26	0915	5,680	9.95	Mar. 28	2045	4,900	9.37
Jan. 28	1815	4,780	9.28	Apr. 14	0200	5,030	9.47
Feb. 9	2015	*13,300	*15.59	May 8	2015	9,850	13.04

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	249	561	664	e300	792	706	1250	458	150	266	382	932
2	197	536	516	e350	e550	875	973	e530	106	166	284	840
3	177	541	432	e450	e400	2210	786	e410	109	120	239	549
4	169	652	416	802	e340	1550	755	e450	92	93	198	411
5	142	895	3700	2320	e290	1610	710	e520	81	76	1030	331
6	109	1840	5020	1590	e260	1720	628	e600	70	62	2110	261
7	92	1260	2080	1100	e260	1570	872	647	62	54	960	211
8	83	806	1170	5270	1860	2860	1250	8080	60	45	540	182
9	75	592	832	7730	11800	3740	1030	6340	62	40	358	153
10	77	485	804	3050	9580	4620	1080	1840	57	91	260	141
11	126	407	1400	1370	4420	3060	1630	981	76	341	199	134
12	141	347	1300	1020	4220	1580	1130	739	132	190	161	78
13	184	402	991	1080	2600	1070	2590	620	104	123	133	70
14	207	2430	820	2020	1890	849	4160	461	86	94	113	59
15	177	1950	739	1850	1320	731	1930	375	65	176	137	51
16	154	1370	802	1150	965	713	2210	622	52	386	114	58
17	137	1080	920	e650	733	642	2120	701	90	358	822	51
18	127	2700	899	e420	599	612	1320	541	172	429	2630	57
19	119	2080	922	e350	506	827	931	446	133	412	1430	69
20	133	1210	976	e300	449	874	689	373	157	270	658	82
21	486	836	888	e280	512	960	520	312	220	220	406	61
22	1000	603	836	e260	736	2420	406	258	217	211	511	47
23	776	472	717	e280	1300	1850	339	212	242	235	863	42
24	502	389	637	e600	3060	1200	290	179	230	186	608	40
25	364	331	545	e2200	2790	904	257	170	199	198	425	40
26	283	285	e480	5220	1640	748	232	348	158	481	328	43
27	229	388	e420	3540	1110	961	268	466	153	1080	529	43
28	192	1900	e370	4410	829	3850	299	395	224	1690	607	39
29	165	1540	e330	3430	---	4510	247	281	304	1110	449	27
30	159	948	e300	1680	---	3070	285	223	431	843	335	15
31	335	---	e280	1090	---	1760	---	180	---	573	283	---
TOTAL	7366	29836	31206	56162	55811	54652	31187	28758	4294	10619	18102	5117
MEAN	238	995	1007	1812	1993	1763	1040	928	143	343	584	171
MAX	1000	2700	5020	7730	11800	4620	4160	8080	431	1690	2630	932
MIN	75	285	280	260	260	612	232	170	52	40	113	15
CFM	.86	3.59	3.63	6.54	7.20	6.36	3.75	3.35	.52	1.24	2.11	.62
IN.	.99	4.01	4.19	7.54	7.50	7.34	4.19	3.86	.58	1.43	2.43	.69

e Estimated

MONONGAHELA RIVER BASIN

03053500 BUCKHANNON RIVER AT HALL, WV--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1915 - 1994, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	265	510	836	922	1012	1125	830	634	380	290	258	167
MAX	1272	2399	1942	1862	1993	2474	1736	1818	1435	1302	976	815
(WY)	1938	1986	1973	1937	1994	1917	1973	1924	1950	1958	1956	1971
MIN	.29	1.03	67.1	169	217	474	299	117	30.5	15.9	3.56	.55
(WY)	1931	1931	1931	1977	1978	1987	1971	1964	1965	1966	1930	1930

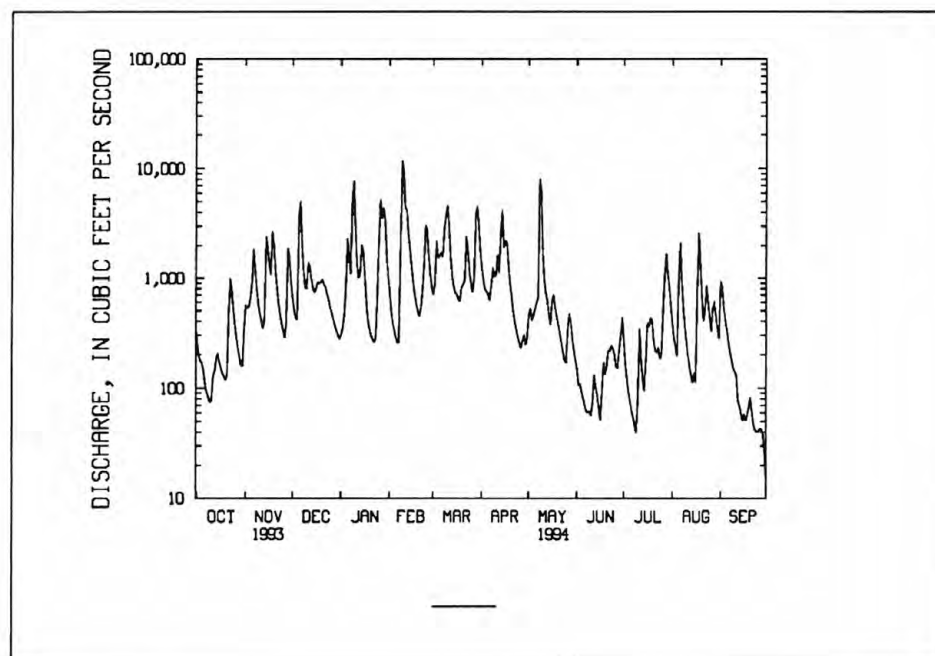
SUMMARY STATISTICS	FOR 1993 CALENDAR YEAR		FOR 1994 WATER YEAR		WATER YEARS 1915 - 1994	
ANNUAL TOTAL	208537.1		333110			
ANNUAL MEAN	571		913		602	
HIGHEST ANNUAL MEAN					915	
LOWEST ANNUAL MEAN					354	
HIGHEST DAILY MEAN	5390		11800		14500	
LOWEST DAILY MEAN	4.4		15		.20	
ANNUAL SEVEN-DAY MINIMUM	5.2		35		.21	
INSTANTANEOUS PEAK FLOW			13300		(b) 15000	
INSTANTANEOUS PEAK STAGE			15.59		(c) 16.88	
INSTANTANEOUS LOW FLOW			13		.20	
ANNUAL RUNOFF (CFSM)	2.06		3.29		2.17	
ANNUAL RUNOFF (INCHES)	28.01		44.74		29.51	
10 PERCENT EXCEEDS	1540		2110		1400	
50 PERCENT EXCEEDS	307		466		312	
90 PERCENT EXCEEDS	12		85		37	

a Oct. 21-23, 25-27, 29, 1930.

b From rating curve extended above 13,000 ft³/s on basis of slope-area measurement.

c From floodmarks.

d Oct. 23, 27, 1930.



MONONGAHELA RIVER BASIN

03054500 TYGART VALLEY RIVER AT PHILIPPI, WV

LOCATION.--Lat 39°09'00", long 80°02'25", Barbour County, Hydrologic Unit 05020001, on right bank at Philippi, 0.2 mi downstream from Anglins Run, 5.0 mi downstream from Buckhannon River, and at mile 44.9.

DRAINAGE AREA.--916 mi².

PERIOD OF RECORD.--April 1940 to current year. Prior to October 1960, published as Tygart River at Philippi.

GAGE.--Water-stage recorder. Datum of gage is 1,280.55 ft above sea level. Prior to May 23, 1940, nonrecording gage at same site and datum.

REMARKS.--Records good except those for periods of estimated daily discharges (well froze, ice effect), which are poor. National Weather Service gage-height telemeter at station. U.S. Army Corps of Engineers satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of July 25, 1912, reached a stage of 27.3 ft, read on National Weather Service gage 0.2 mi downstream, or about 26 ft, present site and datum, discharge, about 37,000 ft³/s.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 13,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage Height (ft)	Date	Time	Discharge (ft ³ /s)	Gage Height (ft)
Dec. 5	2100	19,900	16.23	Feb. 24	1700	13,000	12.25
Jan. 8	0400	25,900	19.25	Mar. 10	1500	15,600	13.75
Jan. 26	1800	17,700	14.99	Mar. 28	1900	15,400	13.67
Jan. 29	0200	18,200	15.29	Apr. 13	2400	15,400	13.65
Feb. 9	1800	*43,800	*27.13	May 8	1000	34,300	23.04

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	656	1330	2150	e730	2890	2270	4250	946	417	878	1590	3850
2	500	1410	1640	e1100	e1900	2530	3270	1920	337	527	1100	3020
3	413	1420	1380	e1400	e1400	4610	2630	1640	291	358	885	1790
4	382	1790	1280	3500	e1100	3590	2430	1530	256	283	957	1370
5	418	2650	12000	3990	e980	3930	2220	1950	221	354	2280	1120
6	280	5710	17300	2740	e900	4760	1950	2250	198	250	6480	869
7	224	3930	7790	9800	e880	5340	2540	5260	181	197	3390	714
8	190	2400	3900	23800	1300	11400	3560	30100	174	162	1870	612
9	174	1710	2670	e14000	32900	12900	2970	20200	178	188	1220	513
10	180	1390	2440	e8700	32700	14600	3130	6370	169	352	864	434
11	228	1170	3750	e5600	16400	10400	5040	3350	162	1630	664	419
12	311	1000	3830	3240	13600	5270	3690	2470	220	899	523	361
13	500	1030	2980	7040	9280	3470	7670	2090	202	532	424	258
14	639	8980	2510	6160	6560	2760	13000	1590	202	392	365	246
15	534	7090	2370	4070	4410	2430	6160	1320	158	457	397	201
16	435	4230	3340	e2300	3160	2520	6110	1810	129	1180	380	189
17	370	3220	4230	e1600	2410	2320	6500	2210	203	1130	1660	181
18	334	9140	3530	e1200	2000	2130	4220	1680	415	1230	7540	192
19	303	7230	3420	e1000	1720	2650	2910	1400	346	1560	4890	219
20	314	4020	3250	e850	1600	3080	2190	1180	353	965	2310	244
21	1070	2720	2850	e760	1920	3280	1690	991	657	1440	1440	212
22	2360	1980	2490	e700	2760	8760	1380	828	850	1300	1610	175
23	1960	1550	2100	e730	4830	7330	1190	692	815	1090	3490	149
24	1310	1310	1810	e1200	12100	4220	1040	584	761	1320	2180	130
25	951	1100	1590	e4100	9460	3070	913	534	617	946	1410	120
26	744	935	1450	14000	5480	2620	826	880	457	1530	1050	122
27	610	1080	1270	14600	3610	2970	770	1150	385	4100	2890	117
28	511	6020	e1100	14000	2630	12300	854	1020	440	7480	2920	112
29	430	5460	e1000	16200	---	14400	854	780	703	4920	1770	107
30	412	3150	e900	8370	---	10400	738	622	1190	4160	1200	91
31	744	---	e800	4290	---	6050	---	504	---	2730	1010	---
TOTAL	18487	96155	103120	181770	180880	178360	96695	99851	11687	44540	60759	18137
MEAN	596	3205	3326	5864	6460	5754	3223	3221	390	1437	1960	605
MAX	2360	9140	17300	23800	32900	14600	13000	30100	1190	7480	7540	3850
MIN	174	935	800	700	880	2130	738	504	129	162	365	91
CFSM	.65	3.50	3.63	6.40	7.05	6.28	3.52	3.52	.43	1.57	2.14	.66
IN.	.75	3.90	4.19	7.38	7.35	7.24	3.93	4.06	.47	1.81	2.47	.74

e Estimated

MONONGAHELA RIVER BASIN

03054500 TYGART VALLEY RIVER AT PHILIPPI, WV--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 1994, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	732	1622	2647	2811	3196	3601	2821	2042	1229	907	802	503
MAX	3391	7341	6172	5864	6460	8024	5162	4982	4224	3753	3779	2772
(WY)	1980	1986	1973	1994	1994	1963	1973	1967	1981	1958	1942	1971
MIN	5.88	11.4	273	563	587	1531	1090	483	114	67.5	30.9	16.4
(WY)	1954	1954	1966	1977	1978	1987	1971	1991	1965	1993	1993	1946

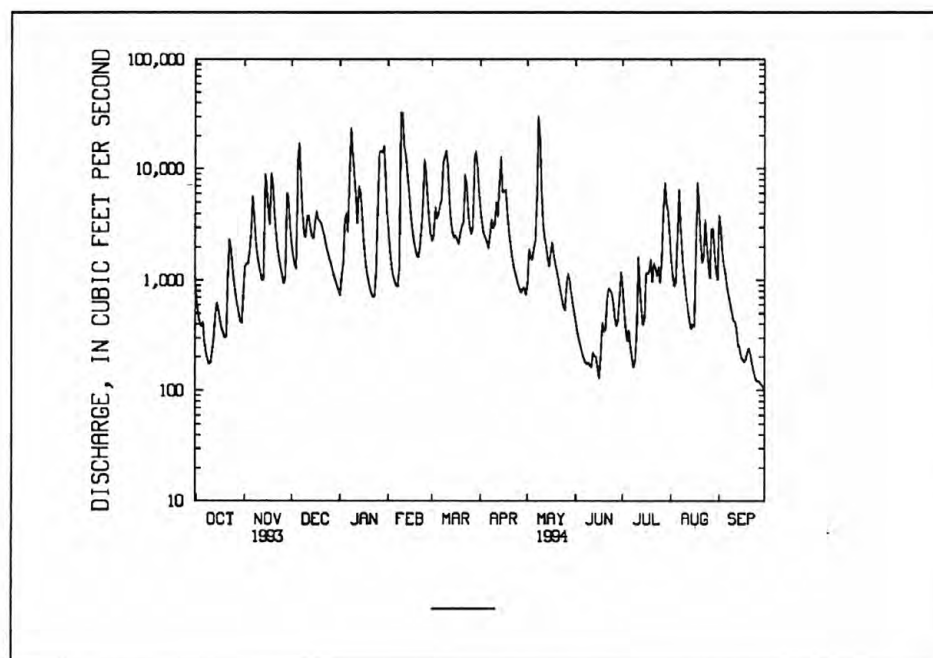
SUMMARY STATISTICS	FOR 1993 CALENDAR YEAR		FOR 1994 WATER YEAR		WATER YEARS 1940 - 1994	
ANNUAL TOTAL	664361		1090441			
ANNUAL MEAN	1820		2988		1899	
HIGHEST ANNUAL MEAN					2988	1994
LOWEST ANNUAL MEAN					1105	1966
HIGHEST DAILY MEAN	18200	Mar 24	32900	Feb 9	50900	Nov 5 1985
LOWEST DAILY MEAN	15	Sep 2	91	Sep 30	4.9	(a)
ANNUAL SEVEN-DAY MINIMUM	17	Aug 28	114	Sep 24	5.2	Oct 9 1953
INSTANTANEOUS PEAK FLOW			43800	Feb 9	(b) 61000	Nov 5 1985
INSTANTANEOUS PEAK STAGE			27.13	Feb 9	(c) 31.83	Nov 5 1985
INSTANTANEOUS LOW FLOW			77	Sep 30	4.9	(d)
ANNUAL RUNOFF (CFSM)	1.99		3.26		2.07	
ANNUAL RUNOFF (INCHES)	26.98		44.28		28.16	
10 PERCENT EXCEEDS	4610		7270		4520	
50 PERCENT EXCEEDS	920		1440		1030	
90 PERCENT EXCEEDS	36		238		116	

a Oct. 10, 11, 1953.

b From rating curve extended above 41,000 ft³/s on basis of slope-area measurement of peak flow.

c From floodmarks.

d Oct. 10-12, 21, 1953.



MONONGAHELA RIVER BASIN

03056250 THREE FORK CREEK NEAR GRAFTON, WV

LOCATION.--Lat 39°20'13", long 79°59'36", Taylor County, Hydrologic Unit 05020001, on right bank 20 ft downstream from bridge on State Secondary Route 50/9, 1.4 mi east of Grafton, and at mile 1.8.

DRAINAGE AREA.--97.4 mi².

PERIOD OF RECORD.--October 1984 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 1,000.00 ft above sea level, from topographic map.

REMARKS.--Records good except those for periods of estimated daily discharges (ice effect), which are poor. U.S. Army Corps of Engineers satellite telemeter at station.

PEAK DISCHARGES 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)
Jan. 8	0030	2,870	10.03	Mar. 10	0830	3,050	10.28
Jan. 28	1830	3,710	11.22	Apr. 10	1930	4,960	12.83
Feb. 9	0730	*5,860	*13.88	May 8	0230	4,990	12.86
Mar. 8	0400	4,640	12.42				

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	29	220	185	e80	300	223	338	95	46	18	18	350
2	22	155	143	e100	e190	216	252	87	39	12	15	142
3	26	148	121	e130	e150	226	202	69	31	9.0	38	82
4	27	217	128	185	e125	197	184	83	27	7.5	29	64
5	20	221	1230	192	e110	227	151	105	23	6.2	384	49
6	16	223	695	174	e100	278	135	124	21	5.2	303	39
7	13	159	391	1160	e93	824	352	463	19	4.3	110	34
8	11	113	278	1660	278	2940	354	2480	18	4.1	62	28
9	9.8	86	205	606	4030	1150	280	654	16	4.9	42	24
10	22	71	746	365	1110	2210	1790	360	15	11	34	21
11	24	62	900	288	591	880	1560	236	14	9.8	24	28
12	29	55	445	318	411	498	738	204	14	6.8	20	21
13	53	61	308	447	521	378	1140	162	15	9.7	18	17
14	39	184	241	423	450	346	825	125	11	69	19	15
15	29	184	217	304	359	317	480	109	9.6	124	54	14
16	23	158	239	e175	340	278	713	130	8.7	80	34	13
17	22	183	207	e140	298	206	584	98	8.6	48	609	13
18	66	607	184	e110	272	195	382	85	15	28	1250	17
19	61	336	218	e90	303	247	285	76	13	19	400	19
20	58	224	214	e75	396	233	207	69	9.1	14	181	14
21	150	148	245	e66	707	344	160	61	9.4	11	114	12
22	209	111	215	e62	582	940	131	52	12	13	451	10
23	110	89	189	e67	1110	497	109	45	15	32	408	9.3
24	71	77	160	e140	1300	357	95	39	11	21	186	8.9
25	54	68	148	e600	757	271	85	38	11	26	109	10
26	43	58	118	1820	487	204	77	130	9.4	83	79	49
27	35	164	e100	839	336	392	70	265	11	42	62	48
28	31	1040	e90	2660	260	1190	66	132	30	42	51	25
29	28	471	e80	1700	---	1040	57	90	25	35	44	19
30	30	278	e74	647	---	773	53	68	23	33	45	17
31	159	---	e66	404	---	470	---	54	---	25	98	---
TOTAL	1519.8	6171	8780	16027	15966	18547	11855	6788	529.8	853.5	5291	1212.2
MEAN	49.0	206	283	517	570	598	395	219	17.7	27.5	171	40.4
MAX	209	1040	1230	2660	4030	2940	1790	2480	46	124	1250	350
MIN	9.8	55	66	62	93	195	53	38	8.6	4.1	15	8.9
CFSM	.50	2.11	2.91	5.31	5.85	6.14	4.06	2.25	.18	.28	1.75	.41
IN.	.58	2.36	3.35	6.12	6.10	7.08	4.53	2.59	.20	.33	2.02	.46

e Estimated

MONONGAHELA RIVER BASIN

03056250 THREE FORK CREEK NEAR GRAFTON, WV--Continued

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

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	56.1	219	263	263	354	340	242	160	81.8	82.8	40.3	23.9
MAX	160	654	578	517	643	598	395	366	238	187	171	58.0
(WY)	1990	1986	1991	1994	1986	1994	1994	1989	1989	1990	1994	1990
MIN	4.49	44.2	122	151	159	80.2	151	44.2	7.07	3.85	3.57	3.72
(WY)	1992	1992	1990	1985	1993	1987	1986	1991	1991	1991	1988	1991

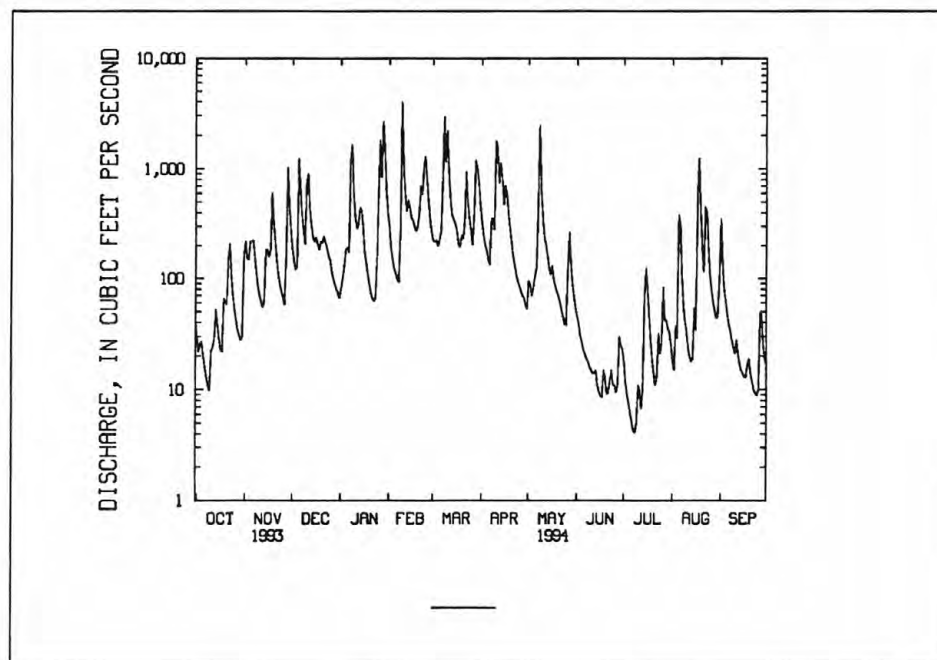
SUMMARY STATISTICS	FOR 1993 CALENDAR YEAR		FOR 1994 WATER YEAR		WATER YEARS 1985 - 1994	
ANNUAL TOTAL	56673.94		93540.3			
ANNUAL MEAN	155		256		176	
HIGHEST ANNUAL MEAN					256	1994
LOWEST ANNUAL MEAN					112	1988
HIGHEST DAILY MEAN	1850	Mar 24	4030	Feb 9	5200	Nov 5 1985
LOWEST DAILY MEAN	.59	Sep 1	4.1	Jul 8	.49	(a)
ANNUAL SEVEN-DAY MINIMUM	.83	Aug 27	5.9	Jul 3	.55	Aug 13 1988
INSTANTANEOUS PEAK FLOW			5860	Feb 9	(b) 12000	Nov 5 1985
INSTANTANEOUS PEAK STAGE			13.88	Feb 9	(c) 20.13	Nov 5 1985
INSTANTANEOUS LOW FLOW			3.8	Jul 8	.44	(d)
ANNUAL RUNOFF (CFSM)	1.59		2.63		1.81	
ANNUAL RUNOFF (INCHES)	21.65		35.73		24.57	
10 PERCENT EXCEEDS	386		624		408	
50 PERCENT EXCEEDS	64		109		87	
90 PERCENT EXCEEDS	4.0		14		6.7	

a Aug. 16, 18, 1988.

b From rating curve extended above 10,000 ft³/s on basis of slope-area measurement of peak flow.

c From floodmarks.

d Aug. 18, 19, 1988.



MONONGAHELA RIVER BASIN

03057000 TYGART VALLEY RIVER AT COLFAX, WV

LOCATION.--Lat 39°26'15", long 80°07'55", Marion County, Hydrologic Unit 05020001 on right bank at highway bridge at Colfax, 300 ft upstream from Guyses Run, and at mile 6.0. Records include flow of Guyses Run.

DRAINAGE AREA.--1,366 mi², including that of Guyses Run.

PERIOD OF RECORD.--May 1939 to current year. Prior to October 1960, published as Tygart River at Colfax.

REVISED RECORDS.--WSP 1083: 1942(M), WSP 1335: 1941.

GAGE.--Water-stage recorder. Datum of gage is 856.27 ft above sea level, supplementary adjustment of 1944. Formerly published as 855.49 ft Baltimore & Ohio RR datum. Since Jan. 19, 1945, auxiliary water-stage recorder at Fairmont waterworks, 5.7 mi downstream from base gage, at datum 856.99 ft above sea level.

REMARKS.--No estimated daily discharges. Records good. Flow regulated since June 1938, by Tygart Lake. U.S. Army Corps of Engineers satellite telemeter at station. Possible backwater from West Fork River at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of 1888 reached a stage of 39.6 ft at site 1,100 ft downstream, present datum, from information by local resident. The stage on that day was probably affected by backwater from West Fork River.

PEAK DISCHARGE FOR CURRENT YEAR.--Peak discharge, 19,600 ft³/s, Feb. 13, gage height, 14.86 ft.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2170	1500	5400	1990	9560	9310	11900	1090	1130	1000	3580	2760
2	1320	1800	5190	1800	10900	7800	11500	1060	666	1210	1480	4020
3	1310	2500	5000	1580	11500	5650	10900	1320	555	1200	865	4780
4	1300	2530	4010	2270	10500	2920	8470	1980	546	1190	658	4080
5	1130	2560	4150	2790	7810	3990	3690	2000	522	1050	1270	2560
6	736	3060	4340	4260	6470	4450	1530	2280	370	567	2710	1380
7	643	3820	7880	4890	4830	5760	1810	2270	357	361	5370	877
8	637	2850	11800	6600	4630	9200	1910	7260	346	347	6160	653
9	644	1300	11200	4760	9410	5060	1810	6650	347	363	4780	676
10	646	646	11100	6940	6190	7760	2790	16300	355	353	2040	776
11	651	599	11400	7810	4590	5430	4710	17100	354	352	1130	776
12	668	592	9270	4590	11600	7630	3170	15200	354	349	818	1010
13	688	627	7080	8980	19500	13200	4220	12900	371	355	524	1640
14	674	1040	5590	11600	18800	14700	4640	10200	472	723	532	922
15	658	2380	2500	11800	17700	13600	4920	5590	351	622	580	897
16	648	4250	2530	11300	16800	12500	8660	4290	349	603	508	889
17	656	4660	2550	10000	16200	11100	10100	3130	348	899	1120	894
18	694	4810	2590	7520	14800	8010	9930	2940	346	1160	3720	895
19	713	4970	2670	7140	13800	5690	9530	1660	362	1330	6960	886
20	712	5090	2720	7060	12000	4110	8000	1640	371	1560	8310	876
21	803	5180	2820	4710	10300	2610	5010	1620	371	1550	5030	868
22	914	5300	2620	3940	7950	3750	2790	1600	373	1560	3460	861
23	1290	5270	2010	3400	3420	3950	1810	1350	338	1580	3590	857
24	2590	5080	4950	2630	4100	5540	1350	684	346	1560	3120	852
25	2520	4890	5020	2620	5530	5420	1340	685	367	1470	1720	861
26	2460	3600	4830	4370	7340	5230	1240	905	500	1300	2030	977
27	2010	803	4630	4330	8960	5470	1030	1720	532	1370	3130	930
28	1210	2930	4420	5720	9600	6210	1020	2090	569	3090	3120	869
29	1190	3010	3830	7020	---	5660	1000	2000	682	8760	2880	841
30	1200	5620	3070	6910	---	7170	1010	1860	726	6840	3110	865
31	1330	---	2620	8770	---	8290	---	1520	---	3980	2630	---
TOTAL	34815	93267	159790	180100	284790	217170	141790	132894	13676	48654	86935	41028
MEAN	1123	3109	5155	5810	10170	7005	4726	4287	456	1569	2804	1368
MAX	2590	5620	11800	11800	19500	14700	11900	17100	1130	8760	8310	4780
MIN	637	592	2010	1580	3420	2610	1000	684	338	347	508	653

MONONGAHELA RIVER BASIN

03057000 TYGART VALLEY RIVER AT COLFAX, WV--Continued

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

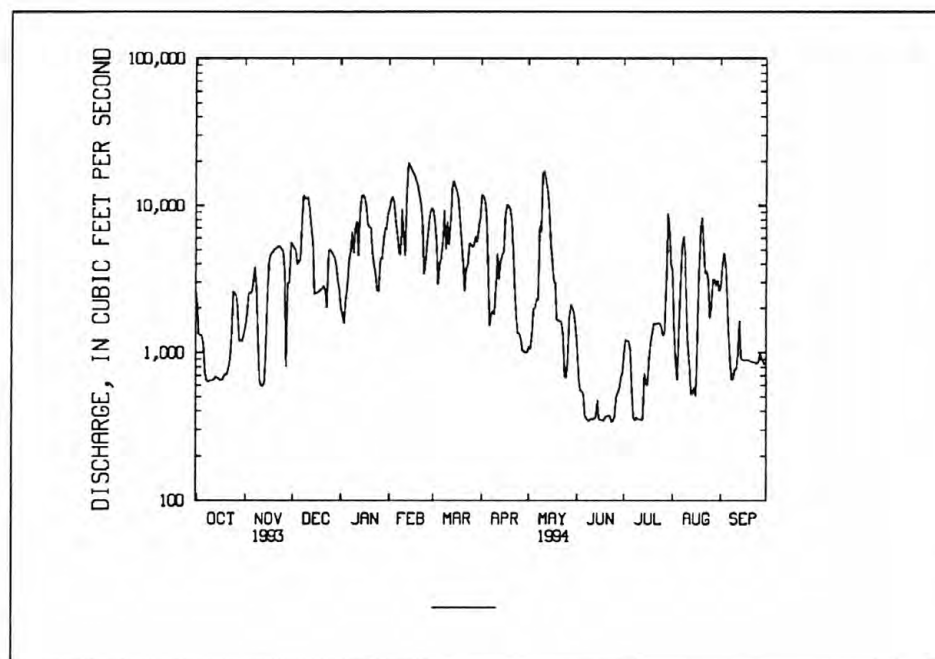
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1306	2347	3897	3952	4578	5036	3138	2590	1766	1298	1340	1004
MAX	5957	8667	9185	7459	10170	12270	6466	7140	7124	4043	5745	4477
(WY)	1980	1986	1973	1952	1994	1963	1965	1967	1981	1958	1958	1971
MIN	359	339	489	861	1304	1824	647	274	264	251	303	336
(WY)	1947	1954	1966	1977	1941	1969	1963	1982	1965	1965	1965	1983

SUMMARY STATISTICS	FOR 1993 CALENDAR YEAR			FOR 1994 WATER YEAR			WATER YEARS 1939 - 1994		
ANNUAL TOTAL	890941			1434909					
ANNUAL MEAN	2441			3931			2681		
HIGHEST ANNUAL MEAN							3931		
LOWEST ANNUAL MEAN							1570		
HIGHEST DAILY MEAN	12600			Mar 28			24900		
LOWEST DAILY MEAN	141			Sep 7			129		
ANNUAL SEVEN-DAY MINIMUM	236			Sep 5			132		
INSTANTANEOUS PEAK FLOW							31700		
INSTANTANEOUS PEAK STAGE							(b) 19.77		
INSTANTANEOUS LOW FLOW							94		
10 PERCENT EXCEEDS	6350			9730			6720		
50 PERCENT EXCEEDS	1280			2610			1440		
90 PERCENT EXCEEDS	316			568			405		

a May 5-7, 1941.

b Backwater from West Fork River.

c June 22, 23.



MONONGAHELA RIVER BASIN

03058500 WEST FORK RIVER AT BUTCHERVILLE, WV

LOCATION.--Lat 39°05'25", long 80°28'05", Lewis County, Hydrologic Unit 05020002, on right bank at Butcherville, 0.5 mi upstream from Freemans Creek, 3,500 ft downstream from abandoned railroad bridge, 3.0 mi north of Weston, and at mile 62.0.

DRAINAGE AREA.--181 mi².

PERIOD OF RECORD.--April 1915 to current year. Monthly discharge only for some periods, published in WSP 1305.

REVISED RECORDS.--WSP 1053: 1935. WSP 1335: 1918, 1923.

GAGE.--Water-stage recorder. Datum of gage is 993.0 ft Department of Highways datum. Prior to Feb. 17, 1937, nonrecording gage at interurban bridge 3,500 ft upstream. Feb. 17, 1937, to Apr. 7, 1939, nonrecording gage at site 2,500 ft upstream. Prior to Oct. 1, 1942, at datum 10.0 ft lower.

REMARKS.--Records good except those for periods of estimated daily discharges (ice effect, recorder malfunction), which are poor. Flow partially regulated since 1973 by Stonecoal Reservoir. Flow regulated since January 1990 by Stonewall Jackson Lake. U.S. Army Corps of Engineers satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of 1888 reached a stage of 17 ft at site 3,500 ft upstream, present datum, from information by local residents. The stage on that day may have been affected by backwater from a dam which has since been washed out.

PEAK DISCHARGE FOR CURRENT YEAR.--Peak discharge, 6,710 ft³/s, Feb. 9, gage height, 10.28 ft.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	80	250	563	238	984	331	1060	334	59	67	112	181
2	77	157	499	317	e900	805	1000	205	71	58	129	81
3	84	116	434	390	e740	1020	826	160	79	73	126	65
4	76	97	386	905	e650	842	665	163	92	108	135	60
5	73	174	1360	608	e560	1000	558	148	92	107	1400	56
6	73	367	583	682	e500	910	354	168	92	104	452	55
7	74	431	683	2320	540	841	344	746	94	108	348	65
8	75	414	819	1360	914	1440	292	1640	101	119	286	82
9	79	309	798	756	4820	894	257	601	96	146	257	100
10	99	139	1140	739	1270	1990	869	756	95	180	214	102
11	85	72	1060	759	e1500	780	762	854	96	142	148	101
12	107	68	888	892	e2300	732	433	827	98	136	132	102
13	97	173	763	1150	e2100	953	935	787	93	134	107	105
14	78	287	660	1170	1940	967	970	761	92	146	121	101
15	70	381	646	1060	1760	1010	1180	756	92	228	141	101
16	67	497	551	e950	1640	986	1730	700	113	218	103	103
17	66	625	373	e870	1590	956	1450	513	111	144	770	106
18	55	786	292	e800	1550	928	1260	350	e88	126	933	109
19	52	630	312	e700	1510	886	1170	205	e75	122	727	101
20	95	581	310	e640	1340	858	977	128	e70	128	615	98
21	164	550	347	e580	1120	923	708	108	e73	149	581	98
22	149	536	338	e520	744	930	473	105	e77	164	769	86
23	95	477	330	e480	828	632	276	101	e82	145	642	48
24	78	347	314	602	1060	907	231	92	e90	123	458	103
25	73	195	309	958	673	781	184	103	e110	173	266	108
26	68	167	297	1480	512	574	183	214	e94	221	183	95
27	66	468	281	e1000	404	799	201	129	e98	156	127	76
28	67	583	e240	e1400	350	1520	192	61	e110	172	128	74
29	67	347	e220	e1200	---	1020	162	50	159	147	123	77
30	80	499	e210	e1050	---	986	146	44	94	118	103	86
31	142	---	e200	e1000	---	1080	---	45	---	107	135	---
TOTAL	2611	10723	16206	27576	34799	29281	19848	11854	2786	4269	10771	2725
MEAN	84.2	357	523	890	1243	945	662	382	92.9	138	347	90.8
MAX	164	786	1360	2320	4820	1990	1730	1640	159	228	1400	181
MIN	52	68	200	238	350	331	146	44	59	58	103	48
CFSM	.47	1.97	2.89	4.91	6.87	5.22	3.66	2.11	.51	.76	1.92	.50
IN.	.54	2.20	3.33	5.67	7.15	6.02	4.08	2.44	.57	.88	2.21	.56

e Estimated

MONONGAHELA RIVER BASIN

03058500 WEST FORK RIVER AT BUTCHERVILLE, WV--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1915 - 1972, BY WATER YEAR (WY) [UNREGULATED]

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	113	214	406	505	542	580	391	298	189	125	130	85.1
MAX	717	886	941	1314	1045	1487	893	985	1061	628	501	472
(WY)	1938	1922	1927	1937	1956	1963	1972	1933	1950	1958	1958	1945
MIN	.44	.51	3.05	75.4	72.1	147	93.0	15.7	5.26	1.20	1.03	.78
(WY)	1931	1931	1931	1931	1941	1969	1971	1930	1936	1930	1930	1932

SUMMARY STATISTICS

WATER YEARS 1915 - 1972

ANNUAL MEAN	298
HIGHEST ANNUAL MEAN	501
LOWEST ANNUAL MEAN	142
HIGHEST DAILY MEAN	14200
LOWEST DAILY MEAN	.00
ANNUAL SEVEN-DAY MINIMUM	.00
INSTANTANEOUS PEAK FLOW	(b) 18000
INSTANTANEOUS PEAK STAGE	16.81
INSTANTANEOUS LOW FLOW	.00
ANNUAL RUNOFF (CFSM)	1.65
ANNUAL RUNOFF (INCHES)	22.38
10 PERCENT EXCEEDS	740
50 PERCENT EXCEEDS	96
90 PERCENT EXCEEDS	5.6

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1973 - 1994, BY WATER YEAR (WY)
[REGULATED, UNADJUSTED]

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	151	333	471	449	516	534	443	284	208	152	128	121
MAX	487	1631	1188	958	1243	945	934	729	824	362	347	538
(WY)	1980	1986	1979	1991	1994	1994	1973	1981	1981	1986	1994	1989
MIN	20.7	79.0	124	92.4	136	142	187	49.8	18.2	15.2	33.1	33.0
(WY)	1989	1988	1989	1977	1993	1990	1985	1982	1987	1987	1988	1983

SUMMARY STATISTICS

FOR 1993 CALENDAR YEAR

FOR 1994 WATER YEAR

WATER YEARS 1973 - 1994

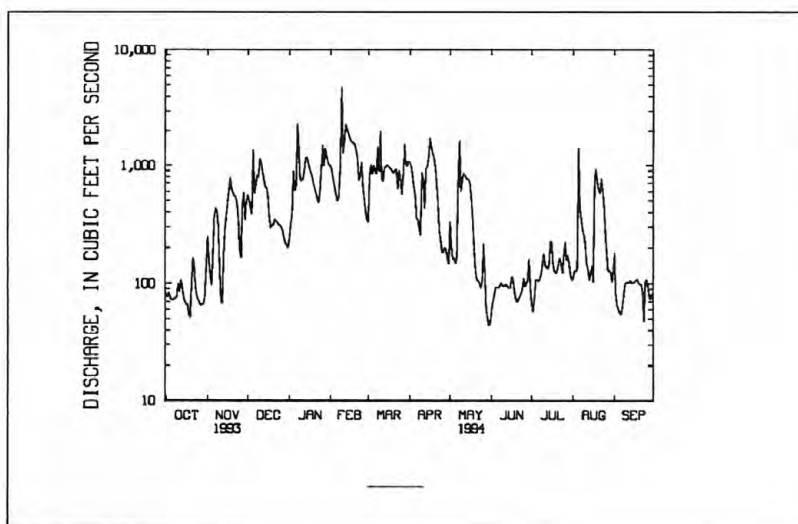
ANNUAL TOTAL	102379	173449	
ANNUAL MEAN	280	475	315
HIGHEST ANNUAL MEAN			475
LOWEST ANNUAL MEAN			159
HIGHEST DAILY MEAN	1710	Mar 4	4820
LOWEST DAILY MEAN	49	May 16	44
ANNUAL SEVEN-DAY MINIMUM	54	Feb 9	58
INSTANTANEOUS PEAK FLOW			6710
INSTANTANEOUS PEAK STAGE			10.28
INSTANTANEOUS LOW FLOW			41
ANNUAL RUNOFF (CFSM)	1.55	2.63	4.3
ANNUAL RUNOFF (INCHES)	21.04	35.65	1.74
10 PERCENT EXCEEDS	733	1060	23.63
50 PERCENT EXCEEDS	138	266	763
90 PERCENT EXCEEDS	73	76	143
			32

a Oct. 9, 10, 1919, Sept. 23, 27-30, Oct. 1-5, Dec. 3, 1922.

b From rating curve extended above 7,500 ft³/s on basis of slope-area measurement of peak flow.

c At times during October 1919, September, October, and December 1922, caused by either diversion or pondage at small dam upstream.

d Sept. 13, 14, 1973.



MONONGAHELA RIVER BASIN

03058975 WEST FORK RIVER NEAR MOUNT CLARE, WV

LOCATION.--Lat 39°14'19", long 80°21'34", Harrison County, Hydrologic Unit 05020002, on right bank 4 miles south of Clarksburg and 2 mi north of Mount Clare, 0.3 mi off County Route 25 on County Route 34, and at mile 37.5.

DRAINAGE AREA.--367 mi².

PERIOD OF RECORD.--April 1987 to current year.

GAGE.--Water-stage recorder. Datum of gage is 931.04 ft above sea level. U.S. Army Corps of Engineers satellite telemeter at the station.

REMARKS.--Records good except those for periods of estimated daily discharges (ice effect), which are poor. Flow partially regulated since 1973 by Stonecoal Reservoir. Flow regulated since January 1990 by Stonewall Jackson Lake.

PEAK DISCHARGE FOR CURRENT YEAR.--Peak discharge, 11,600 ft³/s, Feb. 9, gage height, 19.08 ft.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	110	517	676	324	1230	633	1510	403	98	183	129	2120
2	96	407	631	433	e1050	813	1250	407	103	122	131	556
3	98	221	523	739	e920	3270	1120	269	107	96	145	267
4	101	163	524	1660	e800	1740	900	289	114	107	147	180
5	97	147	3130	1400	e700	2620	820	305	119	126	1470	143
6	103	332	2230	1020	e650	2600	644	286	117	121	2450	126
7	83	476	997	3990	709	2250	721	596	117	117	594	111
8	80	425	1010	6570	923	3950	698	6270	131	132	392	108
9	103	384	940	2040	9780	3020	573	1820	131	137	315	114
10	123	202	1670	1130	6160	5530	1860	1020	120	206	299	124
11	142	114	2610	1050	2820	3070	3700	1040	128	174	209	123
12	138	79	1450	1120	3540	1430	1320	994	153	143	177	123
13	179	100	1070	2010	3470	1470	2050	926	130	137	146	123
14	157	630	881	2130	3140	1320	2330	859	113	148	129	121
15	129	576	820	1610	2490	1320	1690	837	105	171	151	118
16	117	658	788	e1300	2150	1250	2770	896	135	381	181	118
17	123	636	594	e1200	1950	1130	2650	688	242	210	1220	118
18	142	1830	440	e1050	1830	1140	1850	523	142	153	4060	118
19	132	970	467	e950	1750	1200	1550	355	126	139	1270	118
20	152	762	485	e860	1650	1120	1320	236	122	129	795	118
21	313	651	541	e800	1490	1230	954	181	118	139	665	118
22	384	597	607	e740	1380	2840	757	162	137	226	930	117
23	241	565	562	e700	2300	1220	472	152	136	243	855	102
24	156	463	512	849	2970	1210	405	144	162	165	632	60
25	124	287	477	2100	2240	1090	318	142	194	261	404	112
26	109	214	446	4860	1170	881	287	438	164	558	319	132
27	96	494	412	2690	851	1290	281	490	173	317	227	125
28	92	2530	371	4580	696	4210	312	243	296	353	181	104
29	89	857	e330	3240	---	3080	263	153	570	249	173	96
30	96	653	e300	1590	---	2030	214	126	487	189	155	89
31	169	---	e285	1490	---	1640	---	108	---	147	376	---
TOTAL	4274	16940	26779	56225	60809	61597	35589	21358	4990	5979	19327	6102
MEAN	138	565	864	1814	2172	1987	1186	689	166	193	623	203
MAX	384	2530	3130	6570	9780	5530	3700	6270	570	558	4060	2120
MIN	80	79	285	324	650	633	214	108	98	96	129	60

e Estimated

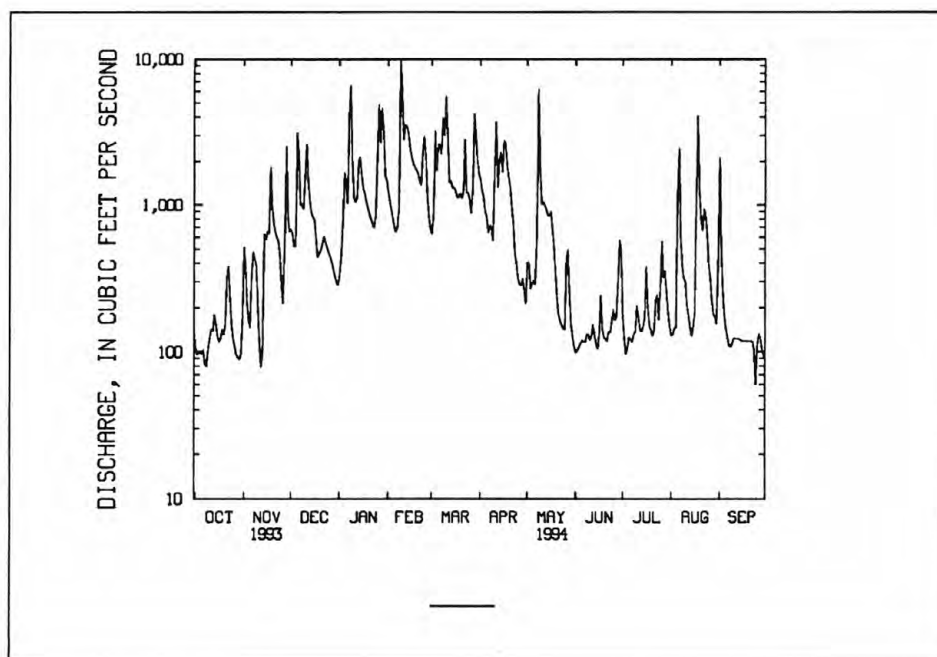
MONONGAHELA RIVER BASIN

03058975 WEST FORK RIVER NEAR MOUNT CLARE, WV--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1987 - 1994, BY WATER YEAR (WY)
[REGULATED, UNADJUSTED]

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	216	381	722	940	1110	1289	793	468	318	215	237	184
MAX	758	815	1442	1814	2172	1987	1186	1066	1065	471	623	551
(WY)	1990	1990	1991	1994	1994	1994	1994	1989	1989	1992	1994	1989
MIN	48.2	136	265	541	353	417	542	124	119	32.8	46.5	59.5
(WY)	1989	1988	1989	1988	1993	1990	1988	1987	1993	1988	1988	1988

SUMMARY STATISTICS	FOR 1993 CALENDAR YEAR			FOR 1994 WATER YEAR			WATER YEARS 1987 - 1994		
ANNUAL TOTAL	182893			319969					
ANNUAL MEAN	501			877			583		
HIGHEST ANNUAL MEAN							877		
LOWEST ANNUAL MEAN							338		
HIGHEST DAILY MEAN	5300			Mar 5			9780		
LOWEST DAILY MEAN	57			Sep 9			60		
ANNUAL SEVEN-DAY MINIMUM	62			Sep 8			94		
INSTANTANEOUS PEAK FLOW							11600		
INSTANTANEOUS PEAK STAGE							19.08		
INSTANTANEOUS LOW FLOW							55		
10 PERCENT EXCEEDS	1160						2240		
50 PERCENT EXCEEDS	199						440		
90 PERCENT EXCEEDS	94						117		



MONONGAHELA RIVER BASIN

03061000 WEST FORK RIVER AT ENTERPRISE, WV

LOCATION.--Lat 39°25'20", long 80°16'40", Harrison County, Hydrologic Unit 05020002, on left bank 150 ft downstream from old highway bridge and 0.3 mi above new highway bridge at Enterprise, 0.8 mi upstream from Bingamon Creek, and at mile 12.1.

DRAINAGE AREA.--759 mi².

PERIOD OF RECORD.--June 1907 to September 1916, October 1916 to September 1918 (gage heights only), October 1932 to September 1983, October 1983 to September 1984 (gage heights, discharge measurements, and annual maximum discharge only) October 1984 to current year.

REVISED RECORDS.--WSP 803: 1936. WSP 823: Drainage area. WSP 1113: 1936-38(M), 1939. WSP 1335: 1911-15, 1937. WSP 1625: 1915(M), 1935(M).

GAGE.--Water-stage recorder. Datum of gage is 869.45 ft above sea level, adjustment of 1912. June 1907 to Sept. 30, 1918, nonrecording gage at site 150 ft upstream at same datum.

REMARKS.--Records good except those for periods of estimated daily discharges (ice effect, well froze), which are poor. Flow partially regulated since 1973 by Stonecoal Reservoir. Flow regulated since January 1990 by Stonewall Jackson Lake. U.S. Army Corps of Engineers satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in 1888 reached a stage of about 33 ft, present site and datum.

PEAK DISCHARGE FOR CURRENT YEAR.--Peak discharge, 25,400 ft³/s, Feb. 9, gage height, 22.13 ft.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	235	966	1110	551	2560	1570	2860	657	314	476	214	4590
2	197	1100	973	663	e2100	1590	2450	891	280	301	214	1610
3	203	671	831	1280	e1800	4480	2200	648	271	222	256	633
4	191	510	785	2260	e1500	3740	1920	633	264	197	246	439
5	179	472	4610	3090	e1300	4410	1640	720	263	205	914	353
6	170	664	5730	2130	e1200	5330	1420	681	253	198	4970	289
7	164	801	2380	6530	1310	6200	2210	1030	243	202	1260	247
8	151	728	1810	15800	1530	10200	2050	12300	262	193	624	219
9	151	620	1580	5620	19900	7930	1550	5380	265	231	470	206
10	184	505	2390	2690	16900	14800	6280	2290	251	288	584	207
11	188	342	5040	2210	5460	9230	10600	1880	243	322	412	213
12	199	248	3010	2340	6840	4140	4310	1760	296	236	311	213
13	209	315	2120	3900	6120	3200	4380	1610	366	208	268	191
14	227	1430	1670	4130	5610	2950	5790	1360	252	242	223	179
15	198	1530	1440	3160	4290	2670	3610	1290	224	328	351	173
16	175	1300	1370	2190	3640	2530	5140	1700	215	566	382	164
17	206	1190	1100	e2000	3170	2290	5330	1360	415	506	1800	166
18	386	3630	845	e1800	2940	2190	3580	969	338	298	8440	201
19	297	2290	828	e1650	2800	2420	2880	756	246	237	2960	206
20	299	1440	883	e1550	2760	2290	2480	598	254	210	1350	192
21	711	1060	1000	e1400	2990	2430	2000	491	248	198	943	171
22	774	851	1220	e1350	3090	5750	1580	436	355	222	1120	157
23	587	765	1090	e1300	4910	3460	1200	402	265	422	1270	152
24	382	671	958	e1800	6650	2530	907	377	243	289	853	140
25	281	541	857	e5000	5890	2310	812	364	304	271	619	124
26	232	385	789	10900	3340	1870	719	941	313	693	522	182
27	205	952	712	6910	2320	2350	679	1910	301	610	438	209
28	184	5420	643	14600	1810	8040	682	848	489	502	334	182
29	174	2730	e580	10700	---	7250	634	536	744	472	306	155
30	179	1380	e560	4050	---	4600	573	425	1450	324	274	146
31	297	---	e520	3090	---	3290	---	360	---	262	350	---
TOTAL	8215	35507	49434	126644	124730	138040	82466	45603	10227	9931	33278	12309
MEAN	265	1184	1595	4085	4455	4453	2749	1471	341	320	1073	410
MAX	774	5420	5730	15800	19900	14800	10600	12300	1450	693	8440	4590
MIN	151	248	520	551	1200	1570	573	360	215	193	214	124
CFSM	.35	1.56	2.10	5.38	5.87	5.87	3.62	1.94	.45	.42	1.41	.54
IN.	.40	1.74	2.42	6.21	6.11	6.77	4.04	2.24	.50	.49	1.63	.60

e Estimated

MONONGAHELA RIVER BASIN

03061000 WEST FORK RIVER AT ENTERPRISE, WV--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1907-1916, 1933-1972, BY WATER YEAR (WY)
[UNREGULATED]

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	389	668	1453	2071	2177	2279	1637	1130	670	443	465	385
MAX	2356	2612	3594	6011	4202	5727	3795	3417	2293	2648	2142	2973
(WY)	1938	1914	1943	1937	1916	1963	1940	1967	1950	1958	1956	1945
MIN	20.3	20.0	34.1	310	332	426	138	147	30.7	57.0	25.4	19.8
(WY)	1939	1909	1909	1967	1954	1910	1910	1939	1936	1911	1910	1908

SUMMARY STATISTICS

WATER YEARS 1907-1916, 1933-1972

ANNUAL MEAN	1136
HIGHEST ANNUAL MEAN	1879
LOWEST ANNUAL MEAN	548
HIGHEST DAILY MEAN	33300
LOWEST DAILY MEAN	4.0
ANNUAL SEVEN-DAY MINIMUM	6.4
INSTANTANEOUS PEAK FLOW	(a) 36500
INSTANTANEOUS PEAK STAGE	28.05
INSTANTANEOUS LOW FLOW	3.4
10 PERCENT EXCEEDS	2800
50 PERCENT EXCEEDS	440
90 PERCENT EXCEEDS	55

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1973 - 1994, BY WATER YEAR (WY)
[REGULATED, UNADJUSTED]

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	525	1126	1733	1827	2109	2190	1681	1212	849	470	461	344
MAX	1762	5040	4494	4085	4455	4453	3181	2786	3796	967	1773	1071
(WY)	1977	1986	1979	1994	1994	1994	1973	1989	1981	1978	1980	1979
MIN	63.9	220	639	373	480	497	839	250	170	75.5	69.5	77.0
(WY)	1989	1988	1990	1977	1978	1987	1982	1982	1977	1988	1988	1983

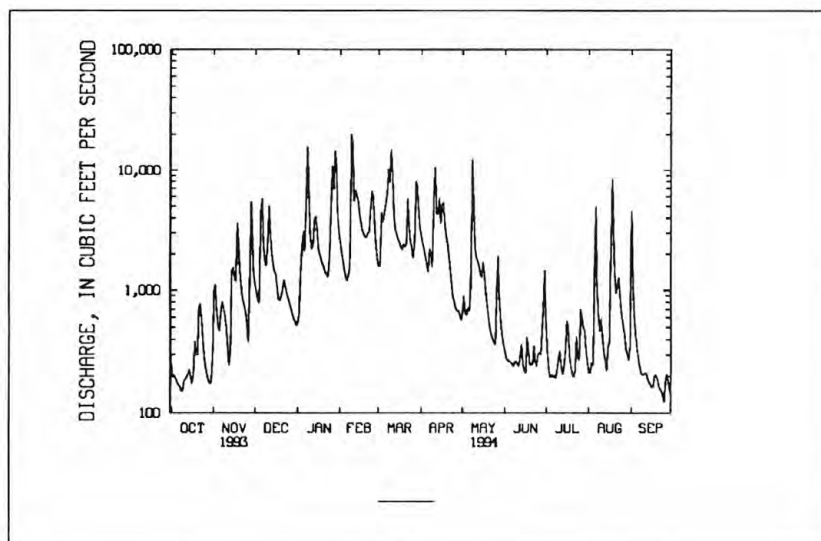
SUMMARY STATISTICS

FOR 1993 CALENDAR YEAR

FOR 1994 WATER YEAR

WATER YEARS 1973 - 1994

ANNUAL TOTAL	375835	676384	
ANNUAL MEAN	1030	1853	1206
HIGHEST ANNUAL MEAN			1853
LOWEST ANNUAL MEAN			583
HIGHEST DAILY MEAN	12600	Mar 5	37900
LOWEST DAILY MEAN	111	Aug 31	14
ANNUAL SEVEN-DAY MINIMUM	115	Aug 25	20
INSTANTANEOUS PEAK FLOW			25400
INSTANTANEOUS PEAK STAGE			22.13
INSTANTANEOUS LOW FLOW			121
ANNUAL RUNOFF (CFSM)	1.36	2.44	1.59
ANNUAL RUNOFF (INCHES)	18.42	33.15	21.59
10 PERCENT EXCEEDS	2580	4980	2890
50 PERCENT EXCEEDS	450	801	587
90 PERCENT EXCEEDS	148	203	121

a From rating curve extended above 21,000 ft³/s on basis of slope-area measurement at gage height 27.84.b From rating curve extended above 36,400 ft³/s.

MONONGAHELA RIVER BASIN

03061500 BUFFALO CREEK AT BARRACKVILLE, WV

LOCATION.--Lat 39°30'15", long 80°10'20", Marion County, Hydrologic Unit 05020003, near center of span on downstream side of highway bridge at Barrackville, 1,700 ft upstream from Finchs Run, and at mile 4.0.

DRAINAGE AREA.--115 mi².

PERIOD OF RECORD.--June 1907 to December 1908, May 1915 to June 1924, August 1932 to current year.

REVISED RECORDS.--WSP 783: 1917(M). WSP 1335: 1916(M), 1918-20(M), 1921, 1922(M), 1924(M), 1933(M), 1940.

GAGE.--Water-stage recorder. Datum of gage is 882.42 ft above sea level. Prior to Dec. 6, 1940, nonrecording gage at same site. Prior to June 4, 1943, at datum 1.98 ft higher. Datums published in error, Oct. 1985 to Sept. 1990.

REMARKS.--Records good except those for periods of estimated daily discharges (well froze, ice effect), which are poor. Flow from 5.20 mi² is partially controlled, but not diverted, by three floodwater-detention reservoirs. Some additional regulation at low flow from mine pumpage above station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in July 1912 reached a stage of about 18 ft, present site and datum, discharge, 11,600 ft³/s.

PEAK DISCHARGES 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)
Jan. 28	1600	*7,200	*13.93	Mar. 10	0600	6,840	13.57
Feb. 9	0800	4,270	10.79	Apr. 10	2100	5,860	12.55
Mar. 8	0200	5,550	12.20				

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	28	212	135	e65	e300	311	249	63	25	28	18	139
2	21	160	109	e78	e250	183	195	56	23	19	22	86
3	24	109	96	e90	e200	185	167	50	20	19	41	58
4	36	85	94	e120	e160	212	163	55	18	17	53	42
5	25	78	1130	e220	e130	249	145	58	16	15	475	33
6	20	103	608	297	e120	372	143	58	16	13	255	27
7	19	84	315	1250	e120	1740	750	247	21	14	105	24
8	16	63	205	e1700	358	3230	474	1910	17	16	63	21
9	12	51	145	e900	2990	1480	307	516	15	14	47	19
10	14	42	340	e500	1730	4480	2410	269	13	30	36	19
11	14	37	574	e300	1290	1010	1750	171	12	15	28	18
12	16	32	314	e250	399	585	951	137	11	11	20	17
13	23	55	215	e350	510	447	1060	113	10	13	17	16
14	22	329	168	e430	459	435	878	88	9.5	31	23	14
15	19	235	144	e350	387	372	547	72	8.6	59	44	14
16	18	167	122	e290	391	281	1160	73	8.7	126	28	18
17	20	160	100	e240	340	197	708	64	11	55	832	21
18	66	925	91	e210	311	191	419	58	11	30	1150	29
19	60	324	102	e200	376	254	292	54	27	21	255	23
20	51	184	114	e180	569	233	210	49	78	19	125	16
21	86	117	138	e160	1320	397	158	43	23	16	102	13
22	71	85	145	e155	800	950	128	37	45	12	486	11
23	52	68	134	e150	1760	494	111	33	24	20	258	11
24	39	61	120	e350	1920	345	97	28	17	13	125	10
25	30	53	110	e900	844	257	83	26	18	74	83	9.8
26	24	43	e100	1760	501	197	73	57	16	154	81	11
27	21	322	e92	874	395	371	71	112	28	63	64	15
28	18	974	e84	5470	395	1370	67	65	28	58	49	16
29	16	394	e75	2380	---	790	60	48	40	44	43	16
30	17	209	e68	793	---	453	57	37	49	29	39	15
31	47	---	e63	475	---	323	---	31	---	22	50	---
TOTAL	945	5761	6250	21487	19325	22394	13883	4678	658.8	1070	5017	781.8
MEAN	30.5	192	202	693	690	722	463	151	22.0	34.5	162	26.1
MAX	86	974	1130	5470	2990	4480	2410	1910	78	154	1150	139
MIN	12	32	63	65	120	183	57	26	8.6	11	17	9.8
CFSM	.27	1.67	1.75	6.03	6.00	6.28	4.02	1.31	.19	.30	1.41	.23
IN.	.31	1.86	2.02	6.95	6.25	7.24	4.49	1.51	.21	.35	1.62	.25

e Estimated

MONONGAHELA RIVER BASIN

03061500 BUFFALO CREEK AT BARRACKVILLE, WV--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1907-1909, 1915-1924, 1932-1994, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	47.6	111	219	281	301	354	255	190	109	66.0	58.3	46.8
MAX	262	530	696	944	690	795	658	543	476	381	357	285
(WY)	1990	1986	1991	1937	1994	1963	1948	1968	1981	1978	1980	1990
MIN	.000	.000	14.8	25.2	32.7	71.9	53.3	17.8	6.69	2.44	2.24	.013
(WY)	1909	1909	1954	1967	1934	1969	1971	1934	1936	1966	1938	1908

SUMMARY STATISTICS	FOR 1993 CALENDAR YEAR		FOR 1994 WATER YEAR		WATER YEARS 1907 - 1994	
ANNUAL TOTAL	58414.0		102250.6			
ANNUAL MEAN	160		280		169	
HIGHEST ANNUAL MEAN					280	1994
LOWEST ANNUAL MEAN					80.3	1969
HIGHEST DAILY MEAN	2480	Mar 4	5470	Jan 28	5710	Apr 12 1948
LOWEST DAILY MEAN	2.5	(a)	8.6	Jun 15	.00	(b)
ANNUAL SEVEN-DAY MINIMUM	2.7	Aug 25	10	Jun 12	.00	Sep 4 1908
INSTANTANEOUS PEAK FLOW			7200	Jan 28	(c) 9490	Jan 22 1917
INSTANTANEOUS PEAK STAGE			13.93	Jan 28	16.20	Jan 22 1917
INSTANTANEOUS LOW FLOW			8.2	(d)	.00	(f)
ANNUAL RUNOFF (CFSM)	1.39		2.44		1.47	
ANNUAL RUNOFF (INCHES)	18.90		33.08		19.93	
10 PERCENT EXCEEDS	403		791		399	
50 PERCENT EXCEEDS	57		84		59	
90 PERCENT EXCEEDS	5.1		16		5.0	

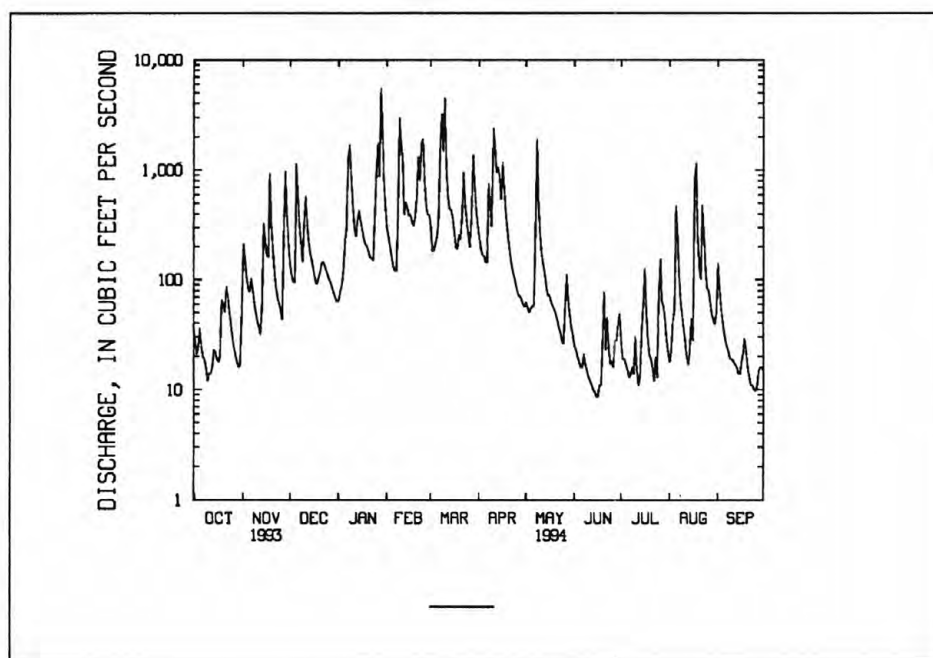
a Aug. 28, 30.

b Aug. 13-17, Sept. 4-28, Sept. 30 to Dec. 6, 1908.

c Observed.

d June 16, 19, July 9.

f Greater part of period August to December 1908.



MONONGAHELA RIVER BASIN

03062400 COBUN CREEK AT MORGANTOWN, WV

LOCATION.--Lat 39°36'30", long 79°57'20", Monongalia County, Hydrologic Unit 05020003, on left bank at Morgantown, 30 ft upstream from concrete box culvert on Greenbag Road, and at mile 1.4.

DRAINAGE AREA.--10.9 mi².

PERIOD OF RECORD.--April 1965 to September 1994 (discontinued).

GAGE.--Water-stage recorder and concrete and metal control. Elevation of gage is 890 ft above sea level, from topographic map.

REMARKS.--Records good except those for periods of estimated daily discharges (ice effect, recorder malfunction), which are poor.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 250 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage Height (ft)	Date	Time	Discharge (ft ³ /s)	Gage Height (ft)
Jan. 28	1015	398	5.82	Mar. 10	0400	296	4.86
Feb. 9	0530	316	5.06	Apr. 10	1645	*545	*6.89
Mar. 7	2345	531	6.79				

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.7	10	e13	e7.5	25	18	32	9.1	3.2	e1.2	1.3	19
2	1.5	7.5	e10	e10	e20	17	25	6.7	e2.7	e1.0	1.9	12
3	2.0	7.4	e9.0	e14	e14	15	23	5.8	e2.2	e.80	1.2	8.8
4	1.5	9.6	e15	e20	e12	17	22	7.9	e2.0	e.72	6.4	7.2
5	1.1	11	e80	e30	e10	20	18	8.3	e1.8	e.64	26	5.2
6	.85	11	e40	e23	e9.0	27	23	9.5	e1.6	e.60	17	3.9
7	.66	8.3	e25	e70	e8.0	155	49	35	e1.4	e.56	9.2	3.5
8	.57	6.3	e19	e110	46	244	35	83	e1.3	e.60	5.4	2.9
9	.58	5.6	e16	e50	218	132	29	39	e1.2	e.68	3.6	2.3
10	1.7	e4.8	e60	e25	71	207	224	25	e1.1	e.80	2.7	5.9
11	1.3	e4.4	e45	e23	47	73	123	18	e1.0	e.70	2.0	2.9
12	2.9	e4.1	e30	e44	37	48	68	17	e1.0	e.64	1.8	1.9
13	3.3	e6.5	e22	47	53	41	86	13	e1.1	e1.0	1.4	1.6
14	2.3	e13	e18	40	39	42	58	11	e.80	e5.0	3.9	1.4
15	1.9	e12	e16	31	32	40	48	10	e.70	e7.0	5.1	1.4
16	1.5	e11	e14	e25	28	34	75	9.9	e.66	e8.0	2.6	1.2
17	2.9	e20	e12	e21	23	25	54	7.6	e.64	e3.5	62	3.0
18	5.1	e40	e11	e18	22	28	38	6.7	e1.1	e2.0	121	4.1
19	3.8	e23	e13	e15	27	29	29	6.0	e.92	e1.4	39	1.9
20	5.1	e16	e15	e13	39	24	23	5.1	e.75	e1.0	19	1.3
21	7.8	e11	e17	e11	66	41	18	4.0	e.68	e.85	20	1.1
22	9.0	e8.0	e15	e10	47	56	15	3.4	e.90	e1.3	138	.85
23	6.0	e6.6	e13	e9.6	99	40	13	3.0	e1.0	e2.2	57	.78
24	4.6	e5.5	e12	e20	113	32	12	2.5	e.92	e1.7	27	.78
25	3.7	e4.8	e11	68	60	25	11	2.5	e.80	e2.5	17	.96
26	2.9	e4.7	e9.6	147	40	20	9.5	13	e.70	e4.0	12	8.3
27	2.5	e20	e8.8	73	28	38	8.6	15	e.90	3.2	9.0	3.4
28	2.2	e65	e7.8	277	22	97	7.6	9.7	e1.5	3.6	6.7	2.1
29	1.9	e35	e7.0	120	---	77	6.8	7.4	e2.1	3.1	7.5	1.7
30	2.7	e23	e6.2	54	---	57	8.2	5.3	e1.6	2.4	5.6	1.4
31	8.4	---	e5.8	35	---	42	---	3.9	---	1.7	9.1	---
TOTAL	93.96	415.1	596.2	1461.1	1255.0	1761	1191.7	403.3	38.27	64.39	641.4	112.77
MEAN	3.03	13.8	19.2	47.1	44.8	56.8	39.7	13.0	1.28	2.08	20.7	3.76
MAX	9.0	65	80	277	218	244	224	83	3.2	8.0	138	19
MIN	.57	4.1	5.8	7.5	8.0	15	6.8	2.5	.64	.56	1.2	.78
CFSM	.28	1.27	1.76	4.32	4.11	5.21	3.64	1.19	.12	.19	1.90	.34
IN.	.32	1.42	2.03	4.99	4.28	6.01	4.07	1.38	.13	.22	2.19	.38

e Estimated

MONONGAHELA RIVER BASIN

03062400 COBUN CREEK AT MORGANTOWN, WV--Continued

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

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	5.85	12.8	23.6	22.7	28.7	31.2	26.0	20.3	10.6	7.48	6.54	4.09
MAX	31.1	47.8	56.5	48.4	63.8	69.4	46.0	46.1	48.1	27.5	61.0	20.1
(WY)	1980	1986	1991	1974	1986	1967	1970	1968	1972	1978	1980	1971
MIN	.023	.63	.94	4.62	6.62	6.95	7.41	2.61	.26	.028	.000	.012
(WY)	1992	1970	1966	1967	1978	1987	1971	1982	1991	1966	1991	1985

SUMMARY STATISTICS	FOR 1993 CALENDAR YEAR		FOR 1994 WATER YEAR		WATER YEARS 1965 - 1994	
ANNUAL TOTAL	4832.58		8034.19			
ANNUAL MEAN	13.2		22.0		16.7	
HIGHEST ANNUAL MEAN					24.1	1980
LOWEST ANNUAL MEAN					7.75	1966
HIGHEST DAILY MEAN	129	Mar 23	277	Jan 28	1200	Aug 18 1980
LOWEST DAILY MEAN	.00	(a)	(e) .56	Jul 7	.00	(b)
ANNUAL SEVEN-DAY MINIMUM	.00	Aug 27	.65	Jul 5	.00	Jun 30 1965
INSTANTANEOUS PEAK FLOW			545	Apr 10	(c) 3100	Aug 18 1980
INSTANTANEOUS PEAK STAGE			6.89	Apr 10	(d) 19.94	Aug 18 1980
INSTANTANEOUS LOW FLOW			.43	Oct 9	.00	(b)
ANNUAL RUNOFF (CFSM)	1.21		2.02		1.53	
ANNUAL RUNOFF (INCHES)	16.49		27.42		20.84	
10 PERCENT EXCEEDS	32		55		39	
50 PERCENT EXCEEDS	7.0		9.2		8.4	
90 PERCENT EXCEEDS	.30		1.0		.27	

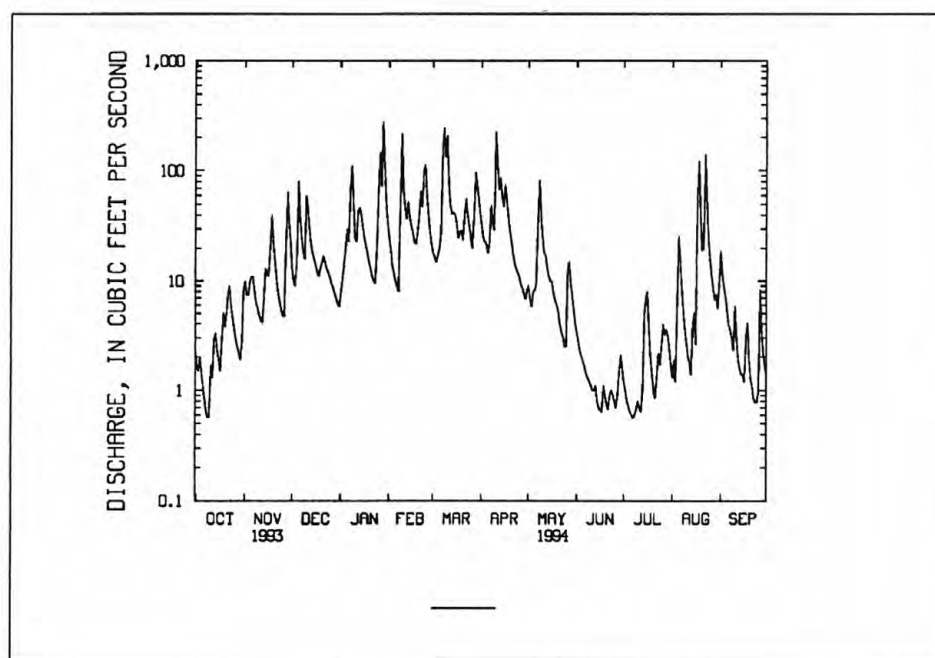
a Several days (July to September).

b At times most years.

c From rating curve extended above 800 ft³/s on basis of culvert rating computation and flow over road measurement of peak flow.

d From floodmarks.

e Estimated.



MONONGAHELA RIVER BASIN

03065400 BLACKWATER RIVER NEAR DAVIS, WV

LOCATION.--Lat 39°08'24", long 79°25'12", Tucker County, Hydrologic Unit 05020004, on right bank, 2.8 mi northeast of Davis, 0.5 mi upstream from Yellow Creek, and at mile 14.0.

DRAINAGE AREA.--55.0 mi².

PERIOD OF RECORD.--November 1991 to current year.

GAGE.--Water-stage recorder. Datum of gage is 3,130 ft above sea level.

REMARKS.--Records fair except those for periods of estimated daily discharges (ice effect, recorder malfunction), which are poor.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 900 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage Height (ft)	Date	Time	Discharge (ft ³ /s)	Gage Height (ft)
Jan. 29	---	UNKNOWN	UNKNOWN	Mar. 28	1500	994	4.96
Feb. 9	1200	*4,050	a*10.48	May 8	1000	2,400	7.73
Mar. '22	1800	1,070	5.14				

a From floodmark.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	41	80	135	e41	e180	e160	308	164	32	29	100	282
2	31	61	116	e41	e130	e130	258	166	29	23	113	210
3	29	62	111	e45	e100	e120	214	106	25	20	123	114
4	25	94	119	e58	e84	e160	210	225	24	29	81	95
5	21	166	583	e100	e70	e145	182	249	22	34	144	83
6	18	246	786	e150	e63	141	158	297	21	22	270	68
7	17	181	408	283	e62	198	199	520	21	19	156	60
8	15	120	225	e700	e250	663	185	2000	19	21	94	50
9	14	98	178	e560	e3800	e560	141	1110	20	18	73	43
10	20	83	176	e450	e2200	e780	209	435	17	21	59	42
11	22	71	242	e380	e800	e540	413	234	18	20	47	46
12	45	63	186	e330	e450	e350	319	217	20	18	40	39
13	74	77	187	541	e330	267	491	196	17	14	35	31
14	53	239	144	390	e270	271	657	141	15	23	32	27
15	39	203	142	275	e220	337	354	118	14	28	57	25
16	34	151	181	e150	e180	420	344	228	14	52	43	24
17	28	140	177	e85	e150	264	247	179	35	43	151	24
18	39	372	154	e65	e170	236	180	139	31	46	369	31
19	38	285	172	e54	e230	292	149	121	19	38	181	32
20	46	213	145	e47	e320	252	129	109	15	38	102	26
21	85	168	125	e42	e450	357	108	96	42	146	77	22
22	88	134	e105	e42	e540	914	95	81	73	124	203	19
23	63	111	e93	e57	478	765	83	71	47	138	184	19
24	46	99	e83	e130	713	550	74	60	52	126	106	20
25	37	88	e75	e220	e500	537	66	58	41	80	80	20
26	32	78	e66	581	e400	388	59	101	31	167	94	19
27	30	121	e59	e400	e260	550	62	103	32	209	78	19
28	29	450	e54	e590	e200	951	79	66	47	346	73	17
29	27	304	e48	e780	---	829	60	49	41	233	62	17
30	37	178	e45	e500	---	519	53	40	38	143	60	16
31	85	---	e42	e300	---	342	---	36	---	110	63	---
TOTAL	1208	4736	5362	8387	13600	12988	6086	7715	872	2378	3350	1540
MEAN	39.0	158	173	271	486	419	203	249	29.1	76.7	108	51.3
MAX	88	450	786	780	3800	951	657	2000	73	346	369	282
MIN	14	61	42	41	62	120	53	36	14	14	32	16
CFSM	.71	2.87	3.14	4.92	8.83	7.62	3.69	4.52	.53	1.39	1.96	.93
IN.	.82	3.20	3.63	5.67	9.20	8.78	4.12	5.22	.59	1.61	2.27	1.04

e Estimated

MONONGAHELA RIVER BASIN

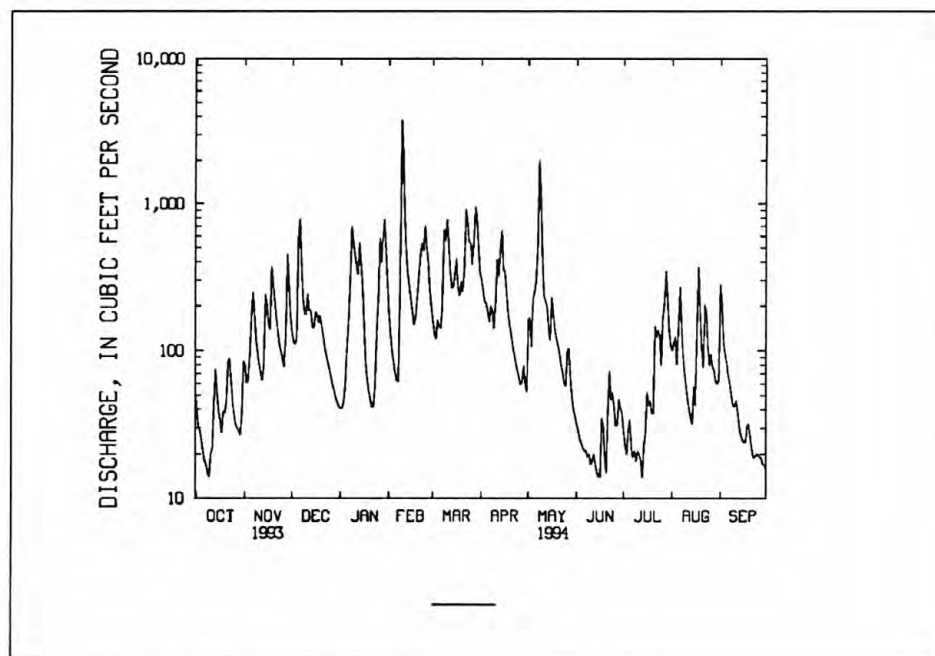
03065400 BLACKWATER RIVER NEAR DAVIS, WV--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1992-1994, BY WATER YEAR (WY)

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	24.9	78.7	205	186	271	351	240	143	37.2	52.2	56.6	32.9
MAX	39.0	158	225	271	486	419	350	249	49.1	76.7	108	51.3
(WY)	1994	1994	1993	1994	1994	1994	1993	1994	1992	1994	1994	1994
MIN	10.8	30.8	173	133	69.5	239	168	65.5	29.1	9.48	7.10	14.9
(WY)	1993	1992	1994	1993	1993	1992	1992	1993	1994	1993	1993	1992

SUMMARY STATISTICS	FOR 1993 CALENDAR YEAR		FOR 1994 WATER YEAR		WATER YEARS 1992 - 1994	
ANNUAL TOTAL	44658.9		68222			
ANNUAL MEAN	122		187		151	
HIGHEST ANNUAL MEAN					187	
LOWEST ANNUAL MEAN					115	
HIGHEST DAILY MEAN	1380		(e) 3800		(e) 3800	
LOWEST DAILY MEAN	4.0		14		4.0	
ANNUAL SEVEN-DAY MINIMUM	4.9		16		4.9	
INSTANTANEOUS PEAK FLOW			4050		4050	
INSTANTANEOUS PEAK STAGE			(b) 10.48		(b) 10.48	
INSTANTANEOUS LOW FLOW			13		4.0	
ANNUAL RUNOFF (CFSM)	2.22		3.40		2.75	
ANNUAL RUNOFF (INCHES)	30.21		46.14		37.32	
10 PERCENT EXCEEDS	258		450		327	
50 PERCENT EXCEEDS	58		100		74	
90 PERCENT EXCEEDS	7.1		22		12	

- a Oct. 9, June 15, 16, July 13.
b From floodmark.
c June 15, July 13, 14.
d July 25, 26, Aug. 29-31, 1993.
e Estimated.



MONONGAHELA RIVER BASIN

03066000 BLACKWATER RIVER AT DAVIS, WV

LOCATION.--Lat 39°07'35", long 79°28'10", Tucker County, Hydrologic Unit 05020004, on right bank 0.4 mi southwest of Davis, 0.5 mi downstream from Beaver Creek, and at mile 10.6.

DRAINAGE AREA.--86.2 mi².

PERIOD OF RECORD.--April 1921 to current year.

REVISED RECORDS.--WSP 583: 1921-23. WSP 803: Drainage area. WSP 1173: 1931-34(M,m). WSP 1305: 1928(M), 1932-37(M), 1939-41(M), 1944-48(M).

GAGE.--Water-stage recorder. Datum of gage is 3,058.87 ft above sea level (levels by West Virginia Power and Transmission Company). Prior to Dec. 18, 1952, nonrecording gage at site 60 ft downstream at same datum.

REMARKS.--Records good except those for periods of estimated daily discharges (well froze, ice effect), which are poor. U.S. Army Corps of Engineers satellite telemeter at station.

PEAK DISCHARGES 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)
Dec. 5	1800	1,560	6.19	Mar. 22	1100	1,680	6.38
Jan. 7	2400	1,550	6.16	Mar. 28	1000	1,690	6.40
Jan. 29	0100	1,500	6.08	Apr. 13	1700	1,520	6.11
Feb. 9	1400	*7,660	*13.60	May 8	0900	4,170	9.90

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	63	135	199	e67	286	257	498	383	54	52	174	497
2	49	104	171	e66	e190	192	431	283	50	38	220	311
3	57	110	163	e70	e150	191	358	168	46	53	241	173
4	47	169	185	e90	e120	256	355	389	43	79	142	150
5	35	322	1260	e150	e105	224	302	440	39	59	429	130
6	30	410	1110	e240	e100	219	262	558	38	38	497	107
7	26	273	580	828	e110	384	353	1100	36	31	262	95
8	23	175	339	1180	e400	1230	303	3430	34	55	164	82
9	23	146	268	903	e6040	914	224	1520	33	37	127	72
10	38	125	282	761	e3500	1350	455	626	28	48	106	71
11	37	109	380	564	1310	926	720	361	30	38	88	76
12	98	97	272	517	740	516	510	359	35	29	76	62
13	126	146	245	603	529	416	1100	313	30	22	65	52
14	84	372	212	440	419	439	1030	223	24	33	70	45
15	64	295	218	350	351	607	551	189	31	51	114	41
16	55	218	313	e230	288	692	589	477	40	80	78	39
17	47	236	283	e140	249	411	400	306	58	70	329	39
18	80	647	236	e100	244	395	291	230	49	81	658	55
19	68	420	268	e80	320	483	236	196	30	64	298	50
20	89	328	219	e70	460	398	200	175	25	349	164	41
21	156	249	186	e65	791	689	168	152	62	385	128	33
22	145	192	e170	e64	848	1590	146	126	116	271	428	29
23	99	158	e145	e85	828	1140	129	111	89	443	327	29
24	75	142	e130	e165	1130	995	114	95	109	239	178	33
25	51	126	e120	e265	902	936	103	105	116	215	134	30
26	55	113	e105	718	563	619	94	191	64	485	168	30
27	51	231	e98	628	372	1040	94	185	72	573	132	30
28	48	837	e90	935	312	1630	113	114	96	757	117	26
29	45	454	e82	1290	---	1220	89	84	72	410	109	25
30	77	270	e75	787	---	758	96	69	70	303	101	23
31	174	---	e70	412	---	520	---	62	---	204	138	---
TOTAL	2115	7609	8474	12863	21657	21637	10314	13020	1619	5592	6262	2476
MEAN	68.2	254	273	415	773	698	344	420	54.0	180	202	82.5
MAX	174	837	1260	1290	6040	1630	1100	3430	116	757	658	497
MIN	23	97	70	64	100	191	89	62	24	22	65	23
CFSM	.79	2.94	3.17	4.81	8.97	8.10	3.99	4.87	.63	2.09	2.34	.96
IN.	.91	3.28	3.66	5.55	9.35	9.34	4.45	5.62	.70	2.41	2.70	1.07

e Estimated

MONONGAHELA RIVER BASIN

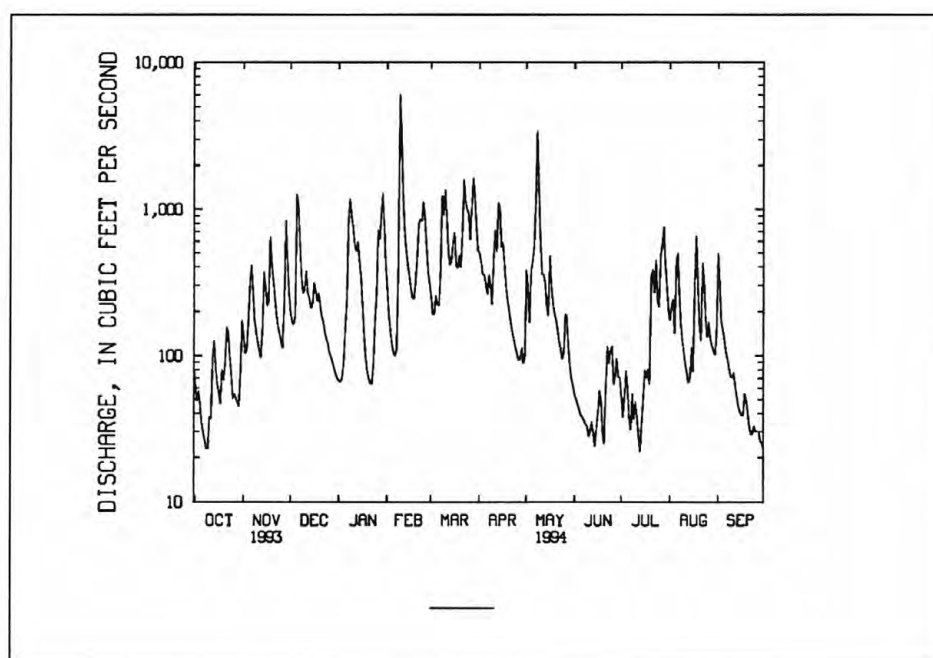
03066000 BLACKWATER RIVER AT DAVIS, WV--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1921 - 1994, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	109	168	250	267	317	390	298	215	142	98.7	98.4	68.6
MAX	510	990	615	634	773	1125	766	512	507	341	478	286
(WY)	1977	1986	1973	1952	1994	1963	1958	1924	1981	1978	1956	1979
MIN	4.31	6.73	70.5	44.5	52.4	127	74.7	47.4	23.3	14.2	7.19	5.23
(WY)	1954	1931	1944	1977	1978	1990	1946	1930	1965	1930	1930	1930

SUMMARY STATISTICS	FOR 1993 CALENDAR YEAR			FOR 1994 WATER YEAR			WATER YEARS 1921 - 1994		
ANNUAL TOTAL	70803.5			113638					
ANNUAL MEAN	194			311			201		
HIGHEST ANNUAL MEAN							311		
LOWEST ANNUAL MEAN							125		
HIGHEST DAILY MEAN	2610			Apr 1			9470		
LOWEST DAILY MEAN	2.9			Aug 30			1.6		
ANNUAL SEVEN-DAY MINIMUM	4.6			Aug 24			2.4		
INSTANTANEOUS PEAK FLOW				7660			(a) 12500		
INSTANTANEOUS PEAK STAGE				13.60			(b) 17.67		
INSTANTANEOUS LOW FLOW				20			(c) 1.5		
ANNUAL RUNOFF (CFSM)	2.25			3.61			2.33		
ANNUAL RUNOFF (INCHES)	30.56			49.04			31.67		
10 PERCENT EXCEEDS	406			747			472		
50 PERCENT EXCEEDS	94			168			110		
90 PERCENT EXCEEDS	9.6			38			19		

- a From rating curve extended above 7,000 ft³/s.
b From floodmarks.
c June 15, July 13, 14.
d Caused by filling small water-supply pool about 1.0 mi upstream.
f Sept. 11, 12, 1959.



MONONGAHELA RIVER BASIN

03069500 CHEAT RIVER NEAR PARSONS, WV

LOCATION.--Lat 39°07'20", long 79°40'50", Tucker County, Hydrologic Unit 05020004, on left bank 2.0 mi north of Parsons, 3.0 mi downstream from confluence of Black Fork and Shavers Fork, and at mile 74.8.

DRAINAGE AREA.--718 mi².

PERIOD OF RECORD.--January 1913 to current year. Monthly discharge only for some periods, published in WSP 1305.

REVISED RECORDS.--WSP 893: Drainage area. WSP 1305: 1917(M), 1924(M), 1932(M), 1936(M), 1938-39(M). WSP 1335: 1916. WSP 1385: 1918-19(M).

GAGE.--Water-stage recorder. Datum of gage is 1,589.66 ft above sea level, adjustment of 1912. Prior to Aug. 17, 1944, nonrecording gage on Moss Bridge about 1,600 ft upstream at datum 1.13 ft higher. Nov. 21, 1985 to Sept. 30, 1986, recording gage on Moss Bridge at datum 1.27 ft lower.

REMARKS.--Records good except those for periods of estimated daily discharges (ice effect), which are poor. National Weather Service and Monongahela Power Company gage-height telemeter at station. U.S. Army Corps of Engineers satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of July 10, 1888, reached a stage of 20.5 ft, discharge, 51,300 ft³/s, from floodmarks, at site and datum in use prior to Aug. 17, 1944; it was not exceeded until flood of Oct. 15, 1954, which reached a stage 0.3 ft higher at that site and datum.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 16,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage Height (ft)	Date	Time	Discharge (ft ³ /s)	Gage Height (ft)
Dec. 5	1500	22,900	11.58	Feb. 9	1200	*78,300	*18.85
Jan. 8	0300	16,200	10.14	Feb. 23	1900	16,000	10.10
Jan. 28	2400	17,400	10.45	May 8	0300	52,700	16.21

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	602	1030	1750	e500	2380	1990	3540	2250	389	647	1620	3670
2	495	816	1400	e530	e1600	1740	3230	2390	350	459	1340	2200
3	467	812	1220	e560	e1300	1450	3010	1570	315	553	1600	1370
4	411	1130	1190	e590	e1050	1360	3330	2280	284	1290	1160	1160
5	329	2850	14100	e650	e950	1540	2680	3370	256	586	2490	966
6	270	4440	9390	740	e880	1550	2340	4180	236	397	4470	772
7	230	2560	4510	6910	e850	2720	3500	10200	223	322	2350	659
8	205	1680	2880	11000	2220	11200	2950	33800	243	351	1500	566
9	190	1290	2140	4650	59400	7690	2220	8990	219	405	1080	483
10	255	1060	1970	2950	17800	9710	3090	4550	193	890	834	421
11	362	906	3060	2260	6890	6290	4960	2910	176	1370	673	433
12	478	793	2510	3070	4550	3770	3640	2390	196	654	564	380
13	966	1040	1920	4890	3780	2920	8270	2050	220	440	469	327
14	715	7050	1790	3390	3280	2650	7230	1560	187	539	415	286
15	547	3700	1750	2200	2450	2990	4080	1310	160	811	617	257
16	455	2530	2330	1450	2110	3850	4670	2870	358	1120	496	237
17	390	2210	2400	e900	1840	2790	3670	2170	1160	784	1700	225
18	398	6760	2020	e740	1720	2390	2630	1640	654	1170	6360	296
19	395	4130	2440	e600	2000	2820	2050	1390	453	1070	2930	331
20	460	2950	2130	e530	3160	2390	1680	1200	572	1160	1710	276
21	1240	2240	1880	e490	6190	3790	1380	1020	637	1970	1260	225
22	1620	1700	1510	e480	6790	12300	1180	861	1160	1840	4050	192
23	1090	1380	1330	e660	11000	6960	1080	747	828	2350	3780	174
24	796	1170	1150	e1300	13300	6290	957	650	1100	1620	2000	170
25	648	1010	1030	e2140	7080	7120	823	612	876	1330	1360	167
26	553	867	846	8060	4460	4840	741	912	556	2920	1130	172
27	483	965	e790	6080	2990	7550	703	993	548	4400	1160	186
28	430	6750	e700	8700	2220	13100	766	778	887	6960	1490	175
29	385	3880	e620	11500	---	9370	689	606	919	3700	1070	160
30	388	2410	e570	4300	---	5960	654	507	1020	3610	920	147
31	878	---	e530	3380	---	4160	---	440	---	2140	800	---
TOTAL	17131	72109	73856	96200	174240	155250	81743	101196	15375	47858	53398	17083
MEAN	553	2404	2382	3103	6223	5008	2725	3264	512	1544	1723	569
MAX	1620	7050	14100	11500	59400	13100	8270	33800	1160	6960	6360	3670
MIN	190	793	530	480	850	1360	654	440	160	322	415	147
CFSM	.77	3.35	3.32	4.32	8.67	6.98	3.79	4.55	.71	2.15	2.40	.79
IN.	.89	3.74	3.83	4.98	9.03	8.04	4.24	5.24	.80	2.48	2.77	.89

e Estimated

MONONGAHELA RIVER BASIN

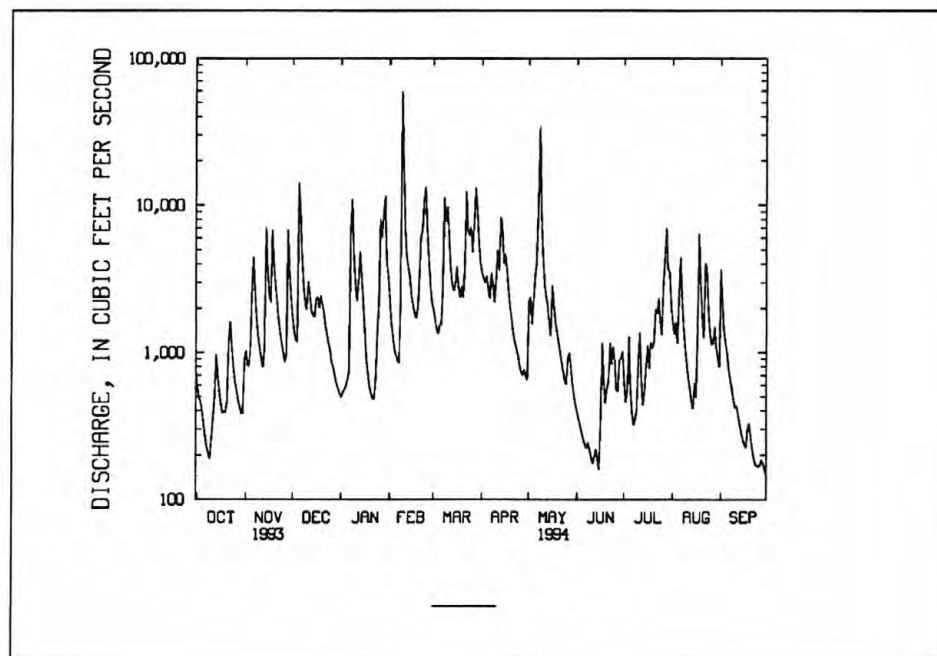
03069500 CHEAT RIVER NEAR PARSONS, WV--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1913 - 1994, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	908	1408	2108	2309	2586	3231	2563	1942	1236	899	847	574
MAX	3882	7540	4969	4859	6223	8028	6272	4763	4013	2542	3203	2452
(WY)	1977	1986	1973	1952	1994	1963	1958	1924	1974	1958	1942	1971
MIN	18.6	37.5	387	370	459	441	668	443	188	89.3	34.9	23.3
(WY)	1931	1931	1931	1977	1978	1915	1921	1930	1991	1930	1930	1930

SUMMARY STATISTICS	FOR 1993 CALENDAR YEAR			FOR 1994 WATER YEAR			WATER YEARS 1913 - 1994		
ANNUAL TOTAL	573530			905439					
ANNUAL MEAN	1571			2481			1712		
HIGHEST ANNUAL MEAN							2481		
LOWEST ANNUAL MEAN							1111		
HIGHEST DAILY MEAN	16700			Apr 1			59400		
LOWEST DAILY MEAN	40			Sep 1			Feb 9		
ANNUAL SEVEN-DAY MINIMUM	59			Aug 28			Sep 30		
INSTANTANEOUS PEAK FLOW							147		
INSTANTANEOUS PEAK STAGE							168		
INSTANTANEOUS LOW FLOW							Sep 24		
ANNUAL RUNOFF (CFSM)	2.19			3.45			Feb 9		
ANNUAL RUNOFF (INCHES)	29.71			46.91			(a) 170000		
10 PERCENT EXCEEDS	3420			6120			Feb 9		
50 PERCENT EXCEEDS	789			1300			(b) 24.30		
90 PERCENT EXCEEDS	84			328			(c) 9.0		

- a From rating curve extended above 55,000 ft³/s.
b From floodmarks.
c Observed.



MONONGAHELA RIVER BASIN

03070000 CHEAT RIVER AT ROWLESBURG, WV

LOCATION.--Lat 39°20'48", long 79°39'56", Preston County, Hydrologic Unit 05020004, on right bank 800 ft upstream from Baltimore & Ohio Railroad bridge at Rowlesburg, 1,100 ft upstream from Saltlick Creek, and at mile 44.2. Prior to Nov. 5, 1985, at site 800 ft downstream.

DRAINAGE AREA.--937 mi², revised. Area at site used prior to Nov. 5, 1985, 972 mi².

PERIOD OF RECORD.--July 1912 to September 1923 (gage heights only), October 1923 to current year. Gage-height records collected at practically the same site since 1884 are contained in reports of National Weather Service. Monthly discharge only for some periods, published in WSP 1305.

REVISED RECORDS.--WSP 803: Drainage area. WSP 893: 1936-37. WSP 1173: 1924-34(M,m). WSP 1725: 1924(M), 1930(M), 1932(M), 1936(M), 1938-39(M), 1944(M), 1948-49(M).

GAGE.--Water-stage recorder. Datum of gage is 1,368.24 ft above sea level. Prior to Sept. 30, 1986, at datum 2.00 ft higher. Prior to Nov. 5, 1985, at site 800 ft downstream at datum 1.56 ft higher. Prior to Nov. 18, 1923, nonrecording gages at several sites within 1,300 ft of present site at various datums.

REMARKS.--Records good except those for periods of estimated daily discharges (ice effect, missing gage-height record), which are poor. National Weather Service gage height telemeter at station. U.S. Army Corps of Engineers satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of July 6, 1844, reached a stage of 18.7 ft, referred to present gage at present datum by relation curve, discharge, 89,000 ft³/s, from rating curve extended above 45,000 ft³/s. Flood of July 10, 1888, reached a stage of 18.2 ft, referred to present gage at present datum by relation curve, discharge, 84,000 ft³/s, from rating curve extended above 45,000 ft³/s.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 20,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage Height (ft)	Date	Time	Discharge (ft ³ /s)	Gage Height (ft)
Dec. 5	1900	26,600	14.53	Mar. 28	1600	21,100	11.91
Jan. 29	0300	22,600	13.46	Apr. 13	2000	22,000	12.16
Feb. 9	1600	*84,100	*23.59	May 8	0700	63,300	20.38
Feb. 23	2400	20,300	11.70				

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	897	1830	2930	e800	3700	e2300	5550	1900	713	1450	2410	5770
2	731	1520	2280	e830	e2600	e2100	4820	3830	595	894	2010	4280
3	657	1400	1910	e870	e2000	e1800	4360	2610	488	623	1970	2560
4	636	1920	1750	e920	e1600	e1600	4450	2560	406	1410	1820	2020
5	526	3930	14300	e1000	e1400	1670	4050	4560	346	1090	3210	1750
6	420	7320	14600	e1100	e1250	1810	3430	5210	301	663	7440	1420
7	349	4530	6950	e8000	e1200	3030	4280	10000	269	440	4030	1170
8	301	2960	4520	e14000	e1700	16000	4860	47200	249	460	2490	961
9	272	2140	3440	e9000	61400	11900	3690	15800	251	460	1770	793
10	272	1690	3160	e5000	30000	15100	4750	7560	230	586	1370	693
11	341	1420	4830	3510	9370	9970	9940	4790	206	1740	1070	629
12	479	1230	4450	3490	5840	5450	6350	3710	195	1170	868	e580
13	938	1150	3290	6700	4660	3950	12100	3380	197	706	711	e490
14	1140	7410	2850	5290	4410	3550	14000	2610	213	541	616	e430
15	813	5620	2660	3620	3280	3700	6980	2170	190	941	764	e390
16	666	3940	3200	e1700	2760	5140	7220	4340	176	1370	806	e360
17	582	3250	3900	e1300	2390	3950	6700	4200	895	1370	1700	e340
18	554	9080	3370	e1100	2180	3170	4620	2940	1330	1080	9360	e430
19	593	6530	3600	e950	2350	3790	3530	2400	641	1660	5270	e470
20	607	4440	3710	e800	3630	3530	2820	2020	805	1110	3000	e340
21	1310	3530	3230	e740	7350	3810	2310	1740	579	2340	2080	e260
22	2730	2690	2690	e710	9080	16000	1950	1480	1320	2090	5180	e220
23	2050	2160	2240	e1000	12500	9930	1710	1250	1280	2700	6720	194
24	1380	1800	1920	e1400	18600	7640	1610	1080	1490	2530	3580	180
25	1050	1520	1680	e3200	e8000	8280	1410	1020	1420	1770	2320	174
26	844	1300	e1500	e11900	e3700	6530	1260	1760	1000	2900	1810	179
27	721	1410	e1250	9780	e2800	7060	1170	3230	781	4920	2070	183
28	642	8430	e1100	12100	e2400	19100	1210	2070	1180	10100	2650	188
29	570	6540	e1000	17900	---	15700	1210	1440	1380	5330	1920	176
30	597	4060	e940	8400	---	10500	1050	1080	1830	6130	1550	160
31	1210	---	e860	5130	---	6920	---	858	---	3720	1680	---
TOTAL	24878	106750	110110	142240	212150	214980	133390	150798	20956	64294	84245	27790
MEAN	803	3558	3552	4588	7577	6935	4446	4864	699	2074	2718	926
MAX	2730	9080	14600	17900	61400	19100	14000	47200	1830	10100	9360	5770
MIN	272	1150	860	710	1200	1600	1050	858	176	440	616	160
CFSM	.86	3.80	3.79	4.90	8.09	7.40	4.75	5.19	.75	2.21	2.90	.99
IN.	.99	4.24	4.37	5.65	8.42	8.53	5.30	5.99	.83	2.55	3.34	1.10

e Estimated

MONONGAHELA RIVER BASIN

03070000 CHEAT RIVER AT ROWLESBURG, WV--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1924 - 1994, BY WATER YEAR (WY)

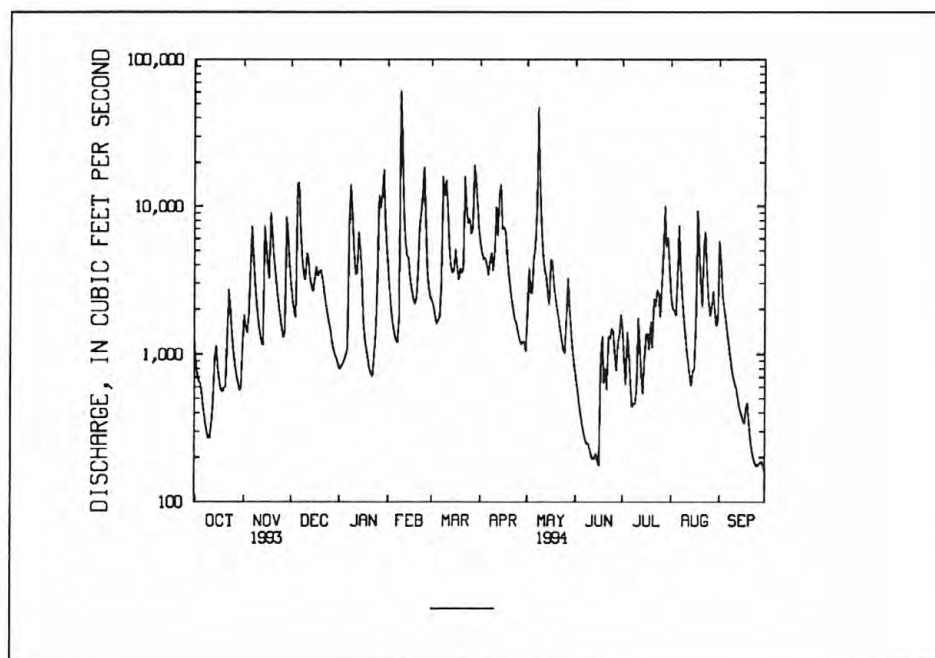
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1123	1929	2903	3078	3575	4344	3566	2683	1634	1174	1119	720
MAX	4890	10400	6865	6680	7665	11260	7370	6633	5514	3714	4079	3500
(WY)	1977	1986	1973	1952	1956	1963	1958	1924	1981	1958	1956	1971
MIN	18.6	42.6	465	514	614	2238	1094	768	219	121	44.2	30.3
(WY)	1931	1931	1931	1977	1978	1931	1946	1991	1965	1930	1930	1930

SUMMARY STATISTICS	FOR 1993 CALENDAR YEAR		FOR 1994 WATER YEAR		WATER YEARS 1924 - 1994	
ANNUAL TOTAL	815518		1292581			
ANNUAL MEAN	2234		3541		2315	
HIGHEST ANNUAL MEAN					3541	1994
LOWEST ANNUAL MEAN					1564	1959
HIGHEST DAILY MEAN	21600		Mar 24	61400	Feb 9	94000
LOWEST DAILY MEAN	46		(a)	160	Sep 30	11
ANNUAL SEVEN-DAY MINIMUM	72		Aug 28	177	Sep 24	12
INSTANTANEOUS PEAK FLOW				84100	Feb 9	(b) 190000
INSTANTANEOUS PEAK STAGE				23.59	Feb 9	(c) 36.90
INSTANTANEOUS LOW FLOW				154	Sep 30	10
ANNUAL RUNOFF (CFSM)	2.38			3.78		2.47
ANNUAL RUNOFF (INCHES)	32.38			51.32		33.57
10 PERCENT EXCEEDS	5430			8000		5340
50 PERCENT EXCEEDS	1150			1920		1320
90 PERCENT EXCEEDS	114			452		219

a Sept. 2, 3.

b From rating curve extended above 60,000 ft³/s.

c From floodmarks.



MONONGAHELA RIVER BASIN

03070500 BIG SANDY CREEK AT ROCKVILLE, WV

LOCATION.--Lat 39°37'15", long 79°42'20", Preston County, Hydrologic Unit 05020004, on right bank just downstream from highway bridge at Rockville, and at mile 5.0.

DRAINAGE AREA.--200 mi².

PERIOD OF RECORD.--May 1909 to March 1918, April 1921 to current year.

REVISED RECORDS.--WSP 583: 1912(M), 1922-23. WSP 643: Drainage area. WSP 923: 1939. WSP 1173: 1930-34(M,m). WSP 1335: 1910-18, 1921, 1922-24(M), 1928(M), 1930-43(M).

GAGE.--Water-stage recorder. Elevation of gage is 1,310 ft above sea level, from topographic map. Prior to Oct. 4, 1924, nonrecording gages at highway bridge at same datum.

REMARKS.--Records good except those for periods of estimated daily discharges (ice effect, well froze), which are poor. U.S. Army Corps of Engineers satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of July 10, 1888, reached a stage of about 20 ft, discharge, about 30,000 ft³/s.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 4,800 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage Height (ft)	Date	Time	Discharge (ft ³ /s)	Gage Height (ft)
Jan. 28	2200	5,540	10.76	Mar. 10	0800	5,100	10.47
Feb. 9	1000	5,870	10.98	Apr. 10	1900	*6,440	*11.32
Mar. 8	0300	4,850	10.30	May 8	0300	5,840	10.96

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	198	460	504	e140	720	570	788	764	96	91	25	268
2	154	376	417	e140	e450	498	624	513	82	57	30	198
3	206	395	391	e145	e350	453	549	384	71	43	52	145
4	172	626	460	e160	e290	460	516	403	65	44	52	127
5	129	782	3080	e190	e250	452	442	416	59	41	499	105
6	99	1050	1790	e250	e230	424	410	569	53	30	441	89
7	83	707	1020	1480	e260	1070	1270	1290	51	24	200	79
8	72	522	709	2810	475	3970	908	4230	51	55	125	67
9	67	405	565	1270	4440	2180	684	1750	47	53	90	59
10	77	327	1060	751	1980	4190	2920	1000	40	90	69	59
11	71	272	1420	650	1130	2090	3190	674	34	56	55	63
12	85	237	882	752	784	1280	1830	643	33	37	48	50
13	120	274	650	852	666	1090	1850	534	31	29	42	42
14	92	535	555	745	563	1550	1570	425	26	81	65	38
15	84	529	523	529	491	1930	1110	382	23	145	157	35
16	76	466	535	e300	495	1990	1690	514	21	207	91	36
17	91	620	463	e230	472	1190	1340	393	21	110	758	37
18	176	1560	424	e180	492	1070	911	334	44	68	2300	75
19	153	900	451	e160	690	1590	686	291	62	50	908	64
20	481	696	409	e140	1280	1060	544	251	42	39	488	45
21	649	527	424	e130	3310	1760	439	217	58	42	506	39
22	607	422	377	e130	2860	3410	362	186	148	40	2990	34
23	423	347	339	e200	3170	2190	301	163	74	48	1430	30
24	309	299	300	e350	3190	2550	260	140	49	44	673	28
25	241	254	291	e570	1880	1990	232	134	42	34	446	29
26	197	217	e220	2790	1210	1140	209	265	35	35	356	64
27	170	454	e200	1600	811	1640	197	339	50	34	281	62
28	153	1950	e180	3480	624	2460	176	194	152	49	214	49
29	132	1010	e165	3430	---	1960	157	155	208	48	200	46
30	152	662	e155	1570	---	1450	198	128	175	47	182	33
31	373	---	e150	985	---	1020	---	110	---	34	149	---
TOTAL	6092	17881	19109	27109	33563	50677	26363	17791	1943	1805	13922	2095
MEAN	197	596	616	874	1199	1635	879	574	64.8	58.2	449	69.8
MAX	649	1950	3080	3480	4440	4190	3190	4230	208	207	2990	268
MIN	67	217	150	130	230	424	157	110	21	24	25	28
CFSM	.98	2.98	3.08	4.37	5.99	8.17	4.39	2.87	.32	.29	2.25	.35
IN.	1.13	3.33	3.55	5.04	6.24	9.43	4.90	3.31	.36	.34	2.59	.39

e Estimated

MONONGAHELA RIVER BASIN

03070500 BIG SANDY CREEK AT ROCKVILLE, WV--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1909-1918, 1921-1994, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	173	333	562	636	697	812	637	480	282	175	138	124
MAX	853	1540	1241	1749	1766	1742	1318	1102	1115	1071	1035	734
(WY)	1912	1986	1973	1937	1918	1963	1940	1921	1941	1912	1956	1911
MIN	.33	2.32	39.1	81.5	106	213	207	81.7	25.0	7.93	6.05	1.13
(WY)	1954	1954	1954	1977	1934	1987	1946	1926	1953	1953	1953	1953

SUMMARY STATISTICS	FOR 1993 CALENDAR YEAR		FOR 1994 WATER YEAR		WATER YEARS 1909 - 1994	
ANNUAL TOTAL	143213.5		218350			
ANNUAL MEAN	392		598		419	
HIGHEST ANNUAL MEAN					671	1912
LOWEST ANNUAL MEAN					240	1954
HIGHEST DAILY MEAN	4680		4440		15700	Jan 13 1911
LOWEST DAILY MEAN	(e) 6.0		21		.10	Oct 21 1953
ANNUAL SEVEN-DAY MINIMUM	8.3		27		.10	Oct 21 1953
INSTANTANEOUS PEAK FLOW			6440		(b) 21300	Jul 24 1912
INSTANTANEOUS PEAK STAGE			11.32		(c) 18.00	Jul 24 1912
INSTANTANEOUS LOW FLOW			20		.10	(f)
ANNUAL RUNOFF (CFSM)	1.96		2.99		2.09	
ANNUAL RUNOFF (INCHES)	26.64		40.61		28.45	
10 PERCENT EXCEEDS	903		1660		980	
50 PERCENT EXCEEDS	217		291		210	
90 PERCENT EXCEEDS	16		42		20	

a June 16, 17.

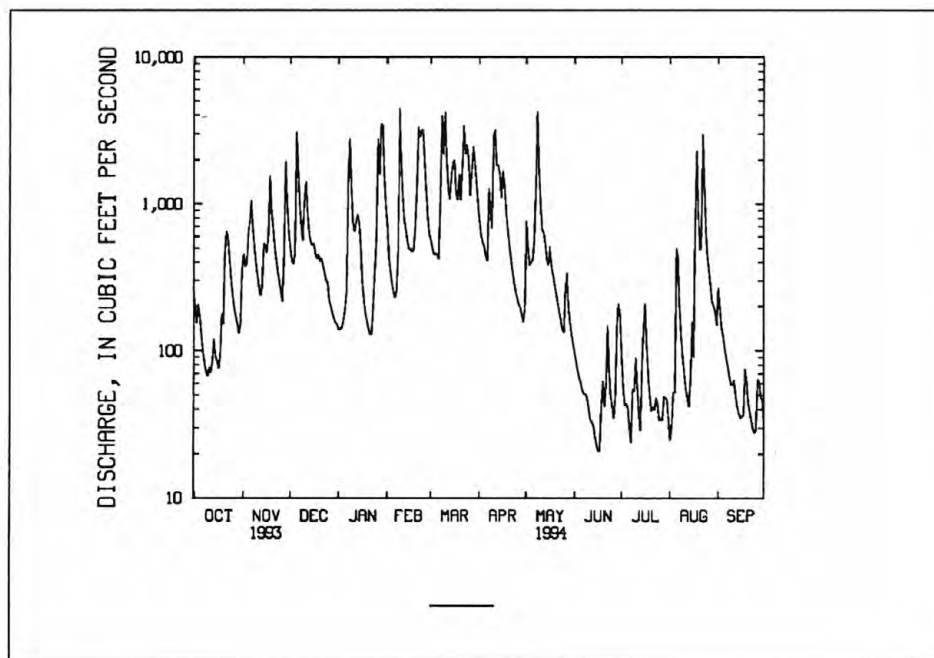
b From rating curve extended above 10,000 ft³/s on basis of velocity-area studies.

c Observed.

d June 16, Aug. 2.

e Estimated.

f Oct. 21-27, 1953.



OHIO RIVER MAIN STEM

03111534 OHIO RIVER AT MARTINS FERRY, OH
(Formerly published as 03112500 Ohio River at Wheeling, WV)

LOCATION.--Lat 40°06'18", long 80°42'31", Belmont County, Ohio, Hydrologic Unit 05030106, on right bank at water plant at Martins Ferry, Ohio, 300 ft downstream from Old Lock 12, 0.9 mi downstream from Glenss Run (Ohio), 3.0 mi upstream from Wheeling Creek (Ohio), and at mile 87.5, measured downstream from Pittsburgh, Pa.

DRAINAGE AREA.--24,700 mi², approximately.

PERIOD OF RECORD.--January to March 1844, January 1905 to December 1906 (gage heights only), December 1906 to February 1907, March to April 1913, February to April 1936, December 1936 to February 1937 (published as "at Wheeling"), October 1978 to current year. Monthly discharge for some periods published in WSP 1305. Gage-height records collected in this vicinity since 1882 are in reports of the National Weather Service.

GAGE.--Water-stage recorder. Datum of gage is 610.80 ft above sea level. See WSP 1305 for history of gages prior to 1978. Auxiliary water-stage recorder 12.9 mi downstream from base gage at same datum.

REMARKS.--Records fair except those below 20,000 ft³/s and those for periods of estimated daily discharge, which are poor. Flow regulated by Ohio River system of locks, dams, and reservoirs. U.S. Army Corps of Engineers satellite telemeter at station.

PEAK DISCHARGE FOR CURRENT YEAR.--Maximum discharge, 250,000 ft³/s, Jan. 29, gage height, 34.09 ft.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23000	27800	84700	19500	91400	74800	144000	38500	23000	e31000	17100	33500
2	24200	32400	77500	22500	79800	76500	138000	38500	18600	e30000	14700	39300
3	19800	29700	76500	24800	75400	78600	126000	41100	14500	e28000	20900	26500
4	21100	31900	76400	27400	69300	72900	124000	39300	19100	e25000	13000	20900
5	15700	33800	95200	30500	60700	66100	126000	37300	17400	e23000	20200	18000
6	14600	38500	126000	31000	53900	67400	112000	38000	16200	e23000	21500	13400
7	13300	41800	117000	30200	44500	70900	103000	36500	15400	e26000	28000	19800
8	14900	41200	98700	53300	45400	104000	115000	61900	13100	e21000	17300	14600
9	12100	36600	99200	75700	52900	136000	106000	118000	13500	e18000	19800	11500
10	11100	32200	86800	43700	127000	160000	108000	74700	13200	e16000	12400	13400
11	9800	31100	80300	40700	108000	200000	166000	63200	15400	e16000	8630	8870
12	11400	24600	82200	43100	52500	134000	177000	58400	13600	e17000	11500	8650
13	13100	25800	62400	42800	64700	109000	187000	53100	21100	e15000	10100	13500
14	10300	27800	53800	50300	63000	117000	188000	48400	20000	e17000	28000	10800
15	9640	43800	47700	47600	59500	125000	172000	38600	42400	e18000	78600	10600
16	12500	46600	38900	37900	58900	129000	150000	36400	45500	e17000	59200	13300
17	13900	55300	35200	27300	56400	132000	169000	38300	38800	e16000	39900	11500
18	11000	91600	38300	31200	52900	113000	157000	39400	39900	e13000	64600	20700
19	11500	109000	40200	30500	54800	e96000	137000	34800	43300	e15000	80000	11100
20	18100	86800	41400	30700	66900	e82000	121000	28300	33600	e14000	63100	12800
21	25600	82900	40400	32300	93400	e90000	102000	e28000	38200	e13000	62400	13300
22	25200	72000	46600	28800	136000	e160000	88400	e26000	28500	e13000	58600	e11000
23	32900	62500	37600	24700	134000	198000	72100	e24000	e26000	e14000	67100	e9500
24	28700	60500	30500	23400	165000	165000	60600	e22000	e23000	e13000	56900	e10000
25	26500	55800	32300	30600	170000	171000	51100	21100	e20000	e12000	45800	e9500
26	23700	47800	28700	51000	119000	169000	49800	29800	e21000	e14000	34500	e19000
27	20900	47900	22400	79200	91600	139000	44900	27400	e23000	e15000	32200	e21000
28	17200	84600	27300	113000	81500	148000	40500	33000	e30000	16500	30000	e22000
29	19000	123000	24200	239000	---	177000	32300	29300	e31000	20200	38600	e23000
30	15400	93200	23500	193000	---	162000	33800	25500	e28000	27200	34800	e24000
31	20100	---	22100	109000	---	149000	---	20500	---	18000	35200	---
TOTAL	546240	1618500	1794000	1664700	2328400	3872200	3401500	1249300	746300	574900	1124630	495020
MEAN	17620	53950	57870	53700	83160	124900	113400	40300	24880	18550	36280	16500
MAX	32900	123000	126000	239000	170000	200000	188000	118000	45500	31000	80000	39300
MIN	9640	24600	22100	19500	44500	66100	32300	20500	13100	12000	8630	8650

e Estimated

OHIO RIVER MAIN STEM

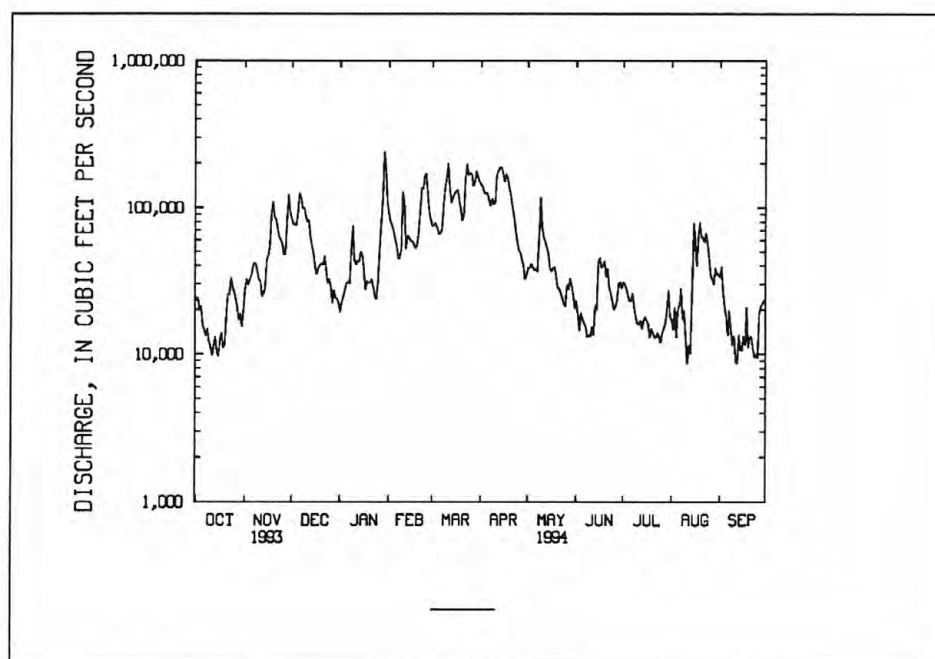
03111534 OHIO RIVER AT MARTINS FERRY, OH-Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1978 - 1994, BY WATER YEAR (WY)
[REGULATED, UNADJUSTED]

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	22950	39950	56030	50290	64680	73430	71050	44260	32600	24370	19440	18530
MAX	58930	114900	99850	105800	107300	124900	113400	94750	86840	49950	55930	40140
(WY)	1991	1986	1991	1991	1990	1994	1994	1989	1989	1990	1980	1990
MIN	8697	10920	23220	20420	24910	36480	36510	19320	9880	7023	5710	5890
(WY)	1983	1992	1990	1981	1980	1987	1986	1986	1988	1988	1988	1983

SUMMARY STATISTICS	FOR 1993 CALENDAR YEAR		FOR 1994 WATER YEAR		WATER YEARS 1978 - 1994	
ANNUAL TOTAL	15933330		19415690			
ANNUAL MEAN	43650		53190		42990	
HIGHEST ANNUAL MEAN					53190	
LOWEST ANNUAL MEAN					30500	
HIGHEST DAILY MEAN	200000		Mar 25		239000	
LOWEST DAILY MEAN	6370		Sep 20		8630	
ANNUAL SEVEN-DAY MINIMUM	7730		Sep 14		11000	
INSTANTANEOUS PEAK FLOW					250000	
INSTANTANEOUS PEAK STAGE					34.09	
10 PERCENT EXCEEDS	99200		126000		92000	
50 PERCENT EXCEEDS	26500		35200		31100	
90 PERCENT EXCEEDS	8380		13300		10000	

NOTE: Minimum instantaneous not determined.



WHEELING CREEK BASIN

03112000 WHEELING CREEK AT ELM GROVE, WV

LOCATION.--Lat 40°02'40", long 80°39'40", Ohio County, Hydrologic Unit 05030106, on right bank at highway bridge at Elm Grove, 500 ft downstream from Little Wheeling Creek, and at mile 7.7.

DRAINAGE AREA.--282 mi².

PERIOD OF RECORD.--October 1940 to current year. Monthly discharge only for October 1940, published in WSP 1907.

REVISED RECORDS.--WSP 1305: 1941(M).

GAGE.--Water-stage recorder. Datum of gage is 667.59 ft above sea level.

REMARKS.--Records good except those for periods of estimated daily discharges (well froze, ice effect), which are poor. U.S. Army Corps of Engineers satellite telemeter at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 6,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage Height (ft)	Date	Time	Discharge (ft ³ /s)	Gage Height (ft)
Jan. 28	---	*UNKNOWN	*UNKNOWN	No other peak greater than base discharge.			

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	85	533	358	e120	1930	508	735	208	47	37	41	49
2	78	445	301	e140	503	448	584	185	41	30	24	38
3	119	352	288	e160	e350	401	497	151	37	25	21	31
4	121	346	330	190	e250	422	481	140	33	25	28	25
5	87	312	1290	237	e180	449	409	138	31	25	127	21
6	66	262	1160	375	e165	685	413	138	29	21	189	18
7	53	204	703	585	e170	1830	1070	196	27	45	70	15
8	46	164	501	1160	215	3120	885	1450	26	26	36	13
9	41	138	393	789	567	2370	678	813	24	21	24	12
10	44	120	364	507	464	4150	1920	442	24	17	18	16
11	43	108	369	507	320	3230	2920	315	22	18	14	12
12	40	97	315	444	253	2160	1860	311	27	17	11	12
13	36	134	275	649	333	1150	1550	276	34	14	9.9	11
14	34	345	257	623	308	1170	1330	210	26	62	17	9.9
15	33	787	246	e450	352	988	1010	185	21	88	20	9.1
16	34	526	226	e350	427	801	1930	198	19	69	12	8.8
17	93	474	195	e270	421	583	1580	171	17	44	19	61
18	138	1630	178	e230	458	566	1010	150	16	27	182	100
19	107	897	189	e210	584	679	768	135	26	20	119	66
20	357	551	189	e190	872	583	597	126	24	15	51	36
21	719	370	207	e180	2110	1740	461	114	27	11	384	26
22	384	284	219	e170	1870	3250	384	103	39	17	939	20
23	227	228	207	e160	2660	1890	326	92	39	18	327	16
24	158	194	195	e500	3670	1340	283	84	35	21	128	14
25	124	170	194	e1000	2550	1120	247	81	31	14	76	59
26	100	148	164	e3000	1380	816	219	87	44	11	53	297
27	85	240	e150	e1500	767	1020	195	88	75	9.2	41	168
28	74	1110	e140	e7000	564	2400	175	76	57	8.9	33	112
29	66	787	e130	5490	---	2010	164	65	46	11	60	71
30	71	496	e120	4370	---	1200	163	57	45	198	39	53
31	191	---	e110	3300	---	877	---	51	---	105	55	---
TOTAL	3854	12452	9963	34856	24693	43956	24844	6836	989	1070.1	3167.9	1399.8
MEAN	124	415	321	1124	882	1418	828	221	33.0	34.5	102	46.7
MAX	719	1630	1290	7000	3670	4150	2920	1450	75	198	939	297
MIN	33	97	110	120	165	401	163	51	16	8.9	9.9	8.8
CFSM	.44	1.47	1.14	3.99	3.13	5.03	2.94	.78	.12	.12	.36	.17
IN.	.51	1.64	1.31	4.60	3.26	5.80	3.28	.90	.13	.14	.42	.18

e Estimated

WHEELING CREEK BASIN

03112000 WHEELING CREEK AT ELM GROVE, WV--Continued

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

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	82.5	205	387	492	610	726	598	399	214	147	105	87.0
MAX	627	2085	1369	1124	1249	1670	1336	1107	1004	885	1424	1012
(WY)	1991	1986	1991	1994	1975	1963	1961	1967	1981	1956	1980	1975
MIN	.53	1.89	5.45	21.4	85.0	126	115	66.0	16.1	3.90	2.06	.88
(WY)	1964	1964	1964	1967	1964	1969	1971	1986	1962	1962	1957	1966

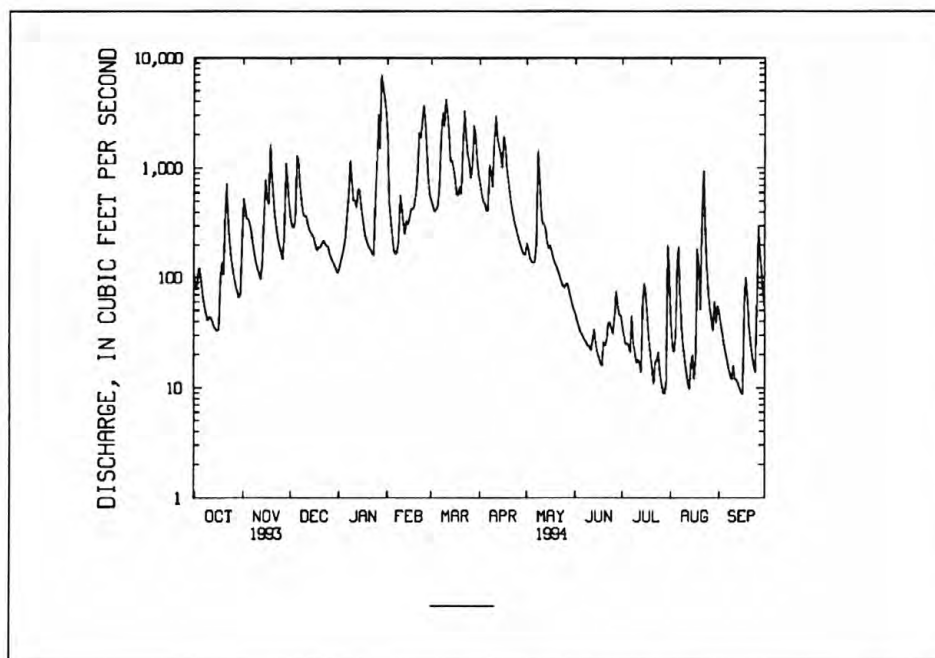
SUMMARY STATISTICS	FOR 1993 CALENDAR YEAR		FOR 1994 WATER YEAR		WATER YEARS 1941 - 1994	
ANNUAL TOTAL	119128		168080.8			
ANNUAL MEAN	326		460		336	
HIGHEST ANNUAL MEAN					580	1943
LOWEST ANNUAL MEAN					112	1954
HIGHEST DAILY MEAN	3590	Mar 5	(e) 7000	Jan 28	13100	Dec 30 1942
LOWEST DAILY MEAN	12	Aug 16	8.8	Sep 16	.10	(a)
ANNUAL SEVEN-DAY MINIMUM	16	Aug 10	11	Sep 10	.24	Sep 21 1964
INSTANTANEOUS PEAK FLOW			UNKNOWN	Jan 28	(b) 22100	Dec 30 1942
INSTANTANEOUS PEAK STAGE			UNKNOWN	Jan 28	13.67	Dec 30 1942
INSTANTANEOUS LOW FLOW			8.2	Sep 16	.10	(c)
ANNUAL RUNOFF (CFSM)	1.16		1.63		1.19	
ANNUAL RUNOFF (INCHES)	15.71		22.17		16.21	
10 PERCENT EXCEEDS	854		1180		830	
50 PERCENT EXCEEDS	158		171		131	
90 PERCENT EXCEEDS	26		20		9.2	

a Sept. 26, 27, 1964.

b From rating curve extended above 15,000 ft³/s on basis of slope-area measurements at gage heights 13.20 ft and 13.65 ft.

c Oct. 7, 1963, Sept. 26, 27, 1964.

e Estimated.



OHIO RIVER MAIN STEM

03112510 OHIO RIVER AT BENWOOD NEAR WHEELING, WV
(National Stream-quality accounting network station)

LOCATION.--Lat 40°02'59", long 80°43'49", Marshall County, Hydrologic Unit 05030106, at Interstate 470 Bridge at Wheeling, and at mile 91.8, measured downstream from Pittsburgh, Pa.

DRAINAGE AREA.--Approximately 25,070 mi².

PERIOD OF RECORD.--Water years 1978 to current year.

REMARKS.--Prior to March 1992, samples collected at Bellaire Toll Bridge 2.5 mi downstream.

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

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	TUR- BID- ITY (NTU) (00076)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (MG/L) (00301)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCHI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD- NESS TOTAL (MG/L AS CaCO3) (00900)
OCT 1993												
21...	1100	26900	395	7.3	17.0	2.0	747	9.4	99	110	K8	130
MAR 1994												
23...	1230	203000	280	7.4	6.5	42	747	12.4	103	K2600	5000	96
MAY												
25...	1100	24200	320	7.3	18.0	2.0	744	9.8	106	K25	K7	120
AUG												
10...	1030	14900	450	7.5	26.0	0.30	758	8.0	99	K23	K2	150
SEP												
08...	1030	13400	270	7.2	22.0	2.1	752	8.0	93	K63	K2	92

DATE	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE WATER DIS IT MG/L AS HCO3 (00453)	CAR- BONATE WATER DIS IT MG/L AS CO3 (00452)	ALKA- LITY WAT DIS TOT IT MG/L AS CACO3 (39086)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)
OCT 1993											
21...	36	9.5	22	2.8	50	0	41	100	22	<0.10	3.3
MAR 1994											
23...	27	6.9	14	1.5	33	0	27	62	20	0.10	6.0
MAY											
25...	32	8.8	15	1.8	39	0	32	90	15	0.10	3.4
AUG											
10...	42	11	29	2.6	51	0	42	130	21	0.30	0.80
SEP											
08...	26	6.5	14	2.2	41	0	34	64	15	0.20	4.1

K: Results based on colony count outside the acceptance range (non-ideal colony count).

OHIO RIVER MAIN STEM

03112510 OHIO RIVER AT BENWOOD NEAR WHEELING, WV--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) (00618)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)
OCT 1993 21...	227	1.08	0.020	1.10	0.100	0.30	0.40	0.070	0.030	0.030	<10
MAR 1994 23...	166	1.08	0.020	1.10	0.100	0.90	1.0	0.350	<0.010	<0.010	110
MAY 25...	200	0.630	0.020	0.650	0.040	0.26	0.30	0.030	0.030	<0.010	30
AUG 10...	278	0.940	0.010	0.950	0.020	0.38	0.40	0.050	<0.010	<0.010	--
SEP 08...	169	0.690	0.020	0.710	0.020	0.28	0.30	0.030	0.010	<0.010	30
DATE	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)
OCT 1993 21...	39	<3	3	9	5	--	3	<1	<1.0	200	<6
MAR 1994 23...	36	<3	84	5	210	--	5	<1	<1.0	120	<6
MAY 25...	39	<3	21	8	120	<10	5	<1	<1.0	190	<6
AUG 10...	--	--	--	--	--	--	--	--	--	--	--
SEP 08...	38	<3	6	5	<1	10	1	<1	<1.0	140	<6

MIDDLE ISLAND CREEK BASIN

03114500 MIDDLE ISLAND CREEK AT LITTLE, WV

LOCATION.--Lat 39°28'30", long 80°59'50", Tyler County, Hydrologic Unit 05030201, on right bank at downstream side of highway bridge at Little, 0.1 mi upstream from Stewarts Run, 5.0 mi west of Middlebourne, and at mile 24.5.

DRAINAGE AREA.--458 mi².

PERIOD OF RECORD.--May 1915 to September 1916, October 1916 to September 1922 (gage heights only), October 1928 to current year.

GAGE.--Water-stage recorder. Datum of gage is 631.32 ft above sea level, adjustment of 1912. Prior to July 11, 1947, nonrecording gage at same site and datum.

REMARKS.--Records fair except those for periods of estimated daily discharges (recorder malfunction, ice effect), which are poor.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in August 1875 reached a stage of about 33.5 ft.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 9,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage Height (ft)	Date	Time	Discharge (ft ³ /s)	Gage Height (ft)
Jan. 8	1100	11,600	15.18	Mar. 10	---	14,400	17.50
Jan. 28	---	*23,000	*24.13	Apr. 11	0800	15,600	18.50
Feb. 9	---	16,000	18.75	May 8	1700	11,300	14.90

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	144	878	534	e180	e1000	e750	946	223	208	205	83	1120
2	107	1150	390	e210	e750	e700	764	216	189	168	64	1140
3	79	593	327	562	e600	e750	651	243	171	108	57	476
4	86	380	371	1390	e520	e800	685	228	159	75	70	270
5	93	309	3730	2590	e480	e1000	664	214	138	56	280	196
6	77	406	3640	1910	e440	e3000	671	309	134	49	956	131
7	65	526	1410	5290	e400	e5000	3210	669	130	56	540	123
8	56	330	824	10300	e500	e7000	2200	8870	122	32	252	82
9	53	227	583	3430	e10000	e5800	1270	3220	114	34	172	65
10	43	171	539	1720	e6300	e9000	5840	1020	108	34	102	49
11	46	137	1940	1450	e5000	e5000	12700	567	103	32	106	43
12	66	112	1320	1470	e1700	e3000	3740	369	99	80	123	40
13	79	183	818	3220	e2200	1730	2480	293	95	71	81	43
14	99	1840	619	2820	e1800	1300	3240	245	95	77	68	36
15	114	1580	516	e2000	e1500	1180	2160	212	93	67	83	30
16	105	1250	436	e1500	e1300	994	6980	206	88	61	82	27
17	106	833	356	e1000	e1000	768	3840	234	85	66	196	24
18	361	3420	302	e800	e950	666	1690	231	87	89	6020	25
19	572	1670	306	e650	e850	742	1100	196	104	74	1410	27
20	368	838	383	e540	e1400	761	798	157	100	49	542	25
21	846	522	487	e480	e2000	1360	598	144	85	40	333	24
22	781	360	604	e440	e3000	4490	476	120	80	30	481	24
23	452	278	554	e420	e4000	2250	408	110	81	29	452	20
24	296	232	478	e858	e6000	1230	360	101	91	33	330	19
25	217	201	425	e3610	e3500	830	337	103	28	24	239	18
26	166	176	376	e9690	e2000	574	326	197	54	21	972	25
27	138	278	328	e5330	e1400	1150	320	1050	62	327	671	27
28	126	3310	e290	e18900	e900	5880	301	669	88	196	340	29
29	84	1850	e250	e16300	---	4450	280	361	105	171	228	25
30	84	876	e220	e2770	---	1820	281	272	105	298	166	23
31	111	---	e200	e1500	---	1150	---	242	---	110	139	---
TOTAL	6020	24916	23556	103330	61490	75125	59316	21291	3201	2762	15638	4206
MEAN	194	831	760	3333	2196	2423	1977	687	107	89.1	504	140
MAX	846	3420	3730	18900	10000	9000	12700	8870	208	327	6020	1140
MIN	43	112	200	180	400	574	280	101	28	21	57	18
CFM	.42	1.81	1.66	7.28	4.79	5.29	4.32	1.50	.23	.19	1.10	.31
IN.	.49	2.02	1.91	8.39	4.99	6.10	4.82	1.73	.26	.22	1.27	.34

e Estimated

MIDDLE ISLAND CREEK BASIN

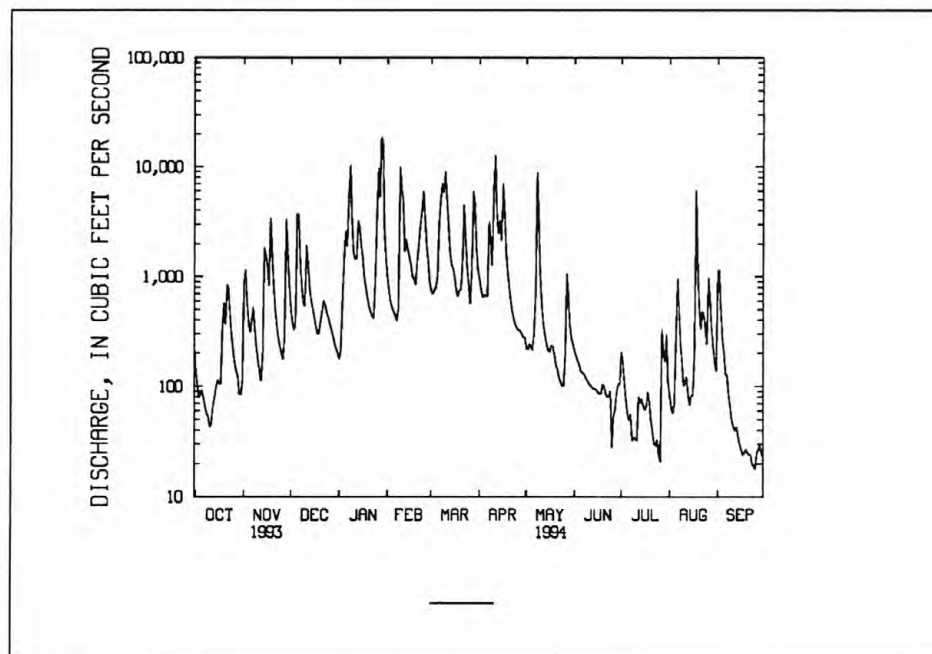
03114500 MIDDLE ISLAND CREEK AT LITTLE, WV--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1916, 1929-1994, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	180	419	859	1089	1198	1328	1023	704	395	210	235	169
MAX	1252	2611	3004	3501	2381	3681	2690	2385	2431	1562	1396	1449
(WY)	1990	1986	1991	1937	1939	1963	1948	1968	1974	1958	1935	1945
MIN	.000	.12	.47	15.3	107	289	134	54.2	4.55	1.68	.20	.000
(WY)	1931	1931	1931	1931	1934	1969	1971	1930	1936	1930	1930	1930

SUMMARY STATISTICS	FOR 1993 CALENDAR YEAR			FOR 1994 WATER YEAR			WATER YEARS 1916 - 1994		
ANNUAL TOTAL	236127.3			400851					
ANNUAL MEAN	647			1098			648		
HIGHEST ANNUAL MEAN							1098		
LOWEST ANNUAL MEAN							247		
HIGHEST DAILY MEAN	11700			Mar 5			(e) 18900		
LOWEST DAILY MEAN	5.7			Aug 16			18		
ANNUAL SEVEN-DAY MINIMUM	7.7			Aug 10			22		
INSTANTANEOUS PEAK FLOW							23000		
INSTANTANEOUS PEAK STAGE							24.13		
INSTANTANEOUS LOW FLOW							16		
ANNUAL RUNOFF (CFSM)	1.41			2.40			1.42		
ANNUAL RUNOFF (INCHES)	19.18			32.56			19.23		
10 PERCENT EXCEEDS	1690			3210			1560		
50 PERCENT EXCEEDS	243			333			200		
90 PERCENT EXCEEDS	13			51			12		

- a Many days in 1922, 1929, 1930.
b From floodmarks.
c Estimated.



LITTLE KANAWHA RIVER BASIN

03151400 LITTLE KANAWHA RIVER NEAR WILDCAT, WV

LOCATION.--Lat 38°44'35", long 80°31'36", Braxton County, Hydrologic Unit 05030203, on right bank on State Secondary Route 24/1, 200 ft upstream from footbridge at Gregory, 3.9 mi west of Wildcat, and at mile 138.6.

DRAINAGE AREA.--112 mi².

PERIOD OF RECORD.--December 1973 to September 1983, October 1985 to current year.

GAGE.--Water-stage recorder. Datum of gage is 850.00 ft above sea level.

REMARKS.--Records good except those for periods of estimated daily discharges (ice effect), which are poor. U.S. Army Corps of Engineers satellite telemeter at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,200 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage Height (ft)	Date	Time	Discharge (ft ³ /s)	Gage Height (ft)
Dec. 5	1500	4,060	10.22	Feb. 11	2000	2,730	8.92
Jan. 7	1930	5,920	11.71	Mar. 28	1300	3,040	9.24
Jan. 26	0330	3,470	9.67	Apr. 13	1530	3,860	10.05
Feb. 9	1200	9,120	13.95	May 8	---	*12,000	a*15.80

a From Floodmarks.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	42	209	213	144	238	277	438	117	39	106	159	225
2	29	177	166	188	180	787	328	125	32	72	109	160
3	26	195	140	389	166	1260	267	109	26	49	81	109
4	28	281	158	1460	143	712	275	128	21	36	60	87
5	22	622	2830	677	128	802	253	128	18	27	781	69
6	17	925	1230	468	114	663	245	133	15	21	781	54
7	14	407	563	3730	101	527	500	1080	14	17	369	46
8	11	244	359	2000	246	997	553	5160	18	19	203	40
9	10	176	259	716	5820	1330	414	946	15	22	123	32
10	15	140	303	437	1690	1580	339	506	17	121	86	26
11	27	116	552	329	1690	783	304	324	109	83	64	23
12	28	99	436	655	1560	490	280	257	68	46	48	19
13	56	348	331	892	943	361	2180	195	56	30	37	16
14	49	1240	277	658	673	311	1340	144	35	27	29	13
15	40	681	254	413	473	262	657	118	24	100	29	12
16	31	468	289	312	349	250	1170	223	25	211	32	10
17	26	487	319	e230	275	217	892	192	192	153	749	9.5
18	23	1150	300	e170	226	241	526	157	127	189	1150	10
19	21	592	326	e140	192	303	363	127	83	121	525	14
20	63	352	307	e120	173	307	268	107	81	80	266	12
21	257	222	324	e110	192	325	201	88	71	86	170	9.4
22	450	162	283	e100	207	659	169	70	293	72	884	7.9
23	216	127	252	e90	523	525	140	55	187	83	560	6.6
24	128	108	210	402	1230	383	119	45	267	57	305	5.9
25	89	92	197	1300	890	323	106	41	229	62	181	5.3
26	67	77	170	2480	584	262	96	73	153	378	125	5.4
27	52	207	147	1090	405	571	100	159	198	483	96	5.0
28	42	845	e130	1360	319	2520	120	125	343	651	80	4.9
29	35	508	e120	838	---	1850	94	89	232	401	64	4.8
30	36	312	e110	475	---	1110	85	65	164	512	51	4.3
31	122	---	e100	326	---	645	---	49	---	273	49	---
TOTAL	2072	11569	11655	22699	19730	21633	12822	11135	3152	4588	8246	1046.0
MEAN	66.8	386	376	732	705	698	427	359	105	148	266	34.9
MAX	450	1240	2830	3730	5820	2520	2180	5160	343	651	1150	225
MIN	10	77	100	90	101	217	85	41	14	17	29	4.3
CFSM	.60	3.44	3.36	6.54	6.29	6.23	3.82	3.21	.94	1.32	2.37	.31
IN.	.69	3.84	3.87	7.54	6.55	7.19	4.26	3.70	1.05	1.52	2.74	.35

e Estimated

LITTLE KANAWHA RIVER BASIN

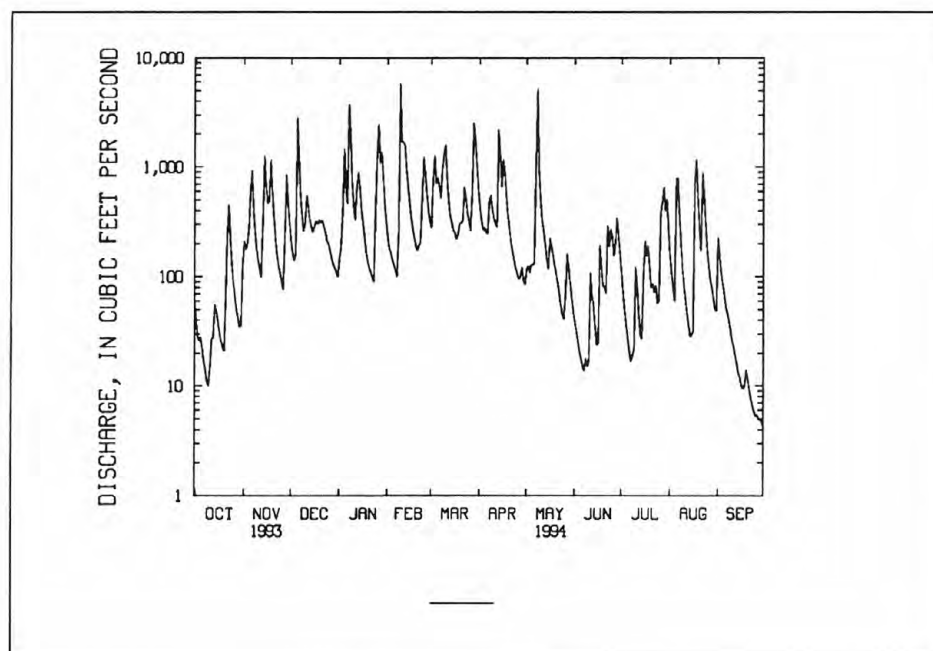
03151400 LITTLE KANAWHA RIVER NEAR WILDCAT, WV--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1974-1983, 1986-1994, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	98.9	221	343	351	387	424	347	239	140	131	76.4	49.3
MAX	426	841	717	732	705	698	600	573	551	305	266	174
(WY)	1977	1986	1979	1994	1994	1994	1980	1989	1981	1992	1994	1979
MIN	9.31	76.2	148	74.5	61.8	132	150	33.7	5.03	4.31	1.41	3.34
(WY)	1993	1979	1989	1977	1978	1987	1982	1991	1991	1988	1993	1983

SUMMARY STATISTICS	FOR 1993 CALENDAR YEAR		FOR 1994 WATER YEAR		WATER YEARS 1974 - 1994	
ANNUAL TOTAL	74059.87		130347.0			
ANNUAL MEAN	203		357		231	
HIGHEST ANNUAL MEAN					357	1994
LOWEST ANNUAL MEAN					142	1988
HIGHEST DAILY MEAN	2830	Dec 5	5820	Feb 9	5820	Feb 9 1994
LOWEST DAILY MEAN	.30	Sep 3	4.3	Sep 30	.11	Aug 17 1987
ANNUAL SEVEN-DAY MINIMUM	.56	Aug 28	5.1	Sep 24	.14	Aug 15 1987
INSTANTANEOUS PEAK FLOW			12000	May 8	12000	May 8 1994
INSTANTANEOUS PEAK STAGE			(a) 15.80	May 8	(a) 15.80	May 8 1994
INSTANTANEOUS LOW FLOW			4.1	Sep 30	.11	Aug 17 1987
ANNUAL RUNOFF (CFSM)	1.81		3.19		2.07	
ANNUAL RUNOFF (INCHES)	24.60		43.29		28.08	
10 PERCENT EXCEEDS	511		861		561	
50 PERCENT EXCEEDS	100		176		116	
90 PERCENT EXCEEDS	1.7		22		9.2	

a From Floodmarks.



LITTLE KANAWHA RIVER BASIN

03152000 LITTLE KANAWHA RIVER AT GLENVILLE, WV

LOCATION.--Lat 38°55'58", long 80°50'19", Gilmer County, Hydrologic Unit 05030203, on right bank at abandoned bridge on Conrad Court Street at Glenville, 1,400 ft upstream from Sycamore Run, and at mile 103.5. Prior to July 1, 1986, at bridge 400 ft downstream.

DRAINAGE AREA.--386 mi².

PERIOD OF RECORD.--June 1915 to September 1922 (gage heights only), October 1928 to September 1983, October 1983 to September 1984 (gage heights, occasional discharge measurements, and annual maximum discharge only), October 1984 to current year. Monthly discharge only October to December 1928, published in WSP 1305.

REVISED RECORDS.--WSP 783: Drainage area. WSP 1305: 1930, 1932(M). WSP 1435: 1954. WSP 1555: 1947(M). WRD WV-82-1: 1979.

GAGE.--Water-stage recorder. Datum of gage is 697.79 ft above sea level. Prior to Dec. 14, 1934, nonrecording gage at same site and datum. Prior to July 1, 1986 at site 400 ft downstream and at the same datum. May 25, 1971 to September 1983, and October 1984 to June 21, 1988, auxiliary water-stage recorder 2.7 mi downstream from base gage at datum 700.23 ft above sea level. Prior to May 25, 1971, auxiliary nonrecording gage at same site and datum.

REMARKS.--Records good except those for periods of estimated daily discharges, (ice effect, missing gage-height records), which are poor. Flow partially regulated since 1968 by five floodwater detention reservoirs affecting 49.5 mi². Flow regulated since March 1979 by Burnsville Lake. National Weather Service gage-height telemeter and U.S. Army Corps of Engineers satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Nov. 16, 1926, reached a stage of 33.6 ft.

PEAK DISCHARGE FOR CURRENT YEAR.--Maximum discharge, 15,900 ft³/s, Feb. 9, gage height, 30.20 ft.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	64	789	875	268	2250	859	1900	608	102	268	415	362
2	52	738	1100	417	2170	1680	1740	703	84	125	225	332
3	50	492	622	906	2030	4820	1620	388	60	77	154	331
4	45	484	487	4260	1050	2500	1520	318	41	47	101	154
5	39	665	4350	2850	641	3210	809	321	37	43	1850	95
6	35	908	2480	1980	370	2250	304	310	35	50	2040	79
7	32	784	1840	5330	304	1830	577	1140	51	50	1870	75
8	29	698	1920	7650	966	3660	516	6960	426	139	853	72
9	29	657	1800	2060	12400	3130	418	2480	85	166	307	69
10	31	629	2360	1900	7790	6320	1070	2370	55	672	305	66
11	31	607	2220	1910	3970	2640	1860	1990	44	332	230	54
12	40	589	1270	2870	4240	2670	757	1860	42	145	99	43
13	55	769	1080	3470	3330	2430	2100	1800	40	92	62	41
14	63	2100	957	3210	3080	2220	2920	1720	36	75	56	40
15	58	2640	671	e1800	2690	953	2520	1620	39	347	58	39
16	113	2070	538	e1200	2520	831	3930	697	56	496	55	38
17	134	1630	531	e800	2410	573	2910	380	116	374	2170	35
18	131	2640	550	e500	2290	587	2160	345	175	476	4370	32
19	100	2040	543	e450	2110	720	1950	320	146	292	2230	30
20	141	1250	611	e400	1640	650	1280	190	189	152	1290	29
21	406	685	687	e370	684	1030	532	110	168	110	534	28
22	422	343	827	e350	990	2760	415	77	217	132	484	26
23	377	369	714	e500	3080	1740	362	67	371	181	694	26
24	332	535	563	e900	3700	957	202	69	670	132	657	26
25	385	267	484	e3000	2640	772	179	91	529	421	589	25
26	476	252	434	e6000	1810	564	182	240	315	2430	519	28
27	365	1130	336	e4500	1490	1740	233	374	261	1220	214	31
28	193	2790	e310	e5000	1300	5160	277	436	598	1540	108	30
29	121	1180	e290	e2500	---	2780	224	276	644	1130	80	27
30	102	864	e270	e1500	---	2650	207	146	481	1340	88	25
31	216	---	e260	e900	---	2120	---	116	---	785	102	---
TOTAL	4667	31594	31980	69751	73945	66806	35674	28522	6113	13839	22809	2288
MEAN	151	1053	1032	2250	2641	2155	1189	920	204	446	736	76.3
MAX	476	2790	4350	7650	12400	6320	3930	6960	670	2430	4370	362
MIN	29	252	260	268	304	564	179	67	35	43	55	25

e Estimated

LITTLE KANAWHA RIVER BASIN

03152000 LITTLE KANAWHA RIVER AT GLENVILLE, WV--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1929 - 1967, BY WATER YEAR (WY) [UNREGULATED]

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	169	370	733	962	1112	1291	867	609	351	267	271	126
MAX	1239	1236	1790	2749	2206	2831	1969	1983	1663	1498	1175	735
(WY)	1938	1963	1943	1937	1939	1967	1939	1967	1950	1958	1958	1945
MIN	.030	.058	22.7	178	180	529	241	65.6	17.4	5.92	1.75	.010
(WY)	1931	1931	1966	1966	1941	1966	1947	1930	1965	1930	1930	1930

SUMMARY STATISTICS

WATER YEARS 1929 - 1967

ANNUAL MEAN	592
HIGHEST ANNUAL MEAN	1020
LOWEST ANNUAL MEAN	315
HIGHEST DAILY MEAN	20300
LOWEST DAILY	.00
ANNUAL SEVEN-DAY MINIMUM	.00
INSTANTANEOUS PEAK FLOW	21500
INSTANTANEOUS PEAK STAGE	(b) 34.50
INSTANTANEOUS LOW FLOW	.00
10 PERCENT EXCEEDS	1440
50 PERCENT EXC	214
90 PERCENT EXCEEDS	14

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1968-1983, 1985-1994, BY WATER YEAR (WY)
[REGULATED, UNADJUSTED]

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	278	655	998	998	1109	1119	894	661	372	289	227	144
MAX	1173	2627	2507	2250	2641	2155	1989	1672	1879	778	736	867
(WY)	1977	1986	1979	1994	1994	1994	1973	1989	1981	1992	1994	1971
MIN	34.2	202	372	188	289	272	229	52.3	29.9	12.2	22.3	15.0
(WY)	1969	1976	1989	1977	1978	1987	1971	1982	1991	1968	1988	1968

SUMMARY STATISTICS

FOR 1993 CALENDAR YEAR

FOR 1994 WATER YEAR

WATER YEARS 1968 - 1994

ANNUAL TOTAL	204482	387988	
ANNUAL MEAN	560	1063	643
HIGHEST ANNUAL MEAN			1063
LOWEST ANNUAL MEAN			339
HIGHEST DAILY MEAN	5600	Mar 5	12400
LOWEST DAILY MEAN	19	(d)	25
ANNUAL SEVEN-DAY MINIMUM	20	Aug 25	27
INSTANTANEOUS PEAK FLOW			15900
INSTANTANEOUS PEAK STAGE			30.20
INSTANTANEOUS LOW FLOW			24
10 PERCENT EXCEEDS	1750		2660
50 PERCENT EXCEEDS	270		500
90 PERCENT EXCEEDS	24		45

a No flow Sept. 3-9, 11-20, 28, Oct. 1-4, 18-23, 1930, Sept. 25 to Oct. 4, 1932.

b Backwater.

c No flow at times in September and October 1930 and 1932.

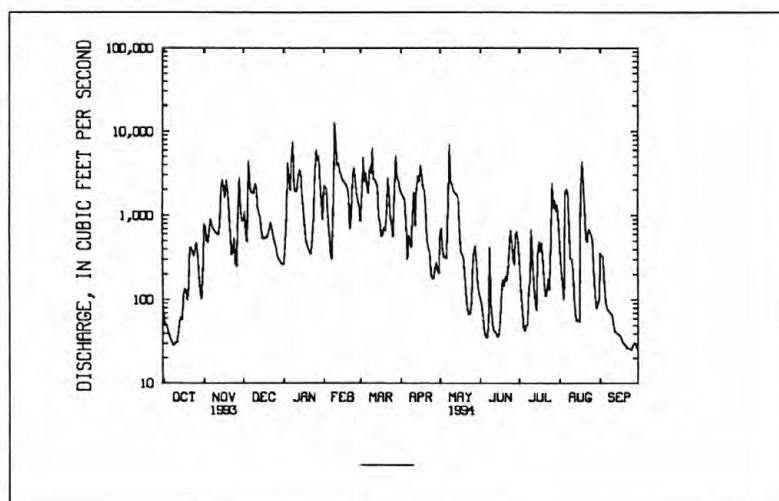
d Aug. 15-16, 29-31.

f Sept. 25, 30.

g From rating curve extended above 18,000 ft³/s.

h From floodmark.

i Sept. 25, 30.



LITTLE KANAWHA RIVER BASIN

03155000 LITTLE KANAWHA RIVER AT PALESTINE, WV
(National stream-quality accounting network station)

LOCATION.--Lat 39°03'35", long 81°23'25", Wirt County, Hydrologic Unit 05030203, on left bank at end of Washington Street in Elizabeth, 1.0 mi upstream from Tucker Creek, 2.3 mi northeast of Palestine, 2.4 mi upstream from old lock 3, and at mile 27.9.

DRAINAGE AREA.--1,515 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1915 to September 1922 (gage heights only), July to September 1939 (fragmentary), October 1939 to current year. Monthly discharge only October 1939 to September 1941, published in WSP 1305.

REVISED RECORDS.--WSP 953: 1940(M).

GAGE.--Water-stage recorder. Datum of gage is 585.51 ft above sea level. Prior to Feb. 17, 1950, water-stage recorders or nonrecording gages at old locks 3 and 4 at various datums. Auxiliary water-stage recorder 3.0 mi upstream from base gage at old lock 4 at datum 596.08 ft above sea level.

REMARKS.--Water-discharge records good except those for estimated daily discharge (ice effect), which is poor. Flow partially regulated since 1968 by five floodwater-detention reservoirs affecting 49.5 mi². Flow regulated since March 1979 by Burnsville Lake. U.S. Army Corps of Engineers satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Apr. 17, 1939, reached a stage of 32.25 ft, from floodmarks at old lock 4, discharge about 53,000 ft³/s.

PEAK DISCHARGE FOR CURRENT YEAR.--Maximum discharge, 40,400 ft³/s, Feb. 10, gage height, 33.48 ft, backwater.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	534	1370	2170	834	3210	3150	5170	667	351	1140	1260	1080
2	347	3030	1690	1090	3870	3780	4140	730	275	782	859	1640
3	260	2100	1790	2320	3530	17000	3500	1290	230	500	740	1160
4	206	1450	1500	10700	3240	16800	3200	999	192	324	521	769
5	176	1160	8920	16800	2180	11900	2970	810	164	232	780	601
6	163	1430	15800	9270	1680	10100	2420	806	143	180	4860	402
7	146	1780	7690	12700	1270	6660	3170	1990	120	157	4370	299
8	131	1640	4150	31300	1630	8500	3600	16500	136	258	2330	234
9	119	1330	3450	9770	21800	16000	2920	19700	186	190	1580	203
10	113	1150	4180	8460	39300	18500	4430	7680	426	491	880	180
11	110	1050	7490	5970	29000	21400	9460	4600	269	785	560	163
12	118	977	6240	5020	20700	10200	8370	3450	214	791	504	147
13	137	1040	3620	9290	16900	6950	5620	2930	289	499	404	135
14	167	3940	2700	10500	11300	6140	10300	2640	212	331	305	123
15	227	7850	2290	8280	8120	5340	8470	2390	182	303	225	106
16	248	7290	1890	5390	6240	3460	11100	2260	143	256	181	91
17	259	4560	1520	3790	5120	2650	13300	1710	122	788	2060	87
18	378	7800	1330	2970	4480	2190	8270	1030	99	769	15200	86
19	457	7260	1320	1900	4010	2500	5360	769	87	634	11300	80
20	607	4230	1350	1700	3560	2720	4150	675	112	680	4040	76
21	1270	2630	1510	e1500	3350	3660	2960	604	165	489	2430	73
22	1720	1660	1840	1380	3200	10400	1840	465	192	364	3660	68
23	1520	1120	2210	1340	7920	9750	1370	357	275	276	2060	62
24	1100	846	1980	2030	13700	5590	1160	290	374	257	1290	60
25	831	876	1660	8560	14200	3450	983	249	664	635	1080	63
26	681	869	1480	23500	8810	2550	816	254	862	881	876	91
27	644	812	1310	23300	5430	4460	758	351	773	3470	803	176
28	671	6560	1100	23000	3840	17900	820	922	654	1960	661	153
29	539	7980	974	21400	---	22300	851	906	895	1960	432	116
30	383	3550	902	9290	---	10700	757	704	1340	1880	294	89
31	361	---	784	3980	---	6800	---	497	---	1690	288	---
TOTAL	14623	89340	96840	277334	251590	273500	132235	79225	10146	23952	66833	8613
MEAN	472	2978	3124	8946	8985	8823	4408	2556	338	773	2156	287
MAX	1720	7980	15800	31300	39300	22300	13300	19700	1340	3470	15200	1640
MIN	110	812	784	834	1270	2190	757	249	87	157	181	60

e Estimated

LITTLE KANAWHA RIVER BASIN

03155000 LITTLE KANAWHA RIVER AT PALESTINE, WV--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 1967, BY WATER YEAR (WY) [UNREGULATED]

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	422	1145	2631	3242	4141	4875	3259	1951	1193	855	785	390
MAX	3010	4401	6366	7468	8437	10940	7233	7573	4820	5069	3756	2401
(WY)	1955	1963	1943	1952	1956	1963	1948	1967	1950	1958	1958	1950
MIN	6.14	2.41	84.8	552	499	1428	677	323	50.5	14.7	9.85	14.4
(WY)	1954	1954	1966	1967	1941	1966	1947	1962	1965	1966	1965	1953

SUMMARY STATISTICS

WATER YEARS 1940 - 1967

ANNUAL MEAN	2065
HIGHEST ANNUAL MEAN	3216
LOWEST ANNUAL MEAN	1068
HIGHEST DAILY MEAN	48600
LOWEST DAILY MEAN	.90
ANNUAL SEVEN-DAY MINIMUM	1.3
INSTANTANEOUS PEAK FLOW	(a) 50700
INSTANTANEOUS PEAK STAGE	(b) 39.14
INSTANTANEOUS LOW FLOW	(c) .60
10 PERCENT EXCEEDS	5440
50 PERCENT EXCEEDS	694
90 PERCENT EXCEEDS	56

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1968 - 1994, BY WATER YEAR (WY)
[REGULATED, UNADJUSTED]

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	797	1977	3305	3528	4156	4165	3382	2381	1153	858	764	502
MAX	3933	8281	9517	8946	8985	8823	7210	6133	5710	2450	2156	2941
(WY)	1977	1986	1979	1994	1994	1994	1972	1989	1981	1990	1994	1971
MIN	75.3	463	1102	605	935	873	795	243	81.3	96.4	28.5	38.5
(WY)	1989	1988	1990	1977	1978	1969	1971	1982	1991	1968	1988	1985

SUMMARY STATISTICS

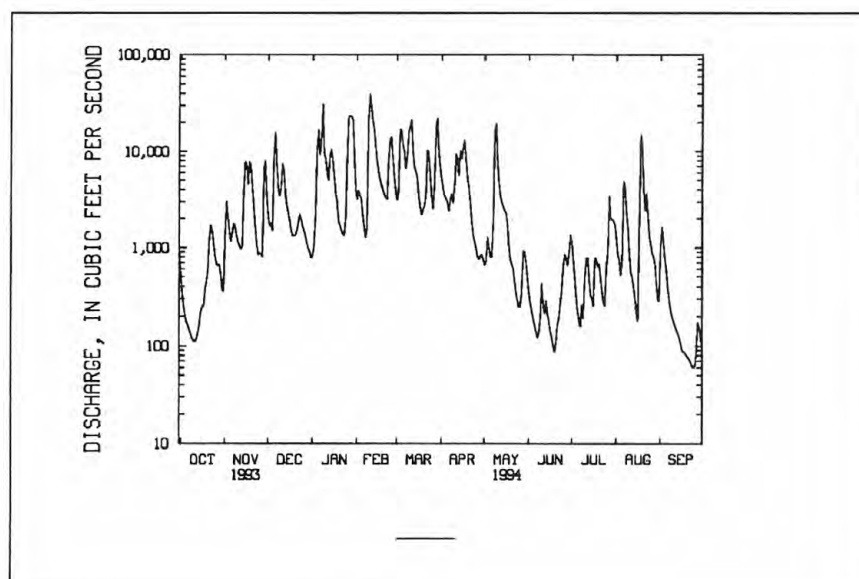
FOR 1993 CALENDAR YEAR

FOR 1994 WATER YEAR

WATER YEARS 1968 - 1994

ANNUAL TOTAL	732100	1324231	
ANNUAL MEAN	2006	3628	2238
HIGHEST ANNUAL MEAN			3628
LOWEST ANNUAL MEAN			1119
HIGHEST DAILY MEAN	25300	Mar 5	39300
LOWEST DAILY MEAN	28	(d)	60
ANNUAL SEVEN-DAY MINIMUM	32	Aug 13	69
INSTANTANEOUS PEAK FLOW			40400
INSTANTANEOUS PEAK STAGE			(b) 33.48
INSTANTANEOUS LOW FLOW			57
10 PERCENT EXCEEDS	6110		10100
50 PERCENT EXCEEDS	876		1340
90 PERCENT EXCEEDS	64		164

- a From rating curve extended above 39,000 ft³/s.
b Backwater.
c Filling pool above old lock 3.
d Aug. 16, 17.
f Peak stage associated with this discharge affected by backwater.
g Sept. 24, 25.
h Aug. 21, 22, 1987 and July 17, 18, 1988.



LITTLE KANAWHA RIVER BASIN

03155000 LITTLE KANAWHA RIVER AT PALESTINE, WV--Continued
(National stream-quality accounting network station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1960-61, 1965-67, 1976 to September 1994, discontinued.

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

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	TUR- BID- ITY (NTU) (00076)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	COLI- FORM, FECAL, 0.7 KF AGAR (COLS./ 100 ML) (31625)	STREP- TOCOCCHI FECAL, KF AGAR (COLS./ 100 ML) (31673)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)
MAR 1994												
22...	1345	10900	91	7.2	9.0	57	748	10.6	93	930	2100	34
MAY												
26...	1230	239	120	7.2	21.0	1.7	741	8.3	96	K120	58	45
SEP												
07...	1415	291	152	7.0	21.0	24	752	6.3	72	K160	K27	55

DATE	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE WATER DIS IT FIELD (MG/L AS HCO3 (00453)	CAR- BONATE WATER DIS IT FIELD (MG/L AS CO3 (00452)	ALKA- LITY WAT DIS TOT IT FIELD (MG/L AS CACO3 (39086)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)
MAR 1994											
22...	9.3	2.5	3.1	0.80	18	0	15	17	3.0	<0.10	5.9
MAY											
26...	13	3.1	4.9	1.4	38	0	31	18	5.0	<0.10	3.5
SEP											
07...	16	3.5	6.4	2.1	48	0	39	18	8.6	<0.10	5.2

DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) (00618)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)
MAR 1994											
22...	65	0.170	0.010	0.180	0.020	0.38	0.40	0.120	<0.010	<0.010	300
MAY											
26...	67	--	<0.010	<0.050	<0.010	0.20	0.20	0.020	0.010	<0.010	20
SEP											
07...	94	--	<0.010	0.220	0.020	0.28	0.30	0.040	<0.010	0.010	60

K Results based on colony count outside the acceptance range (non-ideal colony count.)

LITTLE KANAWHA RIVER BASIN

03155000 LITTLE KANAWHA RIVER AT PALESTINE, WV--Continued

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

DATE	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)
MAR 1994											
22...	34	<3	88	<4	13	--	<1	<1	<1.0	55	<6
MAY											
26...	43	<3	52	<4	32	<10	<1	<1	<1.0	77	<6
SEP											
07...	50	<3	120	<4	45	<10	<1	<1	<1.0	89	<6

LITTLE KANAWHA RIVER BASIN

03155500 HUGHES RIVER AT CISCO, WV

LOCATION.--Lat 39°07'10", long 81°16'40", Ritchie County, Hydrologic Unit 05030203, on right bank 100 ft downstream from confluence of North and South Forks, 1.0 mi upstream from Cisco, 5.0 mi south of Petroleum, and at mile 14.0.

DRAINAGE AREA.--452 mi².

PERIOD OF RECORD.--May 1915 to September 1922 (gage heights only), October 1928 to September 1931, October 1938 to September 1994 (discontinued). Monthly discharge only for some periods, published in WSP 1305. Prior to October 1965, published as "at Cisko."

REVISED RECORDS.--WSP 893: 1939. WSP 1113: 1947.

GAGE.--Water-stage recorder. Datum of gage is 607.92 ft above sea level, adjustment of 1912. Prior to Sept. 30, 1931, nonrecording gage at site 0.9 mi downstream and Mar. 5, 1939, to Sept. 30, 1945, nonrecording gage at site 1.0 mi downstream, both at datum 2.56 ft lower. Oct. 1, 1945, to June 30, 1946, nonrecording gage at bridge across mouth of North Fork at present datum.

REMARKS.--Records poor. U.S. Army Corps of Engineers satellite telemeter at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 9,500 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage Height (ft)	Date	Time	Discharge (ft ³ /s)	Gage Height (ft)
Jan. 8	0600	12,300	20.20	Mar. 10	1700	12,200	20.07
Jan. 26	1400	11,800	19.75	Apr. 11	0700	14,100	21.74
Jan. 29	0100	*23,000	*29.04	May 8	1230	13,600	21.34
Feb. 9	1930	20,800	27.29	Aug. 18	0700	10,600	18.55

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	77	1080	346	e150	890	610	787	133	105	159	89	2250
2	51	772	259	240	601	870	623	134	81	82	57	959
3	42	366	220	731	e500	3400	524	141	65	45	757	376
4	36	267	235	2400	e450	2330	533	141	50	31	279	232
5	33	275	3520	2590	e400	3480	512	152	41	24	1150	167
6	32	496	2470	1640	375	2460	524	172	35	19	1680	127
7	28	414	956	5270	351	1660	1750	592	31	20	378	103
8	24	275	559	10200	676	2260	1630	11000	31	28	194	84
9	20	203	409	2780	16000	2660	940	2820	29	24	124	68
10	19	160	655	1350	8300	9390	2150	956	26	139	90	54
11	19	129	1700	1200	2280	4390	10100	544	24	129	87	43
12	28	108	886	1110	3530	1890	2990	385	22	87	75	76
13	47	211	575	2400	3050	1210	2130	324	22	48	52	65
14	63	1440	455	2410	2260	963	2320	246	25	34	40	42
15	70	1440	404	1490	1440	804	1340	201	22	52	38	35
16	56	988	356	812	1140	656	4090	195	19	109	37	30
17	92	841	290	e650	887	509	2980	184	15	82	1530	27
18	294	2840	245	e550	753	450	1310	148	14	44	7030	27
19	290	1110	251	e470	759	562	807	137	14	31	926	26
20	449	541	284	e420	829	530	592	123	13	25	340	e27
21	1090	346	328	e390	1290	1230	444	113	e12	21	272	e25
22	519	240	427	e360	1930	4370	357	99	e11	18	1670	e24
23	285	187	399	e350	3810	1910	294	83	e10	17	705	e22
24	183	154	344	1190	4340	1040	249	74	e12	15	297	e21
25	129	133	305	2980	3090	724	221	89	13	34	185	e19
26	99	117	275	8980	1610	544	199	863	15	231	209	e18
27	76	378	238	4340	975	1210	190	1880	20	176	465	e24
28	58	2460	215	16600	694	4480	189	644	28	110	349	e30
29	44	1130	e190	16000	---	3630	167	325	156	91	162	e27
30	43	534	e170	2410	---	1730	141	206	223	251	115	e23
31	156	---	e160	1310	---	1040	---	144	---	175	366	---
TOTAL	4452	19635	18126	93773	63210	62992	41083	23248	1184	2351	19748	5051
MEAN	144	654	585	3025	2257	2032	1369	750	39.5	75.8	637	168
MAX	1090	2840	3520	16600	16000	9390	10100	11000	223	251	7030	2250
MIN	19	108	160	150	351	450	141	74	10	15	37	18
CF5M	.32	1.45	1.29	6.69	4.99	4.50	3.03	1.66	.09	.17	1.41	.37
IN.	.37	1.62	1.49	7.72	5.20	5.18	3.38	1.91	.10	.19	1.63	.42

e Estimated

LITTLE KANAWHA RIVER BASIN

03155500 HUGHES RIVER AT CISCO, WV--Continued

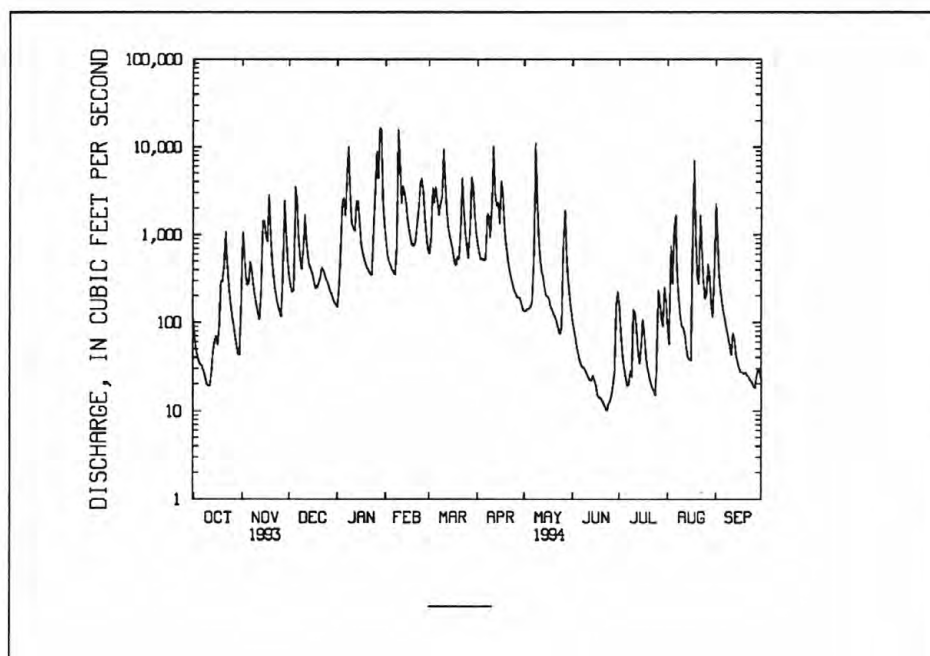
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1929-1931, 1939-1994, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	162	395	777	922	1117	1183	934	630	325	224	206	124
MAX	1346	2196	2775	3025	2257	3485	2659	2350	1794	2249	713	1035
(WY)	1977	1986	1979	1994	1994	1963	1948	1967	1950	1958	1989	1971
MIN	.000	.000	1.13	19.8	121	293	117	61.1	5.72	1.01	.12	.010
(WY)	1931	1931	1931	1931	1941	1987	1971	1930	1930	1930	1930	1930

SUMMARY STATISTICS	FOR 1993 CALENDAR YEAR		FOR 1994 WATER YEAR		WATER YEARS 1929 - 1994	
ANNUAL TOTAL	181090.9		354853		581	
ANNUAL MEAN	496		972		972	
HIGHEST ANNUAL MEAN					260	
LOWEST ANNUAL MEAN					1954	
HIGHEST DAILY MEAN	9990	Mar 5	16600	Jan 28	26400	Apr 13 1948
LOWEST DAILY MEAN	2.1	Aug 2	(e) 10	Jun 23	.00	Jul 26 1930
ANNUAL SEVEN-DAY MINIMUM	3.4	Jul 31	12	Jun 19	.00	Sep 4 1930
INSTANTANEOUS PEAK FLOW			23000	Jan 29	31700	Jun 26 1950
INSTANTANEOUS PEAK STAGE			29.04	Jan 29	32.69	Jun 26 1950
INSTANTANEOUS LOW FLOW			(e) 10	Jun 23	.00	(a)
ANNUAL RUNOFF (CFSM)	1.10		2.15		1.28	
ANNUAL RUNOFF (INCHES)	14.90		29.20		17.46	
10 PERCENT EXCEEDS	1230		2430		1450	
50 PERCENT EXCEEDS	170		279		177	
90 PERCENT EXCEEDS	11		25		11	

a July 26, Aug. 2-6, Sept. 4 to Dec. 5, 1930.

e Estimated.



KANAWHA RIVER BASIN

03176500 NEW RIVER AT GLEN LYN, VA
(National stream-quality accounting network station)

LOCATION.--Lat 37°22'22", long 80°51'39", Giles County, Hydrologic Unit 05050002, on right bank 90 ft upstream from bridge on U.S. Highway 460 at Glen Lyn, 0.3 mi upstream from East River, and 6.3 mi downstream from Wolf Creek.

DRAINAGE AREA.--3,768 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1927 to current year.

REVISED RECORDS.--WSP 758: Drainage area. WSP 1305: 1928(M), 1930(M).

GAGE.--Water-stage recorder. Datum of gage is 1,490.11 ft above sea level. Aug. 11, 1927, to Oct. 16, 1934, on left bank opposite present site at same datum, and Oct. 17, 1934, to June 16, 1939, on left bank at site 200 ft upstream at same datum.

REMARKS.--No estimated daily discharges. Water-discharge records good. Flow regulated since 1939 by Claytor Reservoir (station 03169000) 55 mi upstream from station. U.S. Army Corps of Engineers satellite gage-height telemeter at station. Maximum discharge, 226,000 ft³/s, from rating curve extended above 89,000 ft³/s on basis of slope-area measurement of peak flow. Minimum gage height, 2.10 ft, Sept. 8, 1930.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 62,400 ft³/s, Aug. 18, gage height, 13.58 ft; minimum, 799 ft³/s, Nov. 16, gage height, 2.41; minimum daily, 1,130 ft³/s, Nov. 24.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1	1830	2850	2710	4590	10800	11500	18900	11500	3050	3020	4470	3390	
2	1990	4720	2270	4320	7930	15800	17300	9700	3130	2560	3360	2670	
3	1720	4940	3270	2630	5870	18400	15400	7620	3480	2640	4470	2790	
4	1180	5200	2710	6400	4470	16900	10400	9590	2810	4570	5150	3540	
5	1530	3520	17000	6100	6870	18300	10100	10700	2790	2960	5060	3670	
6	1750	3060	24600	3640	4300	17400	13300	10400	2740	2450	4620	3340	
7	1270	1740	13000	6570	2610	15500	8110	8010	2750	2290	2900	2760	
8	1440	2170	8860	8010	7010	13800	7790	9100	5290	2240	3490	2650	
9	1200	2180	6650	8800	6600	15600	8830	7150	6380	1520	2750	2500	
10	1540	1770	6540	5650	14400	12300	8120	7360	4920	1590	3750	2510	
11	1960	1550	4820	5760	20200	7150	10300	6590	4460	2390	2760	2430	
12	1470	1710	3620	13200	33500	7690	11900	6180	3360	2380	3630	2390	
13	1650	1560	3490	20500	26000	7060	11700	5340	3220	2390	2740	3370	
14	1600	1510	3860	16600	23500	3830	16900	5180	4820	3260	3080	2140	
15	1670	1570	3220	11300	18900	7910	16200	5660	5120	2680	3370	1330	
16	1490	1490	4070	10100	17200	7470	14100	4540	2940	2420	2730	1680	
17	1530	1520	3650	6190	14500	6400	8750	4550	2280	2490	14100	2390	
18	1470	1690	5340	12700	11800	6280	9520	4690	2680	3480	50500	2390	
19	1170	1690	3140	9760	11700	6350	10800	3230	2690	3600	25500	2480	
20	1250	1840	2980	5620	11900	5350	8360	4430	3410	3840	14300	2410	
21	1610	1700	4450	4700	11900	5080	6930	4540	2650	2740	12600	2300	
22	1630	1780	4190	4130	9900	7520	7010	3060	2690	5100	7480	2130	
23	1600	1190	2700	5530	15200	4450	6620	2990	2730	5090	6010	1850	
24	2090	1130	2910	3110	21900	5670	7410	4940	2970	3820	5450	1850	
25	2300	1210	3280	7230	19200	5480	4540	3880	2930	3150	4770	2070	
26	1750	1250	1660	6510	16900	5670	5770	2990	2860	3240	4550	2240	
27	1450	1390	2180	8440	13300	7610	5730	3990	2910	3320	3000	2810	
28	1470	3650	2490	14200	9620	29100	6110	3100	3870	6130	3930	2530	
29	1250	3420	3520	19100	---	49500	5900	4260	4160	6340	4050	2270	
30	1800	2750	5990	15100	---	32900	10200	3240	3880	7320	2990	2070	
31	2570	---	4910	9970	---	22100	---	3690	---	5330	3950	---	
TOTAL	50230	67750	164080	266460	377980	396070	303000	182200	103970	106350	221510	74950	
MEAN	1620	2258	5293	8595	13500	12780	10100	5877	3466	3431	7145	2498	
MAX	2570	5200	24600	20500	33500	49500	18900	11500	6380	7320	50500	3670	
MIN	1170	1130	1660	2630	2610	3830	4540	2990	2280	1520	2730	1330	
(*)	-122	+113	-37	+31	+7	+101	-99	+20	-27	-8	+10	+5	
MEAN#	1498	2371	5256	8626	13510	12880	10000	5897	3439	3423	7155	2503	
CFSM#	.40	.63	1.39	2.29	3.59	3.42	2.65	1.57	.91	.91	1.90	.66	
IN.#	.46	.70	1.61	2.64	3.73	3.94	2.96	1.80	1.02	1.05	2.19	.74	
CAL YR 1993	TOTAL 2127800		MEAN 5830		MAX 81600		MIN 1110		MEAN# 5828		CFSM# 1.55		IN.# 21.00
WTR YR 1994	TOTAL 2314550		MEAN 6341		MAX 50500		MIN 1130		MEAN# 6340		CFSM# 1.68		IN.# 22.85

* Change in contents, equivalent in cubic feet per second, in Claytor Reservoir; provided by Appalachian Power Company.

Adjusted for change in contents.

KANAWHA RIVER BASIN

03176500 NEW RIVER AT GLEN LYN, VA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1928 - 1938, BY WATER YEAR (WY) [UNREGULATED]

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	4319	4112	4543	6919	6141	7665	7007	5225	3920	3322	3436	3343
MAX	11250	9016	7798	13770	10980	13050	11390	7093	8351	7956	8211	10840
(WY)	1938	1930	1928	1937	1936	1936	1936	1933	1929	1938	1928	1928
MIN	1094	1249	1685	1795	1494	3307	3899	2491	1908	1206	1330	1145
(WY)	1931	1932	1934	1934	1934	1931	1930	1934	1930	1930	1930	1932

SUMMARY STATISTICS

WATER YEARS 1928 - 1938

ANNUAL MEAN	4992
HIGHEST ANNUAL MEAN	6859
LOWEST ANNUAL MEAN	3208
HIGHEST DAILY MEAN	57600
LOWEST DAILY MEAN	820
ANNUAL SEVEN-DAY MINIMUM	914
INSTANTANEOUS PEAK FLOW	99000
INSTANTANEOUS PEAK STAGE	16.75
INSTANTANEOUS LOW FLOW	770
ANNUAL RUNOFF (CFSM)	1.32
ANNUAL RUNOFF (INCHES)	17.99
10 PERCENT EXCEEDS	9340
50 PERCENT EXCEEDS	3800
90 PERCENT EXCEEDS	1520

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

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	3265	3765	4748	5742	7371	8446	7562	5948	4433	3327	3233	2914
MAX	9882	12450	10910	12660	15810	18650	20890	11270	12860	9784	16410	11500
(WY)	1990	1978	1949	1946	1957	1993	1987	1984	1992	1949	1940	1989
MIN	1204	1258	1506	1489	3304	2407	2673	2397	1741	1390	1267	1362
(WY)	1989	1982	1940	1966	1941	1988	1986	1941	1988	1988	1981	1963

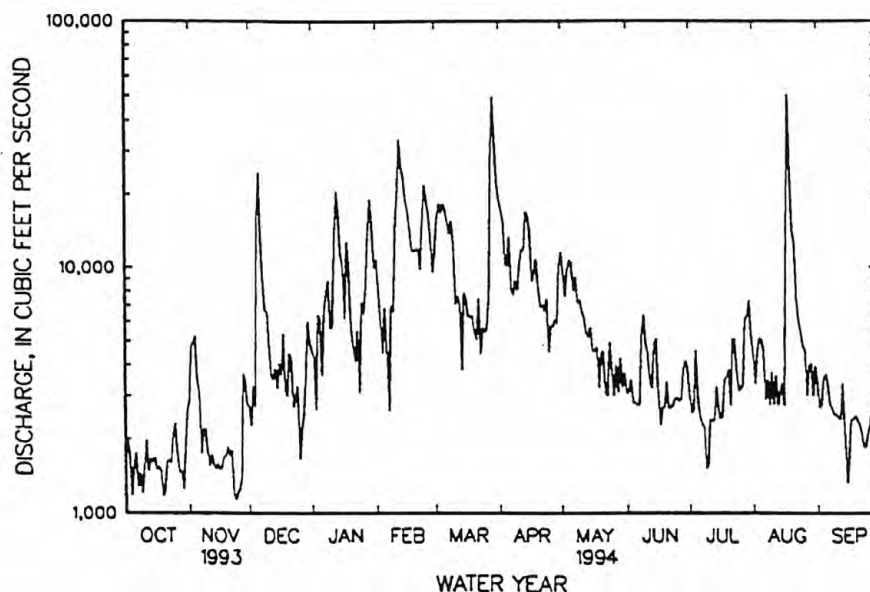
SUMMARY STATISTICS

FOR 1993 CALENDAR YEAR

FOR 1994 WATER YEAR

WATER YEARS 1939 - 1994

ANNUAL TOTAL	2127800	2314550	
ANNUAL MEAN	5830	6341	5050
HIGHEST ANNUAL MEAN			7424
LOWEST ANNUAL MEAN			2626
HIGHEST DAILY MEAN	81600	Mar 24	50500
LOWEST DAILY MEAN	1110	Sep 2	1130
ANNUAL SEVEN-DAY MINIMUM	1380	Nov 21	1380
INSTANTANEOUS PEAK FLOW			62400
INSTANTANEOUS PEAK STAGE			13.58
INSTANTANEOUS LOW FLOW			799
ANNUAL RUNOFF (CFSM)	1.55	1.68	1.34
ANNUAL RUNOFF (INCHES)	21.01	22.85	18.20
10 PERCENT EXCEEDS	11000	14300	9660
50 PERCENT EXCEEDS	3620	4050	3700
90 PERCENT EXCEEDS	1530	1680	1570



KANAWHA RIVER BASIN

03176500 NEW RIVER AT GLEN LYN, VA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1931, 1950, 1952, 1955-56, 1965 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: April 1968 to September 1988.

WATER TEMPERATURE: October 1964 to September 1988.

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

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	TUR- BID- ITY (NTU) (00076)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)
NOV 17...	1000	1930	170	7.4	19.0	15.0	725	0.60	11.7	122
JAN 26...	1000	7190	145	7.3	6.0	3.0	727	2.5	13.2	103
MAR 23...	0915	3930	125	7.5	6.5	9.0	724	0.20	11.0	100
MAY 11...	0915	6720	135	7.2	8.0	14.0	729	1.6	9.5	96
AUG 16...	1000	2880	155	7.2	20.0	24.0	725	0.70	7.1	89

DATE	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	ALKA- LITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)
NOV 17...	K14	31	76	17	8.1	5.3	1.7	76	0	62
JAN 26...	170	70	62	16	5.4	4.7	1.6	60	0	49
MAR 23...	37	K6	64	16	5.8	3.5	1.4	66	0	54
MAY 11...	59	K14	56	14	5.2	3.2	1.2	59	0	48
AUG 16...	29	45	62	14	6.6	4.7	1.9	60	0	49

K Results based on colony count outside the acceptance range (non-ideal colony count).

KANAWHA RIVER BASIN

03176500 NEW RIVER AT GLEN LYN, VA--Continued

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

DATE	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) (00618)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)
NOV 17...	18	4.8	0.10	5.6	94	101	0.010	0.540	0.550	0.550
JAN 26...	10	6.5	<0.10	7.9	90	86	0.010	0.890	0.900	0.900
MAR 23...	7.6	5.4	<0.10	6.7	83	83	0.020	0.840	0.860	0.860
MAY 11...	8.2	3.9	<0.10	6.3	84	74	0.020	0.610	0.630	0.630
AUG 16...	14	4.7	0.10	8.1	91	86	<0.010	--	0.500	0.500

DATE	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)
NOV 17...	0.020	<0.20	0.060	0.050	0.030	10	34	<3	23	<4
JAN 26...	0.060	0.20	0.030	0.020	0.010	--	--	--	--	--
MAR 23...	0.030	0.30	0.020	<0.010	0.010	40	35	<3	56	<4
MAY 11...	0.030	<0.20	0.010	<0.010	<0.010	40	31	<3	27	<4
AUG 16...	0.030	<0.20	0.030	0.030	0.020	30	34	3	64	<4

DATE	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
NOV 17...	3	<10	<1	<1	<1.0	91	<6	4	64
JAN 26...	--	--	--	--	--	--	--	12	73
MAR 23...	5	<10	2	<1	<1.0	58	<6	7	73
MAY 11...	2	<10	2	<1	<1.0	54	<6	8	62
AUG 16...	4	<10	1	<1	<1.0	70	<6	5	96

< Actual value is known to be less than the value shown.

KANAWHA RIVER BASIN

03179000 BLUESTONE RIVER NEAR PIPESTEM, WV

LOCATION.--Lat 37°32'38", long 81°00'38", Summers County, Hydrologic Unit 05050002, on left bank 1.2 mi downstream from Mountain Creek, 2.5 mi west of Pipestem, and at mile 10.6.

DRAINAGE AREA.--394 mi².

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

REVISED RECORDS.--WSP 1705: 1959. WDR WV-82-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,527.35 ft above sea level (U.S. Army Corps of Engineers bench mark).

REMARKS.--Records good except those for periods of estimated daily discharges (ice effect), which are poor. U.S. Army Corps of Engineers satellite telemeter at station.

PEAK DISCHARGES 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)
Feb. 9	2300	6,380	10.22	Mar. 29	0500	6,210	10.14
Feb. 12	0730	*6,890	*10.45				

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	78	110	166	491	847	694	2110	1140	123	110	131	110
2	63	106	132	426	661	1770	1580	928	114	103	106	118
3	54	99	115	406	557	2670	1200	719	110	86	100	110
4	50	102	147	455	470	1960	971	1410	102	78	100	89
5	47	111	2360	470	436	2280	785	1350	96	79	129	77
6	43	125	1970	421	526	1650	722	980	92	73	322	74
7	39	115	819	621	487	1190	867	847	95	67	220	77
8	37	96	488	3410	468	977	970	1220	453	63	148	74
9	36	80	349	2210	2770	932	849	1320	806	61	114	65
10	39	71	291	1070	5180	1120	759	961	1330	59	95	60
11	43	63	312	766	4520	1330	1030	721	1230	59	82	57
12	57	58	295	1880	6630	1100	1110	574	1960	58	73	55
13	56	55	252	2940	4230	893	1430	474	1720	56	67	51
14	55	52	230	1990	2840	785	1660	393	708	55	68	48
15	49	53	253	1260	1970	682	1190	350	586	67	75	46
16	42	55	423	773	1480	587	963	382	529	75	81	45
17	39	69	661	e600	1210	498	763	390	357	73	661	46
18	35	145	638	e500	1030	458	621	304	260	86	1060	59
19	38	174	513	e400	904	438	533	269	205	77	465	86
20	92	135	410	e350	806	377	472	244	174	107	265	74
21	117	117	371	e320	802	431	412	226	156	64	190	57
22	93	98	327	e300	845	1280	385	207	156	58	169	51
23	97	82	279	467	1860	1150	369	187	149	66	161	46
24	78	74	245	687	2780	844	330	172	248	63	129	44
25	62	69	223	1390	2090	746	299	163	164	59	108	42
26	54	63	194	3060	1410	671	275	170	138	78	95	46
27	49	197	199	3240	1000	1710	291	251	140	303	89	62
28	46	546	263	2780	795	5320	395	224	174	403	92	75
29	43	367	759	2910	---	5500	436	176	147	313	89	56
30	47	229	877	1710	---	3570	1450	151	119	374	80	47
31	76	---	615	1140	---	2400	---	134	---	194	77	---
TOTAL	1754	3716	15176	39443	49604	46013	25227	17037	12641	3467	5641	1947
MEAN	56.6	124	490	1272	1772	1484	841	550	421	112	182	64.9
MAX	117	546	2360	3410	6630	5500	2110	1410	1960	403	1060	118
MIN	35	52	115	300	436	377	275	134	92	55	67	42
CFSM	.14	.31	1.24	3.23	4.50	3.77	2.13	1.39	1.07	.28	.46	.16
IN.	.17	.35	1.43	3.72	4.68	4.34	2.38	1.61	1.19	.33	.53	.18

e Estimated

KANAWHA RIVER BASIN

03179000 BLUESTONE RIVER NEAR PIPESTEM, WV--Continued

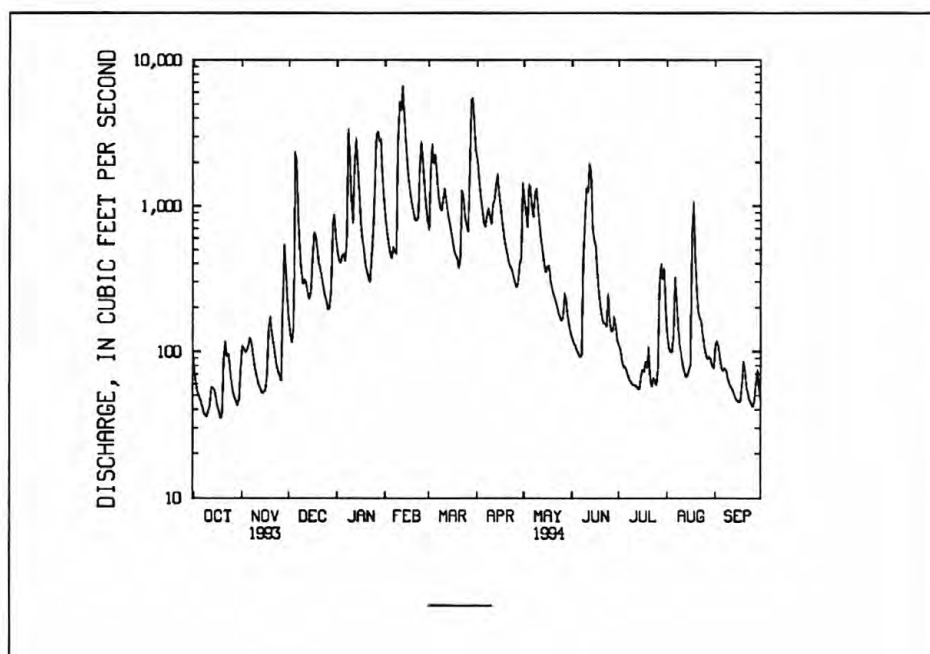
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1950 - 1994, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	152	242	496	678	932	1104	823	624	303	145	117	92.8
MAX	796	1048	1485	2107	2148	3276	2855	1459	1163	466	447	456
(WY)	1977	1978	1973	1957	1957	1955	1987	1989	1979	1980	1972	1989
MIN	16.7	20.0	33.8	53.7	225	188	174	154	58.4	40.6	23.8	13.9
(WY)	1954	1954	1966	1966	1954	1988	1986	1964	1966	1952	1988	1955

SUMMARY STATISTICS	FOR 1993 CALENDAR YEAR		FOR 1994 WATER YEAR		WATER YEARS 1950 - 1994	
ANNUAL TOTAL	162728		221666			
ANNUAL MEAN	446		607		473	
HIGHEST ANNUAL MEAN					762	
LOWEST ANNUAL MEAN					178	
HIGHEST DAILY MEAN	9910		6630		15900	
LOWEST DAILY MEAN	26		35		7.0	
ANNUAL SEVEN-DAY MINIMUM	30		41		8.5	
INSTANTANEOUS PEAK FLOW			6890		19300	
INSTANTANEOUS PEAK STAGE			10.45		15.82	
INSTANTANEOUS LOW FLOW			33		7.0	
ANNUAL RUNOFF (CFSM)	1.13		1.54		1.20	
ANNUAL RUNOFF (INCHES)	15.36		20.93		16.32	
10 PERCENT EXCEEDS	871		1610		1120	
50 PERCENT EXCEEDS	157		252		203	
90 PERCENT EXCEEDS	42		55		37	

a Sept. 14, 15.

b Sept. 21-23, 30, 1955.



KANAWHA RIVER BASIN

03180300 EAST FORK GREENBRIER RIVER AT FRANK, WV

LOCATION.--Lat 38°32'34", long 79°48'24", Pocahontas County, Hydrologic Unit 05050003, on right bank at Frank, 2,400 ft downstream from Johns Run, 1.0 mi east of Durbin, and at mile 1.5.

DRAINAGE AREA.--67.1 mi².

PERIOD OF RECORD.--December 1987 to July 1994 (discontinued).

GAGE.--Water-stage recorder. Elevation of gage is 2,750 ft above sea level, from topographic map.

REMARKS.--Records good except those for periods of estimated daily discharges (ice effect, orifice damaged by ice), which are poor. Natural flow of stream affected by diversion for industrial use just upstream from station.

PEAK DISCHARGES 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)
Dec. 5	0915	2,690	4.53	Feb. 23	---	UNKNOWN	UNKNOWN
Jan. 28	---	UNKNOWN	UNKNOWN	Mar. 27	---	UNKNOWN	UNKNOWN
Feb. 9	---	*UNKNOWN	*UNKNOWN	May 8	0315	8,600	6.61

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	32	49	150	e70	e200	e140	e260	147	22	16	---	---
2	26	45	122	e76	e150	e120	e220	137	23	14	---	---
3	21	52	103	e74	e130	e110	e190	137	22	12	---	---
4	17	60	134	e70	e110	e120	e170	237	20	11	---	---
5	16	89	1880	e65	e95	e140	e160	317	19	11	---	---
6	14	125	826	e80	e85	e180	e150	314	17	10	---	---
7	12	114	426	e100	e75	e400	e155	1020	18	15	---	---
8	11	94	259	e500	e170	e800	e140	4880	17	19	---	---
9	11	75	188	e300	e3000	e700	e130	967	16	15	---	---
10	17	62	164	e210	e1500	e900	e120	416	15	35	---	---
11	15	53	171	e200	e600	e600	e130	286	15	28	---	---
12	25	47	147	e360	e350	e350	e140	204	16	---	---	---
13	25	231	142	e410	e250	e250	e450	148	14	---	---	---
14	19	571	128	e270	e200	e200	e500	124	12	---	---	---
15	18	303	128	e200	e170	e210	e320	101	12	---	---	---
16	17	179	136	e130	e150	e220	e270	105	19	---	---	---
17	17	173	140	e100	e130	e190	e240	82	16	---	---	---
18	17	317	134	e85	e140	e170	e200	80	13	---	---	---
19	16	259	135	e75	e190	e160	e160	65	11	---	---	---
20	22	188	120	e65	e350	e150	e130	58	17	---	---	---
21	31	128	116	e60	e570	e500	e105	55	32	---	---	---
22	34	104	102	e56	e610	e1100	e110	50	38	---	---	---
23	31	87	89	e70	e1500	e660	e96	53	23	---	---	---
24	29	74	78	e100	e1300	e610	e90	106	18	---	---	---
25	27	64	75	e250	e650	e800	e84	71	16	---	---	---
26	25	53	85	e500	e350	e570	e78	56	15	---	---	---
27	24	195	85	e400	e230	e880	e86	66	21	---	---	---
28	22	876	73	e900	e170	e1200	e90	49	25	---	---	---
29	20	386	67	e1000	---	e900	e100	161	19	---	---	---
30	30	223	e58	e480	---	e600	134	54	16	---	---	---
31	54	---	e64	e290	---	e400	---	43	---	---	---	---
TOTAL	695	5276	6525	7546	13425	14330	5208	10589	557	---	---	---
MEAN	22.4	176	210	243	479	462	174	342	18.6	---	---	---
MAX	54	876	1880	1000	3000	1200	500	4880	38	---	---	---
MIN	11	45	58	56	75	110	78	43	11	---	---	---

e Estimated

KANAWHA RIVER BASIN

03180300 EAST FORK GREENBRIER RIVER AT FRANK, WV--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1988 - 1994, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	41.7	83.8	178	185	193	301	181	185	43.1	21.2	33.6	20.7
MAX	108	176	294	267	479	506	287	342	106	37.5	146	44.1
(WY)	1990	1994	1992	1990	1994	1993	1993	1994	1989	1989	1989	1989
MIN	2.46	21.5	57.7	110	43.1	149	86.5	43.1	8.59	4.17	2.70	7.12
(WY)	1992	1992	1989	1993	1993	1988	1988	1991	1991	1988	1988	1988

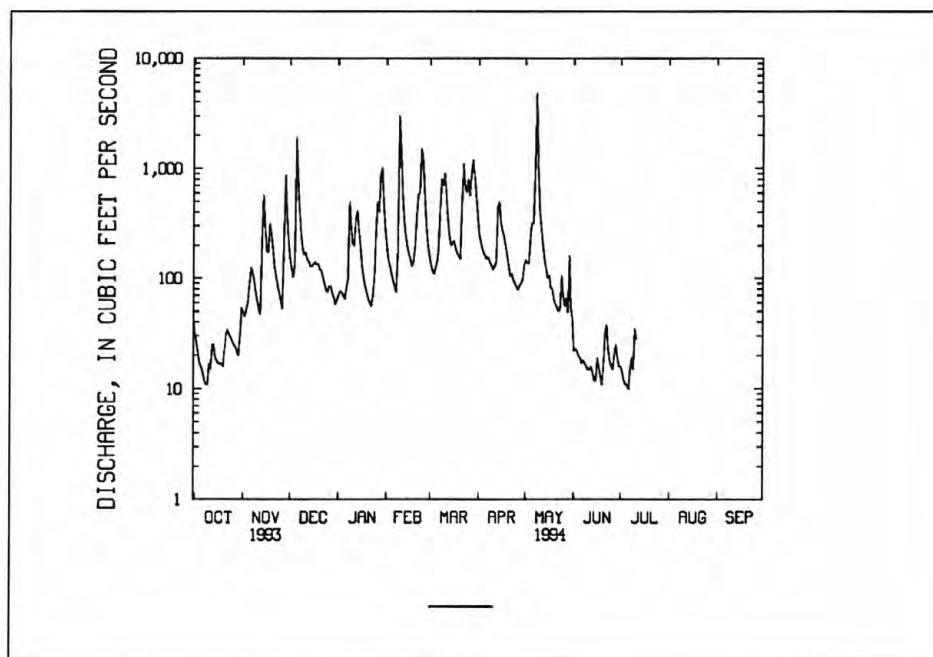
SUMMARY STATISTICS

FOR 1993 CALENDAR YEAR

WATER YEARS 1988 - 1994

ANNUAL TOTAL	45338.75		
ANNUAL MEAN	124	118	
HIGHEST ANNUAL MEAN		127	1990
LOWEST ANNUAL MEAN		109	1993
HIGHEST DAILY MEAN	2220	Mar 24	4880 May 8 1994
LOWEST DAILY MEAN	.15	Sep 2	.15 Sep 2 1993
ANNUAL SEVEN-DAY MINIMUM	.44	Aug 28	.44 Aug 28 1993
INSTANTANEOUS PEAK FLOW			(a) 8600 May 8 1994
INSTANTANEOUS PEAK STAGE			(a) 6.61 May 8 1994
INSTANTANEOUS LOW FLOW			.00 (b)
10 PERCENT EXCEEDS	218		288
50 PERCENT EXCEEDS	53		63
90 PERCENT EXCEEDS	2.2		5.2

- a Instantaneous peak flow and peak stage may have been higher on Feb. 9, 1994, (gage damaged by ice prior to this time).
b Aug. 27, 28, Sept. 1-3, 1993.



KANAWHA RIVER BASIN

03180500 GREENBRIER RIVER AT DURBIN, WV

LOCATION.--Lat 38°32'37", long 79°50'00", Pocahontas County, Hydrologic Unit 05050003, on left bank at Durbin, 500 ft downstream from confluence of East and West Forks, and at mile 153.4.

DRAINAGE AREA.--133 mi².

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

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

GAGE.--Water-stage recorder. Datum of gage is 2,699.71 ft above sea level.

REMARKS.--Records good except those for periods of estimated daily discharges (ice effect), which are poor. National Weather Service gage-height telemeter at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,800 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage Height (ft)	Date	Time	Discharge (ft ³ /s)	Gage Height (ft)
Dec. 5	1030	3,480	5.49	Feb. 23	1130	3,620	5.56
Jan. 28	2230	3,150	5.28	Mar. 27	1300	2,910	5.13
Feb. 9	1230	*9,320	*8.11	May 8	0400	8,100	7.62

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	87	141	367	e160	452	349	591	281	46	39	208	116
2	66	131	286	e170	326	308	482	274	44	30	169	77
3	54	148	239	e160	e280	245	438	274	38	25	264	60
4	45	173	296	e150	e240	299	425	473	35	33	182	55
5	37	302	2860	e140	e210	340	366	590	32	25	254	50
6	31	486	1620	e170	e190	335	333	583	31	22	302	44
7	27	392	789	e230	e170	516	371	1610	30	28	239	41
8	25	284	506	1140	e300	1850	315	5070	28	31	177	35
9	24	221	377	611	6760	1510	293	1600	25	28	131	31
10	44	182	332	453	2890	1910	288	794	24	111	100	27
11	38	156	387	435	1250	1210	304	514	24	82	78	26
12	71	137	347	845	736	691	309	402	24	47	65	26
13	88	576	335	910	557	538	1030	305	23	34	54	23
14	66	1360	287	603	446	473	1080	237	20	51	49	21
15	62	711	280	393	376	466	690	205	23	54	56	19
16	55	470	308	e280	330	504	651	238	73	78	44	18
17	51	437	321	e200	297	440	552	187	188	66	303	18
18	50	801	308	e170	291	400	451	169	68	95	471	27
19	46	631	323	e160	385	370	365	156	43	61	329	27
20	69	490	288	e150	663	331	296	143	44	49	231	20
21	111	352	277	e140	1300	700	240	129	132	111	183	17
22	119	270	230	e130	1400	2310	258	113	115	153	231	16
23	106	221	202	e170	2860	1430	222	102	73	187	238	14
24	94	195	178	e250	2880	1370	206	91	58	144	180	13
25	83	170	171	546	1540	1850	193	84	51	122	141	13
26	74	147	140	1100	841	1110	179	97	40	422	112	14
27	67	444	190	1020	536	2110	195	98	69	428	99	13
28	61	1690	162	2160	407	2700	200	75	70	641	90	13
29	55	847	149	2260	---	2040	194	63	50	380	73	12
30	80	516	130	1070	---	1220	218	56	42	302	66	12
31	151	---	e140	617	---	785	---	51	---	202	74	---
TOTAL	2037	13081	12825	16993	28913	30710	11735	15064	1563	4081	5193	898
MEAN	65.7	436	414	548	1033	991	391	486	52.1	132	168	29.9
MAX	151	1690	2860	2260	6760	2700	1080	5070	188	641	471	116
MIN	24	131	130	130	170	245	179	51	20	22	44	12
CFSM	.49	3.28	3.11	4.12	7.76	7.45	2.94	3.65	.39	.99	1.26	.23
IN.	.57	3.66	3.59	4.75	8.09	8.59	3.28	4.21	.44	1.14	1.45	.25

e Estimated

KANAWHA RIVER BASIN

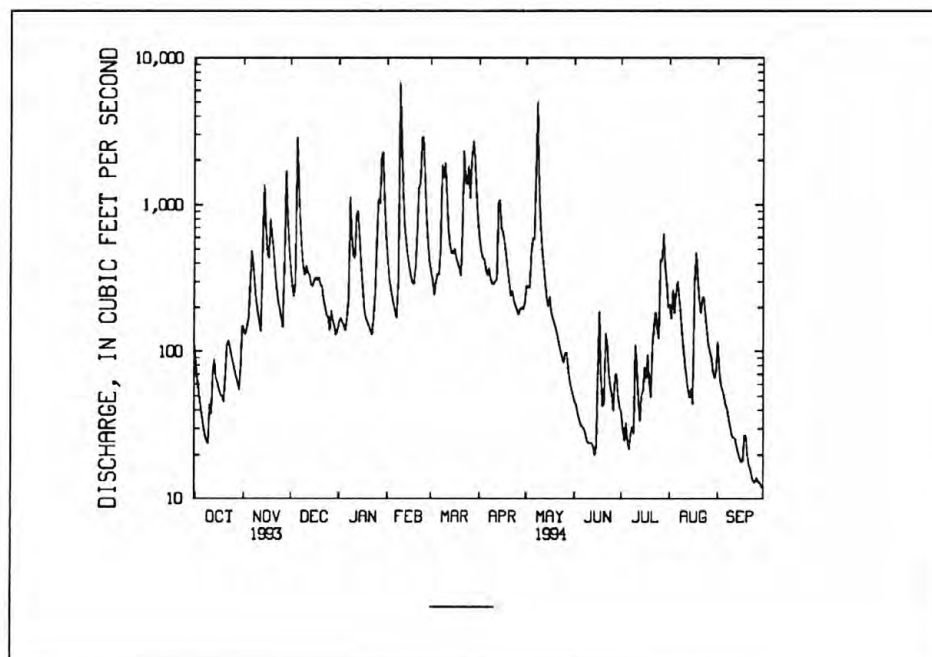
03180500 GREENBRIER RIVER AT DURBIN, WV--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1943 - 1994, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	108	221	333	356	433	575	431	300	156	95.5	84.0	61.8
MAX	665	1336	796	871	1033	1255	1041	687	598	308	496	328
(WY)	1977	1986	1973	1952	1994	1963	1958	1967	1981	1949	1984	1950
MIN	2.06	10.1	46.6	51.7	120	234	142	77.9	21.9	10.9	6.02	1.82
(WY)	1954	1954	1961	1981	1993	1957	1955	1976	1991	1988	1988	1953

SUMMARY STATISTICS	FOR 1993 CALENDAR YEAR			FOR 1994 WATER YEAR			WATER YEARS 1943 - 1994		
ANNUAL TOTAL	93396.7			143093					
ANNUAL MEAN	256			392			262		
HIGHEST ANNUAL MEAN							392		
LOWEST ANNUAL MEAN							177		
HIGHEST DAILY MEAN	3150			Mar 24			6760		
LOWEST DAILY MEAN	(e) 1.6			(a)			12		
ANNUAL SEVEN-DAY MINIMUM	2.4			Aug 28			13		
INSTANTANEOUS PEAK FLOW							9320		
INSTANTANEOUS PEAK STAGE							8.11		
INSTANTANEOUS LOW FLOW							12		
ANNUAL RUNOFF (CFSM)	1.92						2.95		
ANNUAL RUNOFF (INCHES)	26.12						40.02		
10 PERCENT EXCEEDS	486						954		
50 PERCENT EXCEEDS	132						190		
90 PERCENT EXCEEDS	9.9						28		

- a Sept. 2, 3.
b Sept. 29, 30.
c Sept. 29 to Oct. 4, 1953, and Oct. 2, 3, 1968.
d From rating curve extended above 5,000 ft³/s on basis of slope-area measurement of peak flow.
e Estimated.
f From floodmarks.
g Oct. 2, 3, 1968.



KANAWHA RIVER BASIN

03182500 GREENBRIER RIVER AT BUCKEYE, WV

LOCATION.--Lat 38°11'09", long 80°07'51", Pocahontas County, Hydrologic Unit 05050003, on right bank at upstream side of highway bridge at Buckeye, 1,000 ft upstream from Swago Creek, 3.5 mi downstream from Knapp Creek, and at mile 105.1 (corrected). Records include flow of Swago Creek.

DRAINAGE AREA.--540 mi², includes that of Swago Creek.

PERIOD OF RECORD.--September 1929 to current year.

REVISED RECORDS.--WSP 758: 1933. WSP 953: 1930-32, 1934-35(M), 1936, 1937(M), 1938-39, 1940(M). WSP 1275: 1936.

GAGE.--Water-stage recorder. Datum of gage is 2,085.89 ft above sea level. Prior to Feb. 27, 1939, nonrecording gage at same site and datum.

REMARKS.--Records good except those for periods of estimated daily discharges (ice effect), which are poor. U.S. Army Corps of Engineers satellite telemeter at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 11,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage Height (ft)	Date	Time	Discharge (ft ³ /s)	Gage Height (ft)
Dec. 5	0800	17,000	11.95	Feb. 23	1800	12,900	10.57
Jan. 28	1800	14,000	10.93	Mar. 27	1700	14,200	10.99
Feb. 9	2000	*27,400	*14.88	May 8	0800	26,500	14.64

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	267	518	1150	422	1750	1180	2220	654	143	163	719	144
2	204	433	865	502	1260	1040	1680	721	134	132	596	183
3	162	411	713	512	1060	886	1400	667	125	114	788	152
4	135	462	1170	e480	911	881	1240	1250	119	103	615	124
5	116	579	13000	e450	821	1860	1080	2090	112	107	574	111
6	102	958	5770	e500	697	2080	966	1820	110	108	893	110
7	92	950	2800	710	612	2670	1090	4120	109	87	696	103
8	83	723	1730	3610	645	6030	1110	19500	138	77	522	94
9	79	551	1240	2300	17500	5500	1020	5970	152	83	397	88
10	77	444	1040	1450	12000	6980	957	2960	171	113	314	81
11	78	372	1350	1200	4750	5490	939	1850	137	121	251	76
12	102	318	1290	3740	3410	2960	908	1340	121	171	207	65
13	119	303	1100	5160	2320	2040	3140	1040	108	118	179	57
14	172	2830	1000	2960	1840	1630	4060	811	98	100	161	54
15	137	1930	947	1830	1540	1410	2440	668	88	97	156	51
16	123	1240	1260	1060	1430	1410	2080	616	126	102	161	47
17	113	975	1340	e800	1360	1220	1690	568	202	116	1190	43
18	106	2330	1200	e600	1330	1110	1350	475	306	1170	2910	45
19	106	1890	1070	e560	1530	1210	1090	421	175	499	1470	44
20	122	1370	926	e520	2170	1120	899	386	252	308	906	44
21	269	980	860	e480	3520	1420	735	353	258	296	648	49
22	300	725	744	e450	4030	5280	801	314	291	1590	521	43
23	265	581	625	e600	8710	3980	894	283	250	1730	498	37
24	234	491	545	e900	9210	3000	837	256	268	1040	429	36
25	205	426	479	1960	5350	3460	766	238	188	607	333	34
26	182	367	e450	5720	3070	2980	681	250	158	942	266	36
27	165	999	e430	4970	1890	7760	649	258	175	1520	230	34
28	151	7150	507	8790	1360	9300	651	236	214	3900	211	34
29	138	3120	476	9610	---	7260	599	198	205	1850	192	32
30	154	1750	378	4360	---	4920	627	172	196	1760	160	31
31	414	---	374	2550	---	3060	---	156	---	1100	146	---
TOTAL	4972	36176	46829	69756	96076	101127	38599	50641	5129	20224	17339	2082
MEAN	160	1206	1511	2250	3431	3262	1287	1634	171	652	559	69.4
MAX	414	7150	13000	9610	17500	9300	4060	19500	306	3900	2910	183
MIN	77	303	374	422	612	881	599	156	88	77	146	31
CFSM	.30	2.23	2.80	4.17	6.35	6.04	2.38	3.03	.32	1.21	1.04	.13
IN.	.34	2.49	3.23	4.81	6.62	6.97	2.66	3.49	.35	1.39	1.19	.14

e Estimated

KANAWHA RIVER BASIN

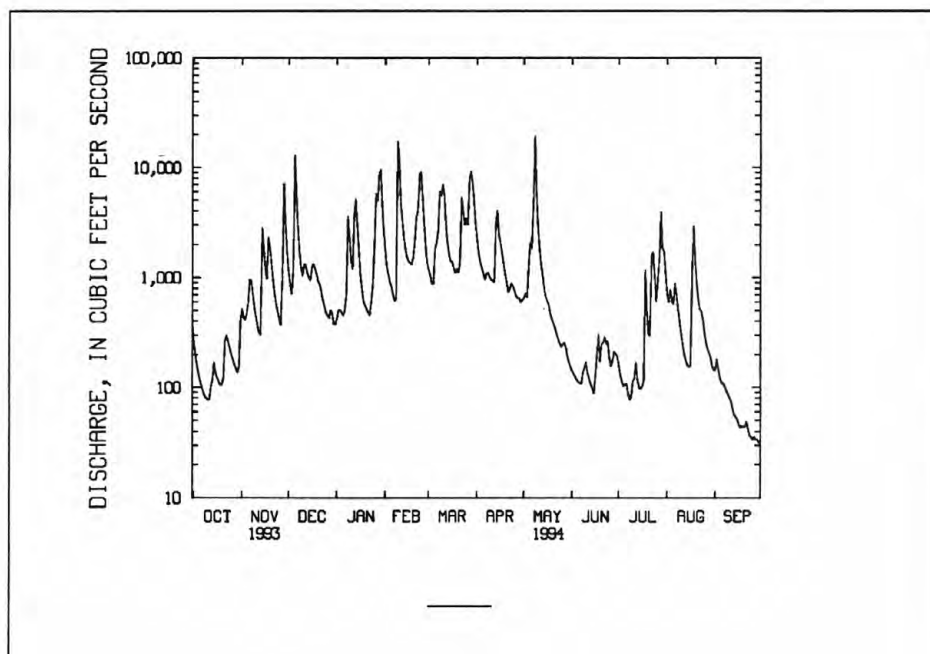
03182500 GREENBRIER RIVER AT BUCKEYE, WV--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1930 - 1994, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	356	638	1095	1259	1526	1970	1399	1048	507	339	310	199
MAX	2626	3602	2811	3166	3431	4672	3097	2274	2107	1333	2000	1255
(WY)	1977	1986	1973	1937	1994	1963	1958	1989	1940	1972	1942	1950
MIN	11.8	20.7	115	101	273	764	508	224	67.9	27.8	21.5	13.5
(WY)	1931	1931	1931	1981	1934	1988	1963	1930	1991	1930	1930	1930

SUMMARY STATISTICS	FOR 1993 CALENDAR YEAR				FOR 1994 WATER YEAR				WATER YEARS 1930 - 1994			
ANNUAL TOTAL	331791				488950				884			
ANNUAL MEAN	909				1340				1340			
HIGHEST ANNUAL MEAN									492			
LOWEST ANNUAL MEAN									492			
HIGHEST DAILY MEAN	15400				19500				44400			
LOWEST DAILY MEAN	18				31				5.2			
ANNUAL SEVEN-DAY MINIMUM	20				34				7.3			
INSTANTANEOUS PEAK FLOW					27400				(a) 82000			
INSTANTANEOUS PEAK STAGE					14.88				(b) 23.20			
INSTANTANEOUS LOW FLOW					30				3.8			
ANNUAL RUNOFF (CFSM)	1.68				2.48				1.64			
ANNUAL RUNOFF (INCHES)	22.86				33.68				22.25			
10 PERCENT EXCEEDS	1830				3250				2080			
50 PERCENT EXCEEDS	409				607				419			
90 PERCENT EXCEEDS	29				102				55			

- a From rating curve extended above 33,000 ft³/s on basis of slope-area measurement of peak flow.
b From floodmarks.



KANAWHA RIVER BASIN

03183500 GREENBRIER RIVER AT ALDERSON, WV

LOCATION.--Lat 37°43'27", long 80°38'30", Monroe County, Hydrologic Unit 05050003, on left bank 400 ft upstream from highway bridge at Alderson, 0.5 mi upstream from Muddy Creek, and at mile 29.2.

DRAINAGE AREA.--1,364 mi².

PERIOD OF RECORD.--July 1895 to current year. Monthly discharge only for some periods, published in WSP 1305.

REVISED RECORDS.--WSP 536: 1907-9. WSP 803: 1918(M). WSP 953: 1930-41. WSP 1275: 1897, 1905, 1910, 1914(M), 1915-16, 1917(M), 1919-20(M), 1924-25(M), 1927(M), 1929, 1949, WDR WV-82-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,529.42 ft above sea level. Prior to Oct. 15, 1929, nonrecording gage at bridge 400 ft downstream at same datum.

REMARKS.--Records fair except those for periods of estimated daily discharges (ice effect, missing gage-height record), which are poor. U.S. Army Corps of Engineers voice hydrologger at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 19,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage Height (ft)	Date	Time	Discharge (ft ³ /s)	Gage Height (ft)
Dec. 5	2000	26,800	12.04	Feb. 24	0600	26,100	11.83
Jan. 29	0800	24,500	11.38	Mar. 28	0600	27,500	12.22
Feb. 10	0900	*44,500	*16.69	May 8	1700	36,400	14.76

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	689	432	2760	1030	4570	2960	6170	1320	370	466	1790	470
2	501	766	2110	1130	3360	2970	4840	1380	335	424	1260	562
3	404	697	1700	1250	2520	2890	3930	1400	307	334	1440	449
4	337	650	1510	1320	2180	2580	3330	1860	282	274	1660	416
5	288	690	16700	1280	1890	5100	2850	3510	265	240	1280	369
6	254	834	16200	1210	1780	6910	2510	3830	248	215	1800	322
7	220	1240	7450	1230	1610	6370	2850	3270	242	193	1940	291
8	200	1240	4480	3420	1490	8080	3160	25300	254	192	1430	270
9	182	989	3280	6530	7960	10800	2850	18000	262	184	1060	250
10	179	782	2730	3960	36800	10300	2550	7390	310	166	798	232
11	168	652	2430	2980	14900	12700	2350	4600	430	154	622	216
12	177	562	2700	5670	11100	7690	2180	3290	378	149	511	203
13	173	497	2560	14000	7960	5160	2730	2560	312	179	418	190
14	170	450	2270	9080	6480	4010	8180	2050	270	211	362	177
15	191	2270	2160	5930	5580	3330	5820	1700	244	233	319	164
16	233	1830	2510	3940	4460	2910	4200	1570	230	214	307	149
17	256	1330	3090	2770	4080	2680	3570	1420	263	245	579	144
18	219	1320	3000	e2100	3790	2350	2930	1250	284	298	7310	154
19	211	2850	2690	1750	3670	2270	2450	1090	372	747	4620	150
20	215	2070	2390	e1400	4110	2360	2090	973	418	903	2450	139
21	215	1530	2190	e1300	5360	2330	1790	880	391	547	1700	133
22	292	1190	2020	e1100	7180	5930	1610	793	393	467	1310	126
23	409	928	1820	e1300	12300	8510	1700	713	414	1640	1040	122
24	445	766	1620	1530	23000	5840	1770	647	493	2130	849	121
25	393	667	1470	2260	14000	5040	1670	593	628	1460	778	125
26	355	602	1330	6200	8290	5500	1550	603	505	1030	627	120
27	326	605	1210	12100	5380	10600	1430	657	431	1150	547	116
28	299	6870	1120	10500	3710	24300	1380	597	439	3640	637	111
29	276	8100	1270	21400	---	18300	1320	538	445	4180	574	108
30	273	4050	1340	10700	---	13400	1290	476	420	3160	464	105
31	300	---	1140	e7000	---	8360	---	416	---	2830	415	---
TOTAL	8850	47459	101250	147370	209510	212530	87050	94676	10635	28255	40897	6504
MEAN	285	1582	3266	4754	7482	6856	2902	3054	354	911	1319	217
MAX	689	8100	16700	21400	36800	24300	8180	25300	628	4180	7310	562
MIN	168	432	1120	1030	1490	2270	1290	416	230	149	307	105
CFSM	.21	1.16	2.39	3.49	5.49	5.03	2.13	2.24	.26	.67	.97	.16
IN.	.24	1.29	2.76	4.02	5.71	5.80	2.37	2.58	.29	.77	1.12	.18

e Estimated

KANAWHA RIVER BASIN

03183500 GREENBRIER RIVER AT ALDERSON, WV--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1895 - 1994, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	739	1259	2282	3026	3513	4556	3103	2343	1311	813	715	422
MAX	4480	6006	6409	7472	7739	10970	7568	5398	6045	3481	4390	1900
(WY)	1977	1986	1974	1937	1897	1963	1987	1989	1907	1919	1898	1906
MIN	35.6	68.9	172	242	411	1332	802	489	203	68.9	43.2	33.8
(WY)	1931	1931	1931	1981	1934	1915	1915	1941	1991	1930	1930	1930

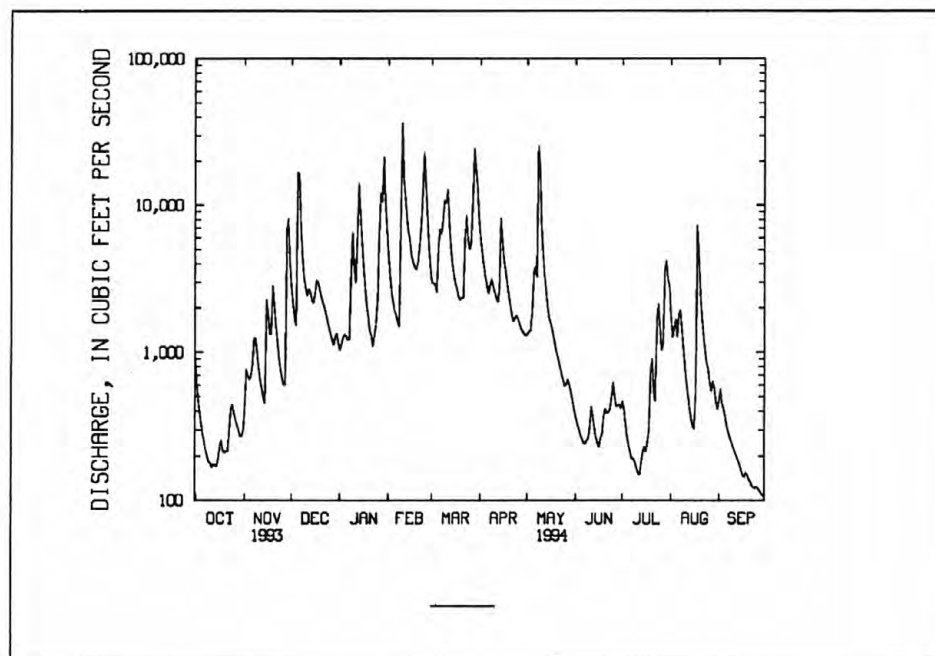
SUMMARY STATISTICS	FOR 1993 CALENDAR YEAR		FOR 1994 WATER YEAR		WATER YEARS 1895 - 1994	
ANNUAL TOTAL	706612		994986			
ANNUAL MEAN	1936		2726		2001	
HIGHEST ANNUAL MEAN					3372	
LOWEST ANNUAL MEAN					983	
HIGHEST DAILY MEAN	31300	Mar 24	36800	Feb 10	57300	Nov 5 1985
LOWEST DAILY MEAN	48	(a)	105	Sep 30	26	Aug 11 1930
ANNUAL SEVEN-DAY MINIMUM	57	Aug 20	115	Sep 24	28	Sep 29 1930
INSTANTANEOUS PEAK FLOW			44500	Feb 10	(b) 90600	Nov 5 1985
INSTANTANEOUS PEAK STAGE			16.69	Feb 10	(c) 23.95	Nov 5 1985
INSTANTANEOUS LOW FLOW			102	Sep 30	24	(d)
ANNUAL RUNOFF (CFSM)	1.42		2.00		1.47	
ANNUAL RUNOFF (INCHES)	19.27		27.14		19.94	
10 PERCENT EXCEEDS	4410		7070		4770	
50 PERCENT EXCEEDS	834		1300		941	
90 PERCENT EXCEEDS	82		213		146	

a Aug. 1, 25, 26.

b From rating curve extended above 37,000 ft³/s on basis of slope-area measurement of peak flow.

c From floodmarks.

d Aug. 12, Oct. 1, 2, 1930.



KANAWHA RIVER BASIN

03184000 GREENBRIER RIVER AT HILLDALE, WV

LOCATION.--Lat 37°38'24", long 80°48'19", Summers County, Hydrologic Unit 05050003, on left bank 100 ft downstream from State Highway 3 bridge at Hilldale, 0.1 mi upstream from Howard Creek, 0.9 mi upstream from Powley Creek, 5.0 mi southeast of Hinton, and at mile 5.5. Records include flow of Howard Creek.

DRAINAGE AREA.--1,619 mi², includes that of Howard Creek.

PERIOD OF RECORD.--June 1936 to current year.

REVISED RECORDS.--WSP 1435: 1955. WDR WV-82-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,388.66 ft above sea level (levels by U.S. Army Corps of Engineers).

REMARKS.--Records good except those for periods of estimated daily discharges (ice effect), which are poor. U.S. Army Corps of Engineers satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 18, 1936, reached a stage of 21.85 ft from data furnished by U.S. Army Corps of Engineers, discharge, 60,800 ft³/s.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 24,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage Height (ft)	Date	Time	Discharge (ft ³ /s)	Gage Height (ft)
Dec. 6	0100	28,800	14.44	Feb. 24	0600	29,900	14.74
Jan. 29	1200	27,000	13.90	Mar. 28	1000	32,400	15.44
Feb. 10	1300	*48,800	*19.51	May 8	2300	39,800	17.34

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	870	310	3090	1080	5870	3820	8460	1480	427	420	2330	478
2	602	654	2100	1100	4320	4730	6600	1550	380	463	1540	570
3	450	832	1580	1250	3240	4820	5320	1540	345	381	1290	585
4	359	725	1390	1410	2710	3750	4430	2000	316	302	1870	450
5	301	721	13100	1440	2360	6440	3740	3630	297	253	1490	415
6	257	822	21100	1320	2140	8610	3250	4590	280	222	1610	363
7	224	1210	9160	1390	1950	7760	3290	3900	265	199	2310	315
8	196	1540	5290	3960	1770	8630	3910	20900	274	181	1760	289
9	177	1250	3540	8430	7330	12500	3590	25100	283	182	1240	270
10	170	974	2680	5300	42000	11900	3180	9720	297	179	888	249
11	156	781	2340	3710	20000	15100	2940	5990	398	157	675	228
12	159	656	2720	6200	15000	10000	2680	4230	439	146	553	212
13	155	562	2680	16900	10500	6620	2950	3220	364	144	439	203
14	153	492	2230	11900	8180	5080	8750	2570	307	175	370	190
15	149	1640	2200	7500	6880	4160	7690	2080	283	204	327	178
16	166	2540	3080	4860	5900	3550	5470	1880	256	215	300	166
17	214	1770	3830	3300	5300	3140	4470	1710	249	200	984	155
18	214	1490	3490	e2400	4860	2800	3660	1420	260	271	6890	154
19	191	3030	2970	1960	4590	2590	3010	1250	320	257	6290	154
20	191	2860	2520	1630	4880	2700	2510	1100	411	1110	3590	151
21	191	2110	2230	e1400	6110	2650	2100	1000	399	666	2330	140
22	191	1600	1970	e1300	8220	6040	1820	915	378	485	1710	134
23	256	1210	1720	e1500	14200	10500	1780	825	419	1090	1310	129
24	432	981	1460	1760	27100	7450	1910	745	428	2280	941	124
25	398	832	1300	2840	17200	6110	1820	679	582	1910	799	122
26	354	728	1150	6790	10400	6410	1700	680	594	1250	693	127
27	317	795	1030	14300	6850	10300	1570	739	477	1010	573	121
28	285	4780	992	12800	4830	29100	1500	707	432	2790	577	114
29	258	10300	1410	23300	---	22900	1450	629	472	5290	635	109
30	249	5100	1570	15200	---	17400	1540	563	446	3610	525	107
31	263	---	1310	8530	---	11300	---	495	---	3560	442	---
TOTAL	8548	53295	107232	176760	254690	258860	107090	107837	11078	29602	47281	7002
MEAN	276	1776	3459	5702	9096	8350	3570	3479	369	955	1525	233
MAX	870	10300	21100	23300	42000	29100	8750	25100	594	5290	6890	585
MIN	149	310	992	1080	1770	2590	1450	495	249	144	300	107
CFSM	.17	1.10	2.14	3.52	5.62	5.16	2.20	2.15	.23	.59	.94	.14
IN.	.20	1.22	2.46	4.06	5.85	5.95	2.46	2.48	.25	.68	1.09	.16

e Estimated

KANAWHA RIVER BASIN

03184000 GREENBRIER RIVER AT HILLDALE, WV--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1936 - 1994, BY WATER YEAR (WY)

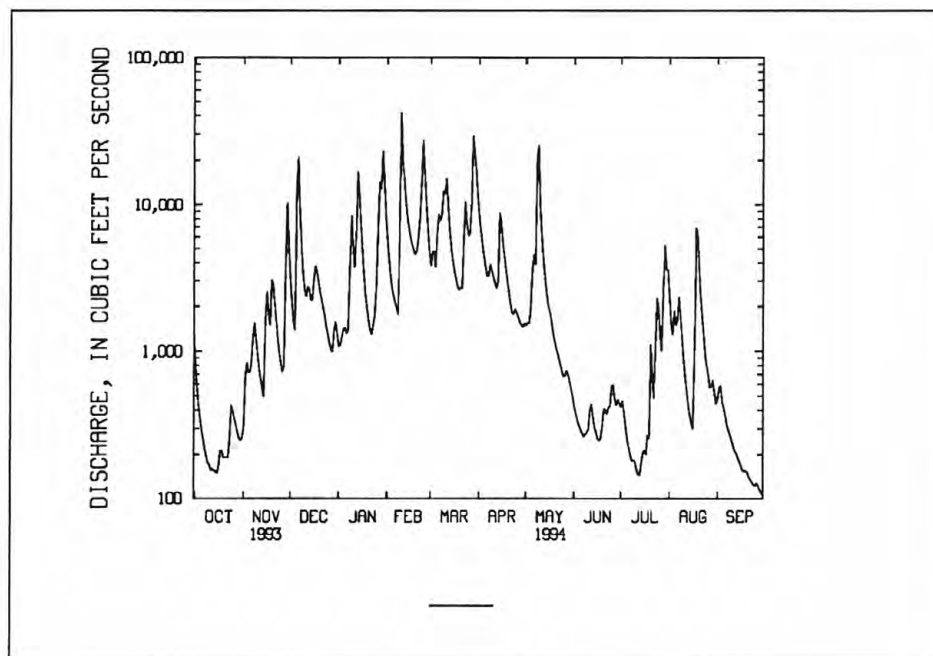
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	843	1386	2718	3343	4153	5211	3656	2740	1392	763	742	456
MAX	5112	6109	7866	8825	9096	12910	9535	6673	4713	3372	3800	1982
(WY)	1977	1986	1974	1937	1994	1963	1987	1989	1982	1972	1942	1979
MIN	46.4	76.8	260	302	930	1436	901	586	245	113	72.1	59.6
(WY)	1954	1954	1961	1981	1978	1988	1986	1941	1991	1966	1987	1946

SUMMARY STATISTICS	FOR 1993 CALENDAR YEAR		FOR 1994 WATER YEAR		WATER YEARS 1936 - 1994	
ANNUAL TOTAL	815738		1169275			
ANNUAL MEAN	2235		3203		2277	
HIGHEST ANNUAL MEAN					3359	1973
LOWEST ANNUAL MEAN					1189	1941
HIGHEST DAILY MEAN	34100	Mar 24	42000	Feb 10	51000	Dec 27 1973
LOWEST DAILY MEAN	53	Aug 2	107	Sep 30	39	Sep 19 1946
ANNUAL SEVEN-DAY MINIMUM	63	Jul 29	118	Sep 24	44	Oct 17 1953
INSTANTANEOUS PEAK FLOW			48800	Feb 10	(a) 83800	Nov 6 1985
INSTANTANEOUS PEAK STAGE			19.51	Feb 10	(b) 25.68	Nov 6 1985
INSTANTANEOUS LOW FLOW			104	Sep 30	39	(c)
ANNUAL RUNOFF (CFSM)	1.38		1.98		1.41	
ANNUAL RUNOFF (INCHES)	18.74		26.87		19.11	
10 PERCENT EXCEEDS	5180		8440		5460	
50 PERCENT EXCEEDS	903		1440		1050	
90 PERCENT EXCEEDS	100		194		155	

a From rating curve extended above 57,000 ft³/s.

b From floodmarks.

c Sept. 18-20, 1946, Sept. 16, 1964.



KANAWHA RIVER BASIN

03184500 NEW RIVER AT HINTON, WV

LOCATION.--Lat 37°40'13", long 80°53'45", Summers County, Hydrologic Unit 05050004, on right bank at Hinton, 0.2 mi upstream from Madam Creek, 1.5 mi downstream from Greenbrier River, at New River mile 62.0 and Kanawha River mile 160.0.

DRAINAGE AREA.--6,256 mi².

PERIOD OF RECORD.--June 1936 to current year.

REVISED RECORDS.--WDR WV-82-1: Drainage area. WDR WV-85-1: 1984(m).

GAGE.--Water-stage recorder. Datum of gage is 1,355.18 ft above sea level. Prior to June 5, 1949, water-stage recorder at site 400 ft upstream at same datum.

REMARKS.--No estimated daily discharges. Records good. Flow regulated since May 1939 by Claytor Lake and since August 1949 by Bluestone Lake. U.S. Army Corps of Engineers satellite telemeter at station.

PEAK DISCHARGE FOR CURRENT YEAR.--Maximum discharge, 66,300 ft³/s, Feb. 10, gage height, 9.09 ft.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2770	3160	6110	6470	34700	14500	43900	15300	3850	4190	6580	4250
2	2540	4990	4810	6030	18300	19800	36700	12100	3800	3270	4890	3800
3	2340	5890	4220	4990	10100	25600	27900	9660	3790	3190	4710	3550
4	2110	5800	4310	6670	8080	24600	19000	12700	3580	3870	6310	3680
5	2040	4620	23000	9030	8700	26700	14600	14900	3420	4020	6290	3930
6	1830	4000	45600	6180	7280	29200	15500	15800	3410	2820	6130	4000
7	1720	3670	28600	7430	6040	26400	12700	12700	3400	2730	5430	3650
8	1690	3530	15600	14700	8380	24000	13300	28800	4690	2670	4550	3000
9	1690	3350	10200	20500	15200	27500	12300	36300	7740	2360	4030	2770
10	1760	3150	8930	12900	58700	26100	12100	18300	6830	2350	4310	2770
11	2090	2970	7660	9870	42900	25600	13200	13100	5680	2310	3930	2840
12	2030	2620	6570	18100	44500	19200	14600	10800	6070	2320	3010	2860
13	1930	2420	6120	37800	43300	14200	15200	9180	6280	2540	3800	3260
14	1930	2370	6020	32900	39600	10400	25700	7950	5570	3090	3410	2710
15	1930	3090	6070	22800	35400	10100	25700	7590	5680	3230	2960	2200
16	1960	4130	7060	14200	29500	13500	21400	7430	4060	2790	3940	2160
17	1990	3490	8000	9520	23400	9960	14200	6740	3440	2700	13600	2360
18	2020	3460	8640	13600	18700	9590	11600	6400	3430	3520	20100	2500
19	2000	4720	7950	14300	16700	9010	13200	5110	3450	3970	42900	2530
20	1980	4760	6590	8100	16500	8090	11600	5440	3740	4750	34800	2260
21	1810	4130	6220	7200	17900	7750	9800	5900	3870	4390	19000	2840
22	1730	3490	6840	7710	18700	14300	9130	4710	3630	4360	10500	2550
23	2150	3030	5250	7710	27600	17900	8800	4140	3540	5780	6350	2560
24	2610	2620	4620	7070	49200	13600	9500	4940	3550	6400	6250	2330
25	2710	2380	4750	11300	40900	12900	7760	5440	3690	5180	5820	2240
26	2140	2740	3840	16500	31700	12400	6920	4090	3770	4410	5350	2300
27	1930	3210	3400	26600	23900	19200	7410	4320	3820	4580	4020	2740
28	2410	7710	3650	27300	17200	45900	7790	4760	4130	7700	4100	2980
29	2370	15100	5770	32400	---	55900	7850	4550	4720	11000	4700	2940
30	2320	8410	7600	18300	---	59700	11400	4560	5070	10300	3900	2500
31	2330	---	7570	25600	---	50700	---	4100	---	8870	4170	---
TOTAL	64860	129010	281570	463780	713080	684300	460760	307810	131700	135660	259840	87060
MEAN	2092	4300	9083	14960	25470	22070	15360	9929	4390	4376	8382	2902
MAX	2770	15100	45600	37800	58700	59700	43900	36300	7740	11000	42900	4250
MIN	1690	2370	3400	4990	6040	7750	6920	4090	3400	2310	2960	2160

KANAWHA RIVER BASIN

03184500 NEW RIVER AT HINTON, WV--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1936 - 1938, BY WATER YEAR (WY) [UNREGULATED]

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	11260	5164	7666	17720	11710	10180	7563	7767	6657	5842	5238	3606
MAX	17110	7554	7958	26230	14240	12070	7996	8741	9633	11730	7740	5551
(WY)	1938	1938	1937	1937	1937	1938	1937	1938	1938	1938	1938	1937
MIN	5415	2773	7374	9209	9181	8285	7129	6792	3681	2820	2946	2225
(WY)	1937	1937	1938	1938	1938	1937	1938	1937	1937	1937	1936	1936

SUMMARY STATISTICS

WATER YEARS 1936 - 1938

ANNUAL MEAN	8642
HIGHEST ANNUAL MEAN	9236
LOWEST ANNUAL MEAN	8047
HIGHEST DAILY MEAN	79500
LOWEST DAILY MEAN	1300
ANNUAL SEVEN-DAY MINIMUM	1580
10 PERCENT EXCEEDS	15900
50 PERCENT EXCEEDS	5570
90 PERCENT EXCEEDS	2370

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

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	4076	5321	8040	9843	12990	15510	12550	9519	6249	4189	4005	3344
MAX	14720	16780	19380	20990	30020	32430	35060	18470	17490	11330	19800	13460
(WY)	1977	1978	1949	1974	1957	1955	1987	1958	1992	1949	1940	1989
MIN	1371	1587	1736	1850	4855	4005	3717	3074	1960	1489	1386	1450
(WY)	1942	1940	1940	1956	1941	1988	1986	1941	1988	1988	1988	1953

SUMMARY STATISTICS

FOR 1993 CALENDAR YEAR

FOR 1994 WATER YEAR

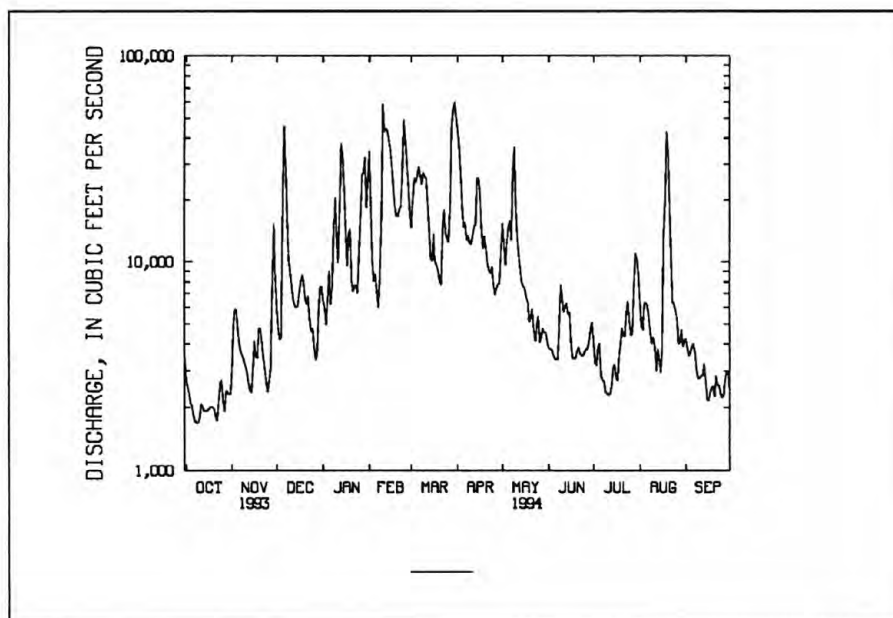
WATER YEARS 1939 - 1994

ANNUAL TOTAL	3168820	3719430	
ANNUAL MEAN	8682	10190	7944
HIGHEST ANNUAL MEAN			11490
LOWEST ANNUAL MEAN			3988
HIGHEST DAILY MEAN	66900	Mar 26	59700
LOWEST DAILY MEAN	1510	Sep 3	1690
ANNUAL SEVEN-DAY MINIMUM	1630	Sep 2	1830
INSTANTANEOUS PEAK FLOW			66300
INSTANTANEOUS PEAK STAGE			9.09
INSTANTANEOUS LOW FLOW			1320
10 PERCENT EXCEEDS	16500		25700
50 PERCENT EXCEEDS	4990		5900
90 PERCENT EXCEEDS	1990		2370

a Oct. 8, 9.

b From rating curve extended above 80,000 ft³/s on basis of slope-area measurement at station at Bluestone Dam, and gaged inflow from Greenbrier River.

c Sept. 21, 22.



KANAWHA RIVER BASIN

03185400 NEW RIVER AT THURMOND, WV

LOCATION.--Lat 37°57'18", long 81°04'36", Fayette County, Hydrologic Unit 05050004, on right bank at Thurmond, at Chessie System pump house, 0.1 mi upstream from Dunloup Creek, 0.3 mi upstream from railroad/highway bridge, at New River mile 25.8 and Kanawha River mile 122.4.

DRAINAGE AREA.--6,687 mi², excluding that of Dunloup Creek.

PERIOD OF RECORD.--February 1981 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,030.71 (corrected) ft above sea level.

REMARKS.--No estimated daily discharges. Records good. Flow regulated by Claytor Lake and Bluestone Lake. National Park Service gage-height telemeter at station.

PEAK DISCHARGE FOR CURRENT YEAR.--Maximum discharge, 74,900 ft³/s, Feb. 10, gage height, 18.17 ft.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3210	2490	7110	7220	39000	14600	47500	15300	4160	5090	7540	5020
2	2760	4300	5760	6620	23600	20700	39900	13600	4090	3460	5700	4240
3	2570	6100	4690	6110	11800	28200	31200	10500	4010	3260	4910	3940
4	2220	6110	4650	6290	9270	27300	20800	11600	3980	3340	5940	3640
5	2080	5750	18900	9540	8640	29400	15900	15400	3630	4470	7440	4130
6	1990	4370	51400	8410	9070	31900	15400	16500	3590	3480	7140	4210
7	1700	4260	34600	7720	6720	29200	15500	15600	3610	2520	6630	4200
8	1660	3650	18700	18300	7510	25800	13400	25500	4140	2860	4940	3510
9	1630	3630	12000	23300	20100	29500	13200	44100	7300	2410	4780	2880
10	1670	3350	9420	17000	64800	30000	12900	21800	7520	2330	4130	2860
11	1780	3120	8960	11200	52500	28300	13600	15400	6330	2260	4800	2880
12	2210	2920	7320	17500	49200	22400	14800	12100	5760	2230	3560	2970
13	1940	2440	6720	40500	48000	16800	18500	10400	6740	2280	3480	3020
14	1910	2370	6460	39100	43500	12600	25200	8630	5770	2780	3720	3550
15	1910	2370	6620	27500	39000	9750	29300	8070	5740	3520	3510	2230
16	1900	4310	7570	17100	33100	15100	23700	8280	5360	3300	2800	2180
17	1920	4110	8750	11900	26600	10500	17000	7650	3260	2810	15400	2160
18	1960	4100	9240	11900	21200	10900	12800	6890	3530	2930	22500	2560
19	1980	4330	9510	15700	18300	9430	13300	6310	3450	4400	42800	2560
20	2030	5520	7540	9940	17900	8540	13400	5190	3600	4340	38700	2430
21	1970	4680	7030	7270	19100	8500	10300	6280	4010	5060	24200	2740
22	1750	4070	7030	7340	20300	14600	9790	5680	3940	4180	12700	2870
23	1710	3290	6880	7590	27700	20200	9220	4500	3660	5280	7960	2340
24	2400	2960	4850	8400	54000	15300	9760	4670	3680	6740	6330	2580
25	2740	2500	5240	10600	46600	14100	8700	5780	3680	5930	6350	2200
26	2700	2330	4920	19000	35800	13400	7240	5440	3850	4890	5840	2290
27	1700	3360	3520	31200	27500	19700	7470	4100	3890	5330	5160	2350
28	2140	5120	3830	32000	19600	54400	7980	5240	4080	6660	3760	3060
29	2350	16600	4860	38100	---	58300	8100	5030	4590	11500	4930	3050
30	2350	10700	7560	23300	---	66300	9830	4910	5080	10600	4800	2930
31	2390	---	8250	22500	---	55500	---	4730	---	9940	3840	---
TOTAL	65230	135210	309890	520150	800410	751220	495690	335180	136030	140180	286290	91580
MEAN	2104	4507	9996	16780	28590	24230	16520	10810	4534	4522	9235	3053
MAX	3210	16600	51400	40500	64800	66300	47500	44100	7520	11500	42800	5020
MIN	1630	2330	3520	6110	6720	8500	7240	4100	3260	2230	2800	2160

KANAWHA RIVER BASIN

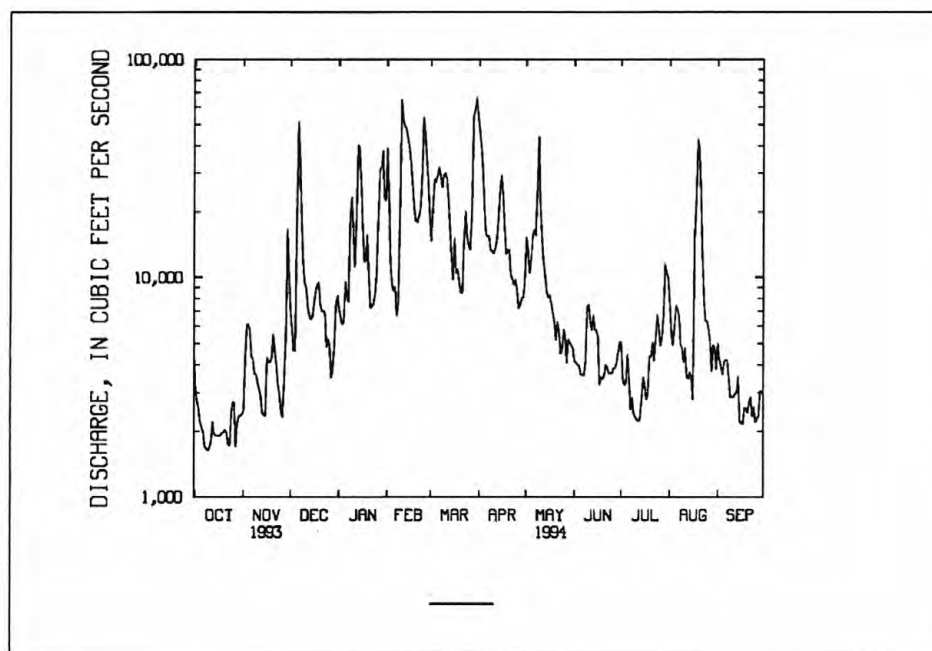
03185400 NEW RIVER AT THURMOND, WV--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1981 - 1994, BY WATER YEAR (WY)
[REGULATED, UNADJUSTED]

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	4200	6105	9430	10830	15690	17110	14930	11460	7059	4029	3770	3340
MAX	16510	15260	14530	19370	28590	34950	40500	19650	19050	8029	9235	14310
(WY)	1990	1986	1984	1991	1994	1993	1987	1989	1992	1989	1994	1989
MIN	1388	2250	4199	4527	6701	4154	3958	6068	2010	1532	1393	1738
(WY)	1992	1982	1989	1986	1988	1988	1986	1988	1988	1988	1988	1985
SUMMARY STATISTICS	FOR 1993 CALENDAR YEAR					FOR 1994 WATER YEAR				WATER YEARS 1981 - 1994		
ANNUAL TOTAL	3406760					4067060						
ANNUAL MEAN	9334					11140				9034		
HIGHEST ANNUAL MEAN										11540		
LOWEST ANNUAL MEAN										4336		
HIGHEST DAILY MEAN	71000					Mar 5				79900		
LOWEST DAILY MEAN	1520					Sep 6				808		
ANNUAL SEVEN-DAY MINIMUM	1620					Sep 3				852		
INSTANTANEOUS PEAK FLOW						74900				(a) 89400		
INSTANTANEOUS PEAK STAGE						18.17				18.95		
INSTANTANEOUS LOW FLOW						1410				804		
10 PERCENT EXCEEDS	18400					27900				19600		
50 PERCENT EXCEEDS	5240					6310				5390		
90 PERCENT EXCEEDS	1960					2360				1830		

a From rating curve extended above 59,000 ft³/s.

b July 10, 11, 1988.



KANAWHA RIVER BASIN

03186500 WILLIAMS RIVER AT DYER, WV

LOCATION.--Lat 38°22'44", long 80°29'03", Webster County, Hydrologic Unit 05050005, on left bank at Dyer, 0.2 mi downstream from Craig Run, 7.0 mi southwest of Webster Springs, and at mile 2.3.

DRAINAGE AREA.--128 mi².

PERIOD OF RECORD.--September 1929 to current year. Monthly discharge only for some periods, published in WSP 1305.

REVISED RECORDS.--WSP 1275: 1930.

GAGE.--Water-stage recorder. Datum of gage is 2,193.46 ft above sea level, adjustment of 1912. Prior to June 11, 1930, nonrecording gage at same site and datum.

REMARKS.--Records good except those for periods of estimated daily discharges (ice effect, missing gage-height records), which are poor.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 4,600 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage Height (ft)	Date	Time	Discharge (ft ³ /s)	Gage Height (ft)
Feb. 9	1130	*12,200	*12.65	Aug. 17	1500	7,220	9.44
May 8	0300	11,800	12.40				

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e80	215	332	e100	476	e350	e700	e330	47	181	482	294
2	e60	183	269	e120	333	e330	e640	e350	42	119	366	221
3	e55	203	234	e160	302	e300	e600	e300	36	89	397	160
4	e45	247	399	197	249	e280	e560	e820	30	84	254	134
5	e40	814	3420	166	e200	e400	e540	635	26	77	868	106
6	e30	936	1470	158	e180	e350	e500	501	23	63	819	91
7	e24	537	811	1330	e150	e700	e760	2410	22	86	492	85
8	23	362	553	1830	225	e2000	e600	5480	27	101	328	69
9	22	280	408	829	7880	e1500	e450	1480	30	82	234	56
10	42	231	455	547	2440	e1400	e400	845	23	869	175	47
11	52	196	888	431	1470	e900	e390	567	26	463	133	44
12	45	170	608	1220	1120	e600	e370	434	23	244	102	37
13	84	401	470	1180	926	e500	e1800	329	21	163	81	31
14	66	1230	400	767	717	e420	e1000	256	18	153	69	25
15	54	765	382	492	535	e380	e750	213	135	148	76	22
16	47	631	406	365	e450	e400	e700	300	415	210	93	20
17	41	645	428	e290	e350	e330	e660	229	315	183	2690	21
18	44	1160	375	e210	e320	e350	e400	194	391	415	1670	51
19	50	719	382	e180	e400	e430	e350	170	272	226	777	42
20	277	545	325	e150	e700	e370	e280	151	424	269	449	28
21	360	401	298	e140	e1100	e800	e240	131	541	576	312	22
22	354	310	242	e130	e1200	e1800	e330	110	323	823	327	18
23	239	252	220	e120	e1700	e1100	e300	95	208	644	286	16
24	183	216	191	e200	e2000	e1100	e250	81	165	392	200	14
25	147	186	176	e450	e1000	e1400	e230	76	127	269	154	13
26	123	158	152	1830	e700	e900	e200	95	96	769	127	14
27	106	588	e140	1320	e500	e2000	e250	125	122	1230	307	15
28	94	1570	e120	2650	e400	e2800	e270	96	135	1490	275	16
29	83	658	e110	2070	---	e1500	e230	75	110	1460	182	13
30	95	446	e100	1000	---	e1000	e270	62	179	1480	141	12
31	264	---	e90	664	---	e800	---	54	---	688	133	---
TOTAL	3229	15255	14854	21296	28023	27490	15020	16994	4352	14046	12999	1737
MEAN	104	508	479	687	1001	887	501	548	145	453	419	57.9
MAX	360	1570	3420	2650	7880	2800	1800	5480	541	1490	2690	294
MIN	22	158	90	100	150	280	200	54	18	63	69	12
CFSM	.81	3.97	3.74	5.37	7.82	6.93	3.91	4.28	1.13	3.54	3.28	.45
IN.	.94	4.43	4.32	6.19	8.14	7.99	4.37	4.94	1.26	4.08	3.78	.50

e Estimated

KANAWHA RIVER BASIN

03186500 WILLIAMS RIVER AT DYER, WV--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1929 - 1994, BY WATER YEAR (WY)

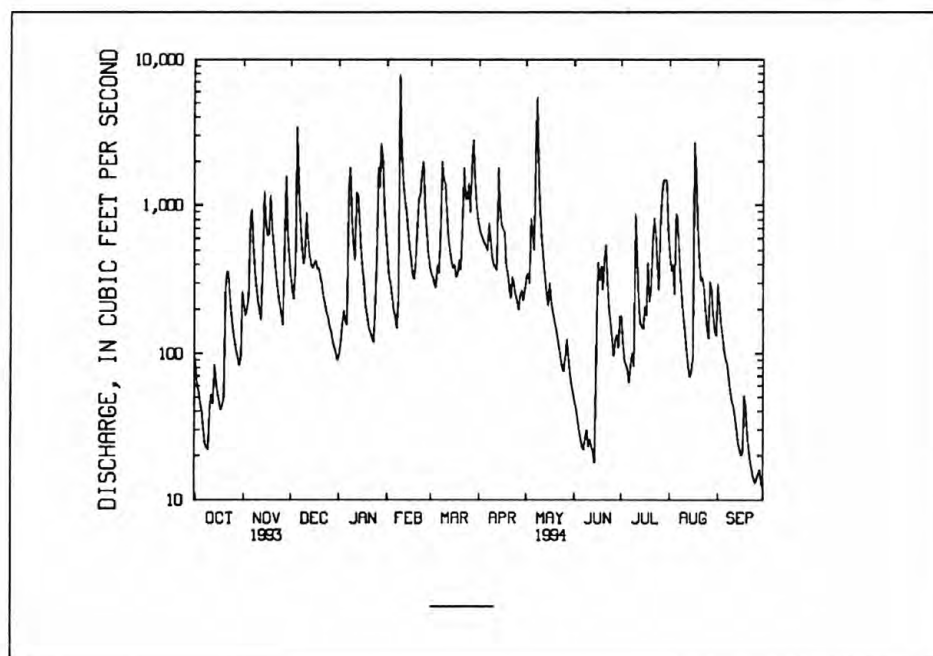
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	170	299	426	450	519	666	499	350	202	189	174	90.8
MAX	852	1085	934	903	1005	1518	1421	826	769	803	710	408
(WY)	1930	1986	1979	1974	1939	1963	1958	1967	1940	1954	1989	1950
MIN	1.07	8.87	94.9	75.7	118	326	177	66.1	19.5	5.85	6.97	2.34
(WY)	1954	1954	1940	1940	1978	1976	1942	1964	1965	1930	1944	1953

SUMMARY STATISTICS	FOR 1993 CALENDAR YEAR				FOR 1994 WATER YEAR				WATER YEARS 1929 - 1994			
ANNUAL TOTAL	115124.1				175295							
ANNUAL MEAN	315				480				335			
HIGHEST ANNUAL MEAN									480			
LOWEST ANNUAL MEAN									187			
HIGHEST DAILY MEAN	3420				7880				10000			
LOWEST DAILY MEAN	2.5				12				.50			
ANNUAL SEVEN-DAY MINIMUM	3.4				14				.54			
INSTANTANEOUS PEAK FLOW					12200				(a) 22000			
INSTANTANEOUS PEAK STAGE					12.65				(c) 18.45			
INSTANTANEOUS LOW FLOW					11				.50			
ANNUAL RUNOFF (CFSM)	2.46				3.75				2.62			
ANNUAL RUNOFF (INCHES)	33.46				50.95				35.60			
10 PERCENT EXCEEDS	715				1170				765			
50 PERCENT EXCEEDS	158				280				181			
90 PERCENT EXCEEDS	7.9				42				21			

a Oct. 13-16, 21, 1953.

b From rating curve extended above 7,000 ft³/s on basis of slope-area measurements at gage heights 12.33 ft and 1845.ft.

c From floodmarks.



KANAWHA RIVER BASIN

03187500 CRANBERRY RIVER NEAR RICHWOOD, WV

LOCATION.--Lat 38°17'43", long 80°31'36", Nicholas County, Hydrologic Unit 05050005, Monongahela National Forest, on left bank 30 ft downstream from U.S. Forest Service highway bridge, 0.6 mi upstream from Barrenshe Run, 5.0 mi north of Richwood, and at mile 5.6.

DRAINAGE AREA.--80.4 mi².

PERIOD OF RECORD.--October 1944 to December 1951, June 1964 to September 1982, March 1984 to current year.

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

GAGE.--Water-stage recorder. Elevation of gage is 2,100 ft above sea level, from topographic map.

REMARKS.--Records good except those below 50 cfs, which are fair, and those for periods of estimated daily discharges (ice effect, missing gage-height record), which are poor. Gage-height data for water years 1972-79 provided by U.S. Forest Service.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of July 19, 1954, reached a stage of 12.22 ft, discharge, 18,000 ft³/s, from floodmarks, present site and datum.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,900 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage Height (ft)	Date	Time	Discharge (ft ³ /s)	Gage Height (ft)
Dec. 5	1045	2,920	6.55	May 8	0200	*7,540	*9.46
Feb. 9	1100	6,820	9.01	Aug. 17	1430	4,190	7.43

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	57	129	207	e65	298	214	430	209	28	133	262	303
2	45	111	169	e75	209	213	395	217	24	89	208	228
3	41	122	147	93	183	195	376	189	21	71	274	170
4	37	144	298	113	160	179	361	457	18	67	174	141
5	29	485	2360	98	e130	240	286	385	16	52	402	113
6	23	622	984	95	e110	222	266	298	14	40	469	95
7	19	356	518	864	e90	315	468	1650	14	58	287	86
8	17	241	345	1080	131	1260	361	3520	16	36	198	68
9	17	187	253	504	4590	865	289	995	15	38	149	55
10	29	153	308	331	1690	864	254	577	14	395	114	46
11	35	127	627	257	957	591	244	383	18	238	88	43
12	31	109	407	700	725	397	229	291	16	138	69	38
13	52	175	301	770	602	312	1120	223	14	98	54	30
14	44	669	251	465	458	266	748	178	16	99	46	25
15	37	459	237	303	342	237	464	152	35	125	53	22
16	32	398	247	215	266	247	464	199	85	170	72	20
17	29	404	252	e150	218	201	366	158	119	130	1680	19
18	33	724	221	e120	198	207	278	138	144	148	1240	38
19	41	444	222	e100	215	269	222	123	80	115	541	32
20	167	337	190	e90	357	229	180	110	123	125	314	23
21	231	248	175	e80	708	458	149	95	397	150	216	18
22	232	193	146	e75	739	1150	202	80	216	223	210	15
23	163	159	129	e120	1050	670	200	70	131	237	189	13
24	124	135	112	204	1200	657	162	60	94	166	132	11
25	101	115	103	356	702	860	143	56	73	122	99	10
26	85	99	93	1100	464	541	128	61	60	208	81	11
27	74	343	e85	859	322	1280	151	67	63	501	861	12
28	66	1000	e75	1610	249	1720	164	55	94	745	533	13
29	58	413	e65	e1200	---	1060	140	44	93	966	286	11
30	66	276	e60	e700	---	677	160	37	166	861	195	8.6
31	153	---	e55	410	---	503	---	31	---	396	169	---
TOTAL	2168	9377	9642	13202	17363	17099	9400	11108	2217	6940	9665	1717.6
MEAN	69.9	313	311	426	620	552	313	358	73.9	224	312	57.3
MAX	232	1000	2360	1610	4590	1720	1120	3520	397	966	1680	303
MIN	17	99	55	65	90	179	128	31	14	36	46	8.6
CFSM	.87	3.89	3.87	5.30	7.71	6.86	3.90	4.46	.92	2.78	3.88	.71
IN.	1.00	4.34	4.46	6.11	8.03	7.91	4.35	5.14	1.03	3.21	4.47	.79

e Estimated

KANAWHA RIVER BASIN

03187500 CRANBERRY RIVER NEAR RICHWOOD, WV--Continued

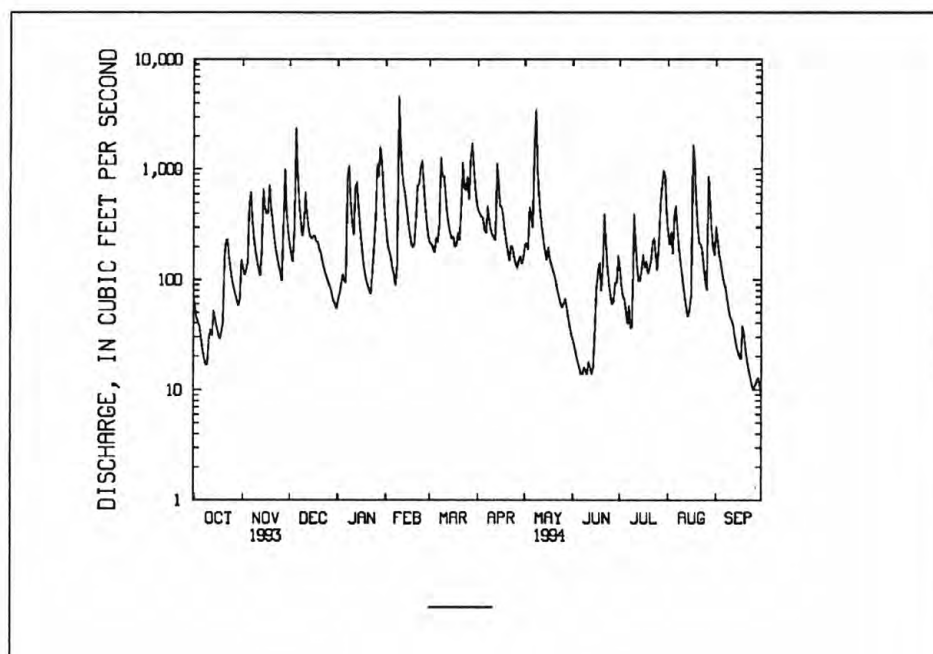
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1945-1952, 1964-1982, 1984-1994, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	127	225	327	312	349	448	323	261	151	123	115	87.3
MAX	613	746	632	636	642	954	570	557	447	360	562	313
(WY)	1977	1986	1979	1974	1982	1984	1987	1981	1974	1979	1989	1971
MIN	9.58	36.7	63.0	40.3	68.2	245	137	86.1	12.7	7.64	8.56	2.50
(WY)	1993	1947	1966	1977	1978	1976	1946	1991	1966	1993	1946	1946

SUMMARY STATISTICS	FOR 1993 CALENDAR YEAR				FOR 1994 WATER YEAR				WATER YEARS 1945 - 1994			
ANNUAL TOTAL	73240.00				109898.6							
ANNUAL MEAN	201				301				236			
HIGHEST ANNUAL MEAN									318			
LOWEST ANNUAL MEAN									156			
HIGHEST DAILY MEAN	2360				4590				6770			
LOWEST DAILY MEAN	.55				8.6				.16			
ANNUAL SEVEN-DAY MINIMUM	1.4				11				.28			
INSTANTANEOUS PEAK FLOW					7540				(a) 11200			
INSTANTANEOUS PEAK STAGE					9.46				(b) 11.93			
INSTANTANEOUS LOW FLOW					8.1				.14			
ANNUAL RUNOFF (CFSM)	2.50				3.74				2.94			
ANNUAL RUNOFF (INCHES)	33.89				50.85				39.95			
10 PERCENT EXCEEDS	409				724				540			
50 PERCENT EXCEEDS	102				170				132			
90 PERCENT EXCEEDS	5.7				30				18			

a From rating curve extended above 9,000 ft³/s on basis of slope-area measurement at gage height 11.00 ft.

b From floodmarks.



KANAWHA RIVER BASIN

03189100 GAULEY RIVER NEAR CRAIGSVILLE, WV

LOCATION.--Lat 38°17'27", long 80°38'57", Nicholas County, Hydrologic Unit 05050005, on right bank at downstream side of highway bridge on State Highway 20, 200 ft downstream from Cherry River, 1.8 mi downstream from Cranberry River, 2.7 mi south of Craigsville, and at mile 61.5.

DRAINAGE AREA.--529 mi².

PERIOD OF RECORD.--October 1964 to September 1982, October 1982 to September 1983 (gauge heights, discharge measurements, and annual maximum discharge only), October 1985 to current year.

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

GAGE.--Water-stage recorder. Datum of gage is 1,870.00 ft above sea level.

REMARKS.--Records good except those for periods of estimated daily discharges (ice effect), which are poor. U.S. Army Corps of Engineers satellite telemeter at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 12,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage Height (ft)	Date	Time	Discharge (ft ³ /s)	Gage Height (ft)
Dec. 5	1300	16,300	16.93	Feb. 9	1500	*39,600	*22.32
Jan. 8	0100	12,900	15.87	May 8	0300	39,500	22.30
Jan. 28	2200	13,200	15.97	Aug. 17	1900	18,100	17.46

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	290	838	1390	e400	2060	1530	3090	1440	187	501	1470	1640
2	236	689	1110	e500	1400	1700	2740	1750	167	363	1210	1390
3	207	757	942	656	1230	1990	2460	1420	145	275	1490	980
4	188	948	1320	1600	1000	1660	2260	2700	124	328	993	764
5	160	2490	12700	1360	e850	2310	1840	2580	105	258	2270	581
6	130	3760	6960	952	e700	2200	1600	2050	94	215	3190	482
7	105	2300	3620	4580	e600	2490	2540	6580	99	208	1940	434
8	91	1530	2420	8780	733	6880	2380	22800	129	196	1290	359
9	83	1150	1770	3830	25100	5880	1990	6770	118	209	900	295
10	111	925	1660	2410	11600	5530	1720	3740	155	1540	640	260
11	179	753	3080	1870	7500	4060	1650	2500	129	1310	480	243
12	180	632	2430	4440	5910	2790	1510	1870	114	624	380	213
13	221	792	1900	5400	4250	2170	6330	1440	101	418	304	178
14	252	4120	1620	3520	3300	1860	5180	1090	84	508	265	149
15	208	3010	1580	2330	2470	1610	3150	890	91	491	294	129
16	180	2560	1810	1510	1930	1640	2860	1020	410	700	369	111
17	160	2420	1970	e1200	1550	1370	2380	893	780	614	8550	103
18	166	5140	1730	e900	1370	1370	1870	717	968	1140	7770	171
19	195	3190	1630	e750	1390	2060	1510	619	663	794	3540	207
20	458	2330	1390	e650	1990	1880	1200	544	1150	744	2050	153
21	1230	1720	1270	e580	3500	2350	981	474	1280	1390	1390	113
22	1400	1300	1060	e540	4080	6360	1210	410	1150	1660	1300	93
23	966	1040	926	e500	5940	4140	1350	357	693	1580	1190	80
24	683	868	799	850	7490	3570	1110	311	552	1070	835	72
25	527	724	724	1670	4770	4470	987	288	457	687	607	64
26	434	598	614	7660	3250	3280	873	327	359	1820	486	62
27	377	1220	e560	6440	2290	6550	1010	377	371	3300	2120	67
28	330	5250	e520	8940	1730	10200	1170	362	459	5540	2450	69
29	296	2730	e480	9070	---	7360	993	289	428	4220	1320	66
30	313	1870	e440	4390	---	4890	1010	247	470	4290	908	57
31	791	---	e410	2860	---	3610	---	214	---	2230	712	---
TOTAL	11147	57654	60835	91138	109983	109760	60954	67069	12032	39223	52713	9585
MEAN	360	1922	1962	2940	3928	3541	2032	2164	401	1265	1700	319
MAX	1400	5250	12700	9070	25100	10200	6330	22800	1280	5540	8550	1640
MIN	83	598	410	400	600	1370	873	214	84	196	265	57
CFSM	.68	3.63	3.71	5.56	7.43	6.69	3.84	4.09	.76	2.39	3.21	.60
IN.	.78	4.05	4.28	6.41	7.73	7.72	4.29	4.72	.85	2.76	3.71	.67

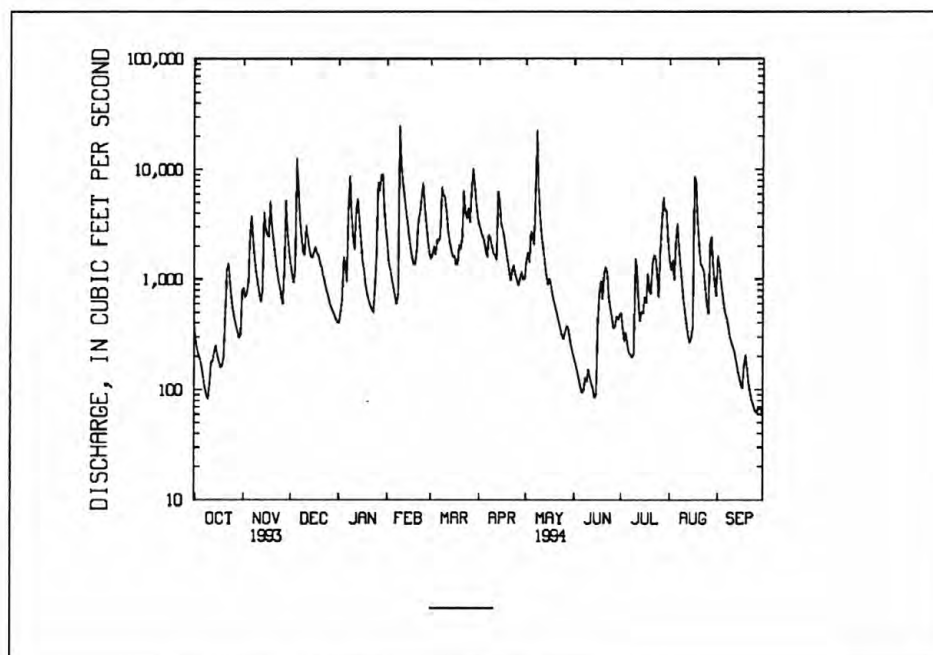
e Estimated

KANAWHA RIVER BASIN

03189100 GAULEY RIVER NEAR CRAIGSVILLE, WV--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1965-1982, 1986-1994, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	813	1399	2034	1843	2112	2697	2056	1560	913	741	714	488
MAX	3531	4464	3561	3622	3928	4968	3525	3339	2730	2129	2819	1765
(WY)	1977	1986	1979	1974	1994	1967	1987	1989	1974	1979	1989	1971
MIN	49.1	302	341	464	551	1433	894	463	100	72.7	67.9	119
(WY)	1993	1979	1966	1977	1978	1976	1976	1991	1991	1991	1988	1991
SUMMARY STATISTICS	FOR 1993 CALENDAR YEAR					FOR 1994 WATER YEAR			WATER YEARS 1965 - 1994			
ANNUAL TOTAL	448240					682093						
ANNUAL MEAN	1228					1869			1445			
HIGHEST ANNUAL MEAN									1914			
LOWEST ANNUAL MEAN									866			
HIGHEST DAILY MEAN	13400					Mar 24			29800			
LOWEST DAILY MEAN	15					Aug 1			8.5			
ANNUAL SEVEN-DAY MINIMUM	18					Jul 27			11			
INSTANTANEOUS PEAK FLOW						39600			(a) 61800			
INSTANTANEOUS PEAK STAGE						22.32			25.72			
INSTANTANEOUS LOW FLOW						55			7.6			
ANNUAL RUNOFF (CFSM)	2.32					3.53			2.73			
ANNUAL RUNOFF (INCHES)	31.52					47.97			37.12			
10 PERCENT EXCEEDS	2770					4410			3310			
50 PERCENT EXCEEDS	623					1140			830			
90 PERCENT EXCEEDS	37					167			128			

a From rating curve extended above 35,000 ft³/s.

KANAWHA RIVER BASIN

03189600 GAULEY RIVER BELOW SUMMERSVILLE DAM, WV

LOCATION.--Lat 38°12'54", long 80°53'18", Nicholas County, Hydrologic Unit 05050005, on right bank 0.4 mi downstream from Summersville Dam, 5.0 mi southwest of Summersville, and at mile 35.3.

DRAINAGE AREA.--806 mi².

PERIOD OF RECORD.--March 1966 to September 1982, October 1986 to current year. October 1982 to September 1986 gage heights, discharge measurements, and annual maximum discharge only.

REVISED RECORDS.--WDR WV-67: 1966. WDR WV-82-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,350.00 ft above sea level (levels by U.S. Army Corps of Engineers).

REMARKS.--Records good, except those below 200 cfs, which are fair, and those for periods of estimated daily discharges (sluggish intakes), which are poor. Flow regulated since May 1965 by Summersville Lake. U.S. Army Corps of Engineers satellite telemeter at station.

PEAK DISCHARGE FOR CURRENT YEAR.--Maximum discharge, 15,800 ft³/s, Feb. 10, gage height, 18.61 ft.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1170	1680	2120	568	8400	2290	3690	2050	210	657	1740	1960
2	1470	2210	1600	1000	11400	2730	2510	2460	210	390	1510	2400
3	1470	2360	1460	1310	6280	3530	2510	2460	210	252	1820	1690
4	1080	2780	1430	2040	2520	3280	1240	3380	217	296	1510	1250
5	320	4040	7250	2830	1690	3940	180	3570	217	299	2350	1010
6	190	5640	15400	2540	1440	4120	180	3130	220	230	4190	822
7	390	4700	9510	4940	1320	3450	180	5230	220	230	2460	675
8	1200	4130	4710	13300	1100	6970	180	13100	220	230	1600	1070
9	1460	3090	3370	10100	6390	8960	180	15100	220	232	1200	1780
10	1450	1920	2820	4110	14600	8350	180	12600	220	1590	846	1780
11	1000	1490	3190	2940	15100	6220	180	8970	220	2590	702	1760
12	180	1860	3520	5100	15100	4700	180	5880	220	905	540	1470
13	160	2060	2930	8030	14700	3130	e300	2920	220	522	391	352
14	150	4240	2300	5370	12200	2650	e210	1600	164	492	392	255
15	363	6010	2200	3380	7570	2220	190	1290	130	547	392	766
16	1570	5250	2900	2280	4250	2110	190	1200	130	835	526	1790
17	1610	4430	2790	1530	2860	1980	190	1200	379	1090	7080	1770
18	545	4920	2580	1720	2030	1620	190	1100	957	1500	11000	1800
19	306	960	2310	1860	1620	2440	430	907	832	1330	9760	1470
20	306	967	1970	1860	2140	2940	1140	906	1120	963	3250	422
21	308	974	1800	1740	2520	2940	1430	690	1540	1530	2270	411
22	309	3430	1800	1180	4740	6420	1680	530	1290	2170	1750	747
23	309	6080	1360	955	6680	6660	1740	530	1150	2220	1400	1730
24	309	5980	922	1190	9780	4300	1730	e420	904	1280	1220	1830
25	297	5870	854	2360	8240	4740	1610	e390	689	920	1120	1840
26	289	4220	1120	9080	4940	4930	1270	e580	461	2200	1020	1490
27	295	2640	1330	12400	3110	6600	1250	e740	349	4930	1780	480
28	298	5660	1190	9800	2510	9290	1860	e740	449	7640	5130	440
29	668	5750	896	4400	---	8170	1800	e540	594	4320	2440	826
30	1270	3180	771	e300	---	8930	1400	380	745	5340	1660	1800
31	1270	---	688	1540	---	5630	---	280	---	2550	1420	---
TOTAL	22012	108521	89091	121753	175230	146240	30000	94873	14707	50280	74469	37886
MEAN	710	3617	2874	3928	6258	4717	1000	3060	490	1622	2402	1263
MAX	1610	6080	15400	13300	15100	9290	3690	15100	1540	7640	11000	2400
MIN	150	960	688	300	1100	1620	180	280	130	230	391	255

e Estimated

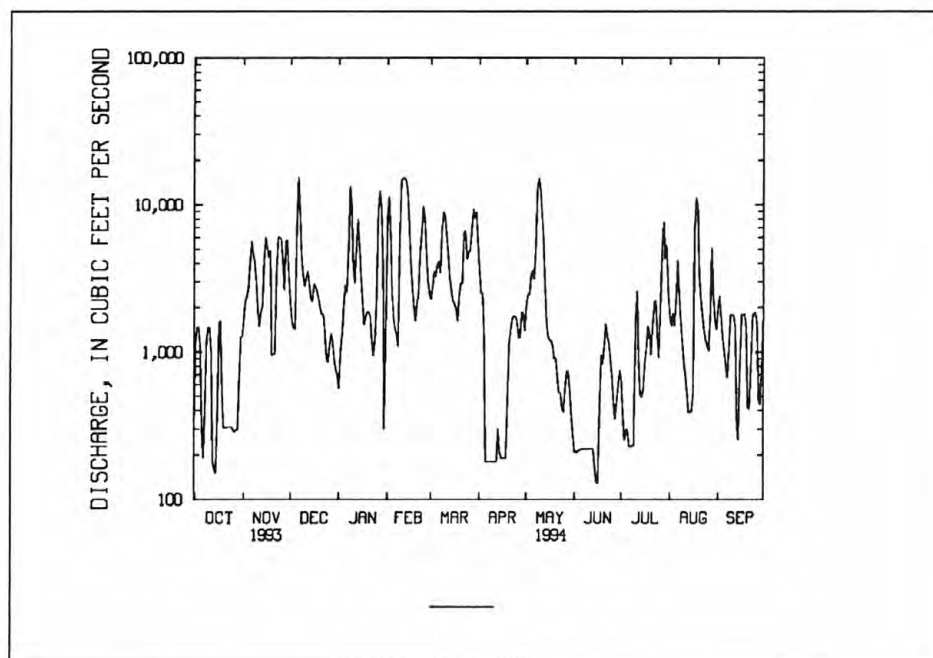
KANAWHA RIVER BASIN

03189600 GAULEY RIVER BELOW SUMMERSVILLE DAM, WV--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966-1982, 1987-1994, BY WATER YEAR (WY)
[REGULATED, UNADJUSTED]

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	2028	2685	2867	2760	2834	3394	1450	2110	1412	1047	1168	1195
MAX	5705	5258	4995	5825	6258	5802	5468	4806	3888	3052	3882	3352
(WY)	1977	1973	1973	1974	1994	1993	1966	1967	1981	1979	1989	1971
MIN	484	159	817	596	729	1408	52.2	141	122	186	19.0	490
(WY)	1989	1979	1990	1977	1967	1976	1971	1991	1991	1991	1966	1967
SUMMARY STATISTICS	FOR 1993 CALENDAR YEAR					FOR 1994 WATER YEAR			WATER YEARS 1966 - 1994			
ANNUAL TOTAL	625014					965062						
ANNUAL MEAN	1712					2644			2075			
HIGHEST ANNUAL MEAN									2741			
LOWEST ANNUAL MEAN									1346			
HIGHEST DAILY MEAN	15400					Dec 6			18000			
LOWEST DAILY MEAN	105					Sep 22			2.4			
ANNUAL SEVEN-DAY MINIMUM	178					Jun 25			2.5			
INSTANTANEOUS PEAK FLOW						15800			Feb 10			
INSTANTANEOUS PEAK STAGE						18.61			Feb 10			
INSTANTANEOUS LOW FLOW						130			(c)			
10 PERCENT EXCEEDS	4230					6490			4820			
50 PERCENT EXCEEDS	942					1610			1290			
90 PERCENT EXCEEDS	200					231			184			

- a June 15, 16.
b Feb. 10, 13-16, 1967.
c June 15, 16, 17.
d Feb. 16, 17, 1967.



KANAWHA RIVER BASIN

03190400 MEADOW RIVER NEAR MOUNT LOOKOUT, WV

LOCATION.--Lat 38°11'23", long 80°56'49", Nicholas County, Hydrologic Unit 05050005, on right bank 1,000 ft upstream from mouth, and 2.5 mi northwest of Mount Lookout.

DRAINAGE AREA.--365 mi².

PERIOD OF RECORD.--September 1966 to September 1983, October 1985 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 1,200 ft, above sea level, from topographic map.

REMARKS.--Records good except those for periods of estimated daily discharges (ice effect), which are poor. U.S. Army Corps of Engineers satellite telemeter at station.

PEAK DISCHARGES 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)
Dec. 5	1230	6,490	9.28	Mar. 28	1430	6,720	9.39
Jan. 8	0030	5,130	8.57	May 8	0330	10,800	11.10
Jan. 29	0100	6,000	9.05	Aug. 18	0030	6,070	9.08
Feb. 9	1900	*12,300	*11.60				

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	129	352	897	e270	1650	1070	2430	543	125	104	418	884
2	98	329	695	e350	1150	1320	1990	581	110	83	328	884
3	82	355	515	531	e900	1810	1670	545	100	67	350	609
4	72	436	532	1080	e700	1460	1380	946	90	55	321	444
5	60	682	5260	867	e600	2230	1110	1240	81	47	835	341
6	52	1150	4170	750	e500	2200	920	1060	75	53	1630	300
7	44	863	2530	1890	e450	1980	1000	2030	75	56	984	295
8	39	602	1730	3940	e400	2080	1110	8210	106	45	630	234
9	36	445	1220	2240	7100	2520	1040	4780	93	42	437	190
10	42	359	945	1530	8270	2690	939	2880	90	50	311	166
11	68	297	1020	1350	6070	2460	842	1880	95	46	212	156
12	98	250	1020	2350	4260	1960	750	1310	91	42	161	137
13	96	231	898	3550	2940	1560	2310	926	78	43	127	120
14	92	268	803	2810	2390	1300	2720	678	67	58	108	102
15	89	384	880	1980	1880	1070	1990	547	60	52	125	91
16	75	435	1360	1440	1540	915	1610	707	62	74	113	82
17	66	644	1480	e1000	1310	790	1270	738	55	110	2780	77
18	63	1510	1300	e800	1190	748	982	600	112	90	5210	84
19	61	1100	1100	e600	1150	881	777	509	162	137	3320	93
20	114	822	909	e450	1260	970	643	435	232	108	2000	89
21	251	634	821	e400	1520	991	542	375	104	102	1190	73
22	411	483	710	e370	1770	1860	545	327	117	102	838	62
23	325	390	614	e340	2300	2080	537	278	161	103	623	54
24	236	337	541	e500	3850	1750	488	234	147	79	447	51
25	189	293	499	836	3590	1910	443	211	156	68	305	48
26	155	250	410	3190	2570	1600	404	216	130	186	223	47
27	130	332	e390	4220	1830	2660	438	249	113	356	199	43
28	114	1700	e360	4600	1350	6260	533	222	127	519	354	42
29	102	1630	e330	5560	---	5870	482	195	159	404	341	44
30	108	1180	e310	3750	---	4280	449	167	141	419	266	41
31	242	---	e290	2370	---	2960	---	143	---	551	240	---
TOTAL	3739	18743	34539	55914	64490	64235	32344	33762	3314	4251	25426	5883
MEAN	121	625	1114	1804	2303	2072	1078	1089	110	137	820	196
MAX	411	1700	5260	5560	8270	6260	2720	8210	232	551	5210	884
MIN	36	231	290	270	400	748	404	143	55	42	108	41
CFSM	.33	1.71	3.05	4.94	6.31	5.68	2.95	2.98	.30	.38	2.25	.54
IN.	.38	1.91	3.52	5.70	6.57	6.55	3.30	3.44	.34	.43	2.59	.60

e Estimated

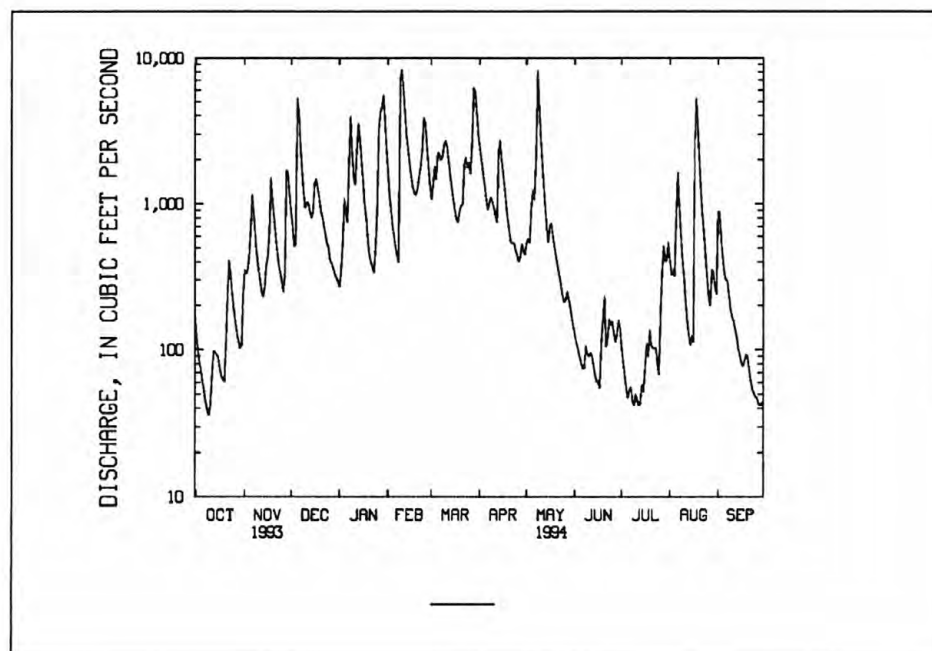
KANAWHA RIVER BASIN

03190400 MEADOW RIVER NEAR MOUNT LOOKOUT, WV--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966-1983, 1986-1994, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	331	629	1016	1029	1238	1476	1133	868	479	308	309	166
MAX	1574	1529	1710	2148	2303	2583	2687	1904	1139	1057	1074	636
(WY)	1977	1986	1973	1974	1994	1993	1987	1989	1981	1972	1969	1979
MIN	8.18	55.8	293	140	396	599	373	271	72.4	32.2	12.9	13.1
(WY)	1992	1979	1981	1977	1978	1988	1986	1976	1988	1991	1987	1983
SUMMARY STATISTICS	FOR 1993 CALENDAR YEAR					FOR 1994 WATER YEAR			WATER YEARS 1966 - 1994			
ANNUAL TOTAL	240380					346640						
ANNUAL MEAN	659					950			743			
HIGHEST ANNUAL MEAN									975			
LOWEST ANNUAL MEAN									410			
HIGHEST DAILY MEAN	8290					8270			14200			
LOWEST DAILY MEAN	11					36			4.1			
ANNUAL SEVEN-DAY MINIMUM	14					45			5.7			
INSTANTANEOUS PEAK FLOW						12300			18500			
INSTANTANEOUS PEAK STAGE						11.60			13.44			
INSTANTANEOUS LOW FLOW						35			3.0			
ANNUAL RUNOFF (CFSM)	1.80					2.60			2.04			
ANNUAL RUNOFF (INCHES)	24.50					35.33			27.67			
10 PERCENT EXCEEDS	1560					2380			1870			
50 PERCENT EXCEEDS	336					450			418			
90 PERCENT EXCEEDS	39					68			48			

a Aug. 21, 22, 1987.



KANAWHA RIVER BASIN

03192000 GAULEY RIVER ABOVE BELVA, WV

LOCATION.--Lat 38°14'00", long 81°10'52", Nicholas County, Hydrologic Unit 05050005, on right bank 0.5 mi upstream from Belva, 1.0 mi upstream from Twentymile Creek, and at mile 6.3.

DRAINAGE AREA.--1,317 mi².

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

REVISED RECORDS.--WSP 873: 1938. WSP 1275: 1929-30, WDR WV-82-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 669.00 ft above sea level, adjustment of 1912.

REMARKS.--No estimated daily discharges. Records good. Flow regulated since May 1965 by Summersville Lake. U.S. Army Corps of Engineers satellite telemeter at station.

PEAK DISCHARGE FOR CURRENT YEAR.--Maximum discharge, 31,800 ft³/s, May 8, gage height, 14.74 ft.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1070	1920	3630	1060	8740	3770	7170	2490	423	848	2260	2570
2	1570	2600	2410	1300	13500	4560	4910	3320	357	660	1850	3650
3	1590	2930	2180	2100	8760	7050	4500	3260	346	397	1920	2670
4	1280	3290	1970	4820	3890	5810	3670	4240	337	337	2020	1830
5	687	4460	13600	4580	2610	6740	1590	5280	327	389	2220	1450
6	319	7060	21800	4190	2120	7260	1320	4700	320	333	6560	1210
7	269	6190	14600	9280	2040	5910	1350	6200	352	297	3960	1010
8	1040	5080	7420	20800	1740	8830	1480	26200	373	293	2530	1130
9	1460	4250	5190	15400	14400	13900	1440	21700	355	296	1900	1910
10	1520	2640	4210	6860	26100	12900	1350	17300	337	615	1240	1920
11	1260	1820	4300	4750	26400	10200	1240	11800	338	3140	964	1880
12	571	1940	4910	7350	22500	7760	1130	7820	336	1320	857	1790
13	310	2390	4400	13300	19300	5170	4870	4740	326	710	584	783
14	285	4030	3500	10200	16400	4560	4480	2610	312	513	538	404
15	277	7000	3140	6300	10700	3740	3000	1970	221	627	551	375
16	1280	6410	4290	4470	6760	3230	2500	1860	164	710	578	1750
17	1780	5730	4650	3130	4510	3210	2090	1970	178	1080	7690	1790
18	998	8380	4150	2930	3820	2560	1650	1820	609	1260	18800	1820
19	431	2780	3820	3010	2920	3150	1330	1450	1170	1720	15200	1760
20	509	2100	3210	3330	3250	4190	1730	1350	1030	1010	6130	694
21	646	1810	2850	2770	4120	4230	2250	1240	1620	1330	3850	504
22	875	2740	2720	1960	5810	7320	2250	928	1350	2000	3000	466
23	776	6720	2420	1570	9220	9680	2400	864	1360	2800	2070	1600
24	663	6560	1740	1760	14600	6700	2340	815	1060	1690	1810	1740
25	587	6390	1540	3290	14100	7530	2270	668	925	947	1430	1820
26	521	5390	1540	12800	8680	7560	1900	805	731	1690	1320	1730
27	484	3290	1830	19600	5760	10400	1750	861	612	4910	1110	725
28	465	6160	1880	16000	4190	21700	2500	830	540	9040	5630	480
29	453	8720	1570	13500	---	16500	2710	783	684	4770	3690	476
30	1270	4790	1340	4910	---	15700	2010	638	851	6220	1920	1690
31	1580	---	1230	3740	---	10100	---	550	---	3840	1830	---
TOTAL	26826	135570	138040	211060	266940	241920	75180	141062	17944	55792	106012	43627
MEAN	865	4519	4453	6808	9534	7804	2506	4550	598	1800	3420	1454
MAX	1780	8720	21800	20800	26400	21700	7170	26200	1620	9040	18800	3650
MIN	269	1810	1230	1060	1740	2560	1130	550	164	293	538	375

KANAWHA RIVER BASIN

03192000 GAULEY RIVER ABOVE BELVA, WV--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1929 - 1964, BY WATER YEAR (WY) [UNREGULATED]

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	819	1785	3027	4022	4542	5790	3963	2903	1552	1524	1264	532
MAX	4859	5609	6421	7870	8926	11660	8691	5737	6164	6141	4871	2824
(WY)	1938	1930	1943	1937	1939	1963	1958	1929	1940	1932	1958	1950
MIN	5.90	23.1	410	437	1084	3000	1166	547	156	22.4	26.7	13.3
(WY)	1954	1931	1940	1940	1934	1937	1942	1964	1936	1930	1930	1930

SUMMARY STATISTICS

WATER YEARS 1929 - 1964

ANNUAL MEAN	2631
HIGHEST ANNUAL MEAN	3803
LOWEST ANNUAL MEAN	1606
HIGHEST DAILY MEAN	60900
LOWEST DAILY MEAN	3.2
ANNUAL SEVEN-DAY MINIMUM	3.6
INSTANTANEOUS PEAK FLOW	(a)105000
INSTANTANEOUS PEAK STAGE	28.60
INSTANTANEOUS LOW FLOW	3.2
10 PERCENT EXCEEDS	6280
50 PERCENT EXCEEDS	1390
90 PERCENT EXCEEDS	129

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

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	2157	3329	4003	3772	4361	5159	2898	3056	1815	1411	1473	1280
MAX	7547	8434	7270	8493	9534	9591	7050	7362	5503	4249	5053	3722
(WY)	1977	1986	1973	1974	1994	1993	1987	1989	1981	1979	1989	1971
MIN	124	70.8	85.6	276	1517	2245	611	538	236	243	36.8	72.5
(WY)	1966	1966	1966	1966	1966	1988	1986	1991	1991	1991	1965	1965

SUMMARY STATISTICS

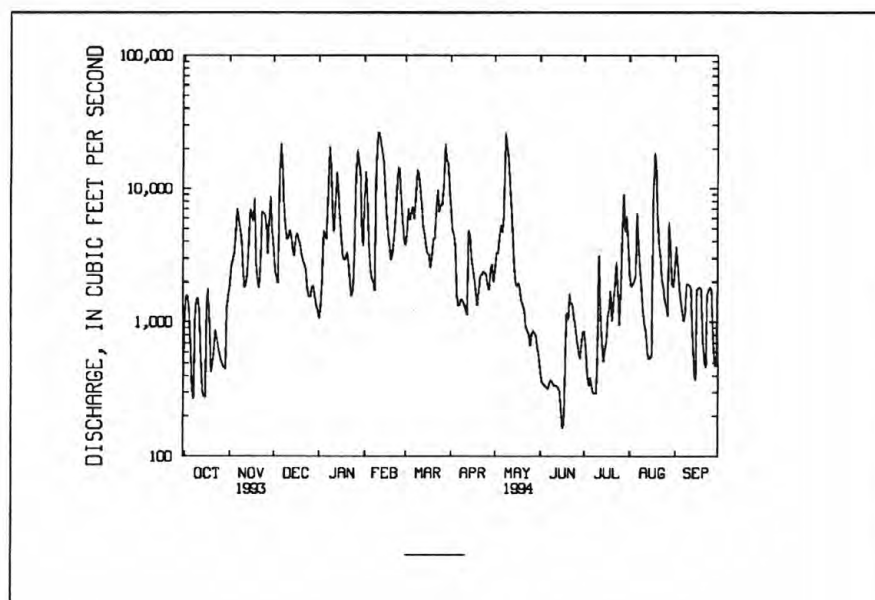
FOR 1993 CALENDAR YEAR

FOR 1994 WATER YEAR

WATER YEARS 1965 - 1994

ANNUAL TOTAL	962626	1459973	
ANNUAL MEAN	2637	4000	2888
HIGHEST ANNUAL MEAN			4000
LOWEST ANNUAL MEAN			1452
HIGHEST DAILY MEAN	25300	Mar 5	26400
LOWEST DAILY MEAN	98	Sep 2	164
ANNUAL SEVEN-DAY MINIMUM	261	Jul 13	268
INSTANTANEOUS PEAK FLOW			31800
INSTANTANEOUS PEAK STAGE			14.74
INSTANTANEOUS LOW FLOW			161
10 PERCENT EXCEEDS	6180		9440
50 PERCENT EXCEEDS	1370		2100
90 PERCENT EXCEEDS	326		478

- a From rating curve extended above 65,000 ft³/s on basis of velocity-area studies and inflow and storage adjustment to record for Kanawha River at Kanawha Falls.



KANAWHA RIVER BASIN

03193000 KANAWHA RIVER AT KANAWHA FALLS, WV

LOCATION.--Lat 38°08'17", long 81°12'52", Fayette County, Hydrologic Unit 05050006, on right bank 150 ft downstream from bridge, 0.8 mi downstream from village of Kanawha Falls, 2.0 mi downstream from Gauley Bridge, 2.0 mi downstream from confluence of New River and Gauley River, and at mile 94.3.

DRAINAGE AREA.--8,371 mi².

PERIOD OF RECORD.--March 1877 to current year. October 1916 to September 1918 and October 1927 to October 1928, published as "at Lock 2, Montgomery".

REVISED RECORDS.--WSP 923: 1878, 1886, 1897, 1899, 1901-3. WSP 1305: 1902(M), 1940. WSP 1335: 1931. WDR WV-82-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 621.20 ft above sea level. Prior to Oct. 27, 1928, nonrecording gages at several sites within 9.0 mi of present site at various datums. Oct. 27, 1928, to Sept. 30, 1964, water-stage recorder at present site at datum 2.00 ft higher.

REMARKS.--Records good except those for periods of estimated daily discharges (sluggish intakes), which are poor. Flow regulated since May 1939 by Claytor Lake, since August 1949 by Bluestone Lake, and since May 1965 by Summersville Lake. U.S. Army Corps of Engineers satellite telemeter and Appalachian Power Co. remote sender at station.

PEAK DISCHARGE FOR CURRENT YEAR.--Maximum discharge, 107,000 ft³/s, Feb. 10, gage height, 18.11 ft.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4410	4720	11900	e9000	50700	e20000	e56000	e18000	4850	6280	10700	8330
2	4490	6560	8900	e8400	45600	e25000	e45000	e17000	4540	4490	8010	8530
3	4350	9220	7350	e9000	27200	e38000	e38000	e14000	4450	3790	6920	7310
4	3810	9650	7040	e12000	e15000	e35000	e25000	15700	4410	3560	7670	6060
5	3120	10800	30400	e15000	e12000	e40000	e20000	22900	4050	4740	9830	5980
6	2500	12100	79200	e13000	e11000	e42000	e17000	23000	3970	4230	14900	5880
7	2210	11200	56500	e17000	e9000	e38000	e18000	24100	4000	3040	11300	5760
8	2510	9070	31300	43700	10200	e37000	e16000	55300	4410	3100	7930	5020
9	3140	8350	20700	42500	29200	e45000	e16000	74400	7100	2940	7110	5070
10	3400	6430	15400	29800	92600	e43000	e15000	43900	8260	2830	5540	5050
11	3210	5350	14900	e17000	e86000	e40000	e16000	31000	7020	5290	6070	5010
12	3170	5120	13500	24500	e76000	e30000	e17000	23000	6140	3960	4780	5000
13	2490	5230	12200	55500	e70000	e23000	e23000	17700	7300	3110	4060	4200
14	2330	6420	10800	55900	e60000	e18000	e32000	12600	6330	3250	4530	4160
15	2310	9970	10600	39800	e50000	e14000	e35000	10900	6100	4130	4280	3100
16	2950	10900	12600	e22000	e38000	e19000	e28000	11000	6130	4260	3660	3800
17	3890	10600	14800	e16000	e32000	e14000	e21000	10600	3690	4060	19200	4120
18	3330	14400	14700	15400	e27000	e14000	e15000	9380	4030	4250	46600	4550
19	2530	8110	14900	e19000	e23000	e13000	e15000	8680	4760	6010	56800	4500
20	2790	8250	e11000	e15000	e22000	e14000	e16000	6790	4690	5350	48800	3570
21	2940	7090	e10000	e11000	e25000	e13000	e13000	7950	5630	6550	33100	3060
22	3100	6790	e10000	e10000	29900	21200	e13000	7310	5550	6540	18500	3630
23	2750	10500	e9600	e9500	36900	e31000	e12000	5750	5150	7760	11700	3850
24	3070	9950	e6800	e11000	70900	e24000	e13000	5520	4950	8590	8330	4460
25	3450	9270	e7000	13500	e62000	e23000	e11000	6590	4740	7350	8230	4330
26	3380	8320	e6800	31500	e45000	e22000	e10000	6890	4700	6770	7540	4270
27	2610	6750	e5600	53400	e35000	e30000	e9500	5090	4640	10400	7000	3420
28	2470	10900	e6000	53200	e25000	83400	e10000	6250	4640	16400	9250	3440
29	2960	25300	6590	58700	---	e78000	e11000	6090	5190	16200	9000	3490
30	3660	18500	9320	36100	---	e86000	12100	5740	5960	18000	7240	4680
31	4320	---	e10000	25200	---	e70000	---	5580	---	15100	6050	---
TOTAL	97650	285820	486400	792600	1116200	1043600	598600	518710	157380	202330	414630	143630
MEAN	3150	9527	15690	25570	39860	33660	19950	16730	5246	6527	13380	4788
MAX	4490	25300	79200	58700	92600	86000	56000	74400	8260	18000	56800	8530
MIN	2210	4720	5600	8400	9000	13000	9500	5090	3690	2830	3660	3060

e Estimated

KANAWHA RIVER BASIN

03193000 KANAWHA RIVER AT KANAWHA FALLS, WV--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1877 - 1938, BY WATER YEAR (WY) UNREGULATED

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	6529	8513	12670	19170	21700	24400	19440	14670	10260	7556	6486	5279
MAX	23470	23460	34030	38890	52880	52620	46930	38140	35870	20210	22440	21070
(WY)	1938	1878	1902	1882	1884	1899	1901	1901	1901	1916	1901	1888
MIN	1133	1514	2691	5600	3181	10160	8151	4797	2546	1290	1394	1308
(WY)	1931	1923	1931	1931	1934	1925	1915	1930	1930	1930	1925	1930

SUMMARY STATISTICS

WATER YEARS 1877 - 1938

ANNUAL MEAN	13020
HIGHEST ANNUAL MEAN	21210
LOWEST ANNUAL MEAN	7591
HIGHEST DAILY MEAN	266000
LOWEST DAILY MEAN	690
ANNUAL SEVEN-DAY MINIMUM	984
INSTANTANEOUS PEAK FLOW	(a) 320000
INSTANTANEOUS PEAK STAGE	(b) 37.80
INSTANTANEOUS LOW FLOW	640
10 PERCENT EXCEEDS	27900
50 PERCENT EXCEEDS	8330
90 PERCENT EXCEEDS	2550

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

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	5986	8674	13170	15770	20170	23980	18260	14040	8900	6207	5862	4623
MAX	24980	24760	29690	35570	42410	50300	50240	29330	22310	15740	23350	17540
(WY)	1977	1986	1973	1974	1957	1955	1987	1989	1992	1949	1940	1989
MIN	1452	1669	2174	2412	6602	7583	5065	4051	2900	2167	1945	1510
(WY)	1954	1954	1966	1940	1941	1988	1986	1941	1988	1966	1944	1953

SUMMARY STATISTICS

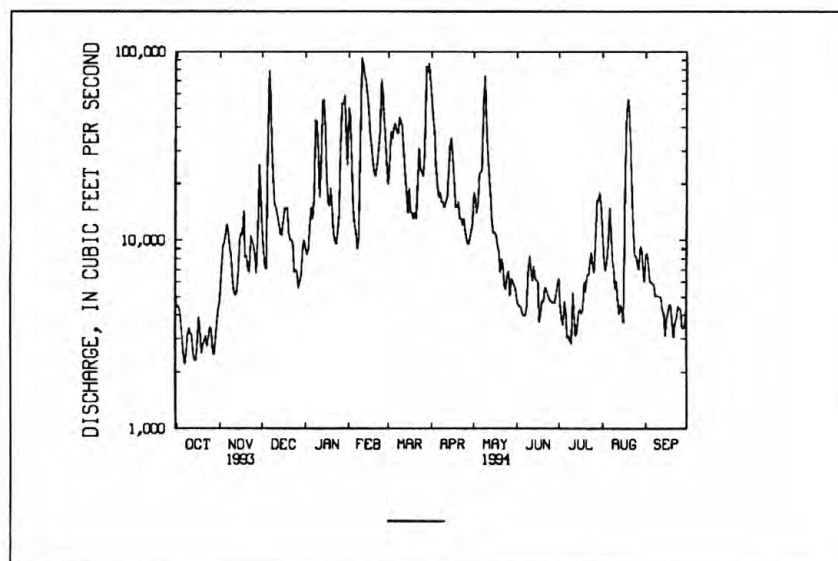
FOR 1993 CALENDAR YEAR

FOR 1994 WATER YEAR

WATER YEARS 1939 - 1994

ANNUAL TOTAL	4712860	5857550	
ANNUAL MEAN	12910	16050	12100
HIGHEST ANNUAL MEAN			16830
LOWEST ANNUAL MEAN			6792
HIGHEST DAILY MEAN	104000	Mar 5	92600
LOWEST DAILY MEAN	2210	Oct 7	2210
ANNUAL SEVEN-DAY MINIMUM	2490	Sep 3	2830
INSTANTANEOUS PEAK FLOW			107000
INSTANTANEOUS PEAK STAGE			18.11
INSTANTANEOUS LOW FLOW			1570
10 PERCENT EXCEEDS	24300		40000
50 PERCENT EXCEEDS	8110		9500
90 PERCENT EXCEEDS	2760		3570

- a From gage-height relationship and rating curve extended above 150,000 ft³/s.
b Site then in use, 39.80 ft gage height at current datum.
c 31.60 ft gage height at current datum.
d Not determined.



KANAWHA RIVER BASIN

03194700 ELK RIVER BELOW WEBSTER SPRINGS, WV

LOCATION.--Lat 38°35'50", long 80°29'26", Webster County, Hydrologic Unit 05050007, on right bank 200 ft upstream from bridge on County Highway 7, 6.5 mi upstream from town of Centralia, 8.9 mi southwest of Salisbury Station, 8.9 mi northwest of Webster Springs, and at mile 125.2.

DRAINAGE AREA.--266 mi².

PERIOD OF RECORD.--October 1959 to September 1983, October 1985 to current year.

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

GAGE.--Water-stage recorder. Elevation of gage is 1,020.1 ft above sea level.

REMARKS.--Records good except those for periods of estimated daily discharges (ice effect), which are poor. U.S. Army Corps of Engineers satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in 1861, probably in September, reached a stage of 26.34 ft and flood of July 26, 1896, reached a stage of 25.87 ft, present datum, at site 0.2 mi upstream, from levels to floodmarks pointed out by a local resident.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 8,500 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage Height (ft)	Date	Time	Discharge (ft ³ /s)	Gage Height (ft)
Dec. 5	1200	8,950	9.52	Feb. 9	1300	*21,900	*13.48
Jan. 7	2400	9,350	9.67	May 8	0400	20,400	13.08

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	229	481	647	e240	998	802	1510	760	109	173	812	1320
2	177	410	508	e300	689	861	1270	1050	98	143	575	1030
3	146	433	432	368	599	1080	1090	791	87	105	518	660
4	139	532	420	952	497	867	1020	923	77	256	466	513
5	114	1240	5880	728	443	1150	872	1090	69	201	598	379
6	94	1890	3540	559	390	1180	761	929	63	118	1180	289
7	80	1260	1890	3740	344	1380	1170	2510	60	84	784	248
8	71	828	1240	5620	336	3760	1290	11400	72	78	535	207
9	66	602	889	2320	13900	3250	1060	3500	70	77	385	169
10	81	478	728	1450	6120	3090	883	1970	61	685	288	140
11	152	394	1200	1070	4100	2290	1020	1310	55	615	227	120
12	128	336	1100	1780	3410	1550	974	974	59	326	184	103
13	199	566	888	2710	2340	1170	2830	773	61	206	148	88
14	202	3680	781	1860	1830	987	2720	588	53	158	127	78
15	173	2080	774	1230	1380	852	1680	486	46	153	129	70
16	146	1570	926	836	1100	915	1680	511	48	183	142	63
17	126	1370	1050	e600	900	799	1440	482	68	219	1200	59
18	114	3230	948	e500	790	765	1130	404	467	1250	2620	83
19	106	1880	936	e440	760	1130	882	358	247	717	1490	103
20	113	1320	820	e380	917	1120	702	312	380	888	879	74
21	337	962	746	e340	1510	1150	565	273	254	853	593	61
22	756	717	630	e310	1860	3350	545	238	259	1080	615	53
23	557	568	538	e300	3240	2200	599	207	207	1340	648	47
24	400	470	469	e800	4290	1670	514	179	208	860	480	43
25	303	395	418	e2000	2720	1820	454	162	178	585	354	41
26	245	333	380	e4600	1820	1490	408	177	147	1820	282	39
27	207	327	346	3400	1250	2370	383	226	143	2520	1310	40
28	180	2070	e310	4120	930	4180	468	224	177	3790	1540	39
29	155	1340	e290	4610	---	3610	405	180	203	2190	826	39
30	154	912	e270	2230	---	2570	373	147	188	2310	551	37
31	328	---	e250	1430	---	1830	---	125	---	1280	433	---
TOTAL	6278	32674	30244	51823	59463	55238	30698	33259	4214	25263	20919	6235
MEAN	203	1089	976	1672	2124	1782	1023	1073	140	815	675	208
MAX	756	3680	5880	5620	13900	4180	2830	11400	467	3790	2620	1320
MIN	66	327	250	240	336	765	373	125	46	77	127	37
CFM	.76	4.09	3.67	6.28	7.98	6.70	3.85	4.03	.53	3.06	2.54	.78
IN.	.88	4.57	4.23	7.25	8.32	7.73	4.29	4.65	.59	3.53	2.93	.87

e Estimated

KANAWHA RIVER BASIN

03194700 ELK RIVER BELOW WEBSTER SPRINGS, WV--Continued

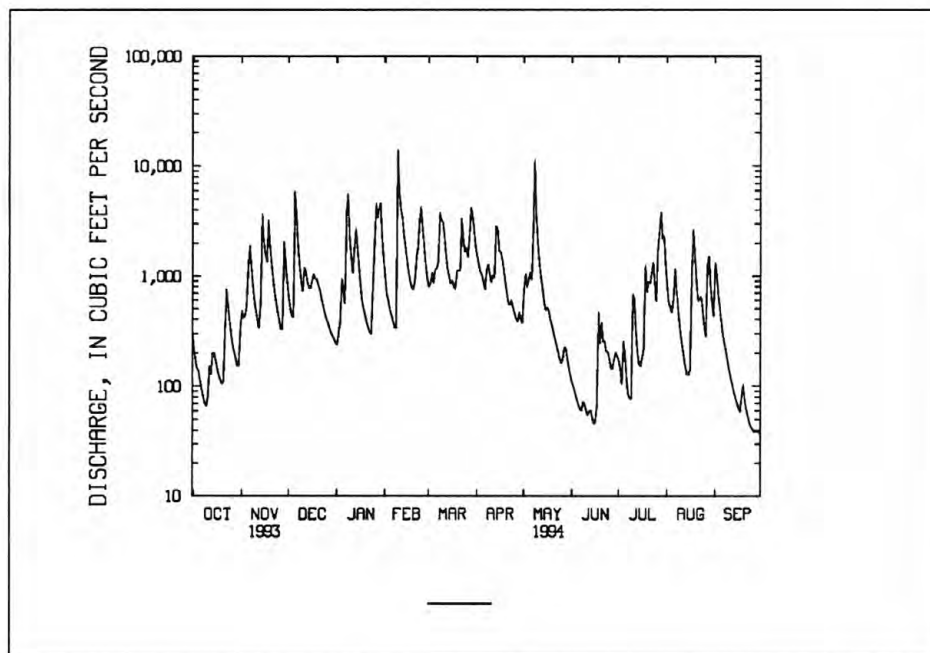
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1960-1983, 1986-1994, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	356	704	947	875	1039	1372	1077	724	453	364	312	218
MAX	1376	2293	1940	1708	2124	2820	1750	1823	1435	898	1171	940
(WY)	1977	1986	1973	1979	1994	1963	1972	1967	1974	1979	1989	1971
MIN	15.1	150	199	202	227	746	312	137	48.9	32.5	23.3	36.8
(WY)	1964	1966	1966	1977	1978	1976	1963	1964	1965	1993	1993	1983

SUMMARY STATISTICS	FOR 1993 CALENDAR YEAR		FOR 1994 WATER YEAR		WATER YEARS 1960 - 1994	
ANNUAL TOTAL	223936.1		356308			
ANNUAL MEAN	614		976		700	
HIGHEST ANNUAL MEAN					976	1994
LOWEST ANNUAL MEAN					446	1966
HIGHEST DAILY MEAN	6600	Mar 24	13900	Feb 9	15200	Apr 26 1989
LOWEST DAILY MEAN	6.5	Sep 1	37	Sep 30	6.5	Sep 1 1993
ANNUAL SEVEN-DAY MINIMUM	8.2	Jul 28	40	Sep 24	8.2	Jul 28 1993
INSTANTANEOUS PEAK FLOW			21900	Feb 9	(a) 38000	Nov 4 1985
INSTANTANEOUS PEAK STAGE			13.48	Feb 9	(b) 17.20	Nov 4 1985
INSTANTANEOUS LOW FLOW			36	Sep 30	6.5	Oct 1 1959
ANNUAL RUNOFF (CFSM)	2.31		3.67		2.63	
ANNUAL RUNOFF (INCHES)	31.32		49.83		35.77	
10 PERCENT EXCEEDS	1430		2310		1650	
50 PERCENT EXCEEDS	328		566		392	
90 PERCENT EXCEEDS	20		84		64	

a From rating curve extended above 24,000 ft³/s,

b From floodmarks.



KANAWHA RIVER BASIN

03197000 ELK RIVER AT QUEEN SHOALS, WV

LOCATION.--Lat 38°28'15", long 81°17'03", Kanawha County, Hydrologic Unit 05050007, on right bank 50 ft upstream from Queen Shoals Creek, 100 ft downstream from highway bridge at Queen Shoals, 4.0 mi upstream from Big Sandy Creek, and at mile 26.2. Records include flow of Queen Shoals Creek.

DRAINAGE AREA.--1,145 mi², includes that of Queen Shoals Creek.

PERIOD OF RECORD.--October 1928 to current year. Monthly discharge only October, November 1928, published in WSP 1305.

REVISED RECORDS.--WSP 783: Drainage area. WSP 1335: 1929-32, 1935(M), 1936, 1939, 1943(M).

GAGE.--Water-stage recorder. Datum of gage is 604.09 ft above sea level. Prior to June 19, 1932, nonrecording gage and June 19, 1932, to Sept. 30, 1946, water-stage recorder, at bridge 100 ft upstream at same datum.

REMARKS.--Records good except those for period of estimated daily discharge (ice effect), which is poor. Flow regulated since April 1959 by Sutton Lake. U.S. Army Corps of Engineers satellite telemeter at station.

PEAK DISCHARGE FOR CURRENT YEAR.--Maximum discharge, 33,700 ft³/s, May 8, gage height, 19.85 ft.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	382	1360	4260	912	4180	3240	7090	1400	317	547	2190	1650
2	339	1710	2890	1020	5110	3540	5030	2240	293	433	1130	2270
3	324	1410	1740	1600	4310	10200	3820	2940	271	375	1060	2440
4	311	1310	1190	10400	3870	6980	3470	2450	249	279	840	1590
5	297	1520	8670	7040	3420	7350	2520	2390	237	164	580	1050
6	288	2940	11800	5530	2650	6040	1640	2560	216	132	1950	915
7	281	3730	10000	11900	1840	5420	1310	3900	159	161	2090	520
8	278	3580	7650	22600	1380	6850	1750	24200	132	463	1550	430
9	277	2560	5990	11300	9570	10900	1630	9550	116	472	1080	342
10	290	1760	5100	9890	14000	12800	1700	9940	109	606	699	292
11	290	1290	4820	7620	13600	9540	3320	8680	217	758	570	300
12	302	1010	4340	7760	17800	7860	3370	7790	559	1200	394	328
13	339	1370	3220	9660	12200	6690	6300	6620	470	663	291	314
14	347	4900	2520	9140	11200	5490	13800	5740	309	405	295	409
15	340	6830	2180	7800	9600	3760	10500	3370	225	324	328	444
16	413	7280	2040	6200	7810	2630	9050	2390	155	421	320	438
17	552	5890	1980	3900	6700	2060	7710	2070	119	467	1400	438
18	638	7490	2140	2930	5850	2020	5450	1880	103	430	7630	457
19	548	4850	2340	2450	5210	2270	3840	1360	145	771	6560	535
20	575	2550	2410	2180	4560	2960	2680	839	573	1410	3350	543
21	857	1910	2540	1750	4360	3370	2090	788	469	899	1830	528
22	904	1610	2740	1480	4530	5090	1870	734	407	1300	1420	433
23	1020	3300	2350	e1200	6100	6570	1590	568	584	1370	1170	365
24	1060	3900	1880	1580	11500	6750	1400	501	736	1570	938	316
25	1040	2690	1680	3920	12100	5880	1330	399	560	1310	1040	288
26	1100	2230	1440	12200	9500	4990	1280	617	491	1070	923	290
27	1070	2470	1380	14500	6780	7200	1280	725	503	2630	642	285
28	1030	5060	1340	12200	4550	19400	1250	641	385	5290	1970	276
29	876	5390	1180	10700	---	12800	1360	489	583	6000	3770	282
30	731	5000	1130	5560	---	11200	1460	403	578	3160	2290	288
31	768	---	967	2120	---	9470	---	351	---	3510	1060	---
TOTAL	17867	98900	105907	209042	204280	211320	110890	108525	10270	38590	51360	19056
MEAN	576	3297	3416	6743	7296	6817	3696	3501	342	1245	1657	635
MAX	1100	7490	11800	22600	17800	19400	13800	24200	736	6000	7630	2440
MIN	277	1010	967	912	1380	2020	1250	351	103	132	291	276

e Estimated

KANAWHA RIVER BASIN

03197000 ELK RIVER AT QUEEN SHOALS, WV--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1929 - 1958, BY WATER YEAR (WY) [UNREGULATED]

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	557	1093	2233	3130	3578	4210	2995	2149	1061	1279	980	408
MAX	3510	3488	5245	6482	7715	7339	5307	4352	3111	6268	4453	2398
(WY)	1938	1930	1943	1937	1939	1936	1958	1958	1940	1932	1958	1950
MIN	3.46	7.50	204	402	759	2154	799	384	113	17.1	13.1	7.21
(WY)	1931	1931	1931	1940	1934	1937	1942	1930	1936	1930	1930	1930

SUMMARY STATISTICS

WATER YEARS 1929 - 1958

ANNUAL MEAN	1967	
HIGHEST ANNUAL MEAN	2821	1950
LOWEST ANNUAL MEAN	1214	1941
HIGHEST DAILY MEAN	58100	Jul 5 1932
LOWEST DAILY MEAN	.30	(a)
ANNUAL SEVEN-DAY MINIMUM	.86	Oct 30 1953
INSTANTANEOUS PEAK FLOW	(b) 72000	Jul 5 1932
INSTANTANEOUS PEAK STAGE	29.20	Jul 5 1932
INSTANTANEOUS LOW FLOW	.30	(c)
10 PERCENT EXCEEDS	4650	
50 PERCENT EXCEEDS	955	
90 PERCENT EXCEEDS	90	

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

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1078	2110	3078	2996	3521	4258	2878	2426	1250	867	901	626
MAX	5017	6135	7402	6743	7296	9051	5649	6601	4745	2735	3487	3072
(WY)	1977	1986	1973	1994	1994	1967	1987	1989	1981	1992	1972	1971
MIN	142	524	244	594	1708	1633	562	409	132	120	83.7	111
(WY)	1959	1959	1966	1977	1968	1987	1963	1964	1965	1964	1965	1959

SUMMARY STATISTICS

FOR 1993 CALENDAR YEAR

FOR 1994 WATER YEAR

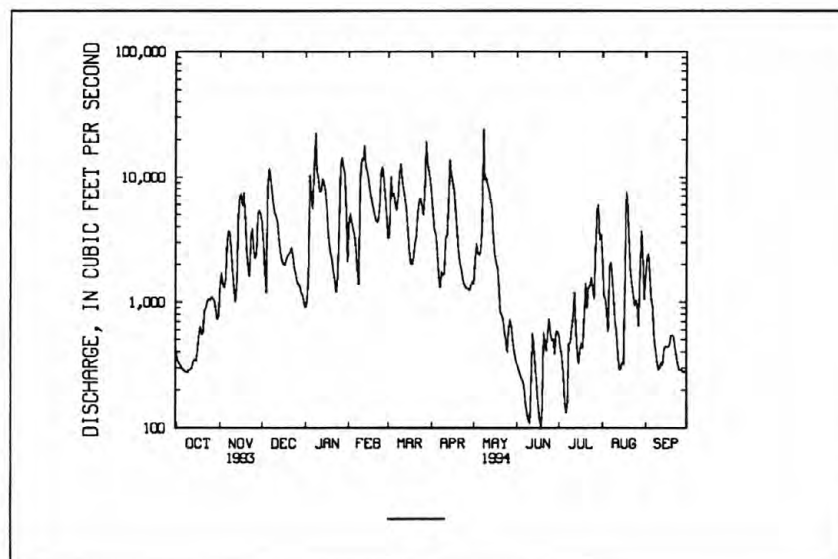
WATER YEARS 1959 - 1994

ANNUAL TOTAL	724199	1186007	
ANNUAL MEAN	1984	3249	2161
HIGHEST ANNUAL MEAN			3249
LOWEST ANNUAL MEAN			1063
HIGHEST DAILY MEAN	14300	Mar 5	24200
LOWEST DAILY MEAN	47	Sep 3	103
ANNUAL SEVEN-DAY MINIMUM	85	Jul 18	169
INSTANTANEOUS PEAK FLOW			33700
INSTANTANEOUS PEAK STAGE			19.85
INSTANTANEOUS LOW FLOW			97
10 PERCENT EXCEEDS	5910	9090	5620
50 PERCENT EXCEEDS	1040	1650	1130
90 PERCENT EXCEEDS	144	301	217

a Nov. 3, 4, 1953.

b From rating curve extended above 40,000 ft³/s.

c Nov. 4, 5, 1953.



KANAWHA RIVER BASIN

03198000 KANAWHA RIVER AT CHARLESTON, WV

LOCATION.--Lat 38°22'10", long 81°42'05", Kanawha County, Hydrologic Unit 05050008, on left bank at old lock 6, 1.0 mi upstream from Davis Creek, 1.5 mi downstream from Twomile Creek, 2.0 mi downstream from Patrick Street Bridge at Charleston, 3.5 mi downstream from Elk River, and at mile 54.5.

DRAINAGE AREA.--10,448 mi².

PERIOD OF RECORD.--June 1939 to current year. Monthly discharge only September 1939 to February 1940, published in WSP 1305.

REVISED RECORDS.--WSP 1335: 1943.

GAGE.--Water-stage recorder. Datum of gage is 548.00 ft above sea level (levels by U.S. Army Corps of Engineers). Auxiliary water-stage recorder 2.3 mi upstream from base gage at datum 547.00 ft, U.S. Army Corps of Engineers datum. Prior to Oct. 1, 1955, auxiliary gages at different sites and datum.

REMARKS.--Records good except those for periods of estimated daily discharges (indefinite stage-fall discharge relation, missing record), which are poor. The rating is not well established at flows below 10,000 ft³/s. All flow is compared to the inflow, and for periods when differences are 10% or greater or record is missing, the inflow is used. Since 1939, flow regulated by increasing number of reservoirs upstream from station. U.S. Army Corps of Engineers satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Sept. 29, 1861, reached a stage of about 54.3 ft.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e5000	6850	17500	11000	49700	25300	71200	18700	5530	6940	12300	e11000
2	e5000	8200	12900	10500	50900	31200	56400	21200	4970	4730	9100	e12000
3	e4800	10300	10400	12100	31100	56800	44700	17900	4950	4110	e8200	e10000
4	e4200	10300	9390	32300	21600	46600	32400	17800	4580	3610	10200	e8200
5	e3500	11900	39900	29500	18000	47100	23500	24300	4030	4460	11400	e7500
6	e2900	14900	88400	24100	18500	48300	20500	24500	4350	3490	14400	e7200
7	e2600	15200	73500	38700	14800	43500	24100	28100	4330	3810	e14000	e6700
8	e2900	12500	41800	82700	13400	48400	18200	87000	5390	3680	e9900	e5800
9	e3500	11600	26900	60600	51800	66000	19700	89600	7380	4030	e8500	e5700
10	e3800	8190	21100	43100	114000	72000	18500	58600	8290	4330	e6500	e5600
11	e3700	6180	20600	28000	116000	55900	19500	40300	7600	6830	e6900	e5600
12	e3700	5750	19000	31500	112000	44800	21000	30600	6880	5910	e5400	e5600
13	e3200	7430	16700	63600	93100	33800	33200	24600	8100	3950	e4500	e4800
14	e3000	11800	13700	69500	82800	27900	45900	18800	6810	4550	e5000	e4800
15	e2900	18000	13600	50600	69200	21000	48500	15400	6330	5040	e4900	e3700
16	e3600	19800	15300	e31000	55000	21400	42600	14300	6430	4620	e4300	e4400
17	e4600	18900	17800	e22000	42800	21100	34400	13200	4140	5240	e22000	e4700
18	e4200	24400	17400	e20000	34100	17600	24800	12100	4020	4670	e59000	e5200
19	e3200	16000	18000	e23000	28600	17200	19800	10600	4700	6530	e65000	e5300
20	e3700	12900	15300	e18000	27300	19700	21000	8320	4690	7230	e53000	e4300
21	5030	9880	14900	e14000	28700	18100	17200	9220	5950	7550	e36000	e3800
22	4720	10000	14200	e12000	31600	24700	16100	9020	6090	7970	e21000	e4200
23	4350	13800	14600	e12000	41600	37600	14600	7030	5320	9200	e14000	e4400
24	4370	14500	10400	e15000	78400	32500	14600	6050	5580	9880	e10000	e5000
25	4160	13100	10100	e22000	88600	32400	14000	7410	6270	7960	e9900	e5000
26	4390	11200	10600	e51000	64200	30700	11600	8150	5450	9970	e8900	e5000
27	4300	9690	8400	72200	46500	41300	11600	7070	6040	12600	e8000	e4100
28	3780	16300	8410	70300	32400	103000	13000	7790	5510	19600	e12000	e4000
29	4110	28900	8540	72100	---	105000	13100	7300	5940	19900	e13000	e4000
30	4680	24500	11400	46600	---	105000	12900	5890	7150	19700	e10000	e5100
31	6040	---	11700	26500	---	86900	---	6230	---	16600	e7500	---
TOTAL	123930	402970	632440	1115500	1456700	1382800	778600	657080	172800	238690	484800	172700
MEAN	3998	13430	20400	35980	52020	44610	25950	21200	5760	7700	15640	5757
MAX	6040	28900	88400	82700	116000	105000	71200	89600	8290	19900	65000	12000
MIN	2600	5750	8400	10500	13400	17200	11600	5890	4020	3490	4300	3700

e Estimated

KANAWHA RIVER BASIN

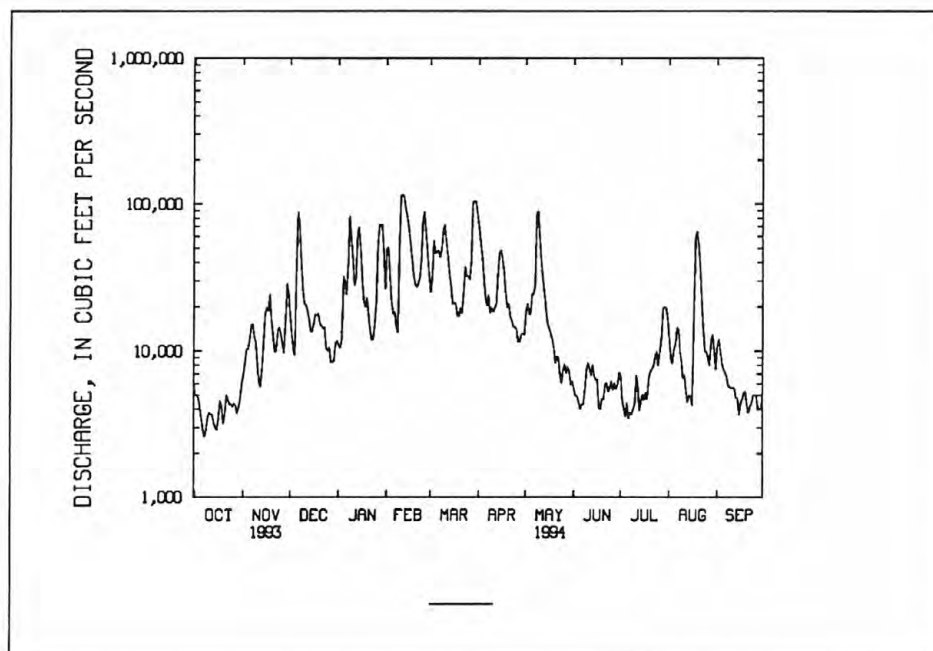
03198000 KANAWHA RIVER AT CHARLESTON, WV--Continued

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

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	7017	10900	17050	20330	25280	30450	23030	17460	10580	7601	7043	5345
MAX	30780	32440	40920	44180	52020	62900	59000	38550	26110	18030	23120	18360
(WY)	1977	1986	1973	1974	1994	1963	1987	1989	1940	1949	1940	1989
MIN	1465	1703	2461	2960	7584	10680	6553	4894	3442	2394	2080	1553
(WY)	1954	1954	1966	1940	1941	1988	1986	1941	1988	1966	1944	1953
SUMMARY STATISTICS	FOR 1993 CALENDAR YEAR				FOR 1994 WATER YEAR				WATER YEARS 1939 - 1994			
ANNUAL TOTAL	5723900				7619010				15140			
ANNUAL MEAN	15680				20870				20960			
HIGHEST ANNUAL MEAN									8649			
LOWEST ANNUAL MEAN									160000			
HIGHEST DAILY MEAN	124000				Mar 5				Feb 11			
LOWEST DAILY MEAN	(e) 2500				Sep 3				Oct 7			
ANNUAL SEVEN-DAY MINIMUM	2700				Aug 20				3270			
INSTANTANEOUS PEAK FLOW									Oct 5			
INSTANTANEOUS PEAK STAGE									Mar 28			
INSTANTANEOUS LOW FLOW									34.14			
10 PERCENT EXCEEDS	28300				UNKNOWN				Mar 29			
50 PERCENT EXCEEDS	10000				51300				39.72			
90 PERCENT EXCEEDS	3200				12100				1030			
					4300				33700			
									9330			
									3060			

a Minimum discharge less than 1,030 ft³/s during Oct. 1-5, 1953.

e Estimated.



KANAWHA RIVER BASIN

03198500 BIG COAL RIVER AT ASHFORD, WV

LOCATION.--Lat 38°10'47", long 81°42'42", Boone County, Hydrologic Unit 05050009, on left bank at downstream side of highway bridge at Ashford, 300 ft upstream from Lick Creek, 1.0 mi downstream from Brush Creek, 1.8 mi upstream from Bull Creek, and at mile 30.2 upstream from Kanawha River.

DRAINAGE AREA.--391 mi².

PERIOD OF RECORD.--June 1908 to September 1916, May 1930 to current year. Published as Coal River at Brushton, June 1908 to September 1916 and as Coal River at Ashford, May 1930 to September 1960.

REVISED RECORDS.--WSP 1305: 1913-14(M). WSP 1335: 1912, 1916(M). WDR WV-82-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 622.46 ft above sea level. Prior to Aug. 9, 1916, nonrecording gage at site 1.0 mi upstream at different datum. May 7, 1930, to Feb. 10, 1939, nonrecording gage at present site and datum.

REMARKS.--Records good except those for periods of estimated daily discharges (ice effect, recorder malfunction), which are poor.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 5,500 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage Height (ft)	Date	Time	Discharge (ft ³ /s)	Gage Height (ft)
Dec. 5	1600	8,770	14.02	Mar. 28	1030	*13,900	*18.45
Jan. 8	0500	13,400	18.06	Apr. 13	1700	8,190	13.44
Feb. 9	2400	9,370	14.61	May 8	0800	13,300	18.03
Feb. 11	2030	9,490	14.72				

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	105	291	411	e350	1000	965	1730	552	173	93	133	521
2	84	281	334	410	838	1820	1390	527	158	87	104	471
3	73	244	302	632	743	3880	1190	482	147	79	89	330
4	63	252	407	2830	649	2350	1060	909	138	74	157	251
5	56	280	5950	1940	590	2070	925	1020	133	70	189	204
6	51	320	3480	1380	558	1710	849	862	127	64	712	190
7	47	351	1530	5380	497	1400	927	1680	126	63	401	173
8	44	267	1020	9300	453	2100	881	9350	159	64	239	148
9	45	204	772	2910	4360	3720	837	3030	152	58	166	128
10	74	171	649	1710	6070	3910	811	1740	134	66	136	114
11	83	148	579	1280	6270	2860	783	1240	323	67	103	114
12	109	131	480	1920	5870	1940	736	976	198	61	87	116
13	135	134	405	3020	2960	1500	4010	789	152	54	79	104
14	124	172	371	2220	2130	1300	3460	659	124	54	82	95
15	106	313	454	1600	1650	1110	1910	577	286	77	192	89
16	89	342	886	1180	1320	979	1800	692	214	154	120	85
17	81	619	1020	e900	1100	852	1390	593	166	121	1820	84
18	74	1480	903	e650	964	809	1130	e500	112	138	2300	95
19	68	959	797	e580	843	773	959	e430	101	111	847	92
20	179	626	679	e500	755	703	821	e390	106	89	519	80
21	235	427	726	e450	851	695	712	e350	104	138	417	74
22	278	324	717	e400	1050	1100	680	e320	146	226	757	69
23	224	265	658	615	2650	1240	596	e290	113	197	678	65
24	178	226	583	892	3860	1040	532	e270	120	191	463	62
25	142	201	534	1720	2640	1580	475	e250	115	124	331	62
26	117	181	484	3440	1810	1430	433	e300	109	96	252	89
27	101	230	413	2910	1330	3550	566	347	201	245	231	133
28	89	823	392	2320	1090	12100	703	289	161	830	293	97
29	80	799	e370	1930	---	6140	576	247	129	401	227	81
30	87	566	e350	1490	---	3450	492	218	110	225	182	70
31	140	---	e330	1200	---	2250	---	194	---	176	198	---
TOTAL	3361	11627	26986	58059	54901	71326	33364	30073	4537	4493	12504	4286
MEAN	108	388	871	1873	1961	2301	1112	970	151	145	403	143
MAX	278	1480	5950	9300	6270	12100	4010	9350	323	830	2300	521
MIN	44	131	302	350	453	695	433	194	101	54	79	62
CF5M	.28	.99	2.23	4.79	5.01	5.88	2.84	2.48	.39	.37	1.03	.37
IN.	.32	1.11	2.57	5.52	5.22	6.79	3.17	2.86	.43	.43	1.19	.41

e Estimated

KANAWHA RIVER BASIN

03198500 BIG COAL RIVER AT ASHFORD, WV--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1908-1916, 1930-1994, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	126	245	581	831	1011	1222	911	577	297	224	172	95.6
MAX	1086	914	2043	2241	2243	2866	2448	1681	1208	1040	1570	442
(WY)	1990	1987	1943	1974	1972	1955	1987	1989	1981	1938	1916	1950
MIN	1.11	5.94	16.7	29.4	142	366	173	89.2	19.6	6.41	11.9	1.13
(WY)	1931	1931	1931	1940	1941	1988	1942	1941	1936	1930	1957	1930

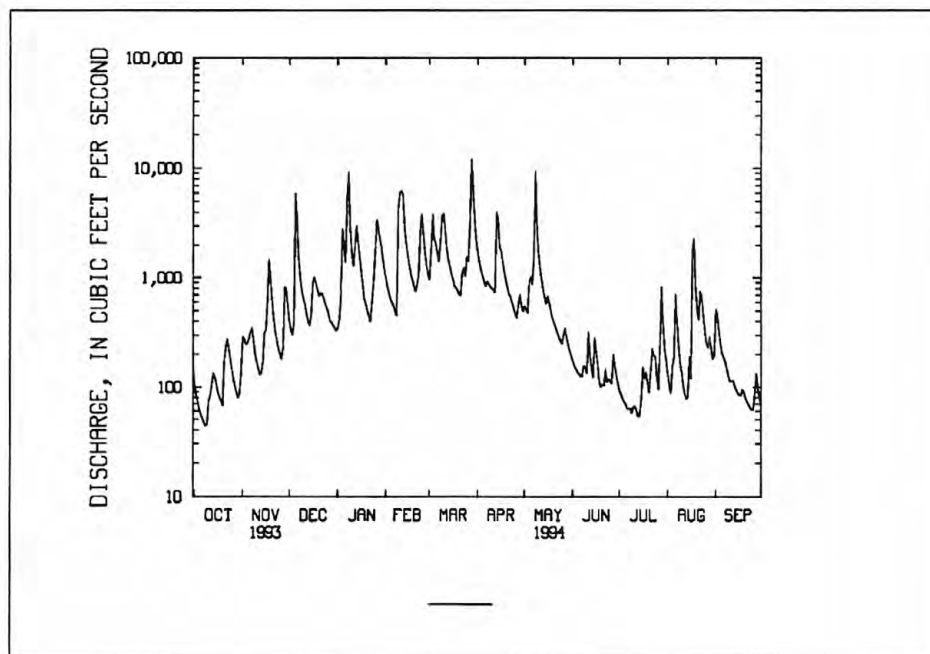
SUMMARY STATISTICS	FOR 1993 CALENDAR YEAR		FOR 1994 WATER YEAR		WATER YEARS 1908 - 1994	
ANNUAL TOTAL	200637		315517			
ANNUAL MEAN	550		864		524	
HIGHEST ANNUAL MEAN					864	
LOWEST ANNUAL MEAN					206	
HIGHEST DAILY MEAN	8620	Mar 5	12100	Mar 28	20400	Mar 7 1967
LOWEST DAILY MEAN	32	Sep 2	44	Oct 8	.00	(a)
ANNUAL SEVEN-DAY MINIMUM	36	Aug 28	54	Oct 3	.00	Oct 6 1930
INSTANTANEOUS PEAK FLOW			13900	Mar 28	(b) 35800	Aug 9 1916
INSTANTANEOUS PEAK STAGE			18.45	Mar 28	(c) 36.30	Aug 9 1916
INSTANTANEOUS LOW FLOW			43	(d)	.00	(a)
ANNUAL RUNOFF (CFSM)	1.41		2.21		1.34	
ANNUAL RUNOFF (INCHES)	19.09		30.02		18.19	
10 PERCENT EXCEEDS	1060		2080		1240	
50 PERCENT EXCEEDS	283		401		220	
90 PERCENT EXCEEDS	51		84		27	

a Sept. 18-21, 24, Oct. 6-12, 1930.

b From rating curve extended above 25,000 ft³/s.

c Observed. From floodmark, site and datum then in use, or 35.66 ft from floodmark, present site and datum.

d Oct. 8, 9.



KANAWHA RIVER BASIN

03200500 COAL RIVER AT TORNADO, WV

LOCATION.--Lat 38°20'20", long 81°50'30", Kanawha County, Hydrologic Unit 05050009, on downstream side of highway bridge at Tornado, 0.2 mi upstream from Falls Creek, and at mile 11.5.

DRAINAGE AREA.--862 mi², includes that of Falls Creek.

PERIOD OF RECORD.--June 1908 to September 1911, October 1911 to June 1912 (gage heights only), November 1928 to September 1931, August 1961 to current year.

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

GAGE.--Water-stage recorder. Datum of gage is 570.46 ft above sea level. Aug. 1, 1961 to Jan. 9, 1973, nonrecording gage at same site and datum. Prior to Aug. 1, 1961, nonrecording gage at same site at different datum.

REMARKS.--Records good except those for period of estimated daily discharges (ice effect), which is poor. U.S. Army Corps of Engineers satellite telemeter at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 16,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage Height (ft)	Date	Time	Discharge (ft ³ /s)	Gage Height (ft)
Jan. 8	1000	23,400	23.96	Mar. 28	2000	*25,900	*25.37
Feb. 10	0600	17,800	20.53	May 8	1500	22,600	23.50
Feb. 12	0300	19,700	21.75				

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	211	495	809	673	2030	1940	3630	972	376	230	288	805
2	163	595	665	805	1670	3100	2950	1050	346	205	240	933
3	137	483	605	1340	1460	9960	2550	921	337	184	212	643
4	121	435	824	6280	1280	5370	2280	1610	320	169	231	495
5	109	487	8480	4650	1150	4140	1950	2090	306	162	337	409
6	98	544	9200	3110	1100	3520	1780	1790	298	148	818	375
7	92	579	3350	9470	999	2930	2010	3170	309	146	660	368
8	90	487	2080	20700	983	4830	1980	19500	318	141	417	328
9	91	385	1500	8200	7530	10700	1800	9610	338	158	311	280
10	107	327	1230	3780	15200	12300	1840	3850	298	183	273	255
11	161	287	1090	2800	12600	7530	1830	2700	400	175	214	240
12	202	260	929	3430	16800	4290	1740	2030	394	146	175	254
13	304	330	798	5390	8030	3330	3730	1610	343	124	150	237
14	266	482	727	4360	4670	2870	7970	1340	282	130	151	212
15	222	982	838	3350	3580	2450	3910	1190	286	140	318	194
16	187	827	1880	2520	2880	2110	4530	1280	505	300	299	179
17	192	1010	2150	e2000	2340	1820	3680	1150	438	339	1550	176
18	179	2990	1850	e1500	1970	1700	2750	971	310	302	4460	200
19	149	2100	1580	e1200	1710	1660	2200	866	255	279	1740	230
20	295	1280	1330	e1000	1520	1520	1810	793	234	212	953	197
21	642	899	1360	e900	1690	1540	1540	735	268	252	672	168
22	617	695	1460	e800	2580	1950	1450	663	316	451	1140	158
23	513	579	1330	1290	5710	2390	1280	611	302	404	1210	144
24	386	506	1190	2020	10400	2220	1140	546	261	433	840	168
25	312	467	1080	4320	6030	2710	1030	508	281	313	603	377
26	257	423	1000	7000	3900	3450	948	633	259	244	471	425
27	225	524	867	5880	2890	6190	1000	641	380	303	388	347
28	192	1090	802	4800	2290	22400	1280	557	434	1100	810	268
29	171	1370	794	4040	---	18000	1080	495	317	769	579	210
30	171	1030	757	3160	---	8420	949	448	267	452	438	171
31	253	---	684	2520	---	4590	---	413	---	340	377	---
TOTAL	7115	22948	53239	123288	124992	161930	68617	64743	9778	8934	21325	9446
MEAN	230	765	1717	3977	4464	5224	2287	2088	326	288	688	315
MAX	642	2990	9200	20700	16800	22400	7970	19500	505	1100	4460	933
MIN	90	260	605	673	983	1520	948	413	234	124	150	144
CFSM	.27	.89	1.99	4.61	5.18	6.06	2.65	2.42	.38	.33	.80	.37
IN.	.31	.99	2.30	5.32	5.39	6.99	2.96	2.79	.42	.39	.92	.41

e Estimated

KANAWHA RIVER BASIN

03200500 COAL RIVER AT TORNADO, WV--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1908-1911, 1929-1931, 1961-1994, BY WATER YEAR (WY)

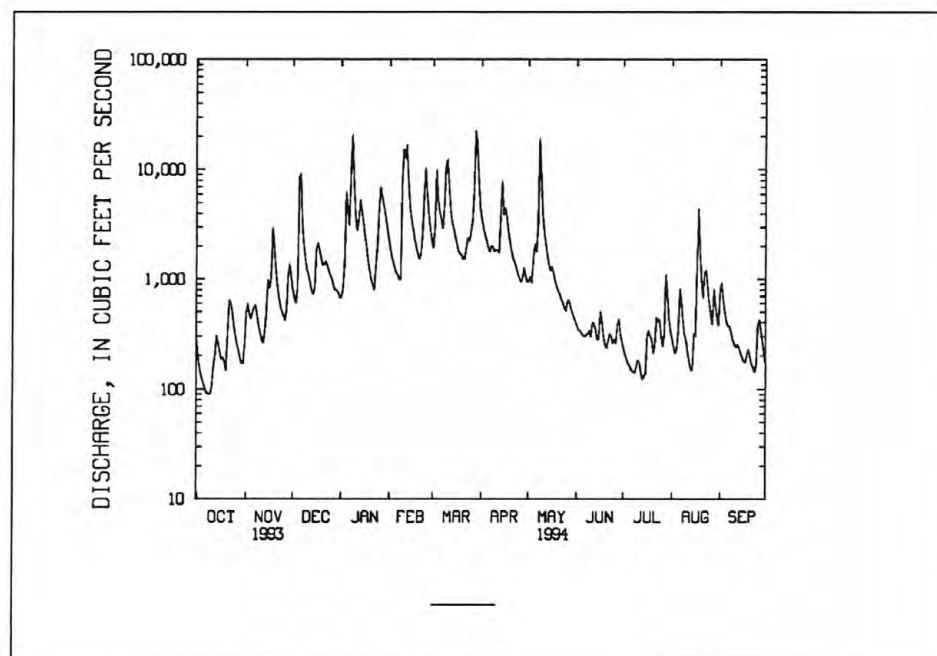
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	388	805	1431	1738	2196	2559	2035	1451	794	544	428	290
MAX	1832	2525	3723	4433	4749	5634	4812	3886	2548	1639	1394	1108
(WY)	1990	1930	1973	1979	1972	1963	1987	1989	1981	1962	1968	1989
MIN	3.05	10.5	46.7	209	631	757	509	234	47.2	8.67	26.1	7.00
(WY)	1931	1931	1931	1931	1931	1910	1986	1930	1930	1930	1930	1930

SUMMARY STATISTICS	FOR 1993 CALENDAR YEAR			FOR 1994 WATER YEAR			WATER YEARS 1908 - 1994		
ANNUAL TOTAL	412688			676355					
ANNUAL MEAN	1131			1853			1219		
HIGHEST ANNUAL MEAN							1853		
LOWEST ANNUAL MEAN							585		
HIGHEST DAILY MEAN	17400			Mar 5			32000		
LOWEST DAILY MEAN	72			Sep 1			(e) 2.0		
ANNUAL SEVEN-DAY MINIMUM	75			Aug 28			2.0		
INSTANTANEOUS PEAK FLOW							35500		
INSTANTANEOUS PEAK STAGE							31.98		
INSTANTANEOUS LOW FLOW							2.0		
ANNUAL RUNOFF (CFSM)	1.31			2.15			1.41		
ANNUAL RUNOFF (INCHES)	17.81			29.19			19.21		
10 PERCENT EXCEEDS	2330			4400			2720		
50 PERCENT EXCEEDS	579			802			650		
90 PERCENT EXCEEDS	108			184			104		

a Oct. 1-10, 1930.

b Oct. 7, 8, 9.

e Estimated.



KANAWHA RIVER BASIN

03201300 KANAWHA RIVER AT WINFIELD DAM, AT WINFIELD, WV--Continued

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

DATE	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) (00618)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)
MAR 1994												
31...	0.530	0.020	0.550	0.050	0.25	0.30	0.040	<0.010	<0.010	40	30	<3
AUG												
12...	--	<0.010	0.420	0.060	0.24	0.30	0.050	0.030	0.030	40	32	<3
SEP												
16...	0.490	0.010	0.500	<0.010	0.40	0.40	0.060	0.020	0.020	20	34	<3

DATE	IRON,	LITHIUM	MANGA-	MOLYB-	NICKEL,	SELE-	SILVER,	STRON-	VANA-	RADIUM	URANIUM
	DIS-	DIS-	NESE,	DENUM,	DIS-	NIUM,	DIS-	TIUM,	DIUM,	226,	NATURAL
	SOLVED	SOLVED	DIS-	DIS-	SOLVED	DIS-	SOLVED	DIS-	DIS-	SOLVED,	DIS-
	(UG/L	(UG/L	SOLVED	SOLVED	SOLVED	SOLVED	SOLVED	SOLVED	SOLVED	RADON	SOLVED
AS FE)	AS LI)	(UG/L	(UG/L	(UG/L	(UG/L	(UG/L	(UG/L	(UG/L	(UG/L	METHOD	(UG/L
(01046)	(01130)	AS MN)	AS MO)	AS NI)	AS SE)	AS AG)	AS SR)	AS V)	(PCI/L)	AS U)	(22703)
(01046)	(01130)	(01056)	(01060)	(01065)	(01145)	(01075)	(01080)	(01085)	(09511)		
MAR 1994											
31...	52	7	32	--	2	<1	<1.0	180	<6	0.02	0.03
AUG											
12...	68	4	3	<10	1	<1	<1.0	94	<6	--	--
SEP											
16...	14	5	<1	<10	<1	<1	<1.0	130	<6	0.04	0.07

GUYANDOTTE RIVER BASIN

03202400 GUYANDOTTE RIVER NEAR BAILEYSVILLE, WV

LOCATION.--Lat 37°36'14", long 81°38'43", Wyoming County, Hydrologic Unit 05070101, on right bank 75 ft upstream from Doublecamp Branch, 3.1 mi east of Baileysville, and at mile 130.8.

DRAINAGE AREA.--306 mi².

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

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

GAGE.--Water-stage recorder. Datum of gage is 1,140.00 ft above sea level. Prior to Sept. 10, 1969, at site 25 ft upstream at same datum.

REMARKS.--Records good except those for period of estimated daily discharges (ice effect,), which is poor. U.S. Army Corps of Engineers satellite telemeter at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 4,400 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage Height (ft)	Date	Time	Discharge (ft ³ /s)	Gage Height (ft)
Jan. 8	0400	6,110	10.98	Feb. 11	2100	6,350	11.21
Feb. 10	0100	*6,870	*11.71	Mar. 28	1300	5,720	10.59

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	57	128	160	272	644	702	1470	313	160	103	136	365
2	54	113	129	273	525	1350	1240	293	151	94	112	250
3	54	104	114	310	478	2020	1040	275	142	86	156	168
4	54	104	206	1050	422	1420	883	344	133	82	142	132
5	52	106	2750	843	394	1310	744	350	129	78	213	116
6	48	101	1320	597	403	1090	673	336	125	75	580	120
7	47	91	614	1270	353	911	713	377	122	73	298	113
8	47	79	383	4280	339	882	668	1120	122	70	191	98
9	48	73	287	1670	2370	1210	633	1040	121	68	140	89
10	60	68	253	1000	4310	1510	616	713	120	78	114	82
11	74	64	257	730	4060	1390	642	528	157	94	101	81
12	79	62	223	1570	4110	1090	593	438	310	78	92	86
13	84	60	203	2250	2200	894	1740	370	237	74	86	77
14	73	59	200	1590	1660	802	1610	325	164	74	85	72
15	64	69	256	1110	1290	689	1110	303	136	133	138	69
16	58	91	444	747	1040	604	881	333	205	340	115	68
17	57	139	456	e560	846	525	697	277	154	175	576	67
18	58	331	418	e400	726	500	593	253	127	221	892	74
19	61	257	387	e350	635	466	525	233	110	146	409	76
20	80	180	337	e310	571	411	474	218	121	108	244	69
21	102	134	348	e280	649	462	419	212	110	118	194	65
22	114	105	305	e250	772	1670	405	196	108	95	186	62
23	108	93	267	e330	1670	1230	372	184	112	143	152	60
24	87	86	242	400	2670	898	343	172	137	113	122	58
25	75	79	226	734	1920	786	324	174	119	88	106	63
26	70	74	212	2110	1350	652	303	236	104	124	98	92
27	66	141	193	2100	981	1660	331	453	135	487	122	78
28	64	437	197	1610	796	4910	336	294	142	745	147	65
29	61	325	266	1420	---	4080	296	230	114	304	118	60
30	67	220	296	1020	---	2740	313	197	104	258	102	57
31	103	---	249	790	---	1870	---	176	---	187	103	---
TOTAL	2126	3973	12198	32226	38184	40734	20987	10963	4231	4912	6270	2932
MEAN	68.6	132	393	1040	1364	1314	700	354	141	158	202	97.7
MAX	114	437	2750	4280	4310	4910	1740	1120	310	745	892	365
MIN	47	59	114	250	339	411	296	172	104	68	85	57
CFSM	.22	.43	1.29	3.40	4.46	4.29	2.29	1.16	.46	.52	.66	.32
IN.	.26	.48	1.48	3.92	4.64	4.95	2.55	1.33	.51	.60	.76	.36

e Estimated

GUYANDOTTE RIVER BASIN

03202400 GUYANDOTTE RIVER NEAR BAILEYSVILLE, WV--Continued

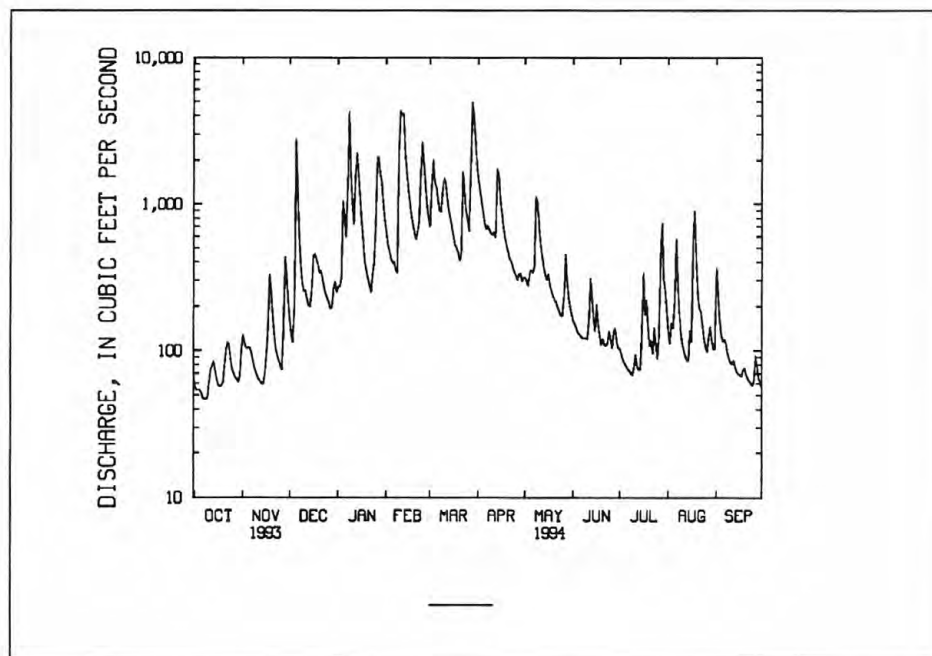
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1968 - 1994, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	158	232	431	613	767	815	750	581	313	180	161	103
MAX	680	774	1294	1894	1620	1969	2003	1257	1262	504	649	264
(WY)	1990	1978	1973	1974	1972	1975	1987	1989	1981	1979	1972	1989
MIN	35.6	33.8	140	153	237	193	211	198	109	74.5	49.8	47.9
(WY)	1979	1979	1981	1977	1988	1988	1986	1976	1988	1970	1970	1987

SUMMARY STATISTICS	FOR 1993 CALENDAR YEAR			FOR 1994 WATER YEAR			WATER YEARS 1968 - 1994		
ANNUAL TOTAL	124601			179736					
ANNUAL MEAN	341			492			424		
HIGHEST ANNUAL MEAN							620		
LOWEST ANNUAL MEAN							174		
HIGHEST DAILY MEAN	5620			Mar 24			4910		
LOWEST DAILY MEAN	47			(a)			Mar 28		
ANNUAL SEVEN-DAY MINIMUM	49			Sep 19			17900		
INSTANTANEOUS PEAK FLOW							23		
INSTANTANEOUS PEAK STAGE							(b)		
INSTANTANEOUS LOW FLOW							50		
ANNUAL RUNOFF (CFSM)	1.12			1.61			Oct 3		
ANNUAL RUNOFF (INCHES)	15.15			21.85			Feb 10		
10 PERCENT EXCEEDS	747			1300			(c) 36700		
50 PERCENT EXCEEDS	170			226			26.89		
90 PERCENT EXCEEDS	59			69			21		

a Sept. 15, Oct. 7, 8.

b Oct. 7, 8.

c From rating curve extended above 14,000 ft³/s on basis of slope-area measurement of peak flow.

GUYANDOTTE RIVER BASIN

03202750 CLEAR FORK AT CLEAR FORK, WV

LOCATION.--Lat 37°37'23", long 81°42'27", Wyoming County, Hydrologic Unit 05070101, on left bank 0.2 mi downstream from Walls Branch, 0.7 mi upstream from Spratt Branch, 1.4 mi southwest of Clear Fork, and at mile 2.6.

DRAINAGE AREA.--126 mi².

REVISED RECORDS.--WDR WV-81-1: Drainage area.

PERIOD OF RECORD.--June 1974 to current year. Prior to October 22, 1974, partial record station.

GAGE.--Water-stage recorder. Elevation of gage is 1,150 ft above sea level, from topographic map. June 28, 1974 to Oct. 22, 1974, nonrecording gage; Oct. 23, 1974 to Oct. 26, 1977, digital recorder at site 0.9 mi upstream at different datum; Oct. 27, 1977 to Dec. 31, 1980, digital recorder at site 0.2 mi upstream at different datum.

REMARKS.--Records good except those for period of estimated daily discharges (ice effect, faulty gage-height record), which are poor. U.S. Army Corps of Engineers satellite telemeter at station. See 1993 revisions on page 192.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,600 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage Height (ft)	Date	Time	Discharge (ft ³ /s)	Gage Height (ft)
Dec. 5	---	UNKNOWN	UNKNOWN	Mar. 22	0600	1,760	6.35
Jan. 8	---	UNKNOWN	UNKNOWN	Mar. 28	1100	3,510	8.92
Feb. 10	---	*UNKNOWN	*UNKNOWN	Apr. 13	1300	5,450	11.29
Feb. 12	---	UNKNOWN	UNKNOWN	May 8	0600	2,740	7.85
Feb. 23	2100	2,250	7.13				

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	35	82	137	143	241	236	475	87	35	34	52	402
2	29	80	111	139	194	680	373	85	33	29	42	282
3	25	77	96	208	174	e1100	315	74	32	25	197	178
4	21	92	210	e900	149	678	268	139	29	22	118	126
5	19	109	e2100	592	139	511	226	148	29	21	556	94
6	16	166	952	382	132	405	210	138	28	19	633	89
7	15	140	438	e700	116	328	219	310	26	18	250	78
8	14	98	276	e2000	111	391	192	2060	29	17	144	61
9	13	74	202	986	e1400	958	186	790	30	17	95	51
10	18	61	177	434	e2000	e1100	194	416	29	16	70	45
11	24	52	178	311	e1500	840	201	273	63	16	56	52
12	36	46	154	e800	e1800	516	195	209	117	16	48	49
13	44	42	143	e1000	818	368	3130	165	60	16	41	38
14	36	41	140	778	561	314	1200	134	42	23	38	34
15	29	52	224	495	388	258	576	118	33	70	63	31
16	25	106	489	330	302	224	379	120	30	152	50	30
17	22	193	405	e250	245	190	279	97	28	75	706	29
18	21	510	300	e200	211	178	223	83	26	77	820	31
19	21	276	238	169	185	171	192	75	29	50	315	30
20	30	178	189	e140	165	148	169	70	167	34	178	26
21	47	121	189	e120	241	231	144	64	69	41	168	23
22	61	92	164	e110	398	1500	131	58	46	38	185	21
23	61	76	145	e140	1350	693	119	53	37	58	143	20
24	50	69	130	188	1480	421	109	49	37	43	110	19
25	41	62	122	485	822	353	100	47	34	32	86	24
26	36	55	115	e1000	503	299	92	69	32	49	70	130
27	32	156	105	e950	336	1700	99	70	44	390	123	79
28	28	489	105	845	267	3220	103	57	56	415	171	45
29	26	298	138	619	---	2130	89	49	42	161	120	36
30	29	194	150	405	---	1200	77	44	35	93	99	30
31	54	---	140	304	---	671	---	40	---	67	127	---
TOTAL	958	4087	8662	16123	16228	22012	10265	6191	1327	2134	5874	2183
MEAN	30.9	136	279	520	580	710	342	200	44.2	68.8	189	72.8
MAX	61	510	2100	2000	2000	3220	3130	2060	167	415	820	402
MIN	13	41	96	110	111	148	77	40	26	16	38	19
CFSM	.25	1.08	2.22	4.13	4.60	5.64	2.72	1.58	.35	.55	1.50	.58
IN.	.28	1.21	2.56	4.76	4.79	6.50	3.03	1.83	.39	.63	1.73	.64

e Estimated

GUYANDOTTE RIVER BASIN

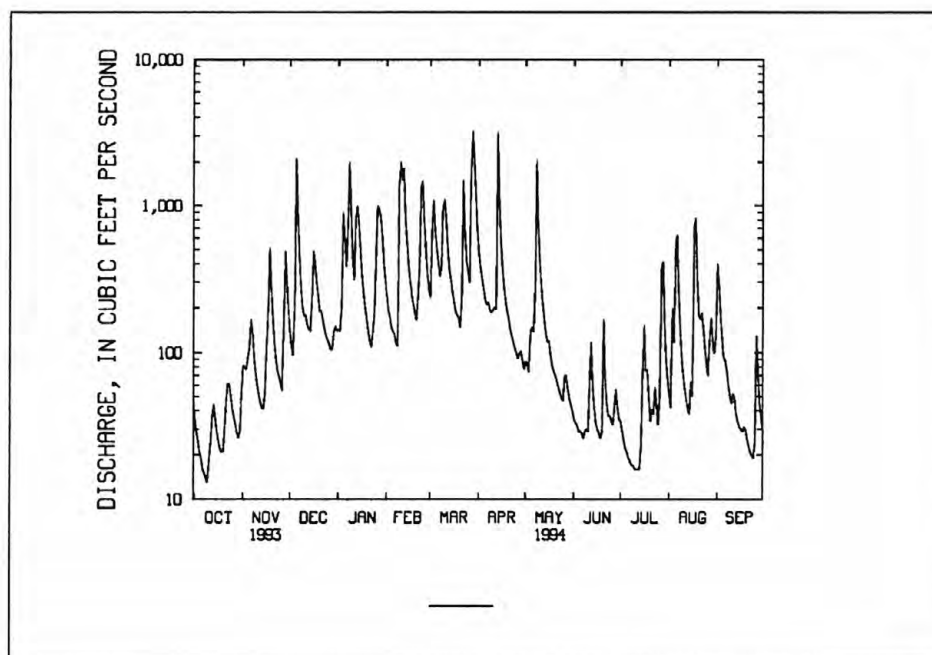
03202750 CLEAR FORK AT CLEAR FORK, WV--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1974 - 1994, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	73.7	130	228	285	360	388	319	234	112	70.2	64.5	42.4
MAX	365	366	491	833	580	981	766	556	551	333	308	103
(WY)	1990	1978	1979	1979	1994	1975	1987	1984	1981	1980	1977	1982
MIN	5.27	11.7	67.5	47.5	126	96.0	74.8	38.9	18.3	12.2	6.32	7.68
(WY)	1992	1988	1981	1977	1988	1988	1986	1976	1988	1988	1987	1983

SUMMARY STATISTICS	FOR 1993 CALENDAR YEAR		FOR 1994 WATER YEAR		WATER YEARS 1974 - 1994	
ANNUAL TOTAL	59438.1		96044			
ANNUAL MEAN	163		263		192	
HIGHEST ANNUAL MEAN					318	1979
LOWEST ANNUAL MEAN					76.5	1988
HIGHEST DAILY MEAN	2760	Mar 24	3220	Mar 28	6380	Apr 5 1977
LOWEST DAILY MEAN	2.9	(a)	13	Oct 9	2.3	Aug 18 1988
ANNUAL SEVEN-DAY MINIMUM	4.0	Jul 27	17	Oct 4	2.9	Aug 13 1988
INSTANTANEOUS PEAK FLOW			UNKNOWN		(b) 9900	Apr 5 1977
INSTANTANEOUS PEAK STAGE			UNKNOWN		(c) 18.64	Apr 5 1977
INSTANTANEOUS LOW FLOW			13	(d)	2.3	(f)
ANNUAL RUNOFF (CFSM)	1.29		2.09		1.52	
ANNUAL RUNOFF (INCHES)	17.55		28.36		20.66	
10 PERCENT EXCEEDS	372		685		440	
50 PERCENT EXCEEDS	81		120		85	
90 PERCENT EXCEEDS	14		28		13	

- a Aug. 1, 2.
b From rating curve extended above 3,000 ft³/s on basis of slope-area measurement of peak flow.
c Site and datum then in use.
d Oct. 8, 9.
f Aug. 17-19, 1988.



NOTE.--See 1993 revisions on following page.

GUYANDOTTE RIVER BASIN

03202750 CLEAR FORK AT CLEAR FORK, WV--Continued

REVISIONS FOR THE 1993 WATER YEAR.--The peak discharges greater than base discharge of 1,600 ft³/s, annual maximum (*), revised daily discharges, revised monthly summaries, revised annual calendar year total, and water year total, in cubic feet per second, for water year 1993 are given below. These figures supersede those published in WRD WV 93-1.

Date	Revised Discharge	Date	Revised Discharge	Date	Revised Discharge
Dec. 23, 1992	e830	Mar. 4, 1993	e3,000	Mar. 19, 1993	e750
Dec. 24, 1992	e870	Mar. 5, 1993	e2,100	Mar. 21, 1993	e950
Feb. 21, 1993	e820	Mar. 6, 1993	e860	Mar. 22, 1993	e1,200
Feb. 22, 1993	e1,900	Mar. 17, 1993	e560		
Feb. 23, 1993	e780	Mar. 18, 1993	e940		

PEAK DISCHARGES FOR 1993 WATER YEAR.--Peak discharges greater than base discharge of 1,600 ft³/s and maximum:

Date	Time	Discharge (ft ³ /s)		Gage Height (ft)		Date	Time	Discharge (ft ³ /s)		Gage Height (ft)		
Feb. 21	---	UNKNOWN		UNKNOWN		Mar. 24	0700	3,390		8.76		
Mar. 4	---	a*UNKNOWN		*UNKNOWN								
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
TOTAL	510.9	910	8222	5337	6810	23265	7575	2523	2297	550.8	1218.6	1018.7
MEAN	16.5	30.3	265	172	243	750	252	81.4	76.6	17.8	39.3	34.0
MAX	37	66	982	333	1900	3000	607	193	540	61	197	166
MIN	9.9	15	30	83	55	178	115	29	19	3.2	2.9	7.7
CFSM	.13	.24	2.10	1.37	1.93	5.96	2.00	.65	.61	.14	.31	.27
IN.	.15	.27	2.43	1.58	2.01	6.87	2.24	.74	.68	.16	.36	.30

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1974 - 1993, BY WATER YEAR (WY)

MEAN	76.0	130	226	273	351	377	318	236	116	70.3	58.3	40.9
MAX	365	366	491	833	562	981	766	556	551	333	308	103
(WY)	1990	1978	1979	1979	1979	1975	1987	1984	1981	1980	1977	1982
MIN	5.27	11.7	67.5	47.5	126	96.0	74.8	38.9	18.3	12.2	6.32	7.68
(WY)	1992	1988	1981	1977	1988	1988	1986	1976	1988	1988	1987	1983

SUMMARY STATISTICS	FOR 1992 CALENDAR YEAR	FOR 1993 WATER YEAR	WATER YEARS 1974 - 1993
ANNUAL TOTAL	61397.9	60238.0	
ANNUAL MEAN	168	165	189
HIGHEST ANNUAL MEAN			318
LOWEST ANNUAL MEAN			76.5
HIGHEST DAILY MEAN	(e) 1300	Mar 11	6380
LOWEST DAILY MEAN	9.9	Oct 26	2.3
ANNUAL SEVEN-DAY MINIMUM	10	Oct 24	2.9
INSTANTANEOUS PEAK FLOW		UNKNOWN	(c) 9900
INSTANTANEOUS PEAK STAGE		UNKNOWN	(d) 18.64
INSTANTANEOUS LOW FLOW		2.6	(b)
ANNUAL RUNOFF (CFSM)	1.33	1.31	1.50
ANNUAL RUNOFF (INCHES)	18.13	17.78	20.34
10 PERCENT EXCEEDS	383	379	434
50 PERCENT EXCEEDS	104	61	83
90 PERCENT EXCEEDS	22	11	12

a Estimated annual peak discharge about 4,000 ft³/s.

b Aug. 1, 2.

c From rating curve extended above 3,000 ft³/s on basis of slope-area measurement of peak flow.

d Site and datum then in use.

e Estimated.

f Aug. 17-19, 1988.

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GUYANDOTTE RIVER BASIN

03203600 GUYANDOTTE RIVER AT LOGAN, WV

LOCATION.--Lat 37°50'32", long 81°58'34", Logan County, Hydrologic Unit 05070101, on right bank 200 ft downstream from Midelburg Bridge at Logan, 0.8 mi downstream from Dingess Run, 1.1 mi upstream from Island Creek, and at mile 81.0.

DRAINAGE AREA.--833 mi².

PERIOD OF RECORD.--October 1960 to September 1962 (annual maximum only), October 1962 to current year. Gage-height records collected in this vicinity since November 1915 are contained in reports of National Weather Service.

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

GAGE.--Water-stage recorder. Datum of gage is 640.49 ft above sea level (corrected). Datum published as 640.00 ft 1963 to 1993. Prior to Oct. 1, 1962, at datum 1.32 ft lower.

REMARKS.--No estimated daily discharges. Records good. Flow regulated since February 1980 by R. D. Bailey Lake at mile 112. U.S. Army Corps of Engineers satellite telemeter at station. See 1993 revisions on pages 196 and 197.

PEAK DISCHARGE FOR CURRENT YEAR.--Maximum discharge, 15,200 ft³/s, Jan. 7, gage height, 19.15 ft.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	189	495	1270	800	1170	1940	5660	882	342	284	442	1210
2	128	562	680	824	2730	3580	5390	934	322	257	299	1500
3	124	538	505	956	2670	6030	5190	916	314	213	253	1010
4	115	549	593	4320	2550	5360	4980	1390	311	202	206	638
5	113	613	6060	3870	2470	3390	4760	1430	274	162	1070	454
6	111	484	5690	3450	2090	3380	3880	1290	215	112	1750	445
7	108	351	4410	6240	1010	2740	1680	2480	196	108	1320	471
8	107	306	2850	7930	799	2800	1220	7230	255	128	571	390
9	106	706	1550	5990	4960	5200	1210	5210	312	168	481	322
10	117	686	1200	5230	7540	6380	1210	3660	297	173	351	263
11	118	672	956	4710	9880	5430	1220	1820	460	163	296	259
12	163	657	855	4620	5020	3670	1200	1430	550	157	265	238
13	274	654	758	5740	4810	2800	6540	1180	659	178	233	229
14	223	657	645	5120	5660	1990	5860	995	474	201	190	224
15	183	523	982	3940	5340	2110	4920	886	375	294	278	219
16	153	599	1820	3450	5080	1640	4610	916	291	373	290	199
17	153	721	2010	2060	4870	1500	3930	902	248	728	2030	171
18	144	1480	1520	1370	4690	1360	2330	647	327	443	3540	188
19	132	1670	1430	1560	4500	1220	1510	697	301	367	1790	171
20	187	757	1040	1090	4310	1180	1320	586	237	359	956	160
21	180	655	1160	1140	4230	1190	1160	490	311	309	1020	155
22	252	480	1140	1290	3140	1710	1180	489	330	309	1070	153
23	300	368	904	1190	6030	3220	991	486	285	493	887	184
24	286	352	898	1020	6200	4320	959	476	239	349	660	197
25	271	343	883	2350	5820	3280	849	473	259	301	418	184
26	257	330	845	5880	5040	2110	821	432	238	402	369	258
27	376	621	763	6190	3510	5530	883	632	349	1000	639	433
28	259	982	446	5530	2870	10700	862	815	301	2210	999	403
29	248	1010	680	1500	---	6320	851	504	285	1180	841	196
30	367	2060	876	1040	---	5390	1020	472	299	603	634	144
31	435	---	970	871	---	6070	---	459	---	476	431	---
TOTAL	6179	20881	46389	101271	118989	113540	78196	41209	9656	12702	24579	11068
MEAN	199	696	1496	3267	4250	3663	2607	1329	322	410	793	369
MAX	435	2060	6060	7930	9880	10700	6540	7230	659	2210	3540	1500
MIN	106	306	446	800	799	1180	821	432	196	108	190	144

GUYANDOTTE RIVER BASIN

03203600 GUYANDOTTE RIVER AT LOGAN, WV--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1963 - 1979, BY WATER YEAR (WY) [UNREGULATED]

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	427	739	1491	1995	1984	2606	1921	1398	796	462	493	319
MAX	1462	2111	3582	5381	5021	5732	3891	2471	3578	1592	2107	1142
(WY)	1977	1978	1973	1974	1972	1975	1977	1975	1979	1979	1972	1966
MIN	48.8	69.0	67.5	125	857	813	526	362	171	122	90.1	83.2
(WY)	1964	1966	1966	1966	1968	1969	1963	1964	1970	1964	1964	1965

SUMMARY STATISTICS

WATER YEARS 1963 - 1979

ANNUAL MEAN	1217
HIGHEST ANNUAL MEAN	1936
LOWEST ANNUAL MEAN	570
HIGHEST DAILY MEAN	40800
LOWEST DAILY MEAN	34
ANNUAL SEVEN-DAY MINIMUM	41
INSTANTANEOUS PEAK FLOW	(a) 55000
INSTANTANEOUS PEAK STAGE	34.98
INSTANTANEOUS LOW FLOW	33
10 PERCENT EXCEEDS	2560
50 PERCENT EXCEEDS	602
90 PERCENT EXCEEDS	110

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1980 - 1994, BY WATER YEAR (WY)
[REGULATED, UNADJUSTED]

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	427	680	1145	1441	2202	2263	1906	1596	762	435	335	268
MAX	2211	1649	2255	3267	4250	4678	5213	3828	3430	1693	793	602
(WY)	1990	1980	1992	1994	1994	1993	1987	1984	1981	1980	1994	1989
MIN	162	98.9	373	416	690	449	353	708	174	120	89.1	115
(WY)	1993	1988	1981	1981	1988	1988	1986	1993	1988	1988	1987	1990

SUMMARY STATISTICS

FOR 1993 CALENDAR YEAR

FOR 1994 WATER YEAR

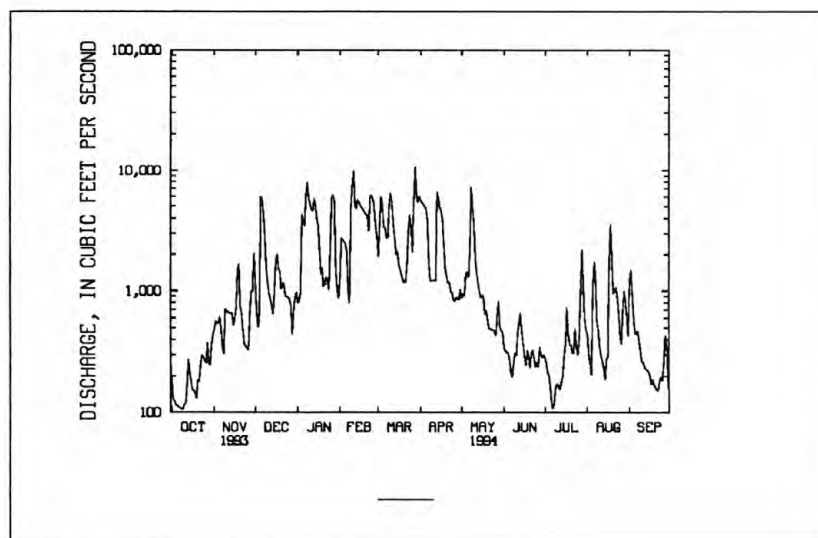
WATER YEARS 1980 - 1994

ANNUAL TOTAL	391573	584659	
ANNUAL MEAN	1073	1602	1116
HIGHEST ANNUAL MEAN			1602
LOWEST ANNUAL MEAN			432
HIGHEST DAILY MEAN	11300	Mar 24	10700
LOWEST DAILY MEAN	62	(b)	106
ANNUAL SEVEN-DAY MINIMUM	68	Jul 27	111
INSTANTANEOUS PEAK FLOW			15200
INSTANTANEOUS PEAK STAGE			19.15
INSTANTANEOUS LOW FLOW			99
10 PERCENT EXCEEDS	2580		5060
50 PERCENT EXCEEDS	579		800
90 PERCENT EXCEEDS	122		189

a From rating curve extended above 26,000 ft³/s on basis of slope-area measurements at gage heights 25.60 ft and 34.98 ft.

b July 31, Aug. 1.

c July 10, Aug. 18, 1988.



NOTE.--See 1993 revisions on following pages.

GUYANDOTTE RIVER BASIN

03203600 GUYANDOTTE RIVER AT LOGAN, WV--Continued

REVISIONS FOR THE 1993 WATER YEAR.--The peak discharge for the year, revised daily mean discharges for the entire year, revised monthly summaries, revised annual calendar year total, and water year total, in cubic feet per second, for water year 1993 are given below. These figures supersede those published in WRD WV 93.1.

PEAK DISCHARGE FOR 1993 WATER YEAR.--Maximum discharge, 11,900 ft³/s, Mar. 24, gage height, 16.57 ft.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	194	302	322	899	544	1110	3580	1330	357	253	77	94
2	130	255	182	824	586	1150	3420	968	318	204	82	118
3	130	289	157	799	495	1460	2270	924	356	421	106	138
4	132	245	151	776	398	6160	2190	897	479	365	164	169
5	142	243	176	793	361	8680	1980	869	2500	210	140	134
6	139	222	194	737	414	6990	1910	797	2120	185	143	158
7	153	309	195	617	427	5330	1590	614	1380	175	190	179
8	162	314	433	719	355	4120	1480	593	911	167	158	134
9	173	319	438	825	332	1200	1300	583	655	163	117	131
10	139	263	308	986	320	1090	1440	604	433	160	109	175
11	118	293	506	942	317	3730	1650	615	391	168	142	155
12	114	307	797	835	292	3490	1850	1040	371	295	189	136
13	109	284	840	829	428	2110	1550	1210	665	194	559	123
14	107	261	721	870	498	3250	1410	1160	993	203	1200	96
15	105	253	682	847	383	3090	1170	810	719	190	1050	97
16	104	192	833	692	505	3060	1170	862	507	194	311	104
17	198	164	2680	640	964	3520	1110	742	374	191	140	120
18	243	162	3790	609	1130	4820	848	741	360	198	109	165
19	205	159	2960	572	1120	5040	947	587	439	233	152	186
20	187	158	2080	546	899	3550	896	776	385	268	172	132
21	189	185	2200	647	2380	4790	918	739	324	203	950	92
22	170	323	2030	812	6240	5780	1260	563	367	165	569	97
23	163	442	3030	990	5210	7440	1370	537	308	128	294	94
24	163	430	4280	1160	4460	9730	1180	459	315	93	238	98
25	165	425	2380	1280	2900	6610	1130	366	294	90	187	121
26	173	403	2100	1350	1790	5550	1430	327	280	88	156	160
27	184	390	1750	1270	1460	5290	2390	352	219	89	149	351
28	186	546	1130	1070	1190	5160	2490	441	208	85	148	646
29	185	727	1060	870	---	4920	1580	376	218	85	113	542
30	219	487	998	801	---	3710	1500	330	210	81	100	257
31	250	---	1090	753	---	3540	---	306	---	77	96	---
TOTAL	5031	9352	40493	26360	36398	135470	49009	21518	17456	5621	8310	5202
MEAN	162	312	1306	850	1300	4370	1634	694	582	181	268	173
MAX	250	727	4280	1350	6240	9730	3580	1330	2500	421	1200	646
MIN	104	158	151	546	292	1090	848	306	208	77	77	92

GUYANDOTTE RIVER BASIN

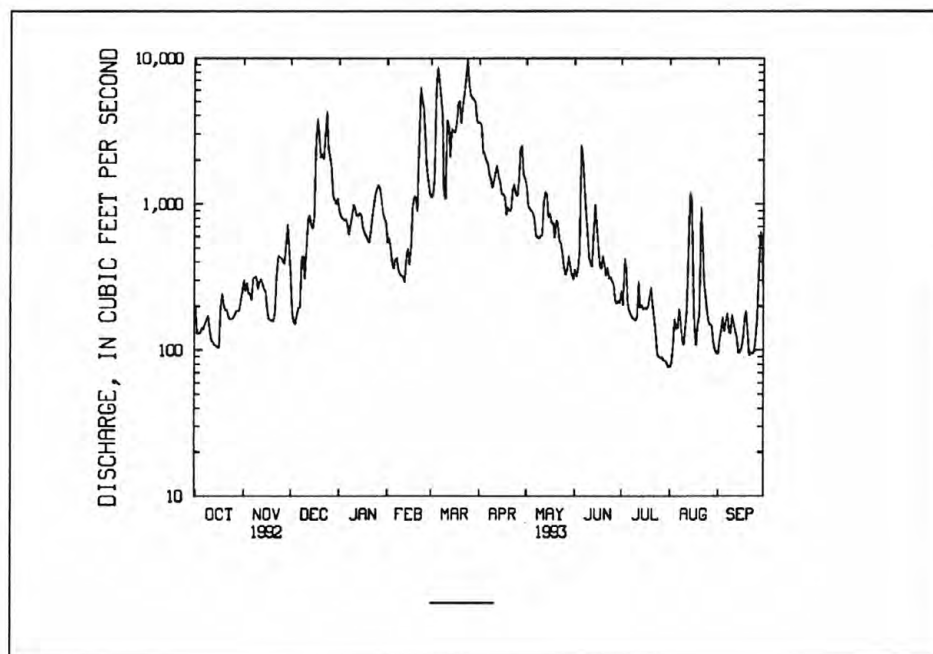
03203600 GUYANDOTTE RIVER AT LOGAN, WV--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1980 - 1993, BY WATER YEAR (WY)
[REGULATED, UNADJUSTED]

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	444	679	1116	1312	2055	2141	1853	1615	792	437	303	260
MAX	2211	1649	2255	2606	3579	4370	5213	3828	3430	1693	740	602
(WY)	1990	1980	1992	1991	1990	1993	1987	1984	1981	1980	1980	1989
MIN	162	98.9	373	416	690	449	353	694	174	120	89.1	115
(WY)	1993	1988	1981	1981	1988	1988	1986	1993	1988	1988	1987	1990

SUMMARY STATISTICS	FOR 1992 CALENDAR YEAR		FOR 1993 WATER YEAR		WATER YEARS 1980 - 1993	
ANNUAL TOTAL	347906		360220		1079	
ANNUAL MEAN	951		987		1439	
HIGHEST ANNUAL MEAN					1980	
LOWEST ANNUAL MEAN					432	
HIGHEST DAILY MEAN	5850	Mar 12	9730	Mar 24	14800	May 7 1984
LOWEST DAILY MEAN	104	Oct 16	77	(a)	48	(b)
ANNUAL SEVEN-DAY MINIMUM	114	Oct 10	82	Jul 27	57	Jul 5 1988
INSTANTANEOUS PEAK FLOW			11900	Mar 24	27200	May 7 1984
INSTANTANEOUS PEAK STAGE			16.57	Mar 24	23.30	May 7 1984
INSTANTANEOUS LOW FLOW			76	(c)	45	Oct 26 1991
10 PERCENT EXCEEDS	2090		2570		2760	
50 PERCENT EXCEEDS	630		427		551	
90 PERCENT EXCEEDS	176		129		147	

- a July 31, Aug. 1.
b July 10, Aug. 18, 1988.
c July 30, 31, Aug. 1, 2.



GUYANDOTTE RIVER BASIN

03204000 GUYANDOTTE RIVER AT BRANCHLAND, WV
(National stream-quality accounting network station)

LOCATION.--Lat 38°13'15", long 82°12'10", Lincoln County, Hydrologic Unit 05070102, on right bank at upstream side of highway bridge at Branchland, opposite mouth of Fourmile Creek, and at mile 35.3. Records include flow of Fourmile Creek.

DRAINAGE AREA.--1,224 mi², includes that of Fourmile Creek.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1915 to September 1917, October 1917 to September 1922 (gage heights only), December 1928 to current year. Prior to October 1959, published as Guyandot River at Branchland. Monthly discharge only for July to September 1916, published in WSP 1305.

REVISED RECORDS.--WSP 853: 1918(M). WSP 1335: 1916-17, 1929-30, 1932-35. WDR WV-82-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 547.91 ft above sea level. Prior to June 20, 1932, nonrecording gage and June 20, 1932, to Oct. 24, 1968, water-stage recorder at site 20 ft downstream at same datum. Oct. 1, 1942, to Jan. 23, 1969, auxiliary nonrecording gage and Jan. 24, 1969, to Dec. 12, 1986, auxiliary water-stage recorder 4.0 mi upstream from base gage at datum 4.99 ft higher.

REMARKS.--Water-discharge records fair except those for periods of estimated daily discharges (obvious backwater effect) and discharges above 6,000 ft³/s due to possible backwater effect from downstream tributaries and the Ohio River, which are poor. Flow regulated since February 1980 by R. D. Bailey Lake at mile 112. U.S. Army Corps of Engineers satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood, probably in 1907, reached a stage of about 44 ft, from floodmark, discharge, 43,500 ft³/s.

PEAK DISCHARGE FOR CURRENT YEAR.--Maximum discharge, unknown, Mar. 28, gage height, 30.88 ft, backwater.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	349	712	2040	1200	1680	3660	8510	1620	651	394	590	819
2	278	751	1380	1140	2610	4110	7680	1580	520	372	557	1600
3	205	731	800	1450	3380	10700	7160	1470	487	348	439	1620
4	193	677	1060	5680	3200	10300	6810	2100	473	297	357	1070
5	182	730	6380	6850	3070	7670	6350	2590	462	275	344	785
6	168	808	9950	5690	2950	5280	6050	2310	423	250	1530	585
7	159	617	7090	10700	2110	4730	4230	3600	363	218	1960	587
8	152	478	4890	20700	1250	6950	2580	16000	327	216	1360	583
9	150	429	3080	13900	5610	11500	2210	12500	374	214	717	494
10	195	740	2050	8720	14600	15800	2130	7450	457	237	590	420
11	199	733	1610	6910	15200	12600	2100	4270	474	245	449	384
12	234	713	1300	6790	e17000	7860	2040	2740	970	227	392	362
13	298	769	1150	7840	e8000	5330	3820	2150	746	218	353	328
14	354	907	1040	8070	e7500	4080	10000	1820	860	244	337	310
15	310	1390	1330	6340	8200	3400	7760	1530	605	299	379	302
16	288	1060	2400	4880	7260	3090	8350	1530	531	471	393	296
17	336	1340	2960	4000	6580	2650	7580	1450	433	491	998	286
18	273	2390	2660	2640	6110	2380	5210	1300	377	848	4230	263
19	248	2370	2250	1950	5760	2210	3460	1100	443	511	3420	281
20	571	1840	1960	1880	5430	2010	2530	1070	416	449	1890	252
21	665	996	1620	1550	6050	2010	2110	932	354	458	1120	235
22	536	814	1800	1830	6280	2380	1970	826	482	442	1390	226
23	462	620	1680	1980	9390	2890	1800	804	479	508	1240	221
24	439	493	1410	1970	14000	4680	1580	779	417	591	1030	245
25	398	455	1360	3080	10500	5620	1480	750	375	440	816	418
26	364	427	1310	6430	8320	4860	1340	778	390	377	583	695
27	344	588	1200	8390	6160	7420	1340	715	536	491	519	476
28	413	1280	1060	9760	4560	20800	1480	952	589	1620	958	572
29	339	1320	829	6950	---	e10000	1340	1020	448	2150	1150	517
30	325	1780	995	2870	---	e9000	1610	727	399	1290	943	325
31	487	---	1130	2110	---	e8000	---	683	---	736	755	---
TOTAL	9914	28958	71774	174250	192760	203970	122610	79146	14861	15927	31789	15557
MEAN	320	965	2315	5621	6884	6580	4087	2553	495	514	1025	519
MAX	665	2390	9950	20700	17000	20800	10000	16000	970	2150	4230	1620
MIN	150	427	800	1140	1250	2010	1340	683	327	214	337	221

e Estimated

GUYANDOTTE RIVER BASIN

03204000 GUYANDOTTE RIVER AT BRANCHLAND, WV--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1916-1917, 1929-1979, BY WATER YEAR (WY)
[UNREGULATED]

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	338	689	1734	2690	3239	4027	2774	1848	963	702	580	311
MAX	1818	2832	6033	7438	7042	9291	6551	5506	5014	3080	2872	1482
(WY)	1977	1930	1973	1979	1939	1917	1948	1958	1979	1938	1977	1950
MIN	10.2	32.3	76.6	89.5	427	965	674	329	79.8	15.1	48.4	21.8
(WY)	1931	1931	1940	1940	1941	1969	1942	1941	1930	1930	1930	1930

SUMMARY STATISTICS

WATER YEARS 1916-1917, 1929-1979

ANNUAL MEAN	1649
HIGHEST ANNUAL MEAN	2978
LOWEST ANNUAL MEAN	573
HIGHEST DAILY MEAN	(a) 41800
LOWEST DAILY MEAN	3.8
ANNUAL SEVEN-DAY MINIMUM	5.6
INSTANTANEOUS PEAK FLOW	44500
INSTANTANEOUS PEAK STAGE	43.83
INSTANTANEOUS LOW FLOW	3.6
10 PERCENT EXCEEDS	4020
50 PERCENT EXCEEDS	700
90 PERCENT EXCEEDS	100

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1980 - 1994, BY WATER YEAR (WY)
[REGULATED, UNADJUSTED]

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	574	1008	1726	2073	3269	3347	2791	2195	1163	620	446	363
MAX	3000	2553	3321	5621	6884	6580	7513	5255	4403	2173	1025	977
(WY)	1990	1980	1992	1994	1994	1994	1987	1989	1981	1980	1994	1989
MIN	200	157	558	629	1094	864	481	876	227	157	131	166
(WY)	1993	1988	1981	1981	1988	1988	1986	1991	1988	1988	1987	1985

SUMMARY STATISTICS

FOR 1993 CALENDAR YEAR

FOR 1994 WATER YEAR

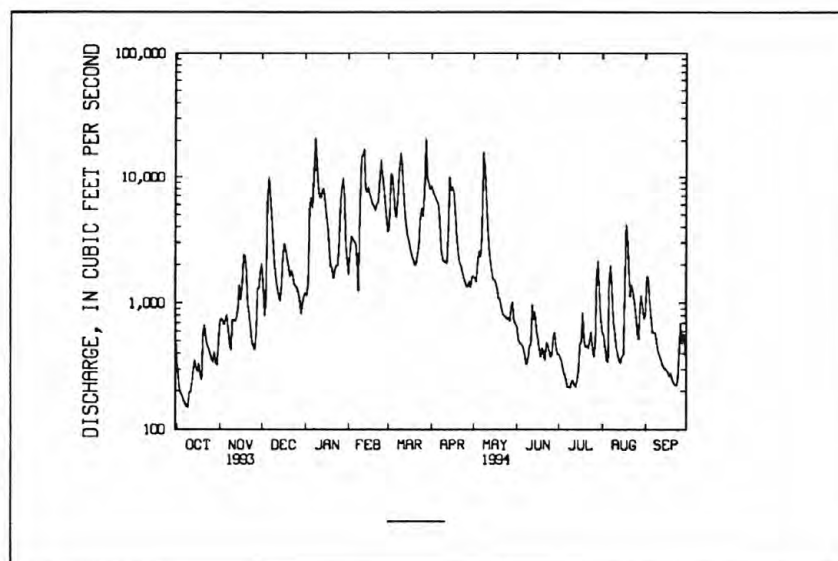
WATER YEARS 1980 - 1994

ANNUAL TOTAL	565949	961516	
ANNUAL MEAN	1551	2634	1622
HIGHEST ANNUAL MEAN			2634
LOWEST ANNUAL MEAN			643
HIGHEST DAILY MEAN	(e) 16000	Mar 24	(b) 20800
LOWEST DAILY MEAN	104	Aug 2	150
ANNUAL SEVEN-DAY MINIMUM	113	Jul 28	171
INSTANTANEOUS PEAK FLOW			146
INSTANTANEOUS PEAK STAGE			UNKNOWN
INSTANTANEOUS LOW FLOW			Oct 9
10 PERCENT EXCEEDS	3730	7620	4250
50 PERCENT EXCEEDS	800	1150	824
90 PERCENT EXCEEDS	182	301	199

a Computed by using fall as a factor.

b Backwater.

c Estimated.



GUYANDOTTE RIVER BASIN

03204000 GUYANDOTTE RIVER AT BRANCHLAND, WV--Continued
(National stream-quality accounting network station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1961, 1965, 1975 to September 1994, discontinued.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1975 to November 1976, February to September 1977.

WATER TEMPERATURE: March to December 1976, February to September 1977.

TURBIDITY: October 1975 to December 1976.

SUSPENDED SEDIMENT DISCHARGE: March 1976 to September 1977.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 845 microsiemens, Aug. 27, 1976; minimum daily, 108 microsiemens, Feb. 11, 1977.

WATER TEMPERATURE: Maximum daily, 32.0°C, July 14, 1977; minimum daily, 1.0°C, several days in February 1977.

TURBIDITY: Maximum daily, 200 NTU, Mar. 21, Aug. 15, 1976, minimum daily, 1 NTU, on several days in 1976.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 3,250 mg/L, Dec. 9, 1976; minimum daily mean, 5 mg/L, Oct. 24, 1976, and July 17, 20, 1977.

SEDIMENT LOADS: Maximum daily, 205,000 tons, Apr. 5, 1977; minimum daily, 2.3 tons, July 20, 1977.

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

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	TUR- BID- ITY (NTU) (00076)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (PER- CENT SOLVED SATUR- ATION) (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SOLVED SATUR- ATION) (MG/L) (00301)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCHI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)
MAR 1994												
30...	1300	E9000	185	7.3	9.0	13	761	10.5	91	550	960	44
MAY												
31...	1345	682	455	7.6	21.5	--	755	8.2	94	K27	K16	140
SEP												
09...	1330	486	425	7.5	21.0	4.1	753	7.9	90	140	K73	130

DATE	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE WATER DIS IT FIELD (MG/L AS HCO3) (00453)	CAR- BONATE WATER DIS IT FIELD (MG/L AS CO3) (00452)	ALKA- LINITY WAT DIS TOT IT FIELD (MG/L AS CACO3) (39086)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)
MAR 1994											
30...	11	3.9	3.2	1.2	28	0	23	19	3.4	<0.10	5.8
MAY											
31...	31	14	38	3.0	88	0	72	120	17	<0.10	5.5
SEP											
09...	29	13	34	3.0	83	0	68	110	13	0.10	5.6

E Estimated.

K Results based on colony count outside the acceptance range (non-ideal colony count).

GUYANDOTTE RIVER BASIN

03204000 GUYANDOTTE RIVER AT BRANCHLAND, WV--Continued

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

DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L) AS N) (00618)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L) AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L) AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L) AS N) (00608)	NITRO- GEN, ORGANIC TOTAL (MG/L) AS N) (00605)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L) AS N) (00625)	PHOS- PHORUS TOTAL (MG/L) AS P) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L) AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L) AS P) (00671)	ALUM- INUM, DIS- SOLVED (UG/L) AS AL) (01106)
MAR 1994 30...	67	0.440	0.020	0.460	0.060	0.34	0.40	0.050	<0.010	<0.010	100
MAY 31...	285	--	<0.010	0.550	<0.010	--	<0.20	0.010	<0.010	<0.010	50
SEP 09...	267	0.610	0.010	0.620	<0.010	--	<0.20	<0.010	<0.010	<0.010	30

DATE	BARIUM, DIS- SOLVED (UG/L) AS BA) (01005)	COBALT, DIS- SOLVED (UG/L) AS CO) (01035)	IRON, DIS- SOLVED (UG/L) AS FE) (01046)	LITHIUM DIS- SOLVED (UG/L) AS LI) (01130)	MANGA- NESE, DIS- SOLVED (UG/L) AS MN) (01056)	MOLYB- DENUM, DIS- SOLVED (UG/L) AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L) AS NI) (01065)	SELE- NIUM, DIS- SOLVED (UG/L) AS SE) (01145)	SILVER, DIS- SOLVED (UG/L) AS AG) (01075)	STRON- TIUM, DIS- SOLVED (UG/L) AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L) AS V) (01085)
MAR 1994 30...	27	<3	59	<4	12	--	1	<1	<1.0	67	<6
MAY 31...	62	3	22	23	30	<10	1	<1	<1.0	520	<6
SEP 09...	55	<3	60	15	20	10	<1	<1	<1.0	470	<6

TWELVEPOLE CREEK BASIN

03206600 EAST FORK TWELVEPOLE CREEK NEAR DUNLOW, WV

LOCATION.--Lat 38°01'02", long 82°17'46", Wayne County, Hydrologic Unit 05090102, on left bank 0.2 mi upstream from Maynard Branch, 0.9 mi downstream from McComas Branch, 1.5 mi upstream from Devilstrace Branch, and 7.5 mi east of Dunlow, and at mile 60.2.

DRAINAGE AREA.--38.5 mi².

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

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

GAGE.--Water-stage recorder. Datum of gage is 710.00 ft above sea level. Prior to Dec. 22, 1964, nonrecording gage at same site and datum.

REMARKS.--Records good except those for periods of estimated daily discharges (backwater from leaves, ice effect), which are poor. U.S. Army Corps of Engineers satellite telemeter at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 840 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage Height (ft)	Date	Time	Discharge (ft ³ /s)	Gage Height (ft)
Jan. 7	1930	*2,890	*13.16	Mar. 2	2100	941	9.63
Feb. 9	1630	1,410	10.69	Mar. 10	0430	1,310	10.48
Feb. 11	1830	1,090	9.99	Mar. 28	0900	2,090	11.95
Feb. 23	1200	1,500	10.87	May 8	0500	2,380	12.41

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.5	e25	37	28	78	67	135	60	4.6	2.1	1.0	18
2	6.0	e23	32	34	61	385	111	51	4.1	1.5	.79	10
3	5.2	e21	30	115	51	491	95	56	3.6	1.5	.86	6.5
4	4.3	23	113	529	43	266	84	138	3.2	1.3	.90	4.4
5	3.6	29	631	253	40	181	70	117	2.8	1.1	6.7	3.4
6	3.1	28	265	170	36	131	70	89	2.9	.98	6.5	3.6
7	2.8	22	128	1810	31	112	92	484	4.4	.89	2.5	3.8
8	2.6	18	80	1030	30	690	86	1370	3.1	.88	1.4	2.6
9	2.7	16	57	245	824	928	79	262	2.9	1.0	1.0	2.0
10	e5.0	14	52	143	468	940	75	140	6.6	1.7	.80	1.7
11	e8.0	13	42	101	713	305	67	86	23	1.0	.67	1.5
12	e15	12	34	254	522	174	62	60	17	.89	.62	1.5
13	e13	e11	30	230	339	125	143	43	6.8	.89	.62	1.4
14	11	e20	29	167	245	104	171	35	4.3	.89	4.8	1.3
15	9.6	e35	103	106	167	80	150	32	3.2	1.2	11	1.2
16	9.3	67	138	e80	115	65	315	35	5.0	4.6	8.7	1.2
17	e9.0	174	108	e60	85	54	221	24	3.9	3.2	167	1.6
18	e9.0	229	85	e50	67	55	145	21	2.5	2.2	45	4.5
19	e13	107	67	e45	56	48	105	18	2.0	1.7	17	3.8
20	e20	62	55	e40	50	42	75	17	1.7	1.1	10	1.9
21	e27	42	63	e35	268	47	57	15	1.4	.90	9.2	1.4
22	e40	33	54	e45	273	56	51	13	1.4	5.6	9.5	1.2
23	e32	28	51	59	1030	54	40	11	3.0	4.0	6.0	1.1
24	e23	25	44	199	475	55	35	10	5.0	2.1	4.3	1.1
25	e15	22	43	329	238	109	31	9.1	5.2	1.2	3.2	1.5
26	e11	20	37	338	148	118	29	11	4.9	.89	2.7	15
27	e10	57	33	258	98	756	40	10	17	1.8	3.2	6.2
28	e9.0	77	31	378	74	1560	37	8.2	8.6	6.0	8.9	3.3
29	e8.0	60	30	264	---	402	41	6.9	4.4	2.4	4.1	2.4
30	e10	46	29	164	---	196	61	6.1	3.1	1.6	2.8	1.9
31	e12	---	29	111	---	158	---	5.2	---	1.2	4.1	---
TOTAL	356.7	1359	2560	7670	6625	8754	2773	3243.5	161.6	58.31	345.86	111.0
MEAN	11.5	45.3	82.6	247	237	282	92.4	105	5.39	1.88	11.2	3.70
MAX	40	229	631	1810	1030	1560	315	1370	23	6.0	167	18
MIN	2.6	11	29	28	30	42	29	5.2	1.4	.88	.62	1.1
CF5M	.30	1.18	2.14	6.43	6.15	7.33	2.40	2.72	.14	.05	.29	.10
IN.	.34	1.31	2.47	7.41	6.40	8.46	2.68	3.13	.16	.06	.33	.11

e Estimated

TWELVEPOLE CREEK BASIN

03206600 EAST FORK TWELVEPOLE CREEK NEAR DUNLOW, WV--Continued

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

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	12.9	32.6	75.3	81.4	102	112	94.5	63.8	34.2	16.3	13.3	9.85
MAX	92.6	98.1	279	247	241	282	212	147	185	92.4	79.4	70.9
(WY)	1990	1974	1979	1994	1972	1994	1987	1989	1989	1971	1977	1979
MIN	.65	2.10	1.52	12.4	12.0	23.3	13.3	9.11	.70	1.86	.71	.20
(WY)	1992	1966	1966	1966	1968	1969	1986	1991	1966	1988	1967	1967

SUMMARY STATISTICS	FOR 1993 CALENDAR YEAR	FOR 1994 WATER YEAR	WATER YEARS 1965 - 1994
ANNUAL TOTAL	20220.09	34017.97	
ANNUAL MEAN	55.4	93.2	53.8
HIGHEST ANNUAL MEAN			98.3
LOWEST ANNUAL MEAN			18.9
HIGHEST DAILY MEAN	1000 Mar 4	1810 Jan 7	3110 Dec 9 1978
LOWEST DAILY MEAN	.73 Aug 1	.62 (a)	.01 (b)
ANNUAL SEVEN-DAY MINIMUM	.93 Jul 29	1.0 Jul 7	.01 Sep 18 1967
INSTANTANEOUS PEAK FLOW		2890 Jan 7	(c) 5040 Dec 9 1978
INSTANTANEOUS PEAK STAGE		13.16 Jan 7	15.84 Dec 9 1978
INSTANTANEOUS LOW FLOW		.62 (d)	.01 (f)
ANNUAL RUNOFF (CFSM)	1.44	2.42	1.40
ANNUAL RUNOFF (INCHES)	19.54	32.87	18.99
10 PERCENT EXCEEDS	125	245	123
50 PERCENT EXCEEDS	23	29	19
90 PERCENT EXCEEDS	2.1	1.5	1.3

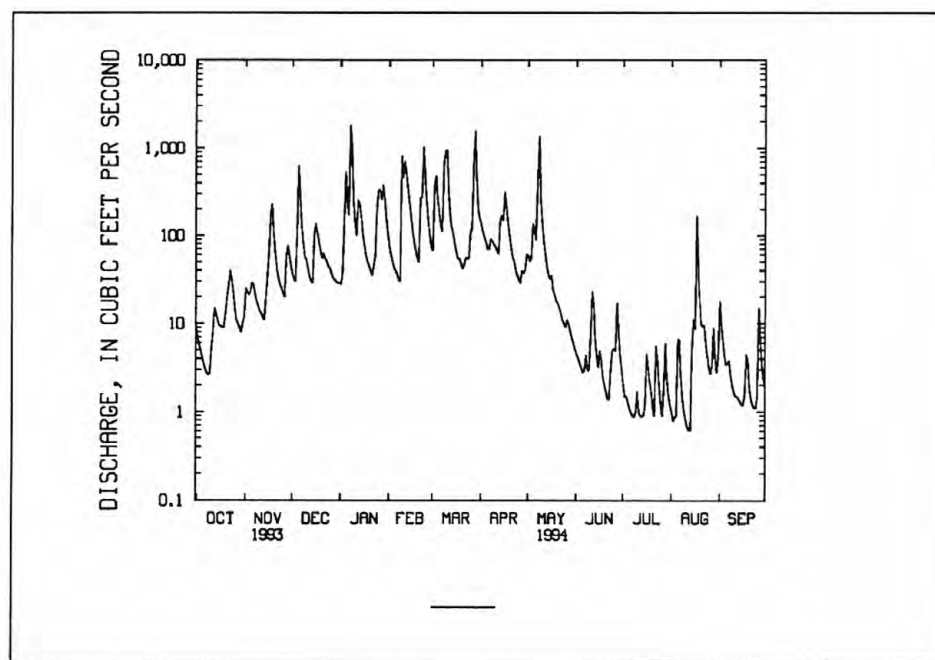
a Aug. 12, 13.

b July 3-6, 8-12, 1966, Sept. 18-27, 1967.

c From rating curve extended above 1,300 ft³/s on basis of slope-area measurement of peak flow.

d Aug. 11, 12, 13, 14.

f July 2-13, 1966, Sept. 18-28, 1967, Sept. 8, 9, 1973.



BIG SANDY RIVER BASIN

03213700 TUG FORK AT WILLIAMSON, WV

LOCATION.--Lat 37°40'23", long 82°16'49", Pike County, Ky., Hydrologic Unit 05070201, on left bank at Williamson, 100 ft upstream from bridge on U.S. Highway 119, 0.8 mi downstream from Pond Creek, and at mile 56.5.

DRAINAGE AREA.--936 mi².

PERIOD OF RECORD.--October 1967 to current year. Gage-height records collected in this vicinity since 1926 are contained in reports of National Weather Service.

GAGE.--Water-stage recorder. Datum of gage is 620.52 ft above sea level. Ohio River Datum is 620.96 (corrected). Formerly published as 620.90 ft Ohio River Datum 1969 to 1993. Prior to Jan. 21, 1969, at datum 619.66 ft above sea level.

REMARKS.--Records fair except those for periods of estimated daily discharges (faulty gage-height record), which are poor. U.S. Army Corps of Engineers satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Floods of Jan. 30, 1957, Mar. 12, 1963, and Mar. 7, 1967, reached stages of 43.6 ft, 44.5 ft, and 40.7 ft respectively, from readings by National Weather Service.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 9,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage Height (ft)	Date	Time	Discharge (ft ³ /s)	Gage Height (ft)
Dec. 5	1700	10,800	17.13	Feb. 23	2200	9,930	16.95
Jan. 8	1000	17,700	23.46	Mar. 28	2000	22,100	29.15
Feb. 12	0700	*24,700	*31.44	Apr. 13	1600	16,900	24.23

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	164	358	457	e1100	1740	2250	4700	1590	447	340	454	529
2	141	364	360	e1000	1470	3710	3880	1430	424	313	376	539
3	132	312	311	e1100	1330	7430	3320	1320	411	286	320	424
4	127	265	470	e5400	1200	5180	2860	1600	394	271	365	332
5	130	262	8020	e5000	1100	4170	2460	1640	378	260	485	289
6	125	264	5100	e2500	1090	3540	2240	1510	363	245	1050	289
7	120	237	2100	6020	1020	2980	2290	1600	382	243	808	277
8	116	209	1260	15300	970	3140	2140	4060	375	247	534	271
9	111	185	913	6110	e7000	5200	2060	3440	368	239	416	237
10	148	172	759	3120	e11000	6850	2040	2470	420	259	335	220
11	166	163	693	e2200	14000	5740	2650	1860	534	274	290	208
12	204	155	617	e2800	21000	4060	2970	1520	1170	236	261	202
13	236	152	535	e3800	8170	3200	9980	1290	1460	261	243	191
14	209	157	487	e3200	4990	2810	6660	1110	772	279	249	179
15	169	214	584	2440	3800	2440	4150	1010	555	311	289	172
16	151	274	1380	1720	3060	2150	3440	1080	576	401	306	167
17	144	381	1570	e1600	2530	1900	2820	1020	537	425	1590	170
18	139	845	1290	1510	2180	1760	2380	871	442	389	2410	273
19	149	617	1070	e1100	1940	1670	2110	800	383	359	1150	324
20	201	454	891	e1000	1770	1490	1910	751	359	291	685	270
21	305	362	911	e1700	2610	1520	1710	716	344	288	685	212
22	303	300	899	e2300	3920	2310	1560	674	365	393	958	187
23	286	257	818	e2100	6770	2690	1480	631	363	474	635	174
24	239	232	746	1360	8350	2270	1350	595	362	322	464	162
25	195	215	685	2920	5610	2640	1260	564	505	252	368	181
26	172	204	644	6180	4150	2830	1120	570	401	249	316	333
27	158	614	576	5320	3120	6200	1260	671	471	536	285	441
28	146	1580	549	3970	2550	18300	1550	628	559	1730	278	297
29	134	975	643	3200	---	15800	1350	544	508	986	266	224
30	147	631	1090	2510	---	9660	1520	504	391	1130	253	189
31	212	---	1200	2050	---	5990	---	475	---	674	286	---
TOTAL	5379	11410	37628	101630	128440	141880	81220	38544	15019	12963	17410	7963
MEAN	174	380	1214	3278	4587	4577	2707	1243	501	418	562	265
MAX	305	1580	8020	15300	21000	18300	9980	4060	1460	1730	2410	539
MIN	111	152	311	1000	970	1490	1120	475	344	236	243	162
CFM	.19	.41	1.30	3.50	4.90	4.89	2.89	1.33	.53	.45	.60	.28
IN.	.21	.45	1.50	4.04	5.10	5.64	3.23	1.53	.60	.52	.69	.32

e Estimated

BIG SANDY RIVER BASIN

03213700 TUG FORK AT WILLIAMSON, WV--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1968 - 1994, BY WATER YEAR (WY)

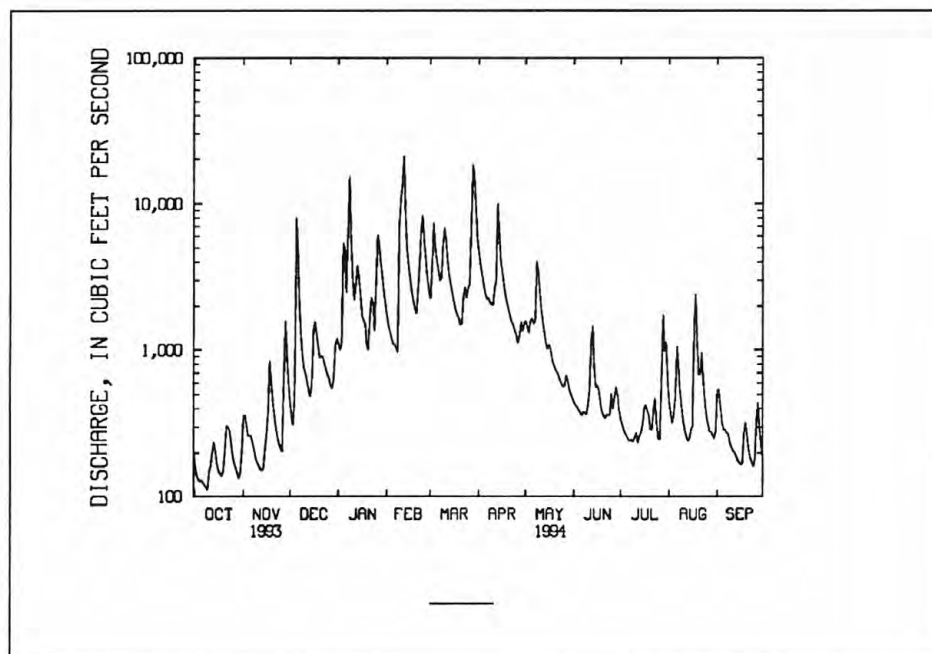
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	393	654	1115	1631	2042	2204	2079	1565	859	444	389	277
MAX	2059	2363	3631	4515	4587	5328	5745	4318	3263	1257	1419	839
(WY)	1990	1978	1973	1974	1994	1975	1987	1984	1979	1979	1972	1989
MIN	71.7	113	290	279	626	448	506	429	156	119	105	97.0
(WY)	1970	1970	1981	1981	1988	1988	1986	1976	1988	1988	1988	1969

SUMMARY STATISTICS	FOR 1993 CALENDAR YEAR		FOR 1994 WATER YEAR		WATER YEARS 1968 - 1994	
ANNUAL TOTAL	372503		599486			
ANNUAL MEAN	1021		1642		1133	
HIGHEST ANNUAL MEAN					1729	
LOWEST ANNUAL MEAN					353	
HIGHEST DAILY MEAN	14800		21000		74000	
LOWEST DAILY MEAN	109		111		59	
ANNUAL SEVEN-DAY MINIMUM	123		123		62	
INSTANTANEOUS PEAK FLOW			24700		(a) 94000	
INSTANTANEOUS PEAK STAGE			31.44		(b) 52.56	
INSTANTANEOUS LOW FLOW			108		59	
ANNUAL RUNOFF (CFSM)	1.09		1.75		1.21	
ANNUAL RUNOFF (INCHES)	14.80		23.83		16.44	
10 PERCENT EXCEEDS	2090		4010		2530	
50 PERCENT EXCEEDS	488		635		596	
90 PERCENT EXCEEDS	145		190		142	

a From rating curve extended above 18,000 ft³/s.

b From floodmarks.

c Oct. 18-20, 1969.



BIG SANDY RIVER BASIN

03214500 TUG FORK AT KERMIT, WV

LOCATION.--Lat 37°50'14", long 82°24'32", Mingo County, Hydrologic Unit 05070201, behind fire station, at Kermit, 0.8 mi downstream from Wolf Creek, and at mile 34.9.

DRAINAGE AREA.--1,280 mi².

PERIOD OF RECORD.--October 1915 to September 1917, October 1917 to December 1920 (gage heights only), January 1929 to September 1934, February 1985 to current year.

GAGE.--Water-stage recorder. Datum of gage is 574.74 ft above sea level.

REMARKS.--Records fair except those for period of estimated daily discharges, which is poor. Records published as "near Kermit" at different site and datum July 1934 to September 1985. U.S. Army Corps of Engineers satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of unknown date prior to 1915, was about 46.7 ft; Jan. 29, 1918, was about 38.8 ft; Jan. 30, 1957, was about 45 ft; Mar. 13, 1963, was about 46 ft; Apr. 6, 1977, was 53.7 ft.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 11,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage Height (ft)	Date	Time	Discharge (ft ³ /s)	Gage Height (ft)
Dec. 5	2200	13,600	24.00	Mar. 10	1500	13,200	23.48
Jan. 7	2300	15,300	26.03	Mar. 29	0400	*26,600	*38.07
Feb. 12	1500	26,300	37.78	Apr. 13	2400	15,400	26.15
Feb. 24	0200	15,100	25.82	May 8	0800	11,600	21.45
Mar. 3	1000	11,700	21.62				

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	251	465	815	1260	2500	2940	6340	2360	541	429	615	767
2	207	522	643	1180	2120	4890	5150	2190	513	386	513	789
3	185	455	540	1450	1860	11000	4390	1990	489	351	440	641
4	168	387	765	6680	1670	8020	3760	2860	487	330	425	503
5	159	357	9060	6430	1510	5720	3240	2760	471	322	924	440
6	155	386	9450	3920	1420	4730	2960	2440	442	313	1090	460
7	148	351	3660	8200	1340	3940	3070	3570	450	297	1120	432
8	140	311	2150	8780	1260	5200	2900	10100	485	303	752	387
9	138	273	1480	5420	5510	9470	2730	6110	484	302	555	344
10	168	247	1200	4810	12400	12700	2660	4000	491	312	455	318
11	207	233	1070	3450	14900	9540	2980	2920	683	337	391	298
12	278	222	942	4180	24900	6010	3440	2330	1140	291	358	295
13	286	219	827	5350	17700	4520	7980	1970	1490	278	336	280
14	277	279	745	4810	7870	3850	11000	1660	1050	367	317	265
15	232	708	1060	3630	5370	3340	5680	1500	713	449	460	253
16	199	737	1840	2600	4160	2910	5230	1410	727	503	489	247
17	196	986	2270	2350	3380	2550	4320	1380	671	486	2140	257
18	191	1800	1980	2220	2910	2360	3490	1170	579	528	3360	370
19	196	1300	1630	1570	2580	2200	2940	1050	514	424	1810	412
20	540	883	1360	1490	2340	1990	2550	979	470	383	1060	378
21	509	654	1410	2430	3710	1910	2240	946	424	358	871	293
22	556	522	1410	3230	6060	2700	2030	890	435	446	1220	253
23	435	440	1290	2860	10300	3270	1850	901	455	623	947	234
24	373	386	1160	2260	13500	2930	1690	806	511	478	698	221
25	312	350	1080	4310	8430	5340	1540	770	597	355	544	218
26	262	323	998	8170	5740	4720	1430	744	530	309	469	308
27	232	759	888	7700	4220	8350	1760	772	821	500	422	e500
28	212	2240	828	6260	3360	22200	2140	804	670	1550	422	e400
29	194	1680	863	4920	---	24200	2090	688	638	1400	406	302
30	196	1090	1100	3770	---	15300	2280	617	507	1130	380	253
31	268	---	1420	3000	---	8500	---	582	---	934	409	---
TOTAL	7870	19565	55934	128690	173020	207300	105860	63269	18478	15474	24398	11118
MEAN	254	652	1804	4151	6179	6687	3529	2041	616	499	787	371
MAX	556	2240	9450	8780	24900	24200	11000	10100	1490	1550	3360	789
MIN	138	219	540	1180	1260	1910	1430	582	424	278	317	218
CFSM	.20	.51	1.41	3.24	4.83	5.22	2.76	1.59	.48	.39	.61	.29
IN.	.23	.57	1.63	3.74	5.03	6.02	3.08	1.84	.54	.45	.71	.32

e Estimated

BIG SANDY RIVER BASIN

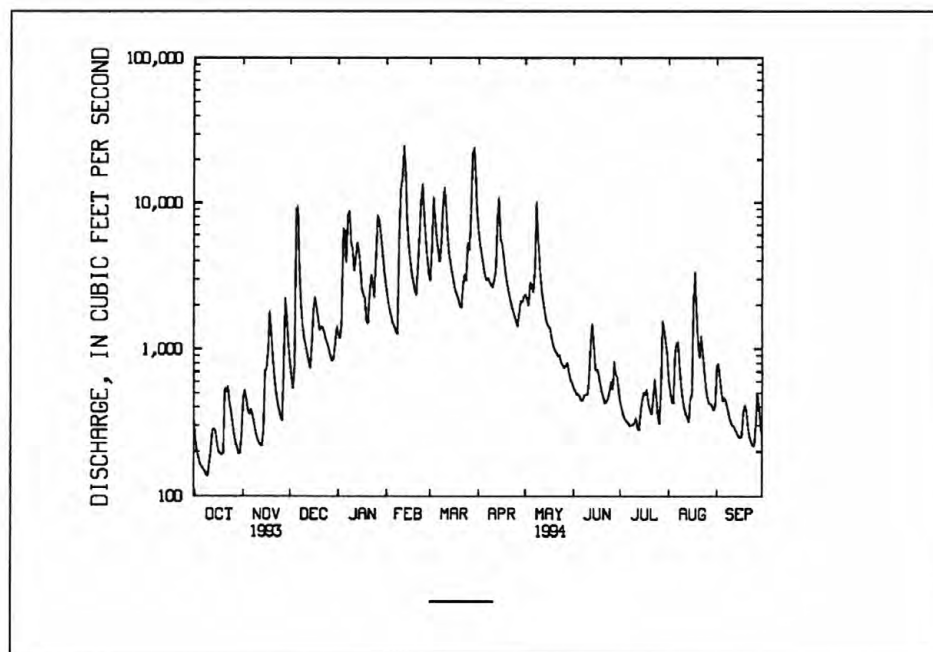
03214500 TUG FORK AT KERMIT, WV--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1916-1917, 1929-1934, 1985-1994, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	406	694	1512	2048	3062	3882	2439	1616	793	492	469	283
MAX	3004	3062	3465	4151	6179	10220	7827	4584	2976	1020	1496	1110
(WY)	1990	1930	1992	1994	1994	1917	1987	1989	1989	1929	1934	1989
MIN	21.1	44.1	119	296	607	617	629	431	114	44.5	78.7	29.4
(WY)	1931	1932	1931	1931	1931	1988	1986	1930	1930	1930	1930	1930

SUMMARY STATISTICS	FOR 1993 CALENDAR YEAR			FOR 1994 WATER YEAR			WATER YEARS 1916 - 1994		
ANNUAL TOTAL	518372			830976					
ANNUAL MEAN	1420			2277			1471		
HIGHEST ANNUAL MEAN							2277		
LOWEST ANNUAL MEAN							476		
HIGHEST DAILY MEAN	18400			Mar 5			24900		
LOWEST DAILY MEAN	136			Sep 14			138		
ANNUAL SEVEN-DAY MINIMUM	150			Aug 28			154		
INSTANTANEOUS PEAK FLOW							26600		
INSTANTANEOUS PEAK STAGE							38.07		
INSTANTANEOUS LOW FLOW							134		
ANNUAL RUNOFF (CFSM)	1.11			1.78			1.15		
ANNUAL RUNOFF (INCHES)	15.07			24.15			15.61		
10 PERCENT EXCEEDS	3000			5700			3490		
50 PERCENT EXCEEDS	737			942			660		
90 PERCENT EXCEEDS	196			275			118		

- a Instantaneous peak flow prior to 1985, undetermined.
b Several higher peaks outside period of record (see EXTREMES on previous page).
c Instantaneous low flow prior to 1985, undetermined.



DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

As the number of streams on which streamflow information is likely to be desired far exceeds the number of stream-gaging stations feasible to operate at one time, the Geological Survey collects limited streamflow data at sites other than stream-gaging stations. When limited streamflow data are collected on a systematic basis over a period of years for use in hydrologic analyses, the site at which the data are collected is called a partial-record station. Data collected at these partial-record stations are usable in low-flow or floodflow analyses, depending on the type of data collected. In addition, discharge measurements are made at other sites not included in the partial-record program. These measurements are generally made in times of drought or flood to give better areal coverage to those events. Those measurements and others collected for some special reason are called measurements at miscellaneous sites.

Records collected at partial-record stations are presented in the following table. Discharge measurements made at partial-record stations and miscellaneous sites are given in separate tables.

Crest-stage partial-record stations

The following table contains annual maximum discharge 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.

Maximum discharge and stage at partial-record stations

Station name and number	Location and drainage area	Period of record	Water year 1994 maximum			Period of record maximum		
			Date	Gage height (ft)	Dis- charge (ft ³ /s)	Date	Gage height (ft)	Dis- charge (ft ³ /s)
MONONGAHELA RIVER BASIN								
West Fork River at Walkersville (03057300)	Lat 38°52'07", long 80°27'29", Lewis County, Hydrologic Unit 05020002, on left bank at downstream side of highway bridge on Secondary Route 44, in Walkersville, 100 ft down- stream from Right Fork, and at mile 95.3. Drainage area is 28.9 mi ² .	1984-92≠ 1993-94*	5-8-94	15.39	2,400	11-4-85	17.87	3,390
Dry Fork at Hendricks, WV (03065000)	Lat 39°04'20", long 79°37'20", Tucker County, Hydrologic Unit 05020004, on right bank at Hendricks, 0.4 mi upstream from confluence with Black- water River. Published as Dry Fork River, 1949-52. Drainage area is 345 mi ² .	1941-93≠ 1994*	2-9-94	(a)12.60	32,000	11-5-85	(a)20.74	100,000

[≠] Operated as a continuous-record gaging station.

* Gage-height records on file in district office.

a From floodmarks.

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

Maximum discharge and stage at partial-record stations--Continued

Station name and number	Location and drainage area	Period of record	Water year 1994 maximum			Period of record maximum		
			Date	Gage height (ft)	Dis- charge (ft ³ /s)	Date	Gage height (ft)	Dis- charge (ft ³ /s)
OHIO RIVER MAIN STEM								
Ohio River near Marietta, OH (03150800)	Lat 39°23'21", long 81°29'03", Washington County, Hydrologic Unit 05030202, on right bank, 1.5 mi southwest of Marietta, 2.0 mi downstream from Muskingum River, and at mile 174.3 measured downstream from Pittsburgh, Pa. Drainage area is approximately 35,600 mi ² .	1969-94*	1-29-94	37.57	(b)	2-27-79	38.52	(b)
LITTLE KANAWHA RIVER BASIN								
Little Kanawha River below Burnsville Dam, WV (03151520)	Lat 38°50'41", long 80°37'45", Braxton County, Hydrologic Unit 05030203, on right bank 2,600 ft downstream from Burnsville Dam, 1.6 mi south- east of Burnsville, and at mile 123.7. Drainage area is 163 mi ² .	1976-82≠ 1983-86* 1987-93≠ 1994*	1-9-94	8.05	2,340	10-9-76	(c)58.51	2,530
Little Kanawha River at Burnsville, WV (03151600)	Lat 38°51'55", long 80°40'32", Braxton County, Hydrologic Unit 05030203, on right bank, 70 ft upstream from Buffalo Creek, 1.0 mi northwest of Burnsville, 1.4 mi downstream from Oil Creek, 1.8 mi downstream from Saltlick Creek, and 1.9 mi downstream from Burnsville, and at mile 119.5. Drainage area is 248 mi ² .	1974-78≠ 1979-83* 1991-94*	2-9-94	12.93	5,060	6-2-74	16.32	6,890
Little Kanawha River at Grantsville, WV (03153500)	Lat 38°55'20", long 81°05'50", Calhoun County, Hydrologic Unit 05030203, on left bank 1,000 ft downstream from bridge on State Highway 16 at Grantsville, 1,200 ft downstream from Philip Run, and at mile 80.0. Drainage area is 913 mi ² .	1929-78≠ 1979-94*	2-10-94	38.70	28,400	3-7-67	(a)43.9	35,100

[≠] Operated as a continuous-record gaging station.

* Gage-height records on file in district office.

a From floodmarks.

b Discharge not determined.

c Datum in use then was 50.00 ft lower than current datum.

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

Maximum discharge and stage at partial-record stations--Continued

Station name and number	Location and drainage area	Period of record	Water year 1994 maximum			Period of record maximum		
			Date	Gage height (ft)	Dis- charge (ft ³ /s)	Date	Gage height (ft)	Dis- charge (ft ³ /s)
LITTLE KANAWHA RIVER BASIN--Continued								
West Fork Little Kanawha River at Rocksdale, WV (03154000)	Lat 38°50'48", long 81°13'26", Calhoun County, Hydrologic Unit 05030203, on right bank on State Route 11, 850 ft downstream from Henry Fork at Rocksdale, 9.0 mi southwest of Grantsville, and at mile 14.1. Drainage area is 205 mi ² .	1929-31, 1938-1975 ≠ 1976-94*	2-9-94	24.52	9,220	4-16-39	(a)30.3	20,200
KANAWHA RIVER BASIN								
Gauley River at Camden-on- Gauley, WV (03187000)	Lat 38°21'57", long 80°36'04", Webster County, Hydrologic Unit 05050005, on right bank in town of Camden on Gauley, 0.2 mi downstream from Coon Creek, and 0.9 mi upstream from Strouds Creek, and at mile 69.6. Drainage area is 236 mi ² .	1909-16, 1930-75 ≠ 1976-94*	2-9-94	18.25	17,800	7-4-32	27.38	42,500
Elk River at Sutton, WV (03195500)	Lat 38°39'47", 80°42'35", Braxton County, Hydrologic Unit 05050007, on left bank, 150 ft upstream from highway bridge at Sutton, 0.5 mi upstream from Granny Creek, 0.9 mi down- stream from Sutton Dam, 2.5 mi downstream from Wolf Creek, and at mile 102.1. Drainage area is 542 mi ² .	1939-92 ≠ 1993-94*	1-27-94	23.17	10,600	1-29-57	39.30	34,200
Elk River at Frametown, WV (03196600)	Lat 38°35'32", long 80°53'05", Braxton County, Hydrologic Unit 05050007, on right bank opposite mouth of Birch River, at village of Glendon, 2.2 mi upstream from Strange Creek, 3.2 mi southwest of Frametown, and at mile 82.6. Records include flow of Birch River. Drainage area is 751 mi ² , includes that of Birch River.	1959-81 ≠ 1982-94*	5-8-94	16.03	21,600	12-3-91	16.31	22,100

≠ Operated as a continuous-record gaging station.

* Gage-height records on file in district office.

a From floodmarks.

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

Maximum discharge and stage at partial-record stations--Continued

Station name and number	Location and drainage area	Period of record	Water year 1994 maximum			Period of record maximum		
			Date	Gage height (ft)	Dis- charge (ft ³ /s)	Date	Gage height (ft)	Dis- charge (ft ³ /s)
KANAWHA RIVER BASIN--Continued								
Elk River at Clay, WV (03196800)	Lat 38°27'38", long 81°05'16", Clay County, Hydrologic Unit 05050007, on right bank at downstream side of pier of highway bridge at Clay, 0.9 mi downstream from Buffalo Creek 2.1 mi downstream from Lower Two Run Creek, and at mile 53.7. Drainage area is 992 mi ² .	1959-78≠ 1979-94*	5-8-94	20.26	(b)	3-15-67	22.80	48,000
OHIO RIVER MAIN STEM								
Ohio River at Point Pleasant, WV (03201500)	Lat 38°50'25", long 82°08'30", Mason County, Hydrologic Unit 05030202, on left bank at Point Pleasant, 1,200 ft upstream from Kanawha River, and at mile 265.4 measured downstream from Pittsburgh, Pa. Drainage area approximately 52,760 mi ² , includes that of Kanawha River.	1940-77≠ 1978-94*	1-31-94	43.11	(b)	4-16-48	55.00	(b)
GUYANDOTTE RIVER BASIN								
Guyandotte River below R. D. Bailey Dam, WV (03202915)	Lat 37°35'53", long 81°49'46", Mingo County, Hydrologic Unit 05070101, on right bank, 500 ft upstream from Little Huff Creek, 2,500 ft downstream from R.D.Bailey Dam and 0.5 mi northeast of Justice and at river mile 111.6. Drainage area is 535 mi ² .	1979-82≠ 1983-86* 1987-91≠ 1992-94*	2-11-94	9.47	5,720	6-22-79	13.90	16,800
Guyandotte River at Man, WV (03203000)	Lat 37°44'25", long 81°52'37", Logan County, Hydrologic Unit 05070101, on right bank at downstream side of highway bridge at Man, 500 feet up- stream from Buffalo Creek, and 0.7 mile downstream from Huff Creek, and at mile 93.4. Drainage area is 758 mi ² .	1928-62≠ 1963-94*	4-13-94	14.51	17,800	3-12-63	24.78	49,000

[≠] Operated as a continuous-record gaging station.

* Gage-height records on file in district office.

b Discharge not determined.

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

Maximum discharge and stage at partial-record stations--Continued

Station name and number	Location and drainage area	Period of record	Water year 1994 maximum			Period of record maximum		
			Date	Gage height (ft)	Dis- charge (ft ³ /s)	Date	Gage height (ft)	Dis- charge (ft ³ /s)
OHIO RIVER MAIN STEM								
Ohio River at Huntington, WV (03206000)	Lat 38°24'48", long 82°30'02", Lawrence County, Ohio, Hydrologic Unit 05090101, on right bank at lock 28 at Sybene, Ohio, 0.1 mi upstream from Fourpole Creek, 3.0 mi downstream from Symmes Creek, and at mile 311.6, measured downstream from Pittsburgh, Pa. Drainage area approximately 55,900 mi ² .	1935-86≠ 1987-94*	1-30-94	50.40	(b)	1-28-37 (d)	69.45	654,000
TWELVEPOLE CREEK BASIN								
East Fork Twelvepole Creek below East Lynn Dam, WV (03206790)	Lat 38°08'52", long 82°23'00", Wayne County, Hydrologic Unit 05090102, on left bank, 800 ft downstream from Laurel Creek, 1,700 ft downstream from East Lynn Dam, 1.4 mi south of the town of East Lynn, 2.3 mi upstream from Camp Creek, 6.0 mi southeast of the town of Wayne, and at mile 41.7. Drainage area is 138 mi ² .	1962-82≠ 1983-86* 1991-94*	3-12-94	12.01	2,350	3-12-68 (a)	31.50	4,960
Twelvepole Creek below Wayne, WV (03207020)	Lat 38°14'56", long 82°26'04", Wayne County, Hydrologic Unit 05090102, on left bank just below highway bridge on secondary State Route 52/43, 1.9 mi northeast of Wayne and at mile 26.5. Drainage area is 300 mi ² .	1915-17≠ 1918-22* 1927-31, 1946-54, 1956-82≠ 1983* 1990-94*	3-9-94	20.48	5,740	2-28-62	29.46	15,900
Beech Fork below Beech Fork Dam, WV (03207057)	Lat 38°18'18", long 82°25'28", Wayne County, Hydrologic Unit 05090102, on left bank, 2,500 ft downstream from Beech Fork Dam, 1.7 mi south- east of Lavalette and at mile 3.0. Drainage area is 79.2 mi ² .	1976-82≠ 1983-94*	1-10-94	8.76	1,490	4-5-77	10.29	1,840

≠ Operated as a continuous-record gaging station.

* Gage-height records on file in district office.

a From floodmarks.

b Discharge not determined.

d Maximum stage 1-27-37.

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

Maximum discharge and stage at partial-record stations--Continued

Station name and number	Location and drainage area	Period of record	Water year 1994 maximum			Period of record maximum		
			Date	Gage height (ft)	Dis- charge (ft ³ /s)	Date	Gage height (ft)	Dis- charge (ft ³ /s)
BIG SANDY RIVER BASIN								
Tug Fork at Welch, WV (03212750)	Lat 37°26'28", long 81°36'00", McDowell County, Hydrologic Unit 05070201, on left bank at bridge in the Hemphill section of Welch, 20 ft downstream from Mod Branch at mile 131.5. Drainage area is 174 mi ² .	1985-93≠ 1994*	2-11-94	11.45	4,800	4-24-87	11.90	5,490
Dry Fork at Beartown, WV (03212980)	Lat 37°23'43", long 81°48'10", McDowell County, Hydrologic Unit 05070201, on left bank, 20 ft upstream from bridge on State Highway 80/3, 0.4 mi upstream from Grapevine branch, at mile 7.1. Drainage area is 209 mi ² .	1985-93≠ 1994*	2-11-94	11.21	8,780	2-11-94	11.21	8,780
Tug Fork at Glenhayes, WV (03214900)	Lat 38°00'09", long 82°31'09", Lawrence County, Ky., Hydrologic Unit 05070201, on left bank, 2,000 ft upstream from Lost Creek, 300 ft down- stream from Rockcastle Creek, 1.0 mi southeast of Glenhayes, and at mile 10.3. Prior to 10-1-90 at site 1,600 ft downstream at same datum. Drainage area is 1,507 mi ² .	1976-82, 1991-92≠ 1993-94*	3-29-94	33.75	26,500	4-6-77	(f)44.00	48,000

[≠] Operated as a continuous-record gaging station.

* Gage-height records on file in district office.

f At original site 1,600 ft downstream.

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

Discharge measurements in the following table were made at partial-record stations and miscellaneous sites throughout the State.

Discharge measurements made at partial-record stations and miscellaneous sites during water year 1994

Station name and number	Location	Drainage area (mi ²)	Measured Previously (water years)	Measurements	
				Date	Discharge (ft ³ /s)
MONONGAHELA RIVER BASIN					
West Fork River at Walkersville, WV (03057300)	Lat 38°52'07", long 80°27'29", Lewis County, Hydrologic Unit 05020002, on left bank at down- stream side of highway bridge on Secondary Route 44, in Walkersville, 100 ft downstream from Right Fork, and at mile 95.3.	28.9	1984-92 [≠] 1993-94	9-28-94	0.32
Dry Fork at Hendricks, WV (03065000)	Lat 39°04'20", long 79°37'20", Tucker County, Hydrologic Unit 05020004, on right bank at Hendricks, 0.4 mi upstream from confluence with Blackwater River. Published as Dry Fork River, 1949-52.	345	1941-93 [≠] 1994	9-26-94	63.9
Blackwater River at Canaan Valley State Park, WV (03065050)	Lat 39°02'22", long 79°27'20", Tucker County, Hydrologic Unit 05020004, on right bank, 0.6 mi east of WV Route 32, 2.4 mi southwest of Courtland, 2.0 mi upstream from Freeland Run, and at mile 30.9.	9.48	1992 [≠] 1993-94	10-19-93 12-2-93 2-2-94	5.57 16.1 91.2
Blackwater River at Cortland, WV (03065200)	Lat 39°03'51", long 79°24'49", Tucker County, Hydrologic Unit 05020004, on left bank, 2.5 mi east of Cortland, 0.1 mi downstream from Yoakum Run, and at mile 24.3.	18.5	1992-93 [≠] 1994	10-19-93 12-2-93 2-22-94 4-13-94 6-2-94 8-16-94	12.6 32.9 192 183 8.86 14.2
LITTLE KANAWHA RIVER BASIN					
Little Kanawha River below Burnsville Dam, WV (03151520)	Lat 38°50'41", long 80°37'45", Braxton County, Hydrologic Unit 05030203, on right bank 2,600 ft downstream from Burnsville Dam, 1.6 mi southeast of Burnsville, and at mile 123.7.	163	1976-82 [≠] 1983-86 1987-93 [≠] 1994	3-24-94 5-25-94	449 51.6
Little Kanawha River at Burnsville, WV (03151600)	Lat 38°51'55", long 80°40'32", Braxton County, Hydrologic Unit 05030203, on right bank, 70 ft upstream from Buffalo Creek, 1.0 mi northwest of Burnsville, 1.4 mi downstream from Oil Creek, 1.8 mi downstream from Saltlick Creek, and 1.9 mi downstream from Burnsville, and at mile 119.5.	248	1974-78 [≠] 1979-83 1991-94	3-24-94 5-25-94	709 82.2

[≠] Operated as a continuous-record gaging station.

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

Discharge measurements made at partial-record stations and miscellaneous sites during water year 1994--Continued

Station name and number	Location	Drainage area (mi ²)	Measured Previously (water years)	Measurements	
				Date	Discharge (ft ³ /s)
LITTLE KANAWHA RIVER BASIN--Continued					
Little Kanawha River at Grantsville, WV (03153500)	Lat 38°55'20", long 81°05'50", Calhoun County, Hydrologic Unit 05030203, on left bank, 1,000 ft down- stream from bridge on State Highway 16 at Grantsville, 1,200 ft downstream from Philip Run, and at mile 80.0.	913	1929-78≠ 1979-94	3-23-94 5-26-94	4,250 290
West Fork Little Kanawha River at Rocksedale, WV (03154000)	Lat 38°50'48", long 81°13'26", Calhoun County, Hydrologic Unit 05030203, on right bank on State Route 11, 850 ft downstream from Henry Fork at Rocksedale, 9.0 mi southwest of Grantsville, and at mile 14.1.	205	1929-31, 1938-75≠ 1976-94	3-23-94 5-26-94	730 58.7
KANAWHA RIVER BASIN					
Gauley River at Camden-on- Gauley, WV (03187000)	Lat 38°21'57", long 80°36'04", Webster County, Hydrologic Unit 05050005, on right bank in town of Camden on Gauley, 0.2 mi downstream from Coon Creek, and 0.9 mi upstream from Strouds Creek, and at mile 69.6.	236	1909-16, 1930-75≠ 1976-94	5-5-94	1,070
New River below Hawks Nest Dam, WV (380649081083301)	Lat 38°06'49", long 81°08'33", Fayette County, Hydrologic Unit 05050004, on right bank, 400 ft upstream of State Route 16 bridge at Cotton Hill, 600 ft upstream from Laurel Creek, and at mile 102.2.	6,909	1990-94	8-26-94	149
Elk River at Sutton, WV (03195500)	Lat 38°39'47", long 80°42'35", Braxton County, Hydrologic Unit 05050007, on left bank 150 ft upstream from highway bridge at Sutton, 0.5 mi upstream from Granny Creek, 0.9 mi down- stream from Sutton Dam, 2.5 mi downstream from Wolf Creek, and at mile 102.1.	542	1939-92≠ 1993-94	11-9-93 4-21-94 6-14-94 6-14-94	1,580 933 36.3 34.3
Elk River at Frametown, WV (03196600)	Lat 38°35'32", long 80°53'05", Braxton County, Hydrologic Unit 05050007, on right bank opposite mouth of Birch River, at village of Glendon, 2.2 mi upstream from Strange Creek, 3.2 mi southwest of Frametown, and at mile 82.6. Records include flow of Birch River.	751	1959-81≠ 1982-94	11-10-93	1,230

[≠] Operated as a continuous-record gaging station.

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

Discharge measurements made at partial-record stations and miscellaneous sites during water year 1994--Continued

Station name and number	Location	Drainage area (mi ²)	Measured Previously (water years)	Measurements	
				Date	Discharge (ft ³ /s)
KANAWHA RIVER BASIN--Continued					
Elk River at Clay, WV (03196800)	Lat 38°27'38", long 81°05'16", Clay County, Hydrologic Unit 05050007, on right bank at down- stream side of pier of highway bridge at Clay, 0.9 mi downstream from Buffalo Creek, 2.1 mi downstream from Lower Two Run Creek, and at mile 53.7.	992	1959-78≠ 1979-94	3-28-94 7-19-94	17,600 1,850
TWELVEPOLE CREEK BASIN					
East Fork Twelvepole Creek below East Lynn Dam, WV (03206790)	Lat 38°08'52", long 82°23'00", Wayne County, Hydrologic Unit 05090102, on left bank, 800 ft down- stream from Laurel Creek, 1,700 ft downstream from East Lynn Dam, 1.4 mi south of the town of East Lynn, 2.3 mi upstream from Camp Creek, 6.0 mi southeast of the town of Wayne, and at mile 41.7.	138	1962-82≠ 1983-94	8-3-94	9.42
Twelvepole Creek below Wayne, WV (03207020)	Lat 38°14'56", long 82°26'04", Wayne County, Hydrologic Unit 05090102, on left bank just below high- way bridge on secondary State Route 52/43, 1.9 mi northeast of Wayne and at mile 26.5.	300	1915-17≠ 1918-22 1927-31 1946-90 1992-94	3-30-94	855
Beech Fork below Beech Fork Dam, WV (03207057)	Lat 38°18'18", long 82°25'28", Wayne County, Hydrologic Unit 05090102, on left bank 2,500 ft downstream from Beech Fork Dam, 1.7 mi southeast of Lavalette and at mile 3.0.	79.2	1976-82≠ 1983-90 1992-94	1-25-94 7-19-94 7-19-94 7-20-94	547 3.70 2.79 7.05
BIG SANDY RIVER BASIN					
Tug Fork at Welch, WV (03212750)	Lat 37°26'28", long 81°36'00", McDowell County, Hydrologic Unit 05070201, on left bank at bridge in the Hemphill section of Welch, 20 ft downstream from Mod Branch at mile 131.5.	174	1985-93≠ 1994	11-3-93 12-29-93	45.6 188
Dry Fork at Beartown, WV (03212980)	Lat 37°23'43", long 81°48'10", McDowell County, Hydrologic Unit 05070201, on left bank 20 ft upstream from bridge on State Highway 80/3, 0.4 mi upstream from Grapevine Branch, at mile 7.1.	209	1985-93≠ 1994	11-3-93 12-29-93	42.4 292

[≠] Operated as a continuous-record gaging station.

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

Discharge measurements made at partial-record stations and miscellaneous sites during water year 1994--Continued

Station name and number	Location	Drainage area (mi ²)	Measured Previously (water years)	<u>Measurements</u>	
				Date	Discharge (ft ³ /s)
BIG SANDY RIVER BASIN--Continued					
Tug Fork at Glenhayes, WV (03214900)	Lat 38°00'09", long 82°31'09", Lawrence County, Ky., Hydrologic Unit 05070201, on left bank, 2,000 ft upstream from Lost Creek, 300 ft downstream from Rockcastle Creek, 1.0 mi southeast of Glenhayes, and at mile 10.3. Prior to 10-1-90 at site 1,600 ft downstream at same datum.	1,507	1976-82, 1991-92≠ 1993-94*	1-27-94	8,640

[≠] Operated as a continuous-record gaging station.

MISCELLANEOUS FIELD DETERMINATIONS

01604500 - PATTERSON CREEK NEAR HEADSVILLE, WV

REMARKS.--See station description and discharge records on pages 48 and 49.

WATER QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)
OCT 1993								
06...	1525	8.9	297	7.8	14.5	756	9.2	91
NOV								
03...	1630	47	260	7.7	7.0	748	11.2	94
MAR 1994								
07...	1000 1100		117	6.9	3.5	747	12.2	94
APR								
13...	1715 1690		100	6.4	11.5	737	9.5	90
SEP								
01...	1500	36	248	7.3	22.0	--	8.4	--
21...	1445	11	296	7.8	20.0	750	8.8	98

01607500 - SOUTH FORK SOUTH BRANCH POTOMAC RIVER AT BRANDYWINE, WV

REMARKS.--See station description and discharge records on pages 56 and 57

WATER QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)
NOV 1993								
03...	1100	20	189	8.2	6.5	720	11.1	96
DEC								
07...	1200	365	89	6.9	9.5	724	11.5	106
MAR 1994								
15...	1130	277	105	6.7	6.5	712	13.7	119
APR								
26...	1100	80	146	8.2	15.0	718	10.3	109
JUN								
02...	1300	22	97	7.0	21.5	722	8.6	103
JUL								
25...	1300	48	133	7.8	24.5	720	9.0	115
SEP								
06...	1315	18	147	7.5	19.0	720	8.4	96

MISCELLANEOUS FIELD DETERMINATIONS

01608500 - SOUTH BRANCH POTOMAC RIVER NEAR SPRINGFIELD, WV

REMARKS.--See station description and discharge records on pages 64 and 65.

WATER QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	BARO- METRIC PRES- SURE (MM HG) (00025)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)
OCT 1993								
06...	1145	181	240	8.0	15.0	760	8.8	88
NOV								
03...	1330	376	263	8.0	7.0	751	11.1	93
29...	0945	6430	160	7.7	8.0	748	10.3	89
DEC								
06...	0945	14700	130	7.4	8.0	743	9.7	84
JAN 1994								
11...	1015	1640	162	7.5	0.0	740	14.1	99
FEB								
01...	1045	3620	154	7.3	3.0	753	12.4	93
MAR								
07...	1515	7680	146	7.3	7.0	747	11.6	97
APR								
13...	1245	2260	176	7.6	13.0	740	9.9	97
MAY								
02...	1100	1660	196	7.4	16.5	753	8.5	88
09...	1215	15500	129	7.1	11.5	745	9.6	90
JUN								
06...	1315	393	257	8.0	25.5	742	8.0	101
JUL								
05...	1015	303	229	8.2	26.5	751	7.9	100
AUG								
04...	1345	977	202	8.1	26.5	748	8.5	108
SEP								
21...	1700	193	239	8.3	22.5	750	10.0	118

MISCELLANEOUS FIELD DETERMINATIONS

03056250 - THREE FORK CREEK NEAR GRAFTON, WV

REMARKS.--See station description and discharge records on pages 100 and 101.

WATER QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)
OCT 1993					
06...	1045	16	560	4.5	11.0
18...	0900	80	460	4.7	13.0
NOV					
01...	1145	227	270	5.6	6.0
22...	1400	107	270	4.4	9.0
DEC					
06...	1400	626	175	5.2	8.0
JAN 1994					
11...	0915	280	200	4.7	0.5
27...	1000	822	260	--	4.0
FEB					
07...	1155	93	420	4.0	4.5
17...	0845	302	255	4.7	2.0
MAR					
23...	1210	485	170	5.8	6.5
APR					
13...	1150	1500	160	5.5	11.0
26...	0750	78	360	4.5	15.0
MAY					
13...	0800	162	--	--	--
27...	0800	306	225	5.6	13.0
JUN					
06...	1330	21	440	4.9	22.5
28...	1245	27	535	4.8	24.0
JUL					
05...	1045	6.3	570	4.6	26.0
08...	1000	3.8	600	4.3	27.0
11...	1000	10	675	4.4	23.0
18...	1030	29	350	4.5	23.0
25...	1015	15	455	4.9	24.0
29...	0940	35	395	5.0	20.0
AUG					
05...	0940	64	330	5.5	22.5
08...	1030	62	290	5.1	19.5
11...	1050	24	370	5.3	21.0
15...	1000	67	375	5.2	20.5
19...	1030	402	165	5.8	18.0
22...	1040	332	255	5.3	18.5
25...	1050	107	225	4.9	18.0
SEP					
06...	1145	39	320	4.9	17.0
15...	0945	14	490	4.5	20.0
21...	1115	12	565	4.7	17.0

MISCELLANEOUS FIELD DETERMINATIONS

03058000 - WEST FORK RIVER BELOW STONEWALL JACKSON DAM NEAR WESTON, WV

LOCATION.--Lat 39°00'13", long 80°28'27", Lewis County, Hydrologic Unit 05020002, on left bank, 500 ft downstream from Stonewall Jackson Dam, 3.0 mi south of Weston, and at mile 71.0.

DRAINAGE AREA.--102 mi².

PERIOD OF RECORD.--May 1990 to current year.

REMARKS.--Discontinued streamflow gaging station. See page xi for former station names. Additional data is collected at this site by the U.S. Army Corps of Engineers, Pittsburgh District.

WATER QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (US/CM) (000095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00300)	OXYGEN, DIS- SOLVED (MG/L) (00300)
OCT 1993							
06...	0840	109	6.8	15.0	743	9.0	92
18...	1150	116	6.7	14.0	735	9.1	92
NOV							
02...	1230	120	7.1	11.5	746	9.9	93
24...	0930	128	6.8	9.0	736	10.4	93
DEC							
07...	0900	140	6.9	8.0	740	10.5	91
JAN 1994							
10...	1330	120	7.2	3.0	748	12.3	93
27...	1145	144	--	4.0	739	12.0	94
FEB							
07...	1420	118	6.9	6.0	737	12.1	101
17...	1030	93	7.1	4.0	743	12.2	95
MAR							
23...	1030	102	7.5	6.0	731	11.2	94
APR							
14...	1050	100	7.1	8.0	729	10.8	95
25...	1440	110	7.0	10.0	731	10.1	93
MAY							
26...	1100	95	7.5	14.0	723	9.0	92
JUN							
07...	1315	95	6.8	20.0	723	7.9	92
29...	0845	95	7.0	21.0	727	8.2	97
JUL							
05...	1345	100	6.5	23.0	737	8.0	97
08...	0820	100	6.1	20.0	735	7.9	90
11...	1230	100	6.3	21.0	737	8.4	98
18...	1315	100	6.5	22.0	735	7.8	93
25...	1240	100	6.4	21.0	732	9.0	105
29...	0830	100	6.4	20.0	734	7.8	89
AUG							
05...	1030	106	6.2	20.5	733	7.5	87
09...	1415	100	6.4	23.0	737	7.6	92
11...	0915	100	6.2	20.0	739	8.0	91
15...	1145	101	6.3	21.0	737	7.7	89
19...	0900	102	5.9	20.0	735	8.0	91
22...	1250	101	6.2	20.0	733	7.9	90
25...	1330	103	6.2	21.0	740	7.6	88
SEP							
06...	1420	96	6.1	22.0	734	6.4	76
22...	1000	96	6.0	21.5	735	7.2	85

ANALYSES OF SAMPLES COLLECTED AT PARTIAL-RECORD, SPECIAL STUDY, AND MISCELLANEOUS SITES

382631081585701 - MILL CREEK AT HURRICANE CITY PARK AT HURRICANE, WV

LOCATION.--Lat 38°26'31", long 81°58'57", Putnam County, Hydrologic Unit 05050008.

PERIOD OF RECORD.--October 1993 to September 1994, discontinued.

WATER QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCHI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)
OCT 1993												
22...	1330	1.6	223	7.2	12.0	753	9.8	92	680	530	93	27
NOV												
24...	1445	0.95	183	7.1	8.0	751	11.5	99	480	250	75	21
JAN 1994												
27...	1445	11	128	6.9	5.5	753	11.0	88	600	700	49	14
FEB												
18...	1415	2.8	126	6.8	8.5	757	13.5	116	K30	K35	51	14
MAR												
25...	1415	2.7	128	8.2	12.0	750	11.9	112	170	280	54	15
APR												
29...	1145	0.87	182	7.4	18.5	759	8.3	89	190	100	79	23
MAY												
27...	1330	0.52	209	7.3	14.5	752	8.4	84	2000	K7900	91	27
JUN												
30...	1345	0.20	251	7.2	22.0	752	6.6	77	K19000	6500	110	33
AUG												
11...	1145	0.13	260	7.2	20.0	755	6.3	70	5100	860	100	31
19...	1415	0.57	225	7.3	22.5	748	7.1	84	1100	1900	92	27
SEP												
02...	1430	0.75	220	7.3	20.0	755	7.6	84	1200	1700	95	28
15...	1500	0.10	238	7.2	21.0	749	7.1	81	K69	200	93	27

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE WATER DIS IT FIELD (MG/L AS HCO3 (00453)	CAR- BONATE WATER DIS IT FIELD (MG/L AS CO3 (00452)	ALKA- LINITY WAT DIS TOT IT FIELD (MG/L AS CACO3 (39086)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SiO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)
OCT 1993												
22...	6.2	6.4	2.9	74	0	61	29	7.4	0.10	8.7	136	127
NOV												
24...	5.4	5.3	2.2	66	0	54	26	4.7	0.20	7.1	108	106
JAN 1994												
27...	3.5	4.0	1.5	28	0	23	22	5.0	<0.10	6.9	80	73
FEB												
18...	3.8	3.7	1.2	35	0	29	22	3.7	<0.10	7.8	72	75
MAR												
25...	3.9	3.5	1.2	41	0	34	22	3.0	<0.10	7.1	89	77
APR												
29...	5.2	5.7	2.0	69	0	57	21	4.6	<0.10	4.4	98	100
MAY												
27...	5.8	5.7	2.7	83	0	68	24	4.7	0.10	6.3	122	119
JUN												
30...	6.7	7.5	3.0	117	0	96	17	6.1	0.20	7.0	143	140
AUG												
11...	6.6	7.9	3.1	107	0	88	19	7.8	0.20	4.6	138	134
19...	5.9	6.7	3.0	89	0	73	22	5.7	0.10	7.9	142	123
SEP												
02...	6.0	6.5	3.1	89	0	73	21	5.8	0.20	8.1	146	125
15...	6.1	7.9	3.0	94	0	77	17	9.5	0.20	3.9	139	122

K Results based on colony count outside the acceptance range (non-ideal colony count).

ANALYSES OF SAMPLES COLLECTED AT PARTIAL-RECORD, SPECIAL STUDY, AND MISCELLANEOUS SITES

382631081585701 - MILL CREEK AT HURRICANE CITY PARK AT HURRICANE, WV--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)
OCT 1993											
22...	<0.010	0.630	0.030	0.010	--	--	--	--	--	--	--
NOV											
24...	<0.010	0.240	0.030	<0.010	--	--	--	--	--	--	--
JAN 1994											
27...	0.010	0.440	0.030	<0.010	200	<1	32	<0.5	<1.0	<5	<3
FEB											
18...	<0.010	0.230	0.020	<0.010	--	--	--	--	--	--	--
MAR											
25...	<0.010	0.140	<0.010	<0.010	40	<1	29	<0.5	<1.0	<5	<3
APR											
29...	0.010	0.061	0.040	<0.010	--	--	--	--	--	--	--
MAY											
27...	<0.010	0.300	<0.010	<0.010	--	--	--	--	--	--	--
JUN											
30...	<0.010	0.190	0.050	<0.010	20	<1	54	<0.5	<1.0	<5	<3
AUG											
11...	<0.010	0.110	0.040	<0.010	--	--	--	--	--	--	--
19...	<0.010	0.130	0.030	<0.010	--	--	--	--	--	--	--
SEP											
02...	0.020	0.430	0.030	<0.010	--	--	--	--	--	--	--
15...	<0.010	0.067	<0.010	<0.010	20	<1	51	<0.5	1.0	<5	4

DATE	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
OCT 1993											
22...	--	73	--	--	110	--	--	--	--	--	--
NOV											
24...	--	160	--	--	200	--	--	--	--	--	--
JAN 1994											
27...	<10	52	<10	<4	53	--	<10	<1.0	73	<6	4
FEB											
18...	--	61	--	--	74	--	--	--	--	--	--
MAR											
25...	<10	110	<10	<4	49	--	<10	1.0	79	<6	<3
APR											
29...	--	140	--	--	82	--	--	--	--	--	--
MAY											
27...	--	140	--	--	67	--	--	--	--	--	--
JUN											
30...	<10	200	<10	<4	140	<10	<10	<1.0	180	<6	19
AUG											
11...	--	170	--	--	110	--	--	--	--	--	--
19...	--	180	--	--	70	--	--	--	--	--	--
SEP											
02...	--	250	--	--	78	--	--	--	--	--	--
15...	<10	230	<10	<4	76	10	<10	<1.0	150	<6	<3

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ANALYSES OF SAMPLES COLLECTED AT PARTIAL-RECORD, SPECIAL STUDY, AND MISCELLANEOUS SITES

DECKERS CREEK BASIN

During the period from August 1993 through July 1994, water-quality samples were collected at 37 sites in the Deckers Creek basin near Morgantown, West Virginia, for a special study. The drainage area of the complete basin is 63.2 square miles, and its average discharge is 98.9 cubic feet per second based on gage records for water years 1947 through 1969. The sites are listed below in downstream order; the station numbers merge the latitude and longitude of each site. Pages 226-241 present data for eight sites, identified below, which were sampled each month. Pages 242-247 present data for synoptic sampling in August 1993, November 1993, and May 1994 as listed below.

STATION NAME	STATION NUMBER	MONTHLY SAMPLES	SYNOPSIS SAMPLES IN		
			AUG 93	NOV 93	MAY 94
DECKERS CREEK BELOW IMPOUNDMENT NR ARTHURDALE	393008079502801			X	X
DECKERS CREEK AT ARTHURDALE	393003079484701		X	X	X
FAIRFAX POND DRAINAGE NEAR MOUTH	393001079483101		X	X	X
KANES CREEK BELOW IMPOUNDMENT	393005079465601	X	X	X	X
KANES CREEK NEAR MOUTH	393013079481901		X	X	X
DECKERS CREEK AT GUSEMAN	393100079483601		X	X	X
UNNAMED TRIBUTARY AT GUSEMAN	393104079485001		X	X	X
LAUREL RUN BETWEEN PONDS	393144079492901			X	X
LAUREL RUN NEAR MOUTH	393134079484601		X	X	X
DILLAN CREEK BELOW IMPOUNDMENT	393146079464301	X		X	X
SWAMP RUN NEAR MASONTOWN	393226079472001		X	X	X
DILLAN CREEK BELOW SWAMP RUN	393150079473401		X	X	X
DILLAN CREEK AT ROUTE 7 BRIDGE	393145079475001		X	X	X
UNNAMED TRIBUTARY TO DILLAN CREEK	393142079482401			X	X
DECKERS CREEK AT BRETZ	393207079483901	X	X	X	X
SLABCAMP RUN NEAR MOUTH	393219079485201		X	X	X
BACK RUN AT MOUTH BELOW IMPOUNDMENT	393257079490601			X	X
DECKERS CREEK AT MASONTOWN	393315079481001		X	X	X
GLADY RUN AT MOUTH	393330079481601		X	X	X
DECKERS CREEK AT CASCADE	393350079490701	X	X	X	X
FALLS RUN AT MOUTH	393354079491401		X	X	X
DRY RUN AT MOUTH	393419079502201			X	X
UPPER UNNAMED TRIBUTARY AT GREER	393413079505801			X	X
LOWER UNNAMED TRIBUTARY AT GREER	393418079511801			X	X
UNNAMED TRIBUTARY NEAR GREER	393433079513701		X	X	X
DECKERS CREEK AT STURGISSON CHURCH	393457079515901	X	X	X	X
UNNAMED TRIBUTARY NEAR STURGISSON CHURCH	393548079514701			X	X
TIBBS RUN NEAR MOUTH	393638079530901		X	X	X
DEEP HOLLOW AT MOUTH	393622079534501		X	X	X
DECKERS CREEK AT RICHARD	393629079535401		X		X
DECKERS CREEK AT ROCK FORGE	393628079551001	X	X	X	X
UNNAMED TRIBUTARY AT ROCK FORGE	393637079551001			X	X
DECKERS CREEK ABOVE KNOCKING RUN	393718079553201	X	X	X	X
KNOCKING RUN NEAR MOUTH	393723079552201			X	X
AARON CREEK NEAR MOUTH	393731079555501		X	X	X
HARTMAN RUN AT MOUTH	393746079560701	X	X	X	X
DECKERS CREEK AT MORGANTOWN - Lat 39°37'45", Long 79°57'10"	03062500		X	X	X

ANALYSES OF SAMPLES COLLECTED AT PARTIAL-RECORD, SPECIAL STUDY, AND MISCELLANEOUS SITES

DECKERS CREEK BASIN--Continued

393005079465601 - KANES CREEK BELOW IMPOUNDMENT

WATER QUALITY DATA, WATER YEARS OCTOBER 1992 TO SEPTEMBER 1994

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (000061)	SPE-CIFIC CON-DUCT- ANCE (US/CM) (000095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED SATUR- ATION) (00301)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	
AUG 1993												
24...	0745	0.03	E1170	3.0	19.0	717	3.9	--	370	120	17	
SEP												
21...	0910	0.26	560	3.4	18.5	716	7.6	87	120	37	7.7	
OCT												
26...	0805	2.5	360	3.7	11.0	717	9.6	93	81	24	5.1	
NOV												
16...	0920	5.8	340	3.3	11.0	725	9.8	94	69	20	4.6	
DEC												
06...	1015	27	270	3.9	7.0	710	10.8	96	49	14	3.4	
JAN 1994												
25...	0820	9.5	300	4.3	1.0	720	12.5	93	63	18	4.3	
FEB												
15...	0750	10	235	4.2	2.0	717	12.4	95	53	15	3.7	
MAR												
28...	0930	26	195	5.0	8.0	708	10.2	93	59	18	3.4	
APR												
19...	0720	11	230	4.0	11.0	713	9.3	90	--	--	--	
MAY												
04...	0650	3.0	280	4.1	13.0	717	8.6	87	66	19	4.4	
JUN												
17...	0910	0.52	375	4.0	23.0	718	6.9	86	88	26	5.6	
JUL												
19...	0800	1.5	310	3.8	23.0	718	7.1	88	78	23	4.9	
DATE		SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)
AUG 1993												
24...	6.2	2.7	0	0	0	490	3.3	0.30	21	718	--	
SEP												
21...	4.7	2.0	0	0	0	190	6.5	0.20	11	262	--	
OCT												
26...	4.9	1.4	0	0	0	120	7.1	0.20	11	168	--	
NOV												
16...	4.4	1.3	0	0	0	110	6.4	0.10	9.0	168	--	
DEC												
06...	2.9	1.1	0	0	0	85	3.7	0.10	8.2	142	--	
JAN 1994												
25...	5.4	1.1	0	0	0	87	9.6	0.10	8.3	128	--	
FEB												
15...	4.0	1.1	0	0	0	73	7.2	<0.10	7.1	118	--	
MAR												
28...	3.2	1.0	1	0	1	70	5.4	<0.10	6.0	114	113	
APR												
19...	--	--	0	0	0	77	4.3	<0.10	7.0	108	--	
MAY												
04...	3.0	0.40	0	0	0	100	4.8	0.10	8.4	148	--	
JUN												
17...	3.2	1.2	0	0	0	140	5.0	<0.10	8.0	194	--	
JUL												
19...	4.2	1.4	0	0	0	110	6.1	<0.10	8.8	150	--	

E Estimated

ANALYSES OF SAMPLES COLLECTED AT PARTIAL-RECORD, SPECIAL STUDY, AND MISCELLANEOUS SITES

DECKERS CREEK BASIN--Continued

393005079465601 - KANES CREEK BELOW IMPOUNDMENT--Continued

WATER QUALITY DATA, WATER YEARS OCTOBER 1992 TO SEPTEMBER 1994

DATE	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)
AUG 1993											
24...	<0.010	0.240	1.10	<0.010	15000	<1	44	5	<1.0	7	100
SEP											
21...	<0.010	0.260	0.690	<0.010	--	--	--	--	--	--	--
OCT											
26...	<0.010	0.260	0.170	<0.010	--	--	--	--	--	--	--
NOV											
16...	<0.010	0.270	0.280	<0.010	4100	<1	49	2	<1.0	<5	30
DEC											
06...	<0.010	0.330	0.400	<0.010	--	--	--	--	--	--	--
JAN 1994											
25...	<0.010	0.410	1.30	<0.010	--	--	--	--	--	--	--
FEB											
15...	0.010	0.410	0.810	<0.010	--	--	--	--	--	--	--
MAR											
28...	<0.010	0.310	0.990	<0.010	1900	<1	45	1	<1.0	<5	20
APR											
19...	<0.010	0.240	1.10	<0.010	--	--	--	--	--	--	--
MAY											
04...	<0.010	0.200	0.730	<0.010	--	--	--	--	--	--	--
JUN											
17...	<0.010	0.220	0.790	<0.010	4700	--	50	2	<1.0	<5	50
JUL											
19...	0.010	0.220	0.700	<0.010	--	--	--	--	--	--	--

DATE	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
AUG 1993											
24...	40	24000	<10	57	3200	<10	150	2.0	280	<6	390
SEP											
21...	--	4100	--	--	2000	--	--	--	--	--	--
OCT											
26...	--	3300	--	--	1100	--	--	--	--	--	--
NOV											
16...	10	2300	<10	12	930	--	30	1.0	62	<6	110
DEC											
06...	--	2400	--	--	560	--	--	--	--	--	--
JAN 1994											
25...	--	1400	--	--	670	--	--	--	--	--	--
FEB											
15...	--	1300	--	--	540	--	--	--	--	--	--
MAR											
28...	<10	670	<10	8	480	--	20	<1.0	48	<6	68
APR											
19...	--	--	--	--	--	--	--	--	--	--	--
MAY											
04...	--	2400	--	--	900	--	--	--	--	--	--
JUN											
17...	20	2300	<10	18	1200	<10	50	2.0	76	<6	130
JUL											
19...	--	1400	--	--	1100	--	--	--	--	--	--

ANALYSES OF SAMPLES COLLECTED AT PARTIAL-RECORD, SPECIAL STUDY, AND MISCELLANEOUS SITES

DECKERS CREEK BASIN--Continued

393146079464301 - DILLAN CREEK BELOW IMPOUNDMENT

WATER QUALITY DATA, WATER YEARS OCTOBER 1992 TO SEPTEMBER 1994

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED (MG/L) (00301)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)
SEP 1993											
21...	1000	0.10	700	3.2	18.0	717	7.1	80	160	38	15
OCT											
26...	0930	2.6	330	3.7	10.0	717	9.5	90	73	18	6.9
NOV											
16...	1015	5.7	305	3.6	11.5	725	9.5	92	66	16	6.3
DEC											
06...	1110	29	240	3.8	7.0	711	10.1	89	48	12	4.4
JAN 1994											
25...	0915	8.2	440	3.7	1.0	720	12.0	89	84	20	8.2
FEB											
15...	0845	8.0	240	4.2	2.0	718	11.8	91	49	12	4.5
MAR											
28...	1030	26	255	4.0	8.0	709	9.7	88	52	13	4.8
APR											
19...	0810	12	255	4.2	11.0	714	9.2	89	49	12	4.6
MAY											
04...	0800	3.3	445	3.7	13.0	718	9.1	92	89	21	8.8
JUN											
17...	1015	0.86	585	3.8	25.0	719	6.6	85	120	29	11
JUL											
19...	0905	1.2	540	3.6	23.0	718	7.1	88	110	26	11

DATE	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE WATER DIS IT FIELD (MG/L AS HCO3 (00453)	CAR- BONATE WATER DIS IT FIELD (MG/L AS CO3 (00452)	ALKA- LINITY WAT DIS TOT IT FIELD (MG/L AS CACO3 (39086)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)
SEP 1993											
21...	0.80	2.4	0	0	0	270	1.7	0.30	9.5	344	<0.010
OCT											
26...	1.1	1.4	0	0	0	120	2.3	0.20	9.0	236	<0.010
NOV											
16...	1.1	1.2	0	0	0	110	2.0	0.30	7.4	154	<0.010
DEC											
06...	0.80	1.1	0	0	0	76	1.7	0.20	6.9	122	<0.010
JAN 1994											
25...	1.7	1.0	0	0	0	150	2.5	0.10	9.5	210	<0.010
FEB											
15...	0.80	1.0	0	0	0	78	1.9	<0.10	6.3	114	0.010
MAR											
28...	0.80	1.0	0	0	0	84	1.5	<0.10	5.8	122	<0.010
APR											
19...	0.70	1.6	0	0	0	85	1.5	<0.10	6.7	120	<0.010
MAY											
04...	0.80	0.40	0	0	0	160	1.6	0.10	8.8	224	<0.010
JUN											
17...	0.90	1.3	0	0	0	210	1.6	<0.10	8.5	282	<0.010
JUL											
19...	1.0	1.3	0	0	0	190	1.6	<0.10	10	232	<0.010

ANALYSES OF SAMPLES COLLECTED AT PARTIAL-RECORD, SPECIAL STUDY, AND MISCELLANEOUS SITES

DECKERS CREEK BASIN--Continued

393146079464301 - DILLAN CREEK BELOW IMPOUNDMENT--Continued

WATER QUALITY DATA, WATER YEARS OCTOBER 1992 TO SEPTEMBER 1994

DATE	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)
SEP 1993											
21...	0.140	0.830	<0.010	--	--	--	--	--	--	--	--
OCT											
26...	0.240	0.130	<0.010	--	--	--	--	--	--	--	--
NOV											
16...	0.340	0.070	<0.010	5500	<1	59	2	<1.0	<5	40	<10
DEC											
06...	0.440	0.040	<0.010	--	--	--	--	--	--	--	--
JAN 1994											
25...	0.640	0.090	<0.010	--	--	--	--	--	--	--	--
FEB											
15...	0.570	0.040	<0.010	--	--	--	--	--	--	--	--
MAR											
28...	0.460	0.060	0.010	4100	<1	57	2	<1.0	<5	30	<10
APR											
19...	0.300	0.030	<0.010	--	--	--	--	--	--	--	--
MAY											
04...	0.210	0.090	<0.010	--	--	--	--	--	--	--	--
JUN											
17...	0.110	0.530	<0.010	9900	--	61	4	<1.0	<5	60	<10
JUL											
19...	0.086	0.460	<0.010	--	--	--	--	--	--	--	--

DATE	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
SEP 1993										
21...	3100	--	--	3200	--	--	--	--	--	--
OCT										
26...	1400	--	--	1300	--	--	--	--	--	--
NOV										
16...	1800	<10	11	1000	--	50	<1.0	37	<6	140
DEC										
06...	1400	--	--	680	--	--	--	--	--	--
JAN 1994										
25...	4500	--	--	1200	--	--	--	--	--	--
FEB										
15...	2100	--	--	620	--	--	--	--	--	--
MAR										
28...	2000	<10	11	670	--	40	<1.0	33	<6	120
APR										
19...	2000	--	--	600	--	--	--	--	--	--
MAY										
04...	2900	--	--	1400	--	--	--	--	--	--
JUN										
17...	1900	<10	31	2000	<10	110	<1.0	53	<6	270
JUL										
19...	2000	--	--	2000	--	--	--	--	--	--

ANALYSES OF SAMPLES COLLECTED AT PARTIAL-RECORD, SPECIAL STUDY, AND MISCELLANEOUS SITES

DECKERS CREEK BASIN--Continued

393207079483901 - DECKERS CREEK AT BRETZ

WATER QUALITY DATA, WATER YEARS OCTOBER 1992 TO SEPTEMBER 1994

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	
AUG 1993													
24...	0930	1.2	E1780	2.7	21.0	718	3.4	--	<3	<3	640	200	
SEP													
21...	1120	3.7	E1330	3.2	18.0	717	5.6	--	<1	K7	540	170	
OCT													
26...	1115	21	315	5.6	10.0	718	8.9	84	<1	<1	120	36	
NOV													
16...	1400	50	270	5.3	12.0	725	9.1	89	<1	72	100	30	
DEC													
08...	0810	126	225	5.3	8.0	720	10.2	91	<1	88	73	20	
JAN 1994													
25...	1015	119	285	5.9	1.5	721	11.1	84	200	880	93	28	
FEB													
16...	0750	94	225	6.5	2.5	724	11.6	90	K30	630	80	23	
MAR													
28...	1115	271	195	6.4	8.5	711	9.4	86	K67	1000	74	22	
APR													
19...	0850	98	235	5.8	11.0	715	8.7	84	K7	K19	83	24	
MAY													
04...	1415	E28	350	6.3	11.0	717	8.9	86	560	81	150	43	
JUN													
16...	0830	2.0	975	3.6	23.0	721	5.0	62	K18	39	400	120	
JUL													
19...	1030	12	465	4.5	23.5	718	5.8	73	22	<1	190	60	
DATE		MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)
AUG 1993													
24...	35	11	5.0	0	0	0	870	4.7	0.40	16	1160	--	
SEP													
21...	28	10	4.6	0	0	0	630	6.3	0.30	13	864	--	
OCT													
26...	8.2	4.6	2.3	5	0	4	120	5.9	0.10	6.6	184	191	
NOV													
16...	6.1	4.2	2.1	5	0	4	100	5.1	0.20	5.4	156	160	
DEC													
08...	5.5	2.8	1.5	17	0	14	61	4.1	0.10	6.0	110	114	
JAN 1994													
25...	5.7	4.1	1.9	5	0	4	86	6.7	<0.10	5.5	154	147	
FEB													
16...	5.5	3.2	1.5	10	0	8	80	5.1	<0.10	5.2	142	134	
MAR													
28...	4.5	2.7	1.5	13	0	11	64	3.9	<0.10	3.9	114	113	
APR													
19...	5.7	2.6	1.4	12	0	10	89	3.4	<0.10	5.1	156	141	
MAY													
04...	11	3.1	1.0	37	0	30	140	4.1	<0.10	5.4	226	230	
JUN													
16...	24	9.2	--	0	0	0	490	4.9	<0.10	9.2	658	--	
JUL													
19...	10	5.6	2.3	0	0	0	210	4.5	<0.10	6.9	312	--	

E Estimated

K Results based on colony count outside the acceptance range (non-ideal colony count).

ANALYSES OF SAMPLES COLLECTED AT PARTIAL-RECORD, SPECIAL STUDY, AND MISCELLANEOUS SITES

DECKERS CREEK BASIN--Continued

393207079483901 - DECKERS CREEK AT BRETZ--Continued

WATER QUALITY DATA, WATER YEARS OCTOBER 1992 TO SEPTEMBER 1994

DATE	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)
AUG 1993											
24...	<0.010	1.70	5.70	0.010	18000	<1	32	15	2.0	10	160
SEP											
21...	<0.010	0.910	1.40	0.010	--	--	--	--	--	--	--
OCT											
26...	<0.010	0.460	0.220	<0.010	--	--	--	--	--	--	--
NOV											
16...	0.010	0.570	0.150	<0.010	280	<1	53	<0.5	<1.0	<5	10
DEC											
08...	<0.010	0.750	0.140	<0.010	--	--	--	--	--	--	--
JAN 1994											
25...	<0.010	1.10	0.290	<0.010	--	--	--	--	--	--	--
FEB											
16...	0.020	0.900	0.220	<0.010	--	--	--	--	--	--	--
MAR											
28...	0.010	0.690	0.200	<0.010	70	<1	47	0.6	<1.0	<5	8
APR											
19...	<0.010	0.430	0.220	<0.010	--	--	--	--	--	--	--
MAY											
04...	0.050	0.320	0.250	<0.010	--	--	--	--	--	--	--
JUN											
16...	<0.010	0.530	1.40	<0.010	--	--	49	8	<1.0	<5	40
JUL											
19...	0.020	0.280	0.580	<0.010	--	--	--	--	--	--	--
DATE	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
AUG 1993											
24...	110	31000	<10	86	2200	<10	300	1.0	790	7	780
SEP											
21...	--	15000	--	--	1400	--	--	--	--	--	--
OCT											
26...	--	1600	--	--	620	--	--	--	--	--	--
NOV											
16...	<10	1000	<10	10	440	--	20	<1.0	140	<6	60
DEC											
08...	--	790	--	--	430	--	--	--	--	--	--
JAN 1994											
25...	--	1400	--	--	400	--	--	--	--	--	--
FEB											
16...	--	1300	--	--	370	--	--	--	--	--	--
MAR											
28...	<10	630	<10	<4	270	--	10	<1.0	81	<6	42
APR											
19...	--	1200	--	--	380	--	--	--	--	--	--
MAY											
04...	--	1600	--	--	740	--	--	--	--	--	--
JUN											
16...	40	4500	<10	51	1400	<10	150	<1.0	430	<6	380
JUL											
19...	--	1500	--	--	860	--	--	--	--	--	--

ANALYSES OF SAMPLES COLLECTED AT PARTIAL-RECORD, SPECIAL STUDY, AND MISCELLANEOUS SITES

DECKERS CREEK BASIN--Continued

393350079490701 - DECKERS CREEK AT CASCADE

WATER QUALITY DATA, WATER YEARS OCTOBER 1992 TO SEPTEMBER 1994

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, (PER- CENT SATUR- ATION) (00301)	COLI- FORM, FECAL, UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCHI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)
AUG 1993												
24...	1100	1.1	E1180	2.9	22.0	718	5.8	--	<3	<3	470	140
SEP												
21...	0815	2.8	1000	3.3	17.0	717	6.4	71	K4	K13	420	130
OCT												
27...	1115	21	370	4.3	11.0	714	9.2	89	K1	280	130	38
NOV												
16...	0800	65	335	4.5	11.0	725	10.1	96	51	K3	95	28
DEC												
08...	0920	120	350	4.5	8.0	720	10.5	94	70	910	77	21
JAN 1994												
26...	0845	600	215	6.0	2.0	721	11.2	86	200	K4200	64	19
FEB												
16...	0915	103	255	5.6	2.0	725	11.6	88	1100	620	85	24
MAR												
29...	0715	E300	185	6.0	7.0	715	9.9	87	K58	1300	68	20
APR												
18...	1245	143	235	5.0	11.0	720	9.2	88	K20	37	80	23
MAY												
04...	1300	34	340	5.7	11.0	718	9.2	89	K15	600	150	43
JUN												
16...	1000	2.6	890	3.6	23.0	722	7.2	89	<1	<1	270	75
JUL												
20...	0740	12	465	4.3	22.0	720	5.9	72	130	200	170	54

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE WATER DIS IT FIELD (MG/L AS HCO3 (00453)	CAR- BONATE WATER DIS IT FIELD (MG/L AS CO3 (00452)	ALKA- LINITY WAT DIS TOT IT FIELD (MG/L AS CACO3 (39086)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SiO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)
AUG 1993												
24...	28	11	4.7	0	0	0	570	11	0.40	15	796	--
SEP												
21...	22	10	4.9	0	0	0	470	10	0.30	12	678	--
OCT												
27...	8.7	5.0	2.3	0	0	0	140	6.6	0.20	8.5	212	--
NOV												
16...	6.1	4.3	2.0	0	0	0	110	5.6	0.20	6.5	162	--
DEC												
08...	5.9	3.0	1.4	0	0	0	87	4.1	0.10	7.4	130	--
JAN 1994												
26...	4.1	3.5	1.8	12	0	10	56	6.2	<0.10	4.9	106	107
FEB												
16...	6.0	3.5	1.6	2	0	2	90	5.8	<0.10	6.1	146	145
MAR												
29...	4.3	2.8	1.4	7	0	6	67	4.0	<0.10	4.6	102	112
APR												
18...	5.4	2.7	1.4	2	0	2	93	3.8	0.10	6.0	138	141
MAY												
04...	11	3.7	0.90	5	0	4	150	4.8	<0.10	6.3	236	226
JUN												
16...	19	7.9	2.9	0	0	0	380	8.8	<0.10	11	504	--
JUL												
20...	9.3	6.0	2.3	0	0	0	200	6.0	<0.10	8.7	290	--

E Estimated

K Results based on colony count outside the acceptance range (non-ideal colony count).

ANALYSES OF SAMPLES COLLECTED AT PARTIAL-RECORD, SPECIAL STUDY, AND MISCELLANEOUS SITES

DECKERS CREEK BASIN--Continued

393350079490701 - DECKERS CREEK AT CASCADE--Continued

WATER QUALITY DATA, WATER YEARS OCTOBER 1992 TO SEPTEMBER 1994

DATE	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)
AUG 1993											
24...	<0.010	0.460	2.00	<0.010	13000	<1	43	9	<1.0	5	110
SEP											
21...	<0.010	0.750	1.90	0.020	--	--	--	--	--	--	--
OCT											
27...	<0.010	0.400	0.280	<0.010	--	--	--	--	--	--	--
NOV											
16...	0.010	0.510	0.160	<0.010	1100	<1	51	0.6	<1.0	<5	20
DEC											
08...	<0.010	0.630	0.150	<0.010	--	--	--	--	--	--	--
JAN 1994											
26...	<0.010	1.10	0.220	<0.010	--	--	--	--	--	--	--
FEB											
16...	0.010	0.830	0.200	<0.010	--	--	--	--	--	--	--
MAR											
29...	0.010	0.580	0.170	<0.010	370	<1	49	0.7	<1.0	<5	20
APR											
18...	<0.010	0.430	0.190	<0.010	--	--	--	--	--	--	--
MAY											
04...	0.030	0.250	0.320	<0.010	--	--	--	--	--	--	--
JUN											
16...	<0.010	0.360	1.20	<0.010	11000	--	52	8	<1.0	<5	110
JUL											
20...	0.010	0.180	0.610	<0.010	--	--	--	--	--	--	--

DATE	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
AUG 1993											
24...	40	3400	<10	61	2000	<10	180	<1.0	540	<6	500
SEP											
21...	--	2300	--	--	1400	--	--	--	--	--	--
OCT											
27...	--	690	--	--	750	--	--	--	--	--	--
NOV											
16...	<10	810	<10	11	510	--	30	<1.0	140	<6	66
DEC											
08...	--	1500	--	--	490	--	--	--	--	--	--
JAN 1994											
26...	--	540	--	--	310	--	--	--	--	--	--
FEB											
16...	--	2300	--	--	450	--	--	--	--	--	--
MAR											
29...	<10	780	10	7	330	--	10	<1.0	79	<6	55
APR											
18...	--	1600	--	--	430	--	--	--	--	--	--
MAY											
04...	--	1400	--	--	880	--	--	--	--	--	--
JUN											
16...	240	2400	10	43	1700	<10	130	<1.0	280	<6	380
JUL											
20...	--	310	--	--	900	--	--	--	--	--	--

ANALYSES OF SAMPLES COLLECTED AT PARTIAL-RECORD, SPECIAL STUDY, AND MISCELLANEOUS SITES

DECKERS CREEK BASIN--Continued

393457079515901 - DECKERS CREEK AT STURGISSON CHURCH

WATER QUALITY DATA, WATER YEARS OCTOBER 1992 TO SEPTEMBER 1994

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED (MG/L) (00301)	HARD- NESS TOTAL AS CACO3 (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)
AUG 1993											
25...	0900	2.6	925	7.0	21.5	728	8.3	99	460	150	21
SEP											
20...	1200	3.9	950	4.3	15.0	726	9.4	98	460	140	26
OCT											
27...	1010	24	320	5.3	10.0	722	10.1	95	130	37	8.0
NOV											
15...	1300	82	330	6.2	13.0	727	9.5	95	100	32	6.0
DEC											
08...	1030	133	350	5.1	8.0	727	11.2	99	75	21	5.5
JAN 1994											
26...	0950	541	200	7.3	2.0	729	12.2	92	63	19	3.8
FEB											
15...	0945	130	230	5.9	2.0	725	12.1	92	78	22	5.5
MAR											
29...	0820	376	175	6.5	7.5	722	10.3	91	67	20	4.0
APR											
18...	1200	180	220	6.5	10.5	726	9.9	93	80	24	4.9
MAY											
03...	1500	32	305	6.2	13.0	730	9.4	93	130	37	8.3
JUN											
13...	1115	4.4	550	4.0	20.5	725	7.5	88	210	61	14
JUL											
20...	0900	18	395	5.2	22.0	718	7.4	90	160	52	8.3

DATE	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)
AUG 1993											
25...	16	4.0	26	0	21	440	13	0.10	7.8	656	673
SEP											
20...	13	4.1	0	0	0	550	11	0.40	15	772	--
OCT											
27...	5.6	2.1	2	0	2	130	6.8	0.20	7.7	194	201
NOV											
15...	4.7	1.9	7	0	6	100	6.1	0.10	6.0	180	164
DEC											
08...	3.1	1.3	2	0	2	79	4.0	0.10	6.8	120	126
JAN 1994											
26...	3.4	1.7	17	0	14	50	5.9	<0.10	4.5	120	102
FEB											
15...	3.4	1.4	2	0	2	84	5.4	<0.10	6.0	140	134
MAR											
29...	2.9	1.3	20	0	16	60	4.1	<0.10	4.3	96	110
APR											
18...	2.7	1.3	13	0	11	81	3.8	<0.10	5.3	118	132
MAY											
03...	3.9	0.80	15	0	12	130	4.7	<0.10	6.8	202	202
JUN											
13...	7.2	2.4	0	0	0	260	8.3	<0.10	9.8	380	--
JUL											
20...	6.5	2.2	12	0	10	160	5.8	0.10	7.8	268	251

ANALYSES OF SAMPLES COLLECTED AT PARTIAL-RECORD, SPECIAL STUDY, AND MISCELLANEOUS SITES

DECKERS CREEK BASIN--Continued

393457079515901 - DECKERS CREEK AT STURGISSON CHURCH--Continued

WATER QUALITY DATA, WATER YEARS OCTOBER 1992 TO SEPTEMBER 1994

DATE	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)
AUG 1993											
25...	0.010	1.10	0.940	<0.010	60	<1	52	<0.5	<1.0	<5	60
SEP											
20...	<0.010	0.940	1.50	<0.010	--	--	--	--	--	--	--
OCT											
27...	<0.010	0.450	0.210	<0.010	--	--	--	--	--	--	--
NOV											
15...	<0.010	0.510	0.150	<0.010	40	<1	50	<0.5	<1.0	<5	10
DEC											
08...	<0.010	0.640	0.130	<0.010	--	--	--	--	--	--	--
JAN 1994											
26...	<0.010	0.990	0.180	<0.010	--	--	--	--	--	--	--
FEB											
15...	0.020	0.740	0.200	<0.010	--	--	--	--	--	--	--
MAR											
29...	<0.010	0.570	0.140	<0.010	10	<1	47	0.6	<1.0	<5	9
APR											
18...	<0.010	0.420	0.170	<0.010	--	--	--	--	--	--	--
MAY											
03...	0.020	0.280	0.260	<0.010	--	--	--	--	--	--	--
JUN											
13...	<0.010	0.560	0.640	<0.010	7100	--	54	5	<1.0	<5	60
JUL											
20...	0.020	0.320	0.530	<0.010	--	--	--	--	--	--	--

DATE	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
AUG 1993											
25...	<10	12	<10	41	1300	<10	90	1.0	560	<6	65
SEP											
20...	--	530	--	--	1700	--	--	--	--	--	--
OCT											
27...	--	47	--	--	650	--	--	--	--	--	--
NOV											
15...	<10	370	<10	11	440	--	20	<1.0	150	<6	54
DEC											
08...	--	1000	--	--	430	--	--	--	--	--	--
JAN 1994											
26...	--	310	--	--	260	--	--	--	--	--	--
FEB											
15...	--	1800	--	--	420	--	--	--	--	--	--
MAR											
29...	<10	480	<10	<4	280	--	<10	<1.0	83	<6	38
APR											
18...	--	580	--	--	350	--	--	--	--	--	--
MAY											
03...	--	530	--	--	680	--	--	--	--	--	--
JUN											
13...	20	140	<10	29	1200	<10	90	<1.0	250	<6	240
JUL											
20...	--	10	--	--	730	--	--	--	--	--	--

ANALYSES OF SAMPLES COLLECTED AT PARTIAL-RECORD, SPECIAL STUDY, AND MISCELLANEOUS SITES

DECKERS CREEK BASIN--Continued

393628079551001 - DECKERS CREEK AT ROCK FORGE

WATER QUALITY DATA, WATER YEARS OCTOBER 1992 TO SEPTEMBER 1994

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	
AUG 1993												
25...	0800	3.4	860	5.7	22.0	732	6.1	73	450	140	24	
SEP												
20...	1045	5.6	800	4.5	15.0	737	8.0	82	390	120	23	
OCT												
27...	0840	28	350	4.3	10.0	735	9.7	89	140	40	9.4	
NOV												
15...	1200	91	285	6.4	13.5	740	9.5	94	100	31	6.3	
DEC												
08...	1300	166	300	5.1	9.0	740	11.0	98	78	22	5.7	
JAN 1994												
26...	1100	500	195	7.2	2.0	744	12.4	92	63	19	3.8	
FEB												
15...	1045	167	260	5.8	2.5	740	12.2	92	85	24	6.2	
MAR												
29...	0930	430	180	6.5	7.0	736	11.0	94	64	19	4.1	
APR												
18...	1120	223	215	6.2	10.0	741	10.2	93	77	22	5.3	
MAY												
03...	1310	41	370	5.1	11.0	743	9.3	87	140	39	9.3	
JUN												
13...	1300	6.4	675	4.3	22.5	738	6.5	78	260	73	19	
JUL												
20...	1020	17	445	5.8	22.0	741	7.0	83	180	54	11	
DATE		SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SiO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)
AUG 1993												
25...	15	3.7	5	0	4	460	9.8	0.20	11	650	684	
SEP												
20...	14	4.1	0	0	0	420	12	0.40	14	622	--	
OCT												
27...	6.3	2.2	0	0	0	140	7.1	0.20	8.2	220	--	
NOV												
15...	5.0	2.0	7	0	6	100	6.3	0.10	6.0	172	164	
DEC												
08...	3.3	1.2	5	0	4	80	4.3	0.10	6.7	126	130	
JAN 1994												
26...	3.5	1.5	11	0	9	48	6.0	<0.10	4.8	106	97	
FEB												
15...	3.9	1.4	12	0	10	91	5.7	0.10	6.3	138	151	
MAR												
29...	2.9	1.2	22	0	18	59	4.0	<0.10	4.4	102	110	
APR												
18...	2.8	1.3	10	0	8	83	3.7	0.10	5.7	138	133	
MAY												
03...	5.1	0.80	2	0	2	150	5.5	0.20	7.7	238	226	
JUN												
13...	11	2.4	0	0	0	330	9.0	0.20	13	470	--	
JUL												
20...	8.2	2.2	13	0	11	180	6.5	0.10	7.4	294	283	

ANALYSES OF SAMPLES COLLECTED AT PARTIAL-RECORD, SPECIAL STUDY, AND MISCELLANEOUS SITES

DECKERS CREEK BASIN--Continued

393628079551001 - DECKERS CREEK AT ROCK FORGE--Continued

WATER QUALITY DATA, WATER YEARS OCTOBER 1992 TO SEPTEMBER 1994

DATE	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)
AUG 1993											
25...	0.010	0.980	0.510	<0.010	190	<1	50	0.9	2.0	<5	70
SEP											
20...	<0.010	0.830	0.920	0.020	--	--	--	--	--	--	--
OCT											
27...	<0.010	0.430	0.190	<0.010	--	--	--	--	--	--	--
NOV											
15...	0.010	0.520	0.130	0.010	30	<1	52	<0.5	<1.0	<5	10
DEC											
08...	<0.010	0.660	0.110	<0.010	--	--	--	--	--	--	--
JAN 1994											
26...	<0.010	0.980	0.130	<0.010	--	--	--	--	--	--	--
FEB											
15...	<0.010	0.720	0.170	<0.010	--	--	--	--	--	--	--
MAR											
29...	0.010	0.600	0.110	<0.010	20	<1	49	<0.5	<1.0	<5	10
APR											
18...	<0.010	0.430	0.140	<0.010	--	--	--	--	--	--	--
MAY											
03...	0.010	0.290	0.230	<0.010	--	--	--	--	--	--	--
JUN											
13...	<0.010	0.630	0.450	<0.010	7500	--	60	5	<1.0	<5	180
JUL											
20...	0.020	0.440	0.380	<0.010	--	--	--	--	--	--	--

DATE	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
AUG 1993											
25...	<10	10000	10	69	1200	<10	120	2.0	480	<6	380
SEP											
20...	--	9100	--	--	1400	--	--	--	--	--	--
OCT											
27...	--	2400	--	--	690	--	--	--	--	--	--
NOV											
15...	<10	930	<10	11	450	--	30	<1.0	150	<6	55
DEC											
08...	--	1200	--	--	460	--	--	--	--	--	--
JAN 1994											
26...	--	370	--	--	280	--	--	--	--	--	--
FEB											
15...	--	2900	--	--	460	--	--	--	--	--	--
MAR											
29...	<10	930	<10	5	280	--	10	<1.0	81	<6	42
APR											
18...	--	1900	--	--	380	--	--	--	--	--	--
MAY											
03...	--	5600	--	--	660	--	--	--	--	--	--
JUN											
13...	20	12000	<10	55	1100	<10	100	<1.0	290	<6	280
JUL											
20...	--	4200	--	--	640	--	--	--	--	--	--

ANALYSES OF SAMPLES COLLECTED AT PARTIAL-RECORD, SPECIAL STUDY, AND MISCELLANEOUS SITES

DECKERS CREEK BASIN--Continued

393718079553201 - DECKERS CREEK ABOVE KNOCKING RUN

WATER QUALITY DATA, WATER YEARS OCTOBER 1992 TO SEPTEMBER 1994

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED SATUR- ATION (00301)	COLI- FORM, FECAL, 0.7 KF AGAR UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCHI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	
AUG 1993													
24...	1350	2.4	1250	3.8	28.5	739	6.2	83	<3	<3	540	160	
SEP													
20...	0940	6.0	900	4.5	14.5	740	8.4	85	<1	28	370	110	
OCT													
28...	1015	27	370	6.2	9.0	735	10.2	92	K2	K11	150	43	
NOV													
15...	1015	91	285	6.7	13.0	741	9.8	96	K19	240	110	33	
DEC													
08...	1200	175	300	5.9	9.0	742	11.0	98	<1	39	82	23	
JAN 1994													
25...	1330	225	285	--	1.0	741	12.8	93	390	650	91	27	
FEB													
16...	1030	156	260	6.7	3.0	751	11.7	88	<3	K47	88	25	
MAR													
29...	1010	476	180	5.3	7.0	738	10.8	92	K37	100	68	20	
APR													
18...	1020	234	210	6.3	10.0	742	10.1	92	K10	K13	80	23	
MAY													
03...	1125	43	365	5.2	11.0	744	10.0	93	<2	<2	140	41	
JUN													
16...	1315	5.1	850	4.4	24.0	742	5.2	64	<1	<1	310	89	
JUL													
20...	1200	18	440	6.0	25.0	741	6.8	85	K32	K13	180	53	
DATE		MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)
AUG 1993													
24...	35	22	4.1	0	0	0	620	14	0.60	18	920	--	
SEP													
20...	24	16	3.9	0	0	0	420	13	0.50	14	618	--	
OCT													
28...	10	6.7	2.2	2	0	2	150	7.7	0.20	8.1	224	234	
NOV													
15...	6.5	5.4	1.9	13	0	11	100	6.7	0.10	5.8	190	170	
DEC													
08...	5.9	3.4	1.3	5	0	4	80	4.5	0.10	6.7	122	132	
JAN 1994													
25...	5.7	6.9	1.6	--	--	--	79	11	<0.10	5.4	144	--	
FEB													
16...	6.3	4.4	1.5	15	0	12	88	6.5	<0.10	5.8	136	152	
MAR													
29...	4.3	3.2	1.3	2	0	2	59	4.2	<0.10	4.5	102	102	
APR													
18...	5.4	2.9	1.3	7	0	6	82	3.8	<0.10	5.8	128	132	
MAY													
03...	9.7	5.2	0.90	2	0	2	160	5.2	0.20	7.9	244	239	
JUN													
16...	22	14	2.7	0	0	0	400	9.7	<0.10	13	602	--	
JUL													
20...	11	8.2	2.2	20	0	16	180	7.1	0.10	7.0	286	284	

K Results based on colony count outside the acceptance range (non-ideal colony count).

ANALYSES OF SAMPLES COLLECTED AT PARTIAL-RECORD, SPECIAL STUDY, AND MISCELLANEOUS SITES

DECKERS CREEK BASIN--Continued

393718079553201 - DECKERS CREEK ABOVE KNOCKING RUN--Continued

WATER QUALITY DATA, WATER YEARS OCTOBER 1992 TO SEPTEMBER 1994

DATE	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMCNIA DIS- SOLVED (MG/L AS N) (00608)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)
AUG 1993											
24...	<0.010	0.780	0.640	<0.010	13000	<1	66	9	<1.0	<5	90
SEP											
20...	<0.010	0.830	0.900	<0.010	--	--	--	--	--	--	--
OCT											
28...	<0.010	0.440	0.200	<0.010	--	--	--	--	--	--	--
NOV											
15...	<0.010	0.530	0.130	<0.010	30	<1	51	<0.5	<1.0	<5	10
DEC											
08...	<0.010	0.660	0.100	<0.010	--	--	--	--	--	--	--
JAN 1994											
25...	<0.010	0.960	0.180	<0.010	--	--	--	--	--	--	--
FEB											
16...	0.020	0.850	0.150	<0.010	--	--	--	--	--	--	--
MAR											
29...	<0.010	0.610	0.110	<0.010	10	<1	49	<0.5	<1.0	<5	10
APR											
18...	<0.010	0.430	0.140	<0.010	--	--	--	--	--	--	--
MAY											
03...	<0.010	0.290	0.230	<0.010	--	--	--	--	--	--	--
JUN											
16...	<0.010	0.590	0.350	<0.010	8900	--	63	5	<1.0	<5	130
JUL											
20...	0.020	0.430	0.340	<0.010	--	--	--	--	--	--	--
DATE	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
AUG 1993											
24...	50	7700	<10	96	1600	<10	180	<1.0	660	<6	470
SEP											
20...	--	7600	--	--	1300	--	--	--	--	--	--
OCT											
28...	--	2500	--	--	710	--	--	--	--	--	--
NOV											
15...	<10	790	<10	11	440	--	30	<1.0	160	<6	56
DEC											
08...	--	1100	--	--	450	--	--	--	--	--	--
JAN 1994											
25...	--	1500	--	--	370	--	--	--	--	--	--
FEB											
16...	--	2700	--	--	390	--	--	--	--	--	--
MAR											
29...	<10	870	<10	5	280	--	10	<1.0	85	<6	35
APR											
18...	--	1800	--	--	370	--	--	--	--	--	--
MAY											
03...	--	5600	--	--	670	--	--	--	--	--	--
JUN											
16...	10	11000	<10	65	1100	20	130	2.0	330	<6	270
JUL											
20...	--	2400	--	--	600	--	--	--	--	--	--

ANALYSES OF SAMPLES COLLECTED AT PARTIAL-RECORD, SPECIAL STUDY, AND MISCELLANEOUS SITES

DECKERS CREEK BASIN--Continued

393746079560701 - HARTMAN RUN AT MOUTH

WATER QUALITY DATA, WATER YEARS OCTOBER 1992 TO SEPTEMBER 1994

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED SATUR- ATION (00301)	COLI- FORM, FECAL, UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCHI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	
AUG 1993													
24...	1245	0.06	1000	4.3	28.0	740	7.0	93	K10	77	580	180	
SEP													
20...	0830	0.08	1100	4.5	14.0	741	9.4	94	K10	K42	520	160	
OCT													
28...	0900	0.29	960	4.9	9.0	735	10.4	94	29	230	440	130	
NOV													
15...	0845	0.79	780	7.2	14.0	741	10.7	107	K900	600	300	91	
DEC													
06...	0845	2.4	510	6.8	11.0	--	10.5	--	460	640	230	69	
JAN 1994													
25...	1215	4.1	700	7.0	4.5	742	11.5	91	150	400	220	66	
FEB													
16...	1130	2.9	740	4.1	6.0	751	11.1	91	<3	K14	230	63	
MAR													
29...	1115	5.5	480	5.3	8.0	739	10.7	93	K30	350	180	53	
APR													
18...	0920	2.8	620	4.0	9.0	743	10.4	92	K10	100	210	59	
MAY													
03...	1000	0.98	900	3.7	11.0	744	9.1	85	K10	240	300	82	
JUN													
16...	1150	0.17	1200	4.1	24.0	743	7.1	87	K11	160	470	140	
JUL													
19...	1230	0.29	850	5.1	25.0	741	7.0	87	1400	83	400	120	
DATE		MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)
AUG 1993													
24...	32	22	5.0	0	0	0	580	31	0.60	32	916	--	
SEP													
20...	29	21	4.9	0	0	0	520	31	0.80	32	824	--	
OCT													
28...	28	23	5.0	1	0	1	450	33	0.60	28	724	705	
NOV													
15...	18	19	4.3	41	0	34	280	32	0.30	14	494	484	
DEC													
06...	14	16	2.8	30	0	25	200	22	0.20	14	378	363	
JAN 1994													
25...	14	37	2.9	21	0	17	190	67	0.20	14	412	410	
FEB													
16...	17	17	2.7	0	0	0	280	31	0.20	22	456	--	
MAR													
29...	12	13	2.5	7	0	6	180	18	0.20	13	302	304	
APR													
18...	15	12	2.5	0	0	0	260	19	0.20	20	402	--	
MAY													
03...	22	14	2.7	0	0	0	400	21	0.30	29	588	--	
JUN													
16...	28	20	4.9	0	0	0	540	31	0.30	35	794	--	
JUL													
19...	25	21	4.0	2	0	2	390	28	0.40	27	646	622	

K Results based on colony count outside the acceptance range (non-ideal colony count).

ANALYSES OF SAMPLES COLLECTED AT PARTIAL-RECORD, SPECIAL STUDY, AND MISCELLANEOUS SITES

DECKERS CREEK BASIN--Continued

393746079560701 - HARTMAN RUN AT MOUTH--Continued

WATER QUALITY DATA, WATER YEARS OCTOBER 1992 TO SEPTEMBER 1994

DATE	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)
AUG 1993											
24...	<0.010	0.830	0.300	<0.010	380	<1	46	1	<1.0	<5	20
SEP											
20...	<0.010	0.740	0.470	<0.010	--	--	--	--	--	--	--
OCT											
28...	0.040	0.730	0.610	<0.010	--	--	--	--	--	--	--
NOV											
15...	0.020	0.760	0.270	0.010	50	<1	32	<0.5	<1.0	<5	10
DEC											
06...	<0.010	1.90	0.220	<0.010	--	--	--	--	--	--	--
JAN 1994											
25...	0.010	1.30	0.380	<0.010	--	--	--	--	--	--	--
FEB											
16...	<0.010	1.30	0.500	<0.010	--	--	--	--	--	--	--
MAR											
29...	0.010	1.20	0.370	<0.010	1400	<1	29	1	<1.0	<5	20
APR											
18...	<0.010	0.900	0.440	<0.010	--	--	--	--	--	--	--
MAY											
03...	<0.010	0.550	0.920	<0.010	--	--	--	--	--	--	--
JUN											
16...	0.010	0.750	0.760	<0.010	8900	--	44	4	<1.0	<5	50
JUL											
19...	0.030	0.620	0.420	<0.010	--	--	--	--	--	--	--

DATE	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
AUG 1993											
24...	10	96	<10	42	2300	<10	50	<1.0	390	<6	140
SEP											
20...	--	160	--	--	2500	--	--	--	--	--	--
OCT											
28...	--	260	--	--	2600	--	--	--	--	--	--
NOV											
15...	<10	96	20	15	1200	--	20	<1.0	240	<6	20
DEC											
06...	--	750	--	--	870	--	--	--	--	--	--
JAN 1994											
25...	--	910	--	--	920	--	--	--	--	--	--
FEB											
16...	--	5700	--	--	1500	--	--	--	--	--	--
MAR											
29...	<10	800	<10	17	890	--	20	<1.0	150	<6	98
APR											
18...	--	3400	--	--	1300	--	--	--	--	--	--
MAY											
03...	--	14000	--	--	2300	--	--	--	--	--	--
JUN											
16...	30	1500	<10	49	3100	10	90	2.0	320	<6	250
JUL											
19...	--	350	--	--	2000	--	--	--	--	--	--

ANALYSES OF SAMPLES COLLECTED AT PARTIAL-RECORD, SPECIAL STUDY, AND MISCELLANEOUS SITES

DECKERS CREEK BASIN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

MULTIPLE STATION ANALYSES AUGUST 1993

STATION	NUMBER	DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	BICAR- BONATE WATER WH IT FIELD MG/L AS HCO3 (00450)	CAR- BONATE WATER WH IT FIELD MG/L AS CO3 (00447)
393008079502801	08-11-93	0845	0.0	--	--	--	--	--	--	--	--	--
393003079484701	08-10-93	0710	0.02	260	7.2	20.0	--	3.3	--	116	0	0
393001079483101	08-10-93	0800	0.24	450	7.1	21.0	722	6.5	77	91	0	0
393005079465601	08-10-93	0950	0.10	620	3.3	20.0	722	6.8	79	0	0	0
393013079481901	08-10-93	0850	2.1	2000	2.9	17.0	722	6.5	72	0	0	0
393100079483601	08-10-93	1030	2.3	1700	2.9	18.0	722	7.5	84	0	0	0
393104079485001	08-10-93	1110	0.21	225	6.7	21.5	722	6.5	78	34	0	0
393144079492901	SITE NOT VISITED			--	--	--	--	--	--	--	--	--
393134079484601	08-11-93	0740	0.05	215	4.5	18.0	721	4.7	53	0	0	0
393146079464301	08-10-93	1230	0.0	--	--	--	--	--	--	--	--	--
393226079472001	08-10-93	1330	0.02	730	7.5	21.0	722	8.0	95	171	0	0
393150079473401	08-10-93	1240	0.06	800	7.1	18.5	722	5.1	58	146	0	0
393145079475001	08-10-93	1415	0.22	810	7.4	22.0	721	6.7	81	134	0	0
393142079482401	08-11-93	0730	0.0	--	--	--	--	--	--	--	--	--
393207079483901	08-11-93	0915	2.8	875	3.0	19.5	721	4.8	55	0	0	0
393219079485201	08-11-93	1000	0.27	800	3.2	16.5	721	7.3	79	0	0	0
393257079490601	08-11-93	1040	0.0	--	--	--	--	--	--	--	--	--
393315079481001	08-11-93	1145	3.9	230	3.0	21.0	721	5.8	69	0	0	0
393330079481601	08-10-93	1500	0.06	700	3.3	17.0	721	7.9	87	0	0	0
393350079490701	08-11-93	1245	4.3	1380	3.1	22.0	721	7.2	88	0	0	0
393354079491401	08-10-93	1345	0.01	530	6.2	20.0	720	8.3	97	46	0	0
393419079502201	08-10-93	1320	0.0	--	--	--	--	--	--	--	--	--
393413079505801	08-10-93	1550	0.0	--	--	--	--	--	--	--	--	--
393418079511801	08-10-93	1600	0.0	--	--	--	--	--	--	--	--	--
393433079513701	08-11-93	1345	0.04	329	6.7	20.0	727	7.9	91	166	0	0
393457079515901	08-11-93	1015	6.0	980	4.2	19.5	728	8.7	100	0	0	0
393548079514701	08-10-93	1310	0.0	--	--	--	--	--	--	--	--	--
393638079530901	08-10-93	1630	0.23	138	6.2	21.0	735	7.8	91	44	0	0
393622079534501	08-10-93	1800	0.04	980	4.9	20.0	736	8.0	91	4	0	0
393629079535401	08-11-93	0915	4.5	870	4.4	19.5	740	8.5	96	0	0	0
393628079551001	08-11-93	0800	5.2	1000	4.2	19.0	742	7.1	79	0	0	0
393637079551001	08-10-93	1240	0.0	--	--	--	--	--	--	--	--	--
393718079553201	08-10-93	1045	3.6	1020	4.2	19.5	742	6.8	76	0	0	0
393723079552201	08-10-93	1020	0.0	--	--	--	--	--	--	--	--	--
393731079555501	08-10-93	0845	0.35	285	6.5	19.5	744	8.2	92	121	0	0
393746079560701	08-09-93	1600	0.08	1120	4.4	27.0	743	6.8	88	0	0	0
03062500	08-09-93	1845	4.3	910	4.3	24.0	744	6.8	83	0	0	0

ANALYSES OF SAMPLES COLLECTED AT PARTIAL-RECORD, SPECIAL STUDY, AND MISCELLANEOUS SITES

DECKERS CREEK BASIN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

MULTIPLE STATION ANALYSES AUGUST 1993

STATION	NUMBER	DATE	ALKA- LIVITY WAT WH TOT IT FIELD MG/L AS CACO3 (00419)	ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL) (01105)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	ALUM- INUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE) (01108)	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE) (01170)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE) (01053)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN) (01093)
393008079502801	08-11-93	--	--	--	--	--	--	--	--	--	--
393003079484701	08-10-93	95	210	1600	300	<10	--	--	--	--	--
393001079483101	08-10-93	25	70	210	140	<10	3300	13000	1800	290	10
393005079465601	08-10-93	0	7500	6300	1200	210	440	47000	180	60	10
393013079481901	08-10-93	0	13000	43000	1900	710	6300	32000	25	10	10
393100079483601	08-10-93	0	13000	33000	1900	680	--	--	--	--	--
393104079485001	08-10-93	28	20	240	180	<10	250	12000	370	70	70
393144079492901	08-11-93	--	--	--	--	--	--	--	--	--	--
393134079484601	08-11-93	0	2400	12000	720	40	1900	12000	8	10	10
393146079464301	08-10-93	--	--	--	--	--	--	--	--	--	--
393226079472001	08-10-93	140	490	1200	160	<10	470	26000	290	50	50
393150079473401	08-10-93	120	320	610	1100	30	12000	13000	370	120	120
393145079475001	08-10-93	110	130	220	230	10	--	--	--	--	--
393142079482401	08-11-93	--	--	--	--	--	--	--	--	--	--
393207079483901	08-11-93	0	11000	24000	1600	510	--	--	--	--	--
393219079485201	08-11-93	0	15000	8500	2500	300	300	47000	47	20	20
393257079490601	08-11-93	--	--	--	--	--	--	--	--	--	--
393315079481001	08-11-93	0	15000	6900	2000	570	--	--	--	--	--
393330079481601	08-10-93	0	4600	2300	1400	80	4900	45000	100	50	50
393350079490701	08-11-93	--	16000	6800	1900	510	--	--	--	--	--
393354079491401	08-10-93	38	420	910	430	<10	--	--	--	--	--
393419079502201	08-10-93	--	--	--	--	--	--	--	--	--	--
393413079505801	08-10-93	--	--	--	--	--	--	--	--	--	--
393418079511801	08-10-93	--	--	--	--	--	--	--	--	--	--
393433079513701	08-11-93	136	420	610	70	<10	--	--	--	--	--
393457079515901	08-11-93	0	11000	390	1600	410	--	--	--	--	--
393548079514701	08-10-93	--	--	--	--	--	--	--	--	--	--
393638079530901	08-10-93	36	550	650	130	20	--	--	--	--	--
393622079534501	08-10-93	3	2300	70	2900	320	12000	22000	1400	200	200
393629079535401	08-11-93	0	7400	190	1300	330	--	--	--	--	--
393628079551001	08-11-93	0	10000	13000	1700	430	4600	11000	240	120	120
393637079551001	08-10-93	--	--	--	--	--	--	--	--	--	--
393718079553201	08-10-93	0	11000	13000	1600	460	7900	28000	650	2800	2800
393723079552201	08-10-93	--	--	--	--	--	--	--	--	--	--
393731079555501	08-10-93	99	110	190	40	<10	3900	15000	820	90	90
393746079560701	08-09-93	0	5200	260	2700	170	1800	23000	1200	140	140
03062500	08-09-93	0	6300	9000	1500	420	--	--	--	--	--

ANALYSES OF SAMPLES COLLECTED AT PARTIAL-RECORD, SPECIAL STUDY, AND MISCELLANEOUS SITES

DECKERS CREEK BASIN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

MULTIPLE STATION ANALYSES NOVEMBER 1993

STATION	NUMBER	DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)
393008079502801	11-16-93	0915	9.9	71	6.1	11.0	713	10.0	97	
393003079484701	11-17-93	1010	11	79	6.2	11.0	715	9.0	87	
393001079483101	11-17-93	0745	3.5	420	7.4	11.0	726	10.1	96	
393005079465601	11-16-93	0920	5.8	340	3.3	11.0	725	9.8	94	
393013079481901	11-17-93	0815	8.0	585	3.9	11.0	715	9.0	87	
393100079483601	11-17-93	1045	29	300	5.6	11.0	715	9.0	87	
393104079485001	11-17-93	1120	1.8	210	6.5	11.0	715	8.3	80	
393144079492901	11-17-93	1210	5.3	63	5.6	8.0	713	9.7	88	
393134079484601	11-16-93	1300	3.4	90	5.5	12.0	725	8.7	85	
393146079464301	11-16-93	1015	5.7	305	3.6	11.5	725	9.5	92	
393226079472001	11-18-93	0745	2.9	260	6.7	8.5	723	8.5	77	
393150079473401	11-18-93	0820	16	340	4.5	9.0	723	9.1	83	
393145079475001	11-16-93	1215	10	260	5.2	11.0	725	9.4	90	
393142079482401	11-16-93	1140	1.6	355	7.0	12.0	725	9.4	92	
393207079483901	11-16-93	1400	50	270	5.3	12.0	725	9.1	89	
393219079485201	11-18-93	0910	4.3	420	3.2	9.0	723	9.5	87	
393257079490601	11-18-93	1000	19	54	5.2	9.0	723	9.8	89	
393315079481001	11-16-93	0845	58	268	4.5	10.5	725	9.2	87	
393330079481601	11-16-93	1000	0.47	440	3.8	9.0	725	9.8	89	
393350079490701	11-16-93	0800	65	335	4.5	11.0	725	10.1	96	
393354079491401	11-16-93	1100	1.6	108	7.2	11.0	725	10.1	96	
393419079502201	11-16-93	1215	1.5	83	6.3	10.5	736	10.3	96	
393413079505801	11-16-93	1500	0.19	118	7.5	10.0	734	10.1	93	
393418079511801	11-16-93	1615	0.04	329	7.3	10.5	734	9.4	88	
393433079513701	11-17-93	0815	0.61	153	7.4	10.0	726	10.2	95	
393457079515901	11-15-93	1300	82	330	6.2	13.0	727	9.5	95	
393548079514701	11-17-93	0930	0.49	63	5.1	10.5	728	10.1	95	
393638079530901	11-17-93	1030	3.4	98	6.9	12.0	735	9.8	94	
393622079534501	11-17-93	1145	1.2	480	4.5	13.0	737	9.6	94	
393629079535401	11-18-93	1120	HIGH WATER, UNABLE TO SAMPLE				--	--	--	
393628079551001	11-15-93	1200	91	285	6.4	13.5	740	9.5	94	
393637079551001	11-17-93	1345	0.40	400	7.8	13.5	738	9.6	95	
393718079553201	11-15-93	1015	91	285	6.7	13.0	741	9.8	96	
393723079552201	11-17-93	1530	1.0	400	7.6	13.0	742	8.7	85	
393731079555501	11-18-93	0945	40	132	7.0	9.5	752	10.6	94	
393746079560701	11-15-93	0845	0.79	780	7.2	14.0	741	10.7	107	
03062500	11-18-93	0815	351	204	7.2	10.0	752	10.4	93	

ANALYSES OF SAMPLES COLLECTED AT PARTIAL-RECORD, SPECIAL STUDY, AND MISCELLANEOUS SITES

DECKERS CREEK BASIN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

MULTIPLE STATION ANALYSES NOVEMBER 1993

STATION	NUMBER	DATE	BICAR- BONATE WATER WH IT FIELD MG/L AS HCO3 (00450)	CAR- BONATE WATER WH IT FIELD MG/L AS CO3 (00447)	ALKA- LINEITY WAT WH TOT IT FIELD MG/L AS CACO3 (00419)	ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL) (01105)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)
393008079502801	11-16-93		5	0	4	90	100	80	<10
393003079484701	11-17-93		15	0	12	100	180	60	<10
393001079483101	11-17-93		61	0	50	100	370	240	<10
393005079465601	11-16-93		-----A-----			4000	2300	890	110
393013079481901	11-17-93		0	0	0	3200	4000	700	110
393100079483601	11-17-93		2	0	2	1200	1500	310	50
393104079485001	11-17-93		15	0	12	200	640	510	10
393144079492901	11-17-93		2	0	2	220	300	170	20
393134079484601	11-16-93		10	0	8	420	1500	280	30
393146079464301	11-16-93		-----A-----			5300	1600	1000	150
393226079472001	11-18-93		67	0	55	440	920	80	<10
393150079473401	11-18-93		0	0	0	4500	2400	820	120
393145079475001	11-16-93		2	0	2	8400	4300	760	140
393142079482401	11-16-93		61	0	50	20	230	100	<10
393207079483901	11-16-93		-----A-----			930	1200	420	60
393219079485201	11-18-93		0	0	0	5100	7400	540	90
393257079490601	11-18-93		2	0	2	410	300	200	30
393315079481001	11-16-93		0	0	0	1200	1500	480	70
393330079481601	11-16-93		0	0	0	2600	520	840	60
393350079490701	11-16-93		-----A-----			1200	1000	490	70
393354079491401	11-16-93		12	0	10	120	350	110	10
393419079502201	11-16-93		7	0	6	30	30	<10	<10
393413079505801	11-16-93		28	0	23	20	30	<10	<10
393418079511801	11-16-93		158	0	130	60	80	<10	<10
393433079513701	11-17-93		49	0	40	240	220	30	<10
393457079515901	11-15-93		-----A-----			750	660	420	60
393548079514701	11-17-93		1	0	1	250	30	200	40
393638079530901	11-17-93		18	0	15	60	70	40	20
393622079534501	11-17-93		0	0	0	6000	220	3100	300
393629079535401	11-18-93		--	--	--	--	--	--	--
393628079551001	11-15-93		-----A-----			1000	1400	450	60
393637079551001	11-17-93		158	0	130	60	100	<10	<10
393718079553201	11-15-93		-----A-----			990	1400	430	60
393723079552201	11-17-93		165	0	135	1000	1700	70	60
393731079555501	11-18-93		21	0	17	470	690	140	20
393746079560701	11-15-93		-----A-----			880	1500	1100	50
03062500	11-18-93		24	0	20	3500	6400	420	90

A: Dissolved bicarbonate, carbonate, and alkalinity values (from filtered samples) are included in tables of monthly samples on pages 226-241.

ANALYSES OF SAMPLES COLLECTED AT PARTIAL-RECORD, SPECIAL STUDY, AND MISCELLANEOUS SITES

DECKERS CREEK BASIN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

MULTIPLE STATION ANALYSES MAY 1994

STATION	NUMBER	DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)
393008079502801	05-05-94	0815	6.8	47	7.1	13.0	712	9.2	94	
393003079484701	05-05-94	0930	6.9	54	6.8	12.0	716	9.0	89	
393001079483101	05-05-94	1030	1.7	405	6.7	13.0	715	8.4	85	
393005079465601	05-04-94	0650	3.0	280	4.1	13.0	717	8.6	87	
393013079481901	05-05-94	1130	6.5	640	4.2	11.5	715	6.4	63	
393100079483601	05-03-94	0830	13	435	7.0	12.0	728	9.2	89	
393104079485001	05-03-94	1000	0.69	238	6.5	13.0	728	8.5	85	
393144079492901	05-06-94	0830	4.9	42	6.5	12.0	714	8.8	87	
393134079484601	05-05-94	1100	4.2	48	5.8	11.0	723	9.0	86	
393146079464301	05-04-94	0800	3.3	445	3.7	13.0	718	9.1	92	
393226079472001	05-03-94	1330	0.64	720	7.9	12.0	726	10.4	102	
393150079473401	05-03-94	1215	3.4	355	4.8	13.0	727	9.9	99	
393145079475001	05-03-94	1115	4.2	360	5.2	12.0	728	9.6	93	
393142079482401	05-05-94	0930	1.1	490	7.4	12.0	725	7.4	72	
393207079483901	05-04-94	1415	E28	350	6.3	11.0	717	8.9	86	
393219079485201	05-05-94	1240	0.66	445	3.6	10.0	716	9.4	89	
393257079490601	05-05-94	1330	13	54	4.9	13.0	716	8.4	85	
393315079481001	05-03-94	1730	26	345	4.4	12.0	727	9.0	88	
393330079481601	05-03-94	1615	0.52	425	3.6	11.5	727	9.2	89	
393350079490701	05-04-94	1300	34	340	5.7	11.0	718	9.2	89	
393354079491401	05-02-94	1945	0.77	94	7.3	15.0	728	9.1	95	
393419079502201	05-04-94	1745	1.7	67	6.8	10.0	731	10.4	96	
393413079505801	05-04-94	1500	0.18	94	7.2	10.0	729	10.4	96	
393418079511801	05-04-94	1600	0.01	292	7.6	10.0	730	9.6	89	
393433079513701	05-04-94	1830	0.43	152	7.5	9.0	732	10.7	96	
393457079515901	05-03-94	1500	32	305	6.2	13.0	730	9.4	93	
393548079514701	05-02-94	1830	0.55	49	5.1	11.0	736	10.1	95	
393638079530901	05-04-94	1345	5.0	87	6.9	10.0	742	10.6	96	
393622079534501	05-04-94	0930	1.1	530	4.9	9.0	744	10.9	97	
393629079535401	05-04-94	1215	46	298	6.9	10.0	744	9.6	87	
393628079551001	05-03-94	1310	41	370	5.1	11.0	743	9.3	87	
393637079551001	05-02-94	1710	0.31	312	8.4	17.5	748	9.4	100	
393718079553201	05-03-94	1125	43	365	5.2	11.0	744	10.0	93	
393723079552201	05-02-94	1600	0.64	301	8.2	15.0	750	9.9	100	
393731079555501	05-04-94	0815	5.2	178	7.5	10.0	746	10.5	95	
393746079560701	05-03-94	1000	0.98	900	3.7	11.0	744	9.1	85	
03062500	05-03-94	1900	E41	350	5.6	12.0	749	9.6	91	

E Estimated.

ANALYSES OF SAMPLES COLLECTED AT PARTIAL-RECORD, SPECIAL STUDY, AND MISCELLANEOUS SITES

DECKERS CREEK BASIN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

MULTIPLE STATION ANALYSES MAY 1994

STATION	NUMBER	DATE	BICAR- BONATE WATER WH IT FIELD	CAR- BONATE WATER WH IT FIELD	ALKA- LINITY WAT WH TOT IT FIELD	ALUM- INUM, TOTAL RECOV- ERABLE	IRON, TOTAL RECOV- ERABLE	MANGA- NESE, TOTAL RECOV- ERABLE	ZINC, TOTAL RECOV- ERABLE
			MG/L AS HCO3 (00450)	MG/L AS CO3 (00447)	MG/L AS CACO3 (00419)	(UG/L AS AL) (01105)	(UG/L AS FE) (01045)	(UG/L AS MN) (01055)	(UG/L AS ZN) (01092)
393008079502801	05-05-94		7	0	6	130	330	220	<10
393003079484701	05-05-94		15	0	12	150	320	180	<10
393001079483101	05-05-94		55	0	45	110	530	680	10
393005079465601	05-04-94		-----A-----			--	--	--	--
393013079481901	05-05-94		0	0	0	10000	43000	1900	510
393100079483601	05-03-94		57	0	47	5300	25000	1100	260
393104079485001	05-03-94		10	0	8	130	590	730	10
393144079492901	05-06-94		7	0	6	180	980	330	20
393134079484601	05-05-94		2	0	2	170	820	300	20
393146079464301	05-04-94		-----A-----			8200	3000	1400	220
393226079472001	05-03-94		195	0	160	270	640	370	<10
393150079473401	05-03-94		4	0	3	6100	2100	1200	170
393145079475001	05-03-94		5	0	4	4000	890	1100	150
393142079482401	05-05-94		133	0	109	60	560	610	<10
393207079483901	05-04-94		-----A-----			1300	2700	780	100
393219079485201	05-05-94		0	0	0	5000	4800	770	100
393257079490601	05-05-94		2	0	2	210	210	350	30
393315079481001	05-03-94		0	0	0	1500	1900	880	90
393330079481601	05-03-94		0	0	0	260	2900	680	60
393350079490701	05-04-94		-----A-----			770	1900	910	90
393354079491401	05-02-94		13	0	11	150	580	110	<10
393419079502201	05-04-94		7	0	6	180	190	30	<10
393413079505801	05-04-94		21	0	17	40	60	30	<10
393418079511801	05-04-94		151	0	124	20	50	<10	10
393433079513701	05-04-94		52	0	43	20	210	50	190
393457079515901	05-03-94		-----A-----			1400	550	720	100
393548079514701	05-02-94		1	0	1	160	220	30	<10
393638079530901	05-04-94		12	0	10	310	150	170	30
393622079534501	05-04-94		4	0	3	9100	280	3100	350
393629079535401	05-04-94		15	0	12	920	340	630	50
393628079551001	05-03-94		-----A-----			3400	5800	700	120
393637079551001	05-02-94		127	0	104	90	120	10	<10
393718079553201	05-03-94		-----A-----			--	--	--	--
393723079552201	05-02-94		80	0	66	220	30	70	<10
393731079555501	05-04-94		55	0	45	100	150	40	<10
393746079560701	05-03-94		-----A-----			9300	16000	2500	210
03062500	05-03-94		2	0	2	2700	4800	640	110

A: Dissolved bicarbonate, carbonate, and alkalinity values (from filtered samples) are included in tables of monthly samples on pages 226-241.

GROUND-WATER RECORDS

GROUND-WATER LEVELS

BERKELEY COUNTY

392725077582401. Local number 20-5-7.

LOCATION.--Lat 39°27'25", long 77°58'24", Hydrologic Unit 02070004, at John Street and Porter Avenue, Martinsburg.
Owner: Martinsburg Mills, Inc.

AQUIFER.--Beekmantown Group of Lower Ordovician age.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 8 in., depth 250 ft, cased with steel to 10 ft.

INSTRUMENTATION.--Digital water-level recorder--60-minute punch.

DATUM.--Elevation of land-surface datum is about 445 ft above sea level. Measuring point: Top edge of recorder shelter base, 3.30 ft above land-surface datum.

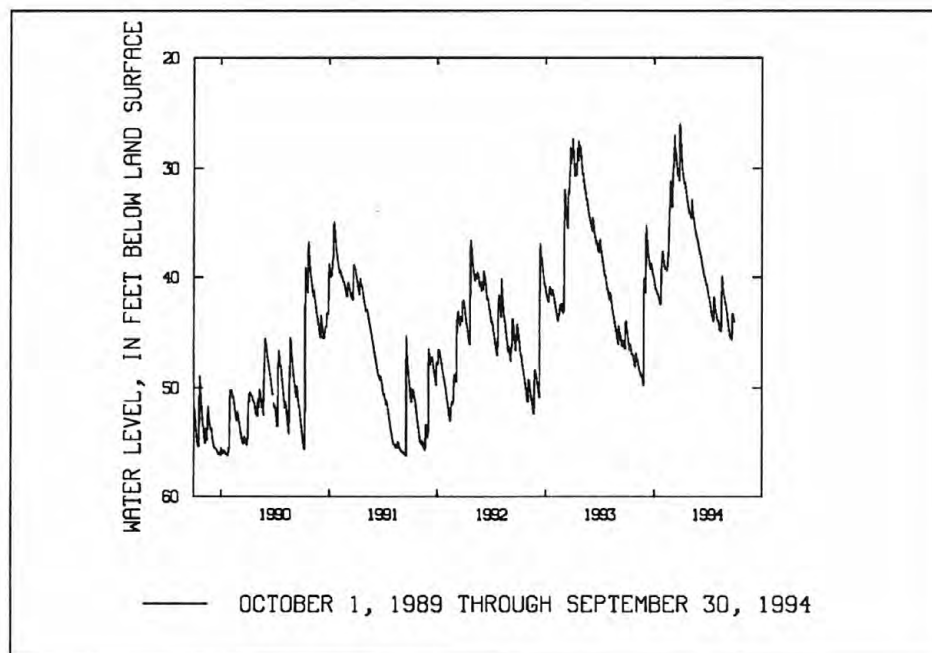
PERIOD OF RECORD.--November 1956 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 23.00 ft, estimated, below land-surface datum, June 24, 1972;
lowest, 68.45 ft below land-surface datum, Dec. 7, 1969.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
NOON VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	45.34	47.51	36.60	40.83	38.96	30.87	29.73	34.23	37.70	41.74	43.91	43.24
10	46.42	48.04	37.07	41.25	39.12	27.80	30.90	33.33	38.24	42.30	44.53	44.35
15	46.28	48.62	38.33	41.54	39.12	28.50	31.39	34.61	39.10	43.20	44.79	45.35
20	46.95	48.79	39.22	42.18	36.41	30.40	32.37	35.44	39.84	43.82	40.11	45.38
25	47.42	49.47	39.03	40.54	31.14	30.78	33.28	36.27	40.36	42.16	41.61	43.42
EOM	47.11	40.13	39.96	37.73	32.45	26.70	34.11	36.90	40.84	43.27	42.50	44.06

WATER YEAR 1994 HIGHEST 25.98 MAR 29, 1994 LOWEST 49.79 NOV 27, 1993



GROUND-WATER LEVELS

BROOKE COUNTY

401216080362703.

LOCATION.--Lat 40°12'16", long 80°36'27", Hydrologic Unit 05030106, about 2.5 mi west of Bethany on hilltop about 1,700 ft west of Buffalo Creek.

Owner: C. E. Reeves.

AQUIFER.--Waynesburg coal in the Monongahela Group of Upper Pennsylvanian age.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 6 in., depth 50.5 ft, cased with steel to 46.5 ft and set in bentonite clay seal.

INSTRUMENTATION.--Continuous strip-chart water-level recorder.

DATUM.--Elevation of land-surface datum is about 1,150 ft above sea level. Measuring point: Top of casing, 2.20 ft above land-surface datum.

REMARKS.--Aquifer test data available.

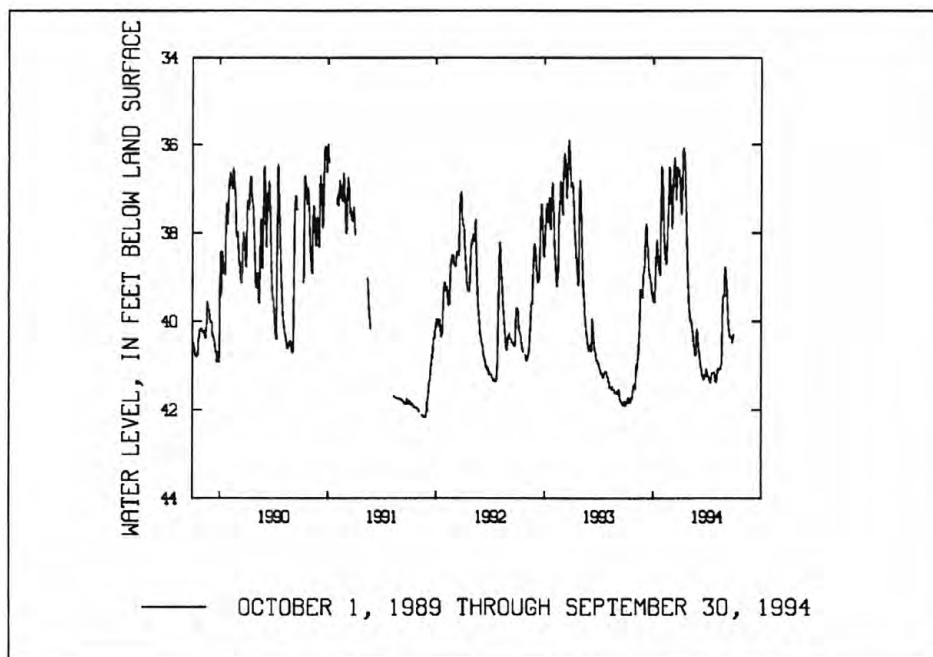
PERIOD OF RECORD.--July 1982 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 34.87 ft below land-surface datum, Apr. 3, 1985; lowest, 42.17 ft below land-surface datum, Nov. 26, 1991.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
NOON VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	41.83	41.06	38.39	39.46	37.54	37.77	37.34	39.81	40.66	41.22	41.18	39.04
10	41.75	40.96	37.80	38.75	38.48	36.66	37.04	39.97	40.95	41.32	41.07	39.70
15	41.84	40.37	38.31	38.23	38.66	36.30	36.13	40.23	41.18	41.34	41.07	40.23
20	41.80	39.28	38.96	38.74	37.78	37.24	36.68	40.57	41.32	41.17	40.97	40.37
25	41.61	39.40	39.10	38.95	36.50	36.53	38.06	40.75	41.20	41.16	39.47	40.47
EOM	41.41	38.90	39.45	36.50	36.86	36.57	39.23	40.21	41.08	41.35	38.83	40.33

WATER YEAR 1994 HIGHEST 36.07 APR 14, 1994 LOWEST 41.91 OCT 1, 1993



GROUND-WATER LEVELS

FAYETTE COUNTY

380154080571301.

LOCATION.--Lat 38°01'54", long 80°57'13", Hydrologic Unit 05050005, 1.6 mi south of U.S. Route 60 along State Route 11, near Clifftop.

Owner: Nuttall heirs.

AQUIFER.--New River Formation of Lower Pennsylvanian age.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 6 in., depth 41.5 ft, cased with wrought iron.

INSTRUMENTATION.--Weekly measurement with chalked tape by USGS personnel.

DATUM.--Elevation of land-surface datum is about 2,280 ft above sea level. Measuring point: Top of casing cover, 1.00 ft above land-surface datum.

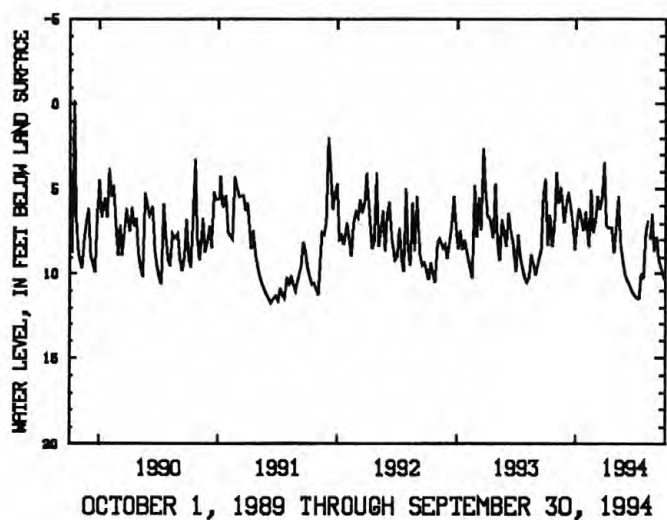
PERIOD OF RECORD.--February 1986 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.23 ft above land-surface datum, Oct. 17, 1989; lowest measured, 12.00 ft below land-surface datum, July 12, 1988.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 05	8.28	DEC 07	5.16	FEB 15	5.02	APR 19	7.29	JUN 21	10.96	AUG 23	6.43
12	6.48	14	6.00	22	7.52	26	8.77	28	11.22	30	8.62
19	8.35	21	7.05	MAR 01	6.88	MAY 03	7.14	JUL 05	11.42	SEP 06	7.79
26	7.28	29	8.58	08	5.43	10	5.40	12	11.47	13	9.11
NOV 02	3.98	JAN 06	6.39	15	6.22	17	8.13	19	9.99	20	9.79
09	5.78	11	6.11	22	5.52	24	9.15	26	10.27	27	10.30
16	4.82	25	7.42	29	3.44	31	9.95	AUG 02	7.55		
23	6.98	FEB 01	6.33	APR 05	7.15	JUN 07	10.34	09	6.91		
30	5.95	08	8.37	12	7.25	14	10.64	16	7.88		

WATER YEAR 1994 HIGHEST 3.44 MAR 29, 1994 LOWEST 11.47 JUL 12, 1994



GROUND-WATER LEVELS

GILMER COUNTY

385604080495901. Local number, 33-3-1.

LOCATION.--Lat 38°56'04", long 80°49'59", Hydrologic Unit 05030203, at Glenville State College Campus, Glenville.
Owner: Glenville State College.

AQUIFER.--Conemaugh Formation of Upper Pennsylvanian age.

WELL CHARACTERISTICS.--Dug unused water-table well, diameter 3 ft, depth 25 ft, cased with concrete tile. July 1988, installed 4-in plastic casing fitted with screened well point, and backfilled dug well with gravel and sand.

INSTRUMENTATION.--Weekly measurement with chalked tape by observer.

DATUM.--Elevation of land-surface datum is about 820 ft above sea level. Measuring point: Top of concrete cover at land-surface datum.

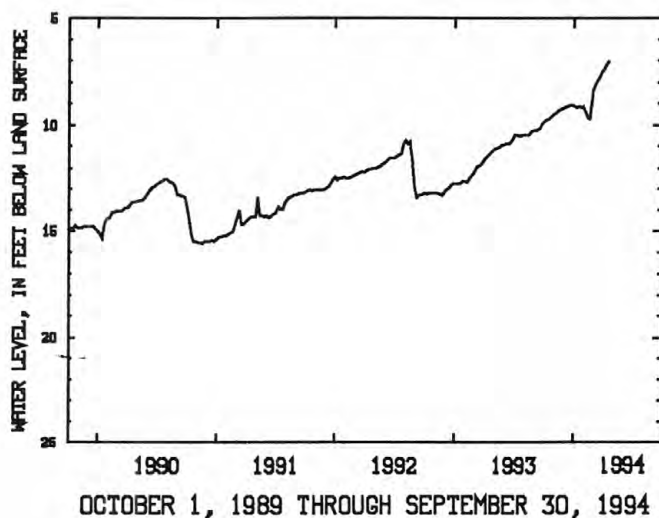
REMARKS.--West Virginia index well. In July 1988, a 4-in plastic casing fitted with screened well point was installed, and this dug well was backfilled with gravel and sand. It is believed that the data we have received since this time does not indicate natural hydrologic conditions. We have selected a new Federal Index well in Monongalia County.

PERIOD OF RECORD.--October 1953 to April 1994, discontinued.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 7.04 ft below land-surface datum, Apr. 18, 1994; lowest measured, 18.75 ft below land-surface datum, Nov. 30, 1953.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 04	9.82	NOV 08	9.46	DEC 20	9.10	JAN 24	9.18	FEB 28	8.34	APR 04	7.38
11	9.76	15	9.35	27	9.09	31	9.13	MAR 07	8.10	11	7.19
18	9.67	29	9.24	JAN 03	9.11	FEB 07	9.41	14	7.89	18	7.04
25	9.58	DEC 06	9.19	10	9.16	14	9.62	21	7.73		
NOV 01	9.50	13	9.14	17	9.15	21	9.69	28	7.51		
WATER YEAR 1994		HIGHEST	7.04	APR 18, 1994	LOWEST	9.82	OCT 04, 1993				



GROUND-WATER LEVELS

GRANT COUNTY

391652079181401.

LOCATION.--Lat 39°16'52", long 79°18'14", Hydrologic Unit 02070002, about 200 ft north of U.S. Route 50, about 3.5 mi west of Mount Storm.

Owner: Buffalo Coal Company.

AQUIFER.--Thin bed of coal in the Conemaugh Group of Upper Pennsylvanian age.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 6 in., depth 24 ft, cased with plastic to 23 ft.

INSTRUMENTATION.--Digital water-level recorder--60-minute punch.

DATUM.--Elevation of land-surface datum is about 2,890 ft above sea level. Measuring point: Top edge of recorder shelter base, 1.50 ft above land-surface datum.

REMARKS.--Well is near reclaimed surface mine. No water-level record Dec. 16 to Feb. 7 and May 27 to June 8, due to recorder malfunction.

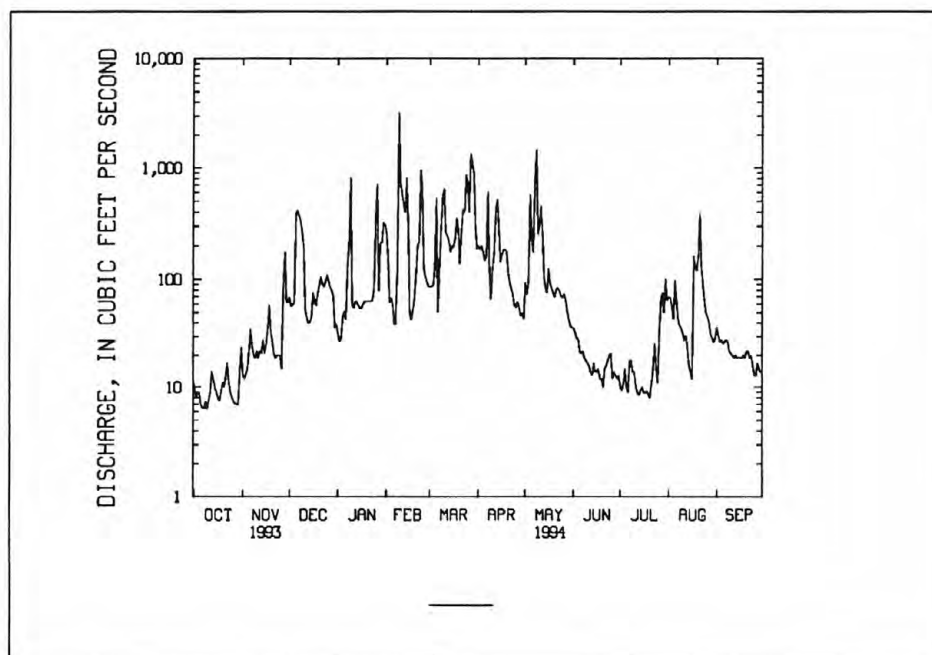
PERIOD OF RECORD.--June 1978 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 6.33 ft below land-surface datum, Mar. 11-15, 1979; lowest, 21.24 ft below land-surface datum, Nov. 28, 29, 1982.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
NOON VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	17.77	17.28	11.37	---	---	9.92	7.92	7.50	---	13.91	13.13	12.03
10	17.66	17.41	12.54	---	8.91	7.95	8.52	7.56	11.13	13.98	12.94	12.64
15	17.87	17.11	12.04	---	9.67	7.49	7.20	8.48	12.02	14.14	12.85	13.00
20	17.79	16.65	---	---	8.86	8.11	8.16	9.01	12.59	14.47	11.97	13.47
25	17.73	16.80	---	---	8.84	7.28	9.09	9.62	12.75	14.47	11.55	13.61
EOM	17.38	15.71	---	---	9.41	7.08	9.68	---	13.44	13.88	11.74	14.07

WATER YEAR 1994 HIGHEST 6.56 APR 13, 1994 LOWEST 17.95 NOV 2, 1993



GROUND-WATER LEVELS
GREENBRIER COUNTY

374804080174001. Local number, 45-8-2.

LOCATION.--Lat 37°48'04", long 80°17'40", Hydrologic Unit 05050003, at Fish Culture Station, U.S. Fish and Wildlife Service Hatchery, White Sulphur Springs.
Owner: U.S. Government.

AQUIFER.--Marcellus Formation and Harrell Shale of Middle Devonian age.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 6 in., depth 61 ft, cased with steel.

INSTRUMENTATION.--Weekly measurement with chalked tape by observer.

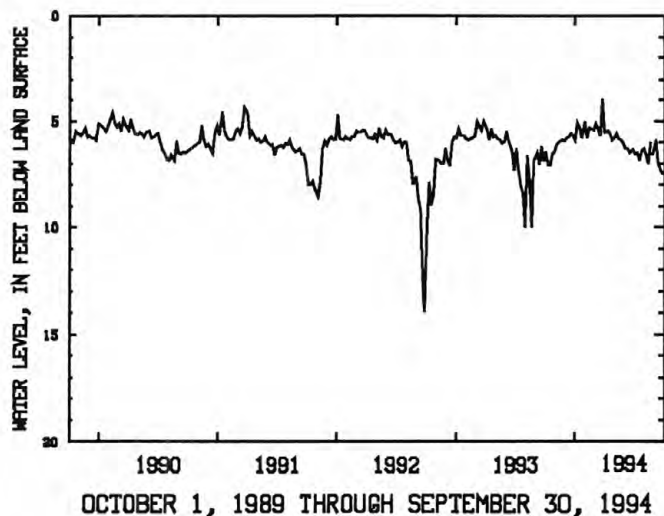
DATUM.--Elevation of land-surface datum is about 1,875 ft above sea level. Measuring point: Top of casing, 0.90 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.80 ft below land-surface datum, Mar. 16, 1955; lowest measured, 14.82 ft below land-surface datum, Aug. 29, 1981.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 02	6.45	DEC 04	5.75	FEB 05	5.79	APR 09	5.45	JUN 11	6.30	AUG 13	7.02
09	7.05	11	5.70	12	5.30	16	5.58	18	6.48	20	6.05
16	7.06	18	5.55	19	5.34	23	5.90	25	6.32	27	6.55
23	6.53	25	5.69	26	5.40	30	5.78	JUL 02	6.52	SEP 03	5.90
30	6.43	JAN 01	5.90	MAR 05	5.10	MAY 07	5.55	09	6.50	10	6.90
NOV 06	6.10	08	5.06	12	5.36	14	5.84	16	6.85	17	7.30
13	5.95	15	5.25	19	5.69	21	5.85	23	6.39	24	7.46
20	5.85	22	5.77	26	3.95	28	6.05	30	6.30		
27	5.95	29	5.00	APR 02	5.50	JUN 04	6.30	AUG 06	6.60		
WATER YEAR 1994 HIGHEST 3.95 MAR 26, 1994 LOWEST 7.46 SEP 24, 1994											



GROUND-WATER LEVELS

HAMPSHIRE COUNTY

391257078404601. Local number, 23-6-46.

LOCATION.--Lat 39°12'57", long 78°40'46", Hydrologic Unit 02070003, about 4 mi south of Augusta on State Route 29.

Owner: Loring Hott.

AQUIFER.--Hampshire Formation of Upper Devonian age.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 6 in., depth 24 ft, cased with tile.

INSTRUMENTATION.--Continuous strip-chart water-level recorder Febuary 1972 to September 1991. Digital water-level recorder--60-minute punch, March 1992 to current year.

DATUM.--Elevation of land-surface datum is about 1,400 ft above sea level. Measuring point: Top of extended casing, 3.00 ft above land-surface datum. May 10, 1988, to March 3, 1992, top edge of shelter base 0.35 ft above land-surface datum. Prior to May 10, 1988, measuring point was top of casing at land-surface datum.

REMARKS.--No water-level record Nov. 2 to Dec. 8 and Jan. 23-24, due to recorder malfunction.

PERIOD OF RECORD.--February 1972 to current year.

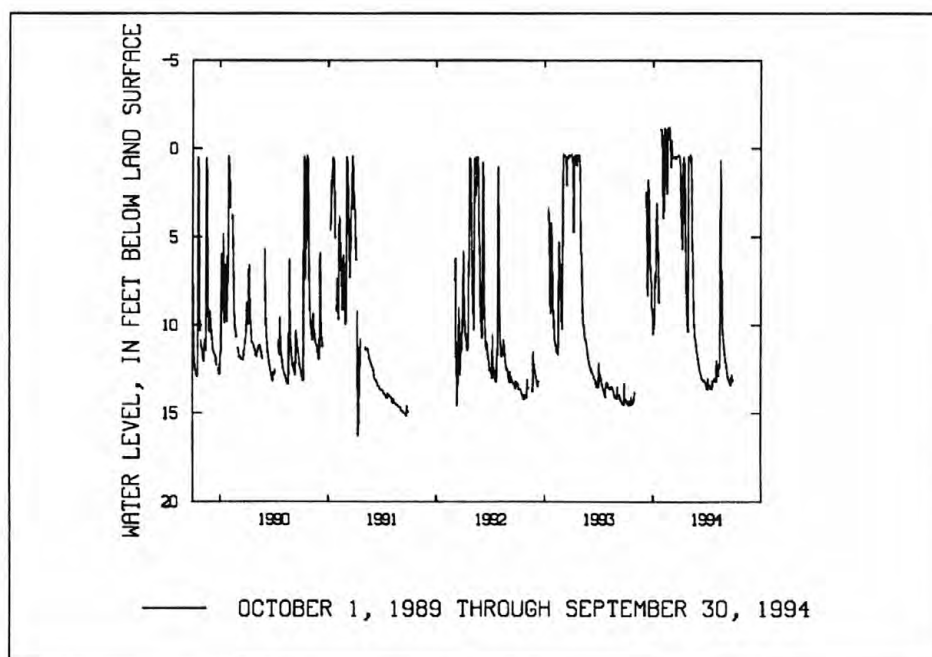
EXTREMES FOR PERIOD OF RECORD.--Highest noon water level, 1.21 ft above land-surface datum, Feb. 21, 1994; lowest, 16.69 ft, estimated, below land-surface datum, July 15, 1973.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
NOON VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	14.31	---	---	9.73	3.93	*+.48	3.07	.44	12.18	13.66	12.02	12.15
10	14.45	---	3.64	7.03	*+1.18	.50	5.72	.52	12.64	13.38	12.84	12.71
15	14.54	---	8.28	3.19	1.06	.47	.53	5.62	12.96	13.54	12.40	13.14
20	14.08	---	3.59	6.37	*+1.12	.57	4.07	9.51	13.15	13.64	5.04	13.38
25	14.46	---	6.93	.55	*+1.19	.47	8.94	10.83	13.12	13.23	10.11	13.22
EOM	13.79	---	9.18	*+.94	*+.56	.48	10.40	11.64	13.30	13.11	11.56	13.21

WATER YEAR 1994 HIGHEST *+1.21 FEB 21, 1994 LOWEST 14.58 OCT 11, 1993

* Flowing well; readings are above land-surface datum.



GROUND-WATER LEVELS

HARDY COUNTY

385714078441301. Local number, 25-4-5.

LOCATION.--Lat 38°57'14", long 78°44'13", Hydrologic Unit 02070003, about 3 mi east of Lost River near entrance to Trout Pond Recreation Area.

Owner: U.S. Forest Service.

AQUIFER.--Helderberg Group of Early Devonian age and Tonoloway Formation of Late Silurian age.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 6 in., depth 460 ft, cased with steel to 190 ft.

INSTRUMENTATION.--Continuous strip-chart water-level recorder prior to November 1976, then periodic measurement with chalked tape by USGS personnel.

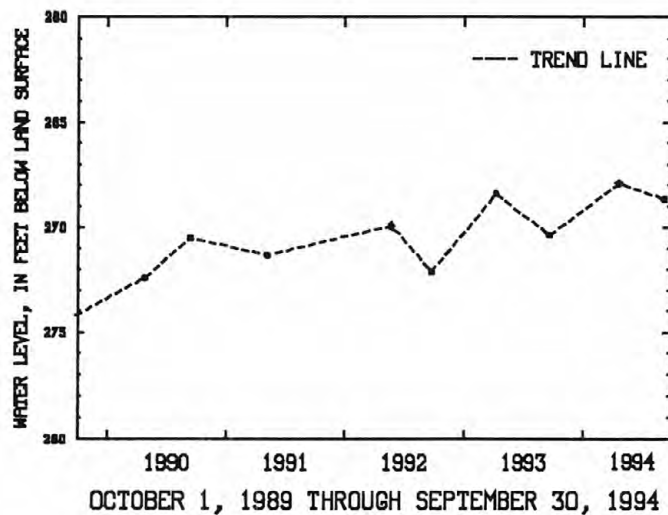
DATUM.--Elevation of land-surface datum is about 1,920 ft above sea level. Measuring point: Top of well casing, 0.90 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 263.00 ft, estimated, below land-surface datum, July 15, 1972; lowest, 274.80 ft below land-surface datum, Oct. 1, 1985.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	WATER LEVEL	DATE	WATER LEVEL
APR 19	267.90	SEP 06	268.65



GROUND-WATER LEVELS

JEFFERSON COUNTY

391142077551701. Local number 037166.

LOCATION.--Lat 39°11'42", long 77°55'17", Hydrologic Unit 02070007, about 6 mi south of Charles Town adjacent to U.S. Route 340.

Owner: James Louthan.

AQUIFER.--Conococheague Formation of Upper Cambrian age.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 6 in., depth 153 ft, cased with steel.

INSTRUMENTATION.--Digital water-level recorder--60-minute punch.

DATUM.--Elevation of land-surface datum is about 572 ft above sea level. Measuring point: Top edge of recorder shelter base, at land-surface datum.

REMARKS.--Water-quality and well log data available. No water-level record Mar. 21 to Apr. 2 and Apr. 6-14, due to recorder malfunction.

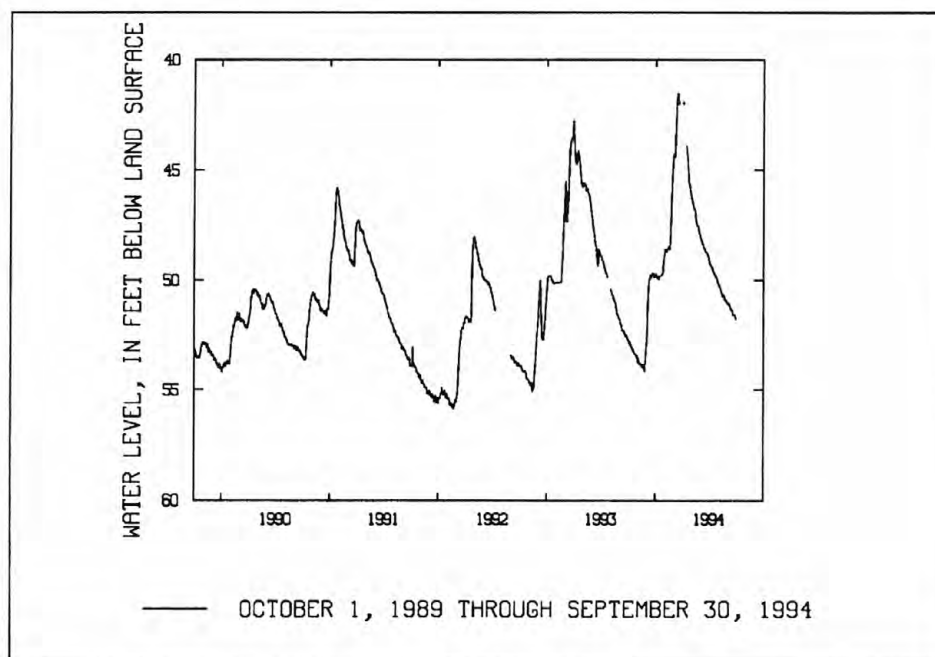
PERIOD OF RECORD.--March 1988 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 41.54 ft, below land-surface datum, March 15-17, 1994; lowest, 61.89 ft below land-surface datum, Sept. 28, 1988.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
NOON VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	52.78	53.58	52.30	49.73	48.58	44.39	42.04	46.31	48.16	49.30	50.19	51.08
10	52.89	53.79	50.20	49.88	48.60	43.29	---	46.63	48.34	49.37	50.39	51.20
15	53.10	53.79	49.79	49.80	48.49	41.60	43.88	46.79	48.57	49.54	50.63	51.35
20	53.23	53.79	49.80	49.80	48.27	42.02	44.67	47.39	48.70	49.74	50.70	51.54
25	53.33	54.01	49.71	49.74	46.06	---	45.61	47.54	48.75	49.84	50.90	51.57
EOM	53.39	53.42	49.83	48.89	45.01	---	45.96	47.91	48.94	50.09	51.00	51.75

WATER YEAR 1994 HIGHEST 41.54 MAR 16, 1994 LOWEST 54.15 NOV 26, 1993



GROUND-WATER LEVELS
JEFFERSON COUNTY (Continued)

392104077554801. Local number 037166.

LOCATION.--Lat 39°21'04", long 77°55'48", Hydrologic Unit 02070007, at Leetown Fish Research Station, Leetown.
Owner: U.S. Government.

AQUIFER.--Beekmantown Group of Lower Ordovician age.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 8 in., depth 155 ft, cased with steel to 36.7 ft, screened from 36.7 to 155 ft.

INSTRUMENTATION.--Digital water-level recorder--60-minute punch.

DATUM.--Elevation of land-surface datum is about 480 ft above sea level. Measuring point: Top edge of recorder shelter base, 2.40 ft above land-surface datum.

REMARKS.--Water-quality and well log data available. No water-level record Jan. 26 to Apr. 3 and June 10 to July 12, due to recorder malfunction.

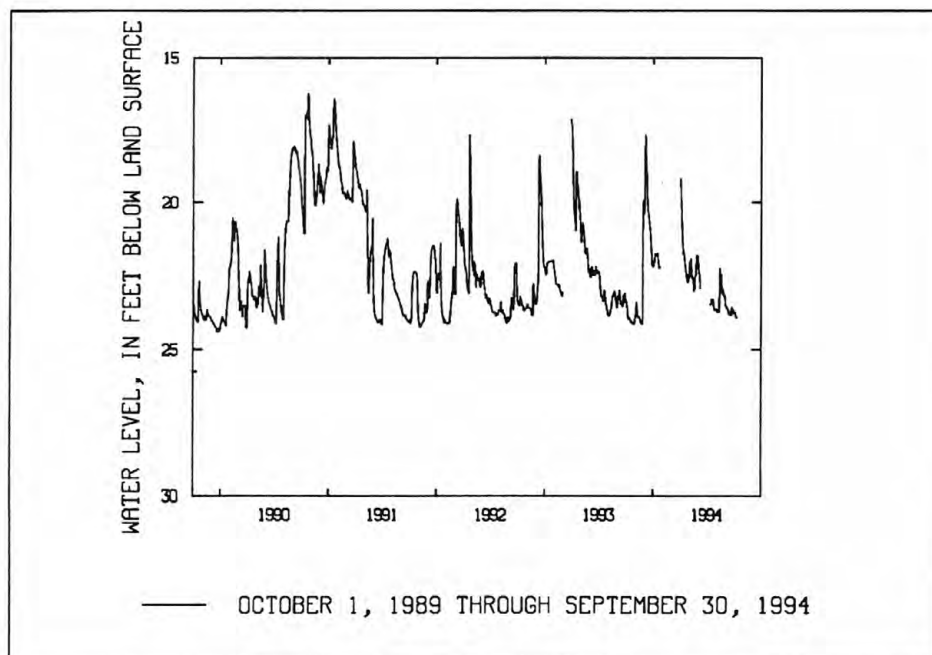
PERIOD OF RECORD.--March 1988 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 15.85 ft, below land-surface datum, May 21, 22, 1988; lowest, 24.41 ft below land-surface datum, Dec. 22, 23, 1989.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
NOON VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	23.47	23.59	18.38	22.04	---	---	19.70	22.00	22.33	---	23.64	23.53
10	23.94	23.82	18.82	21.78	---	---	21.15	22.16	---	---	23.71	23.63
15	23.96	23.90	20.31	21.79	---	---	21.74	22.58	---	23.43	22.24	23.80
20	24.07	24.04	20.72	22.15	---	---	22.21	23.02	---	23.29	22.61	23.81
25	24.10	24.12	21.32	22.15	---	---	22.61	22.50	---	23.50	22.93	23.62
EOM	24.07	19.93	22.16	---	---	---	22.66	21.83	---	23.66	23.14	23.64

WATER YEAR 1994 HIGHEST 17.66 DEC 6, 1993 LOWEST 24.13 9OCT 28, 1993



GROUND-WATER LEVELS

LEWIS COUNTY

390553080280802. Local number, 16-1-9.

LOCATION.--Lat 39°05'53", long 80°28'08", Hydrologic Unit 05020002, at Jackson's Mill State 4-H Camp, Jackson's Mill.
Owner: West Virginia University.

AQUIFER.--Conemaugh Group and Allegheny Formation of Upper and Middle Pennsylvanian age.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 12 in., depth 122 ft, cased.

INSTRUMENTATION.--Weekly measurement with chalked tape by observer prior to October 1977, then periodic measurement by USGS personnel.

DATUM.--Elevation of land-surface datum is about 1,020 ft above sea level. Measuring point: Drilled hole in steel plate covering casing at land-surface datum.

REMARKS.--Water level affected by stage of West Fork River.

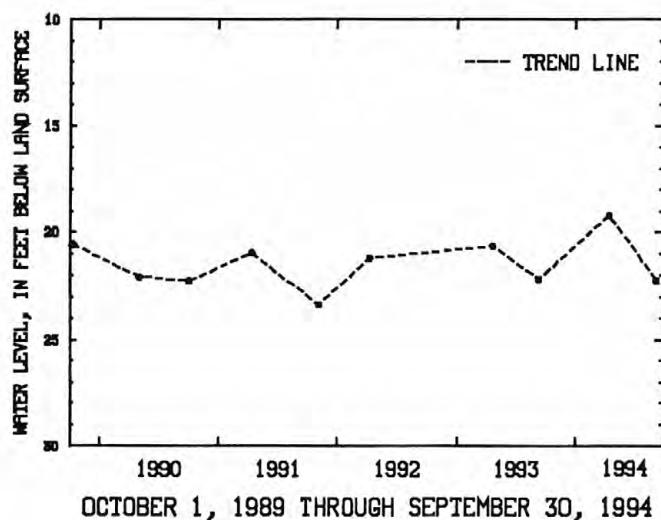
PERIOD OF RECORD.--May 1961 to May 1976, October 1977 to current year. No measurements May 1976 to October 1977.

REVISED RECORDS.--WDR WV-85-1: Highest water level.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 12.00 ft below land-surface datum, Dec. 11, 1972; lowest measured, 24.80 ft below land-surface datum, Oct. 6, 1977.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	WATER LEVEL	DATE	WATER LEVEL
APR 14	19.20	SEP 06	22.23



GROUND-WATER LEVELS

MARION COUNTY

393101080150501.

LOCATION.--Lat 39°31'01", long 80°15'05", Hydrologic Unit 05020003, about 1,250 ft north of State Route 91 and 100 ft west of State Route 15 in Farmington.

Owner: State of West Virginia.

AQUIFER.--Open to a mine in Pittsburgh coal, Member of Monongahela Group of Upper Pennsylvanian age.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 6 in., depth 266 ft, cased with steel to 252 ft.

INSTRUMENTATION.--Daily water-level measurements by observer prior to March 1992, then periodic measurement by USGS personnel.

DATUM.--Elevation of land-surface datum is about 970 ft above sea level. Measuring point: Top of steel plate at land-surface datum.

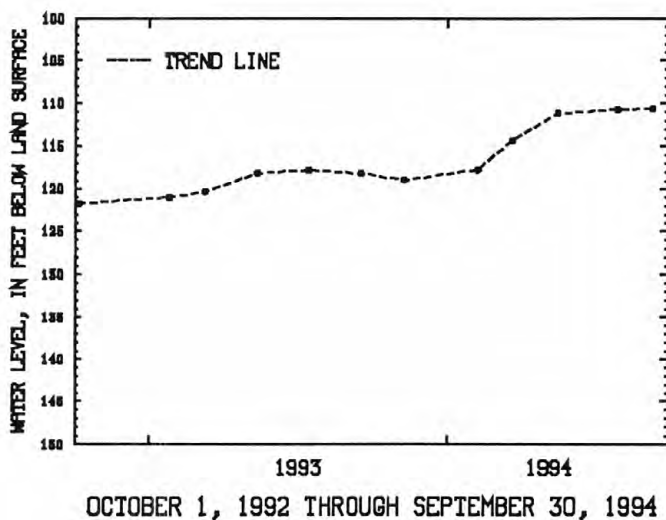
REMARKS.--Well formerly used by U.S. Bureau of Mines to back-fill abandoned mine with shale slurry. Water level possibly affected by mine pumpage. No water-level record Dec. 12 to Sept. 30 except for USGS periodic measurement Aug. 12.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 110.60 ft below land-surface datum, Sept. 9, 1994; lowest measured, 219.47 ft below land-surface datum, May 12, 1978.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
DAILY VALUES

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 09	118.95	FEB 07	117.73	MAR 21	114.28	MAY 16	111.13	JUL 28	110.72	SEP 09	110.60
WATER YEAR 1994		HIGHEST	110.60	SEP 09, 1994		LOWEST	118.95	NOV 09, 1993			



GROUND-WATER LEVELS

MERCER COUNTY

372149081055001. Local number, 48-5-1.

LOCATION.--Lat 37°21'49", long 81°05'50", Hydrologic Unit 05050002, at Princeton Water Service, Company No. 1 well, Princeton.
Owner: West Virginia Service Company.

AQUIFER.--Hinton Formation of Upper Mississippian age.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 6 in., depth 249 ft, cased. Measured depth 165 ft, Oct. 24, 1985.

INSTRUMENTATION.--Weekly measurement with chalked tape by observer.

DATUM.--Elevation of land-surface datum is about 2,387 ft above sea level. Measuring point: Top of casing extension, 5.50 ft above land-surface datum. Prior to September 1975 measuring point was top of casing at land-surface datum.

REMARKS.--Water level affected by nearby pumping. Geophysical logs available. Casing extension installed Oct. 24, 1985.

PERIOD OF RECORD.--March 1960 to current year.

REVISED RECORDS.--WDR WV-79-1: 1977-78 (water levels).

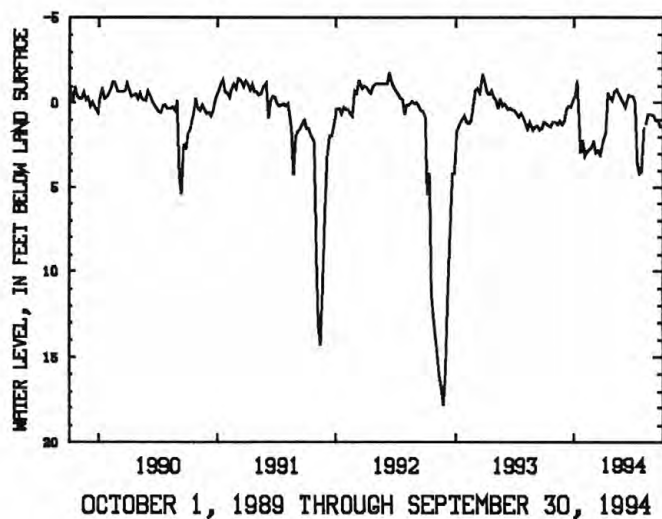
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.14 ft above land-surface datum, Apr. 15, 1987, (flowing at land-surface datum, many days 1968 to 1985); lowest measured, 90.5 ft below land-surface datum, Dec. 10, 1969.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 06	1.20	DEC 08	.36	FEB 09	2.88	APR 13	*+.62	JUN 15	*+.45	AUG 17	.65
13	1.31	15	.18	16	2.70	20	*+.34	23	*+.40	24	.70
20	1.40	22	.20	23	2.60	27	*+.15	29	*+.44	31	.72
27	1.10	29	*+.15	MAR 02	2.20	MAY 04	*+.68	JUL 06	*+.04	SEP 07	.98
NOV 03	1.10	JAN 05	*+.40	09	2.95	11	*+.82	13	3.48	14	1.08
10	1.25	12	*+1.35	16	2.78	18	*+.55	20	4.12	21	1.40
17	1.06	19	2.91	23	3.07	25	*+.31	27	4.03	28	1.40
24	1.25	26	2.16	30	2.18	JUN 01	.00	AUG 03	1.53		
DEC 01	1.04	FEB 02	3.10	APR 06	1.77	08	.25	10	1.18		

WATER YEAR 1994 HIGHEST *+1.35 JAN 12, 1994 LOWEST 4.12 JUL 20, 1994

* Flowing well; readings are above land-surface datum.



GROUND-WATER LEVELS

MINERAL COUNTY

392114079081101. Local number, 22-5-23.

LOCATION.--Lat 39°21'14", long 79°08'11", Hydrologic Unit 02070002, 2.20 mi north of U.S. Route 50 on State Route 42 at Sulphur City near Elk Garden.
Owner: Gerald Whisner.

AQUIFER.--Conemaugh Group of Upper Pennsylvanian age.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 6 in., depth 37 ft, cased with steel.

INSTRUMENTATION.--Weekly measurement with chalked tape by observer 1968 to 1976, periodic measurement with chalked tape by USGS personnel 1977 to current year.

DATUM.--Elevation of land-surface datum is about 2,480 ft above sea level. Measuring point: Top of casing extension, 0.70 ft above land-surface datum.

REMARKS.--Well flows at times. Water level affected by pumpage at times from a nearby dug well of 6 ft depth.

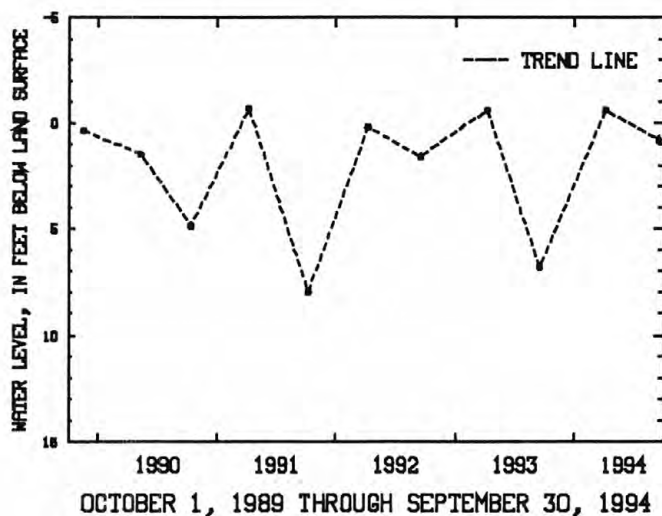
PERIOD OF RECORD.--August 1968 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.70 ft above land-surface datum, Aug. 4, 1972, Apr. 11, 1985, and Apr. 8, 1991; lowest measured, 10.81 ft below land-surface datum, Oct. 29, 1968.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	WATER LEVEL	DATE	WATER LEVEL
APR 06	*+.61	SEP 14	.80

* Flowing well; reading is above land-surface datum.



GROUND-WATER LEVELS

MINGO COUNTY

373554081493401.

LOCATION.--Lat 37°35'54", long 81°49'34", Hydrologic Unit 05070101, downstream of toe of R. D. Bailey Dam northeast of Justice.
Owner: U.S. Army Corps of Engineers.

AQUIFER.--New River Formation of Lower Pennsylvanian age.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 8 in., depth 66 ft, cased with steel.

INSTRUMENTATION.--Digital water-level recorder--60-minute punch.

DATUM.--Elevation of land-surface datum is about 920 ft above sea level. Measuring point: Top edge of recorder shelter base, flush with top of casing, 1.00 ft above land-surface datum.

REMARKS.--No water-level record Dec. 28 to Mar. 4, due to recorder malfunction. At times, water level affected by Guyandotte River.

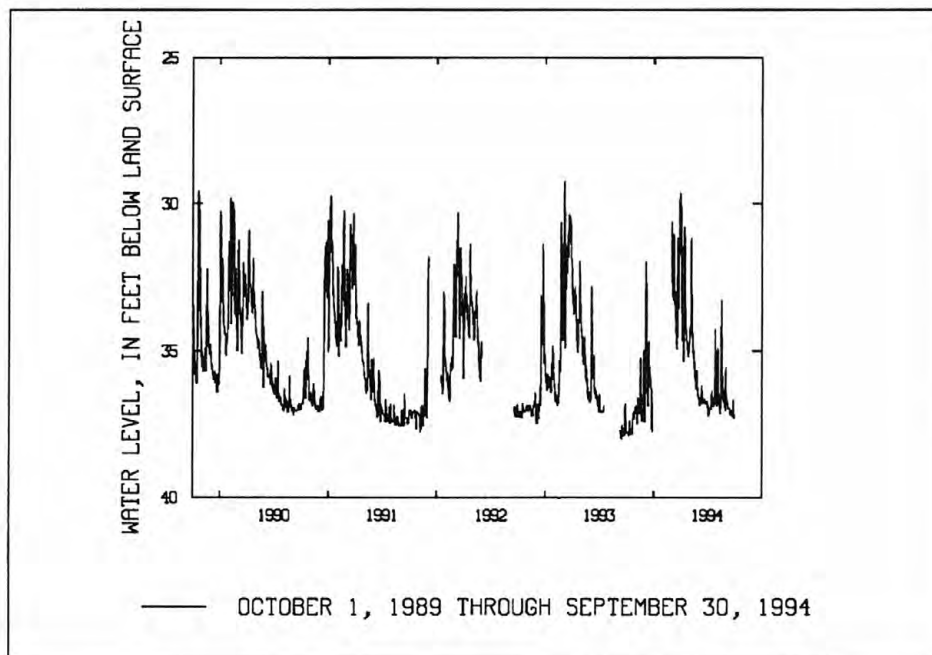
PERIOD OF RECORD.--March 1980 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 28.42 ft below land-surface datum, May 10, 1989; lowest, 44.29 ft below land-surface datum, Oct. 6, 1982.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
NOON VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	37.79	36.85	33.53	---	---	32.65	30.48	34.11	36.74	37.18	36.42	36.85
10	37.89	36.59	35.91	---	---	31.28	34.53	33.02	36.69	36.94	36.73	36.94
15	37.86	37.08	36.31	---	---	32.99	30.79	35.05	36.72	36.95	36.80	36.96
20	37.84	36.83	36.00	---	---	34.58	34.42	35.78	36.69	36.75	36.01	37.16
25	37.29	37.38	36.28	---	---	32.92	34.91	36.19	36.77	36.73	36.72	37.22
EOM	37.10	35.32	---	---	---	29.91	34.77	36.40	36.72	36.48	37.02	37.26

WATER YEAR 1994 HIGHEST 29.66 APR 1, 1994 LOWEST 37.89 OCT 9, 1993



GROUND-WATER LEVELS

MONONGALIA COUNTY

392923079571801. Local number, 9-7-33.

LOCATION.--Lat 39°29'23", long 79°57'18", Hydrologic Unit 05020003, 1 mi northwest of Halleck on Secondary State Route 79.
Owner: Paul H. Price.

AQUIFER.--Buffalo Mahoning sandstone member of Conemaugh Group of Upper Pennsylvanian age.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 6 in., depth 141 ft, cased with steel to 21 ft.

INSTRUMENTATION.--Digital water-level recorder, 1961-62, 1978 to 1985; monthly measurement with chalked tape by USGS personnel, 1953 to 1961, 1962 to 1978, 1985 to current year.

DATUM.--Elevation of land-surface datum is about 1,850 ft above sea level. Measuring point: Top of casing, 0.35 ft above land-surface datum.

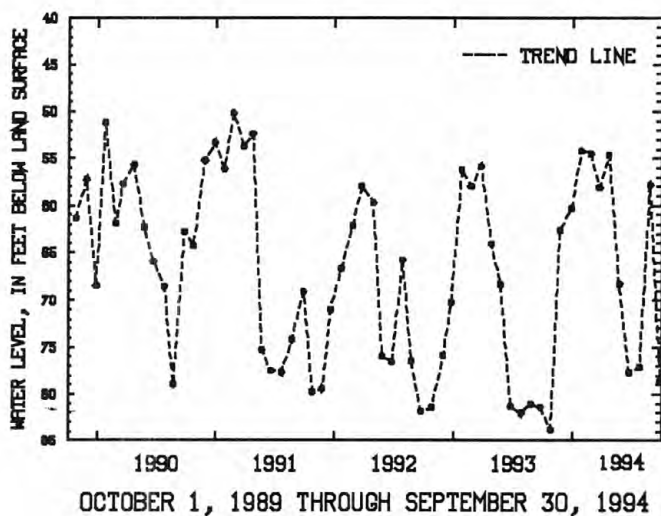
REMARKS.--Effective 1994 water year, West Virginia index well.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 40.95 ft below land-surface datum, Jan. 4, 1960; lowest measured, 83.77 ft below land-surface datum, Oct. 25, 1993.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25	83.77	DEC 28	60.25	FEB 25	54.47	APR 22	54.57	JUN 23	77.63	AUG 25	57.78
NOV 22	62.60	JAN 26	54.18	MAR 23	58.05	MAY 23	68.27	JUL 25	77.10	SEP 26	78.54
WATER YEAR 1994		HIGHEST	54.18	JAN 26, 1994		LOWEST	83.77	OCT 25, 1993			



GROUND-WATER LEVELS
MONONGALIA COUNTY (Continued)

394006080194801. Local number, 9-1-47.

LOCATION.--Lat 39°40'06", long 80°19'48", Hydrologic Unit 05020005, 1 mi east of Wadestown on State Route 7.
Owner: Howard Shriver.

AQUIFER.--Dunkard Group of Upper Pennsylvanian and Permian age.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 6 in., depth 65 ft, cased with steel.

INSTRUMENTATION.--Weekly measurement with chalked tape by observer.

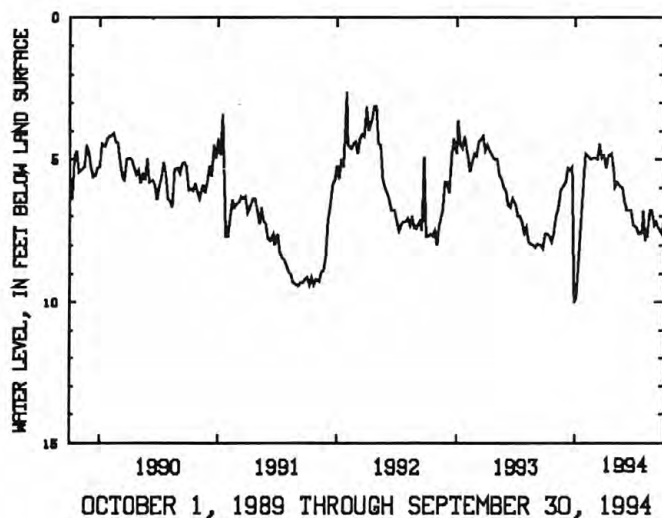
DATUM.--Elevation of land-surface datum is about 1,060 ft above sea level. Measuring point: Top of casing, 1.20 ft above land-surface datum.

PERIOD OF RECORD.--July 1971 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.58 ft below land-surface datum, Jan. 28, 1992; lowest measured, 11.35 ft below land-surface datum, Aug. 6, 1971.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 05	7.60	DEC 07	5.28	MAR 01	4.96	MAY 02	5.96	JUL 05	7.36	AUG 30	7.30
12	7.68	14	5.38	08	4.98	09	5.80	12	7.58	SEP 06	7.18
19	7.88	21	5.26	15	4.46	16	5.96	19	7.58	13	7.38
26	7.58	28	9.99	22	4.96	23	5.98	24	7.48	20	7.58
NOV 02	7.00	JAN 04	9.80	29	4.88	31	6.50	27	6.80	27	7.16
09	6.70	FEB 01	4.80	APR 05	5.28	JUN 07	6.80	AUG 02	7.80		
16	6.09	08	4.90	12	4.86	14	6.80	09	7.68		
23	5.90	15	4.98	19	4.80	21	6.80	16	6.80		
30	5.80	22	4.96	26	5.36	28	7.28	23	6.80		
WATER YEAR 1994		HIGHEST	4.46	MAR 15, 1994	LOWEST	9.99	DEC 28, 1993				



GROUND-WATER LEVELS

MORGAN COUNTY

393043078174001. Local number, 19-5-14.

LOCATION.--Lat 39°30'43", long 78°17'40", Hydrologic Unit 02070004, on Cacapon State Park south of Berkeley Springs on U.S. Route 522.

Owner: West Virginia Department of Natural Resources.

AQUIFER.--Tonoloway Formation of Upper Silurian age.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 8 in., reported depth 250 ft, cased with steel to 33 ft.

INSTRUMENTATION.--Weekly measurement with chalked tape by observer, 1971-75; monthly measurement with chalked tape by USGS personnel, 1976-77; digital water-level recorder--60-minute punch, 1977 to current year.

DATUM.--Elevation of land-surface datum is about 875 ft above sea level. Measuring point: Top edge of recorder shelter base, 1.10 ft above land-surface datum. Prior to Aug. 16, 1977 measuring point was 1.20 ft above land-surface datum.

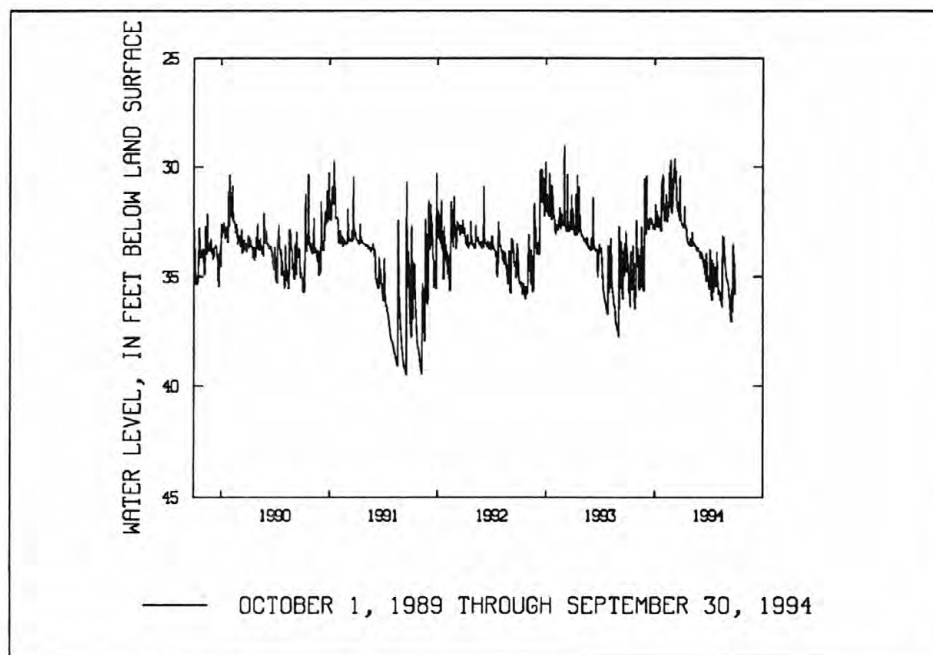
PERIOD OF RECORD.--July 1971 to July 1973, November 1974 to March 1975, July 1976 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 27.80 ft below land-surface datum, June 22, 1989; lowest measured, 39.52 ft below land-surface datum, Sept. 19, 1991.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
NOON VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	35.28	34.24	30.43	32.51	32.44	30.50	32.66	33.47	34.14	35.53	35.82	35.28
10	35.92	35.58	32.67	32.62	31.98	29.61	32.73	33.38	33.95	35.25	35.80	35.95
15	34.98	33.73	32.60	32.45	32.45	30.57	32.73	33.55	34.43	34.22	36.12	36.87
20	34.81	33.71	32.62	32.82	30.76	32.00	32.91	33.60	34.87	35.07	33.79	35.85
25	35.90	35.65	32.55	31.63	30.06	32.29	33.47	33.81	33.91	35.30	33.97	34.26
EOM	32.41	32.74	32.80	31.62	32.11	32.37	33.57	33.82	34.96	34.59	35.09	35.80

WATER YEAR 1994 HIGHEST 29.61 MAR 10, 1994 LOWEST 37.06 SEP 16, 1994



GROUND-WATER LEVELS

NICHOLAS COUNTY

381513081094201.

LOCATION.--Lat 38°15'13", long 81°09'42", Hydrologic Unit 05050005, about 3 mi east of Belva and Route 16 on left of Secondary Route 20/21.

Owner: Burt Whiston.

AQUIFER.--Kanawha Formation of Lower Pennsylvanian age.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 6 in., depth 95 ft, cased with galvanized iron to 13 ft.

INSTRUMENTATION.--Digital water-level recorder--60-minute punch.

DATUM.--Elevation of land-surface datum is 742.6 ft above sea level. Measuring point: Top of casing, 2.00 ft above land-surface datum.

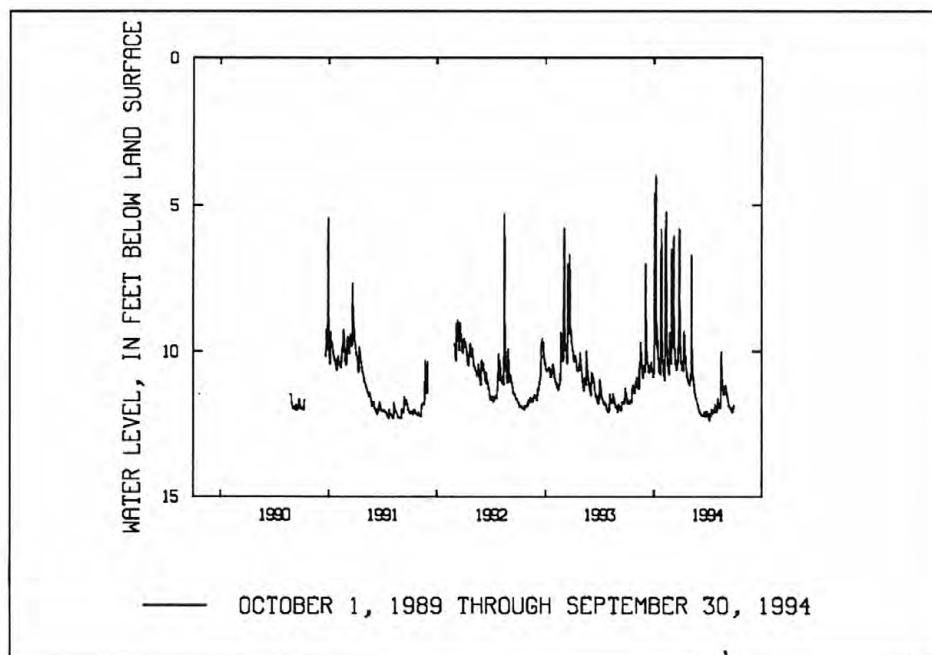
PERIOD OF RECORD.--July 1982 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level 2.52 ft below land-surface datum, Apr. 25, 1983; lowest, 12.71 ft below land-surface datum, Aug. 21, 1987.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
NOON VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	11.76	10.89	7.00	8.23	10.76	9.32	10.45	10.99	12.06	12.24	11.84	11.40
10	11.80	11.21	10.17	9.10	5.65	6.03	10.55	9.91	12.14	12.13	11.79	11.70
15	11.75	10.40	10.60	9.90	9.74	10.22	9.70	10.96	12.21	12.17	11.89	11.90
20	11.42	10.17	10.63	10.60	10.64	10.63	10.46	11.42	12.18	12.14	10.79	12.01
25	11.26	10.86	10.35	10.24	9.35	9.74	10.88	11.65	12.24	12.07	11.43	12.04
EOM	11.29	10.61	10.88	10.21	10.29	9.28	11.08	11.84	12.04	12.01	11.48	11.91

WATER YEAR 1994 HIGHEST 3.99 JAN 8, 1994 LOWEST 12.39 JUL 9, 1994



GROUND-WATER LEVELS

POCAHONTAS COUNTY

380653080155301.

LOCATION.--Lat 38°06'53", long 80°15'53", Hydrologic Unit 05050003, on Droop Mountain State Park north of Droop on U.S. Route 219.

Owner: West Virginia Department of Natural Resources.

AQUIFER.--Mauch Chunk Group of Upper Mississippian age.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 6 in., depth 86 ft, cased with steel.

INSTRUMENTATION.--Weekly measurement with chalked tape by observer, 1970-76; periodic measurement by USGS personnel, 1978-80; digital water-level recorder--60-minute punch, 1980 to current year.

DATUM.--Elevation of land-surface datum is about 3,000 ft above sea level. Measuring point: Top edge of recorder shelter base at land-surface datum. May 28, 1980 to July 7, 1983, measuring point 0.65 ft above land-surface datum. Prior to May 28, 1980 measuring point was top of casing at land-surface datum.

REMARKS.--No water-level record Oct. 1-26, due to recorder malfunction.

PERIOD OF RECORD.--December 1970 to January 1976, April 1978 to current year. Published as local well number "44-4-1", 1973-78.

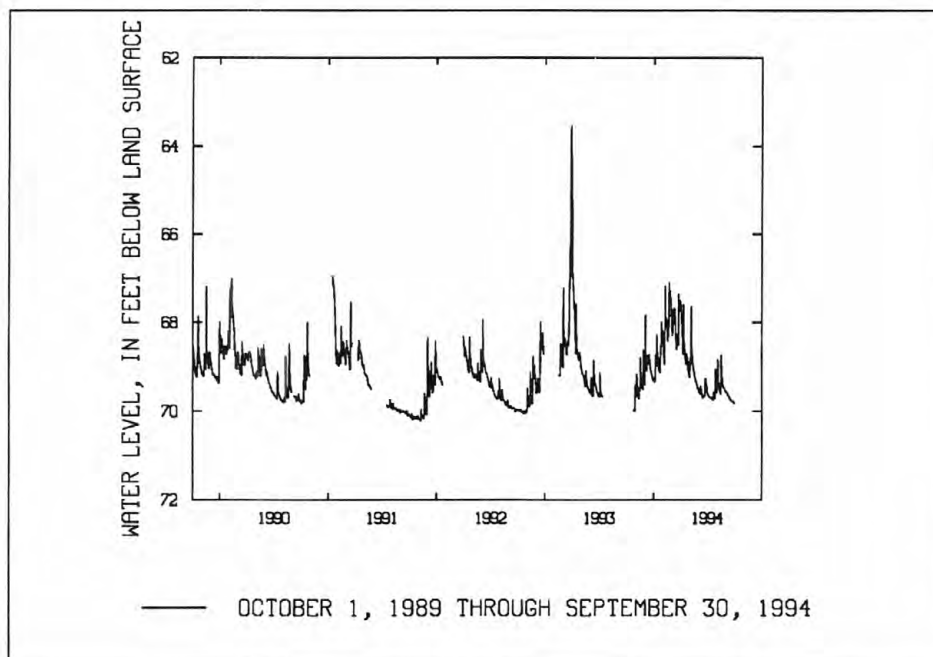
REVISED RECORDS.--WDR WV-79-1: Well location, well characteristics, and water levels. WDR WV-83-1: Station identification number and lowest water level.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 62.86 ft below land-surface datum, May 30, 1982; lowest, 70.24 ft below land-surface datum, Nov. 8, 1991. (73.39 ft below land-surface datum, Oct. 25, 1984, due to pumping.)

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
NOON VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	---	69.24	67.82	69.35	68.71	68.13	67.77	68.79	69.59	69.64	68.97	69.58
10	---	69.52	69.10	68.85	68.15	67.67	68.53	68.59	69.42	69.69	69.47	69.65
15	---	69.55	68.95	68.71	67.96	67.83	68.50	68.98	69.67	69.70	69.59	69.72
20	---	69.24	68.88	69.06	68.29	68.60	68.89	69.20	69.67	69.75	69.20	69.77
25	---	69.51	69.09	68.73	67.33	68.49	68.78	69.35	69.50	69.70	69.45	69.78
EOM	69.41	69.16	69.30	68.16	67.38	67.54	69.13	69.48	69.40	69.46	69.55	69.83

WATER YEAR 1994 HIGHEST 67.09 FEB 23, 1994 LOWEST 70.01 OCT 29, 1993



GROUND-WATER LEVELS

PRESTON COUNTY

393306079474501. Local number, 11-3-8.

LOCATION.--Lat 39°33'06", long 79°47'45", Hydrologic Unit 05020003, East Depot Street, Masontown.
Owner: G. E. Lemmons.

AQUIFER.--Pottsville Group of Lower Pennsylvanian age.

WELL CHARACTERISTICS.--Drilled domestic artesian well, diameter 8 in., depth 785 ft, cased to 350 ft, perforated at or near Upper Freeport coal. Measured depth approximately 330 ft, September 1984.

INSTRUMENTATION.--Weekly measurement with chalked tape by observer, 1941-46, and 1948-50; digital water-level recorder--60-minute punch, 1946-48; monthly measurement by USGS personnel, 1950 to current year.

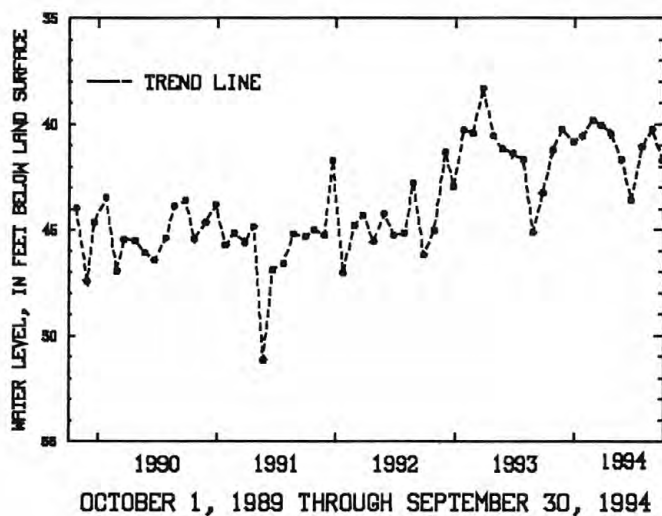
DATUM.--Elevation of land-surface datum is about 1,770 ft above sea level. Measuring point: Top of extended casing, 3.53 ft above land-surface datum. Prior to July 1978 measuring point was 3.00 ft below land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 7.15 ft below land-surface datum, Jan. 20, 1947; lowest measured, 108 ft below land-surface datum, Feb. 3, 1959.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25	41.19	DEC 28	40.81	FEB 25	39.78	APR 22	40.44	JUN 23	43.58	AUG 25	40.22
NOV 22	40.22	JAN 25	40.54	MAR 23	40.04	MAY 23	41.65	JUL 25	41.05	SEP 26	41.70
WATER YEAR 1994		HIGHEST	39.78	FEB 25, 1994		LOWEST	43.58	JUN 23, 1994			



GROUND-WATER LEVELS

RANDOLPH COUNTY

385100079522901.

LOCATION.--Lat 38°51'00", long 79°52'29", Hydrologic Unit 05020001, 1,800 ft west of U.S. Route 250 and 0.60 mi north of intersection of State Route 33 and U.S. Route 250, at Beverly.
Owner: Edsel Lucas.

AQUIFER.--Shale of Upper-Middle Devonian age.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 6 in., depth 98 ft, cased with plastic to 14 ft.

INSTRUMENTATION.--Periodic measurement with chalked tape by USGS personnel, 1978-79, and 1982 to current year; digital water-level recorder--60-minute punch, 1979-82.

DATUM.--Elevation of land-surface datum is about 1,940 ft above sea level. Measuring point: Top of casing 3.00 ft above land-surface datum.

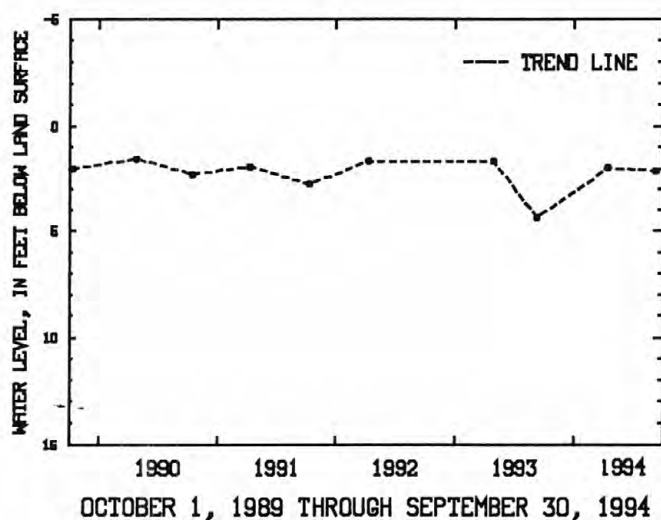
REMARKS.--U.S. Geological Survey Test Well No. 2. Geologic log and aquifer test data available. At times, water level affected by stage of Tygart Valley River.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 3.00 ft above land-surface datum, Mar. 20, 1982; lowest, 4.34 ft below land-surface datum, Sept. 9, 1993.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	WATER LEVEL	DATE	WATER LEVEL
APR 15	1.96	SEP 07	2.10



GROUND-WATER LEVELS
RANDOLPH COUNTY (Continued)

385341079575401. Local number, 18-3-110.

LOCATION.--Lat 38°53'41", long 79°57'54", Hydrologic Unit 05020001, 0.20 mi east of Coalton High School, Coalton.
Owner: Presbyterian Church.

AQUIFER.--Homewood Sandstone Member of Kanawha Formation of Lower Pennsylvanian age.

WELL CHARACTERISTICS.--Drilled exploratory water-table well, diameter 6 in., depth 155 ft, cased to 18 ft.

INSTRUMENTATION.--Monthly measurement with chalked tape by USGS personnel, 1966-67; digital water-level recorder--60-minute punch, 1968-77; periodic measurement with chalked tape by USGS personnel, 1977 to current year.

DATUM.--Elevation of land-surface datum is 2,171 ft above sea level. Measuring point: Top of casing, 1.60 ft above land-surface datum. Prior to Jan. 4, 1983, measuring point was 2.45 ft above land-surface datum.

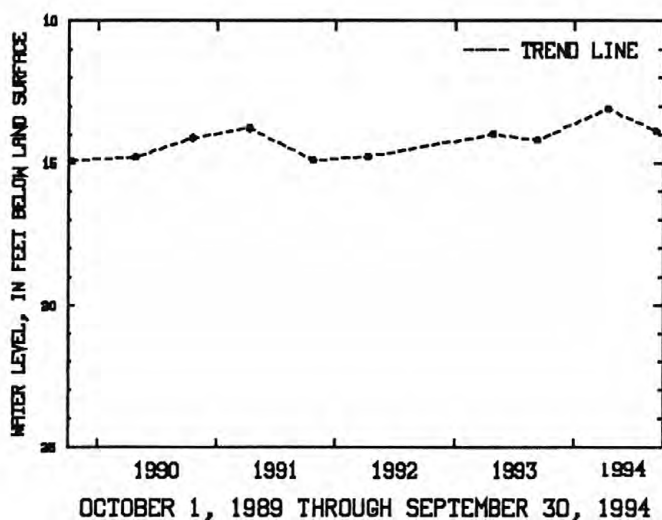
REMARKS.--Water level affected by nearby pumping.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 10.85 ft below land-surface datum, Dec. 12, 1966; lowest, 23.35 ft below land-surface datum, Oct. 28, 1971.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	WATER LEVEL	DATE	WATER LEVEL
APR 14	13.06	SEP 07	13.84



GROUND-WATER LEVELS

RITCHIE COUNTY

391226081024901. Local number, 28-3-3.

LOCATION.--Lat 39°12'26", long 81°02'49", Hydrologic Unit 05030203, at Stout and East South Street, Harrisville.

Owner: Terry Stonestreet.

AQUIFER.--Dunkard Group of Upper Pennsylvanian and Permian age.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 6 in., depth 118 ft, cased with steel.

INSTRUMENTATION.--Weekly measurements with chalked tape by observer, 1966; graphic water-level recorder, 1968-70; digital water-level recorder--60-minute punch, 1970-75; monthly measurements with chalked tape by USGS personnel, 1975-76; digital water-level recorder--60-minute punch, 1976 to current year.

DATUM.--Elevation of land-surface datum is about 840 ft above sea level. Measuring point: Top of casing, 1.20 ft above land-surface datum.

REMARKS.--Formerly public-supply well.

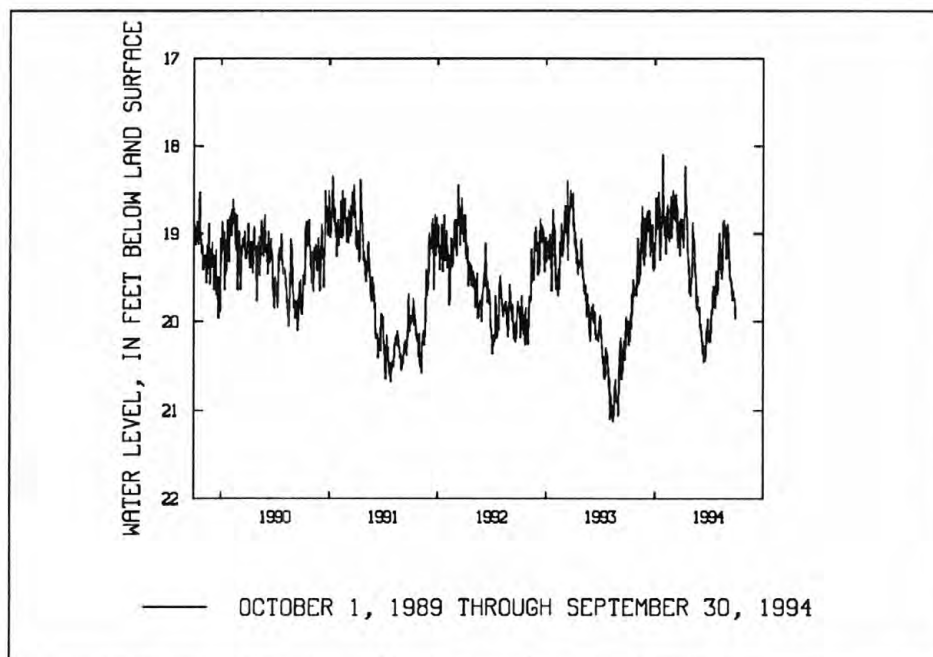
PERIOD OF RECORD.--August 1966 to October 1966, April 1968 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 17.46 ft below land-surface datum, Jan. 25, 1978; lowest measured, 22.03 ft below land-surface datum, July 18, 1988.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
NOON VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	20.22	19.05	18.79	19.02	18.96	18.79	18.89	19.50	20.07	20.23	19.17	18.99
10	20.22	19.47	18.73	18.94	18.97	18.56	18.77	18.97	20.20	19.97	19.34	19.40
15	20.08	19.10	18.74	18.88	18.77	18.56	18.65	19.10	20.46	19.82	19.51	19.53
20	19.74	18.90	19.04	19.15	19.04	19.15	19.07	19.51	20.45	19.80	18.87	19.76
25	19.62	19.36	18.89	18.78	18.78	19.12	19.37	19.81	20.22	19.81	18.97	19.75
EOM	19.57	19.27	19.34	18.76	18.94	18.83	19.52	19.84	20.05	19.68	19.18	19.97

WATER YEAR 1994 HIGHEST 18.09 JAN 28, 1994 LOWEST 20.46 JUN 15, 1994



GROUND-WATER LEVELS

TUCKER COUNTY

390135079275601. Local number, 15-6-17.

LOCATION.--Lat 39°01'35", long 79°27'56", Hydrologic Unit 05020004, at Canaan Valley State Park off W. Va. State Route 32.
Owner: West Virginia Department of Natural Resources.

AQUIFER.--Pocono Group of Lower Mississippian age.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 8 in., depth 281 ft, cased with steel.

INSTRUMENTATION.--Weekly measurement with chalked tape by observer, 1971-75; periodic measurement by USGS personnel, 1978-80; digital water-level recorder--60-minute punch, 1980 to current year.

DATUM.--Elevation of land-surface datum is about 3,275 ft above sea level. Measuring point: Top of recorder shelter base, 1.60 ft above land-surface datum. Prior to May 29, 1980 measuring point was top of casing, 1.55 ft above land-surface datum.

REMARKS.--No water-level record Jan. 8 to Feb. 21, due to recorder malfunction.

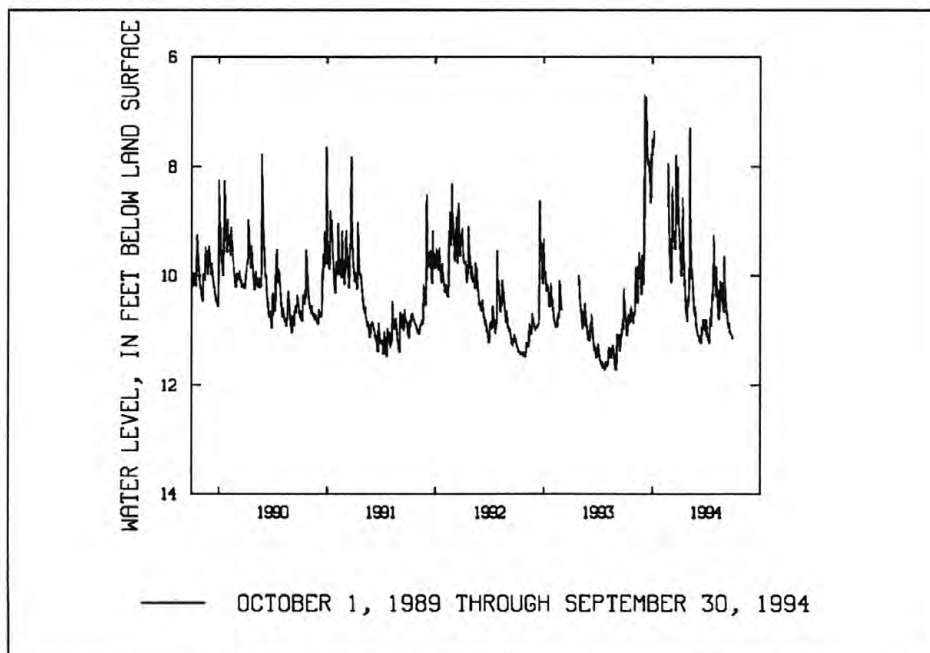
PERIOD OF RECORD.--June 1971 to December 1975, April 1978 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 5.48 ft below land-surface datum, Nov. 5, 1985; lowest measured, 11.79 ft below land-surface datum, Aug. 21, 1987.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
NOON VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	10.88	10.34	9.34	7.63	---	10.03	9.61	10.35	11.08	10.94	10.29	10.24
10	10.99	10.33	6.97	---	---	8.36	10.01	8.93	11.19	11.09	10.46	10.71
15	10.80	9.94	7.60	---	---	9.37	9.05	10.05	11.23	10.99	10.68	10.89
20	10.85	9.71	7.91	---	---	9.51	9.95	10.31	10.93	10.92	10.34	11.01
25	10.75	10.26	8.30	---	8.29	8.59	10.58	10.73	10.96	10.45	10.34	11.07
EOM	10.67	9.86	7.91	---	9.45	8.93	10.83	10.94	10.84	9.94	10.67	11.15

WATER YEAR 1994 HIGHEST 6.70 DEC 6, 1993 LOWEST 11.24 JUL 13, 1994



GROUND-WATER LEVELS

TYLER COUNTY

393211081021201.

LOCATION.--Lat 39°32'11", long 81°02'12", Hydrologic Unit 05030201, 2.50 mi southwest of Sistersville along Route 2, 15 ft northwest of gravel road, between railroad and river.

Owner: U.S. Geological Survey.

AQUIFER.--Monongahela Formation of the Upper Pennsylvanian age.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 6 in., depth 70 ft, cased with steel to 58 ft.

INSTRUMENTATION.--Digital water-level recorder--60-minute punch.

DATUM.--Elevation of land-surface datum is about 620 ft above sea level. Measuring point: Top of well casing, 3.90 ft above land-surface datum.

REMARKS.--Aquifer test data available.

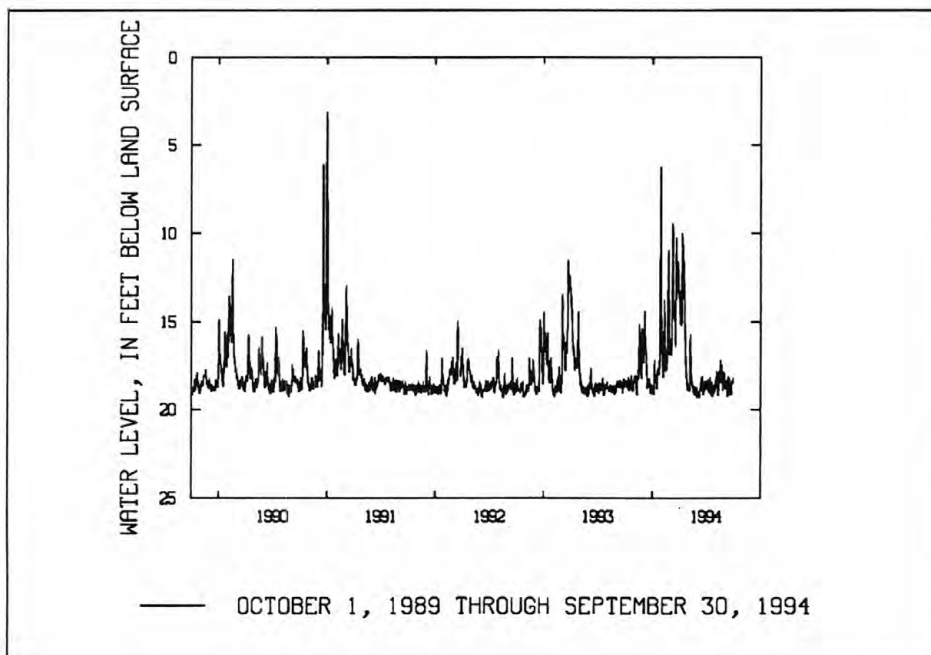
PERIOD OF RECORD.--November 1983 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 3.05 ft below land-surface datum, Jan. 1, 1991; lowest, 22.69 ft below land-surface datum, Oct. 3, 1984.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
NOON VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	18.36	18.25	16.38	18.88	17.48	16.83	14.24	18.97	19.12	18.62	18.41	18.59
10	18.74	18.87	16.28	18.47	15.37	11.86	15.16	16.91	19.29	18.62	18.95	18.70
15	18.93	17.76	18.15	18.27	17.50	14.26	10.70	18.55	18.23	18.20	17.88	18.99
20	18.55	16.10	18.41	17.93	17.27	16.04	14.12	19.10	18.85	18.44	17.86	19.18
25	18.51	18.04	18.58	17.67	10.94	12.08	18.01	19.01	18.80	18.97	18.12	19.17
EOM	18.43	16.16	19.09	14.05	16.41	12.82	18.87	19.29	18.88	18.98	17.86	18.21

WATER YEAR 1994 HIGHEST 6.24 JAN 30, 1994 LOWEST 19.33 JUN 3, 1994



GROUND-WATER LEVELS

WAYNE COUNTY

375827082211501. Local number, 50-6-5.

LOCATION.--Lat 37°58'27", long 82°21'15", Hydrologic Unit 05090102, on Cabwaylingo State Forest along Secondary State Route 35.

Owner: West Virginia Department of Natural Resources.

AQUIFER.--Kanawha Formation of Lower Pennsylvanian age.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 6 in., depth 119 ft, cased with steel to 10 ft.

INSTRUMENTATION.--Weekly measurement with chalked tape by observer.

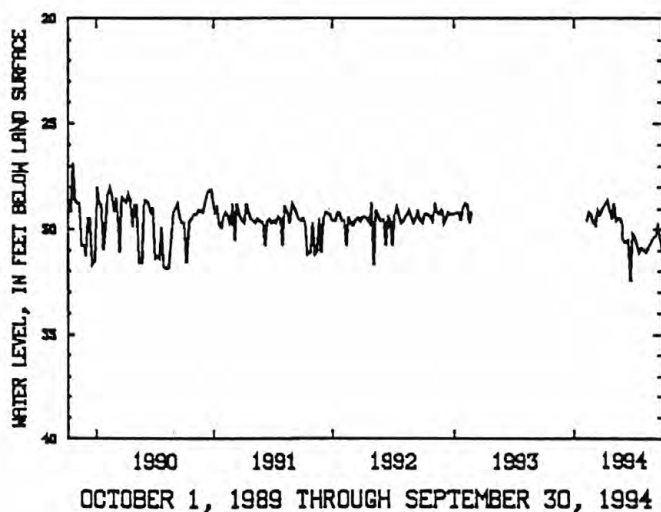
DATUM.--Elevation of land-surface datum is about 740 ft above sea level. Measuring point: Top of casing cover, 1.33 ft above land-surface datum. Prior to Nov. 27, 1979 measuring point was top of casing, 1.30 ft above land-surface datum.

PERIOD OF RECORD.--May 1971 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 26.87 ft below land-surface datum, Oct. 18, 1989; lowest measured, 32.17 ft below land-surface datum, July 21, 1982.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 24	29.47	FEB 16	29.17	APR 06	28.77	MAY 18	29.47	JUN 22	30.42	AUG 31	30.32
DEC 01	29.67	23	29.27	13	28.57	25	29.47	29	30.17	SEP 07	30.27
08	29.57	MAR 02	29.67	20	29.07	31	29.82	JUL 06	30.32	14	29.67
15	29.62	09	29.77	27	29.47	JUN 01	30.42	21	31.07	21	30.47
FEB 02	29.57	16	29.07	MAY 04	28.77	08	30.57	27	30.87	28	31.07
09	29.57	23	29.27	11	29.57	15	30.47	AUG 10	31.07		
WATER YEAR 1994		HIGHEST	28.57	APR 13, 1994	LOWEST	31.07	JUL 21, 1994	AUG 10, 1994	SEP 28, 1994		



GROUND-WATER LEVELS

WEBSTER COUNTY

382008080292801.

LOCATION.--Lat 38°20'08", long 80°29'28", Hydrologic Unit 05050005, at Bishop Knob Campground about 0.50 mi from junction of U.S. Forest Service Roads 81 and 82 and about 4 mi from Dyer.

Owner: U.S. Forest Service.

AQUIFER.--Kanawha Formation of Lower Pennsylvanian age.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 6 in., depth 80 ft, cased with galvanized iron to 60 ft.

INSTRUMENTATION.--Periodic measurement with chalked tape by USGS personnel, 1980-82; digital water-level recorder--60-minute punch, 1982 to current year.

DATUM.--Elevation of land-surface datum is about 3,100 ft above sea level. Measuring point: Top of extended casing, 2.00 ft above land-surface datum.

PERIOD OF RECORD.--March 1980 to current year.

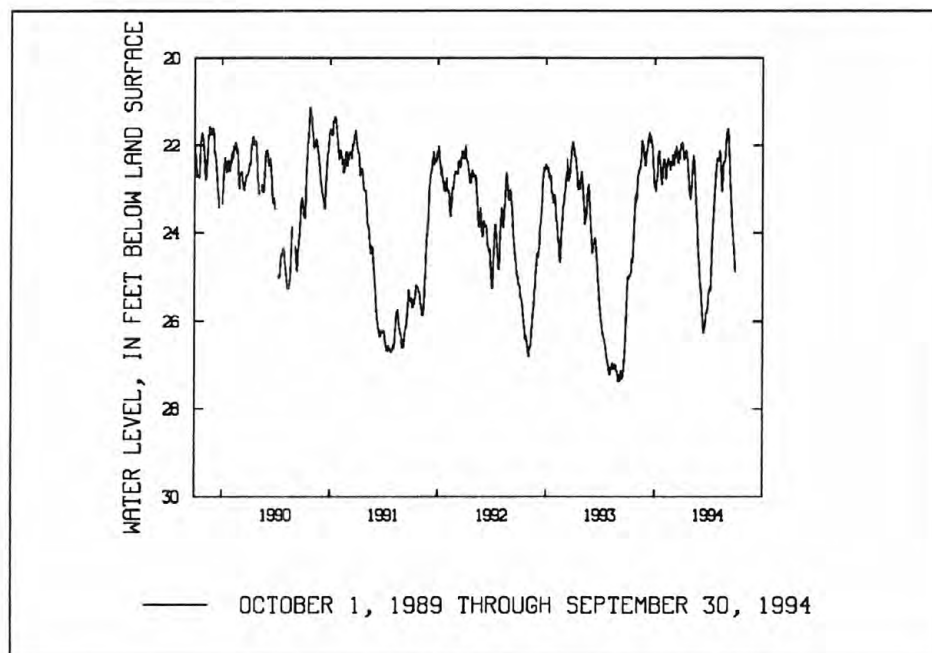
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 21.05 ft below land-surface datum, Jan. 7, 1985; lowest, 27.51 ft below land-surface datum, Aug. 22, 1988.

REVISION.--The lowest water level for period of record reported in 1988 water year as 27.67 ft is in error.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
NOON VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	24.99	22.75	22.14	23.05	22.41	22.38	21.96	23.04	25.17	25.29	22.32	21.61
10	24.99	22.54	21.83	22.72	22.75	22.13	22.20	22.42	25.64	25.22	22.15	22.20
15	24.85	22.38	21.70	22.29	22.29	22.01	22.17	22.33	26.19	24.20	22.81	23.06
20	24.61	21.89	21.82	22.45	22.44	22.39	22.26	23.05	26.10	23.51	22.63	23.79
25	23.72	22.12	21.99	22.89	22.43	22.28	22.66	23.75	25.80	22.90	22.36	24.26
EOM	23.13	22.40	22.86	22.34	22.45	21.99	23.15	24.62	25.65	22.32	21.81	24.87

WATER YEAR 1994 HIGHEST 21.61 SEP 5, 1994 LOWEST 26.26 JUN 16, 1994



GROUND-WATER LEVELS

WYOMING COUNTY

373839081255201. Local number, 54-2-12.

LOCATION.--Lat 37°38'39", long 81°25'52", Hydrologic Unit 05070101, at Twin Falls State Park.

Owner: U.S. Geological Survey.

AQUIFER.--New River Formation of Lower Pennsylvanian age.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 6 in., depth 80 ft, cased with steel to 28 ft.

INSTRUMENTATION.--Digital water-level recorder--60-minute punch.

DATUM.--Elevation of land-surface datum is about 2,015 ft above sea level. Measuring point: Top of recorder shelter floor, 2.62 ft above land-surface datum.

REMARKS.--Aquifer test data available. Water-level record affected by nearby pumping at times.

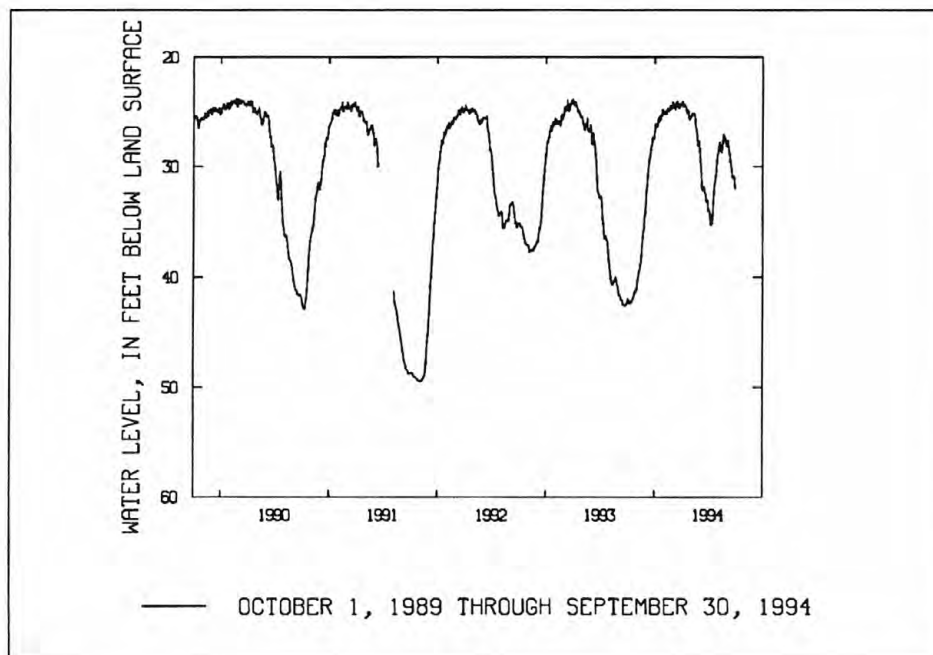
PERIOD OF RECORD.--December 1976 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 19.19 ft below land-surface datum, Mar. 13, 1980; lowest, 52.40 ft below land-surface datum, Nov. 24, 1987.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
NOON VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	42.07	40.28	32.18	26.53	24.97	24.51	24.16	25.46	29.35	34.02	28.56	27.58
10	42.39	39.47	30.32	26.33	25.23	24.36	24.26	25.17	31.91	35.22	27.87	28.82
15	42.30	38.78	29.08	25.75	24.79	24.14	24.48	25.11	31.77	35.12	28.58	29.70
20	42.00	37.10	28.33	25.67	24.75	24.51	25.03	26.30	32.31	32.47	27.58	30.92
25	41.49	35.82	27.26	25.31	24.53	24.57	24.83	27.08	33.12	31.15	27.31	30.95
EOM	41.15	34.33	27.33	24.95	24.70	24.35	25.50	27.63	33.51	29.59	27.98	31.96

WATER YEAR 1994 HIGHEST 24.01 MAR 18, 1994 LOWEST 42.39 OCT 10, 1993



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	Page		Page
Dry Fork at Beartown	213,216	Ground-water level records, explanation of	16
Dry Fork at Hendricks	208,214	Guyandotte River at Branchland	198-201
Dry mass, definition of	21	at Logan	194-197
Dunlow, East Fork Twelvepole Creek near	202-203	at Man	211
Durbin, Greenbrier River at	150-151	below R.D. Bailey Dam	211
Dyer, Williams River at	162-163	near Baileysville	188-189
East Fork Greenbrier River at Frank	148-149	Hall, Buckhannon River at	96-97
East Fork Twelvepole Creek		Hampshire County, ground-water records in	255
below East Lynn Dam	212,216	Hancock, Md., Potomac River at	72-73
near Dunlow	202-203	Hardness, definition of	22
Elk River at Clay	211,216	Hardy County, ground-water records in	256
at Queen Shoals	178-179	Headsville, Patterson Creek near	48-49,218
at Sutton	210,215	Hendricks, Dry Fork at	208,214
below Webster Springs	176-177	Hilldale, Greenbrier River at	156-157
near Frametown	210,215	Hinton, New River at	158-159
Elkins, Tygart Valley River near	88-89	Hughes River at Cisco	140-141
Elm Grove, Wheeling Creek at	126-127	Huntington, Ohio River at	212
Enterprise, West Fork River at	108-109	Hydrologic bench-mark network, definition of	6,22
Explanation of the records	6-19	Hydrologic conditions, summary of	2
Explanation of water-quality records	13-14	Hydrologic unit, definition of	22
Extremes, explanation of:		Identifying estimated daily discharge	12
ground-water levels	18	Instantaneous discharge, definition of	22
stage and water discharge	10	Instrumentation, explanation of	17
surface-water quality	16	Introduction	1
Fayette County, ground-water records in	251	Jefferson County, ground-water records in	257-258
Fecal coliform bacteria, definition of	20	Kanawha Falls, Kanawha River at	174-175
Fecal streptococcal bacteria, definition of	20	Kanawha River at Charleston	180-181
Frametown, Elk River near	210,215	at Kanawha Falls	174-175
Frank, East Fork Greenbrier River at	148-149	at Winfield Dam, at Winfield	186-187
Franklin, South Branch Potomac River at	50-51	Kermit, Tug Fork at	206-207
Gage, explanation of	10	Laboratory measurements, explanation of	15
Gage height, definition of	22	Land-surface datum definition of	22
Gaging station, definition of	22	Latitude-longitude system, definition of	7
Gauley River above Belva	172-173	Lewis County, ground-water records in	259
at Camden on Gauley	210,215	Little, Middle Island Creek at	130-131
below Summersville Dam	168-169	Little Kanawha River at Burnsville	209,214
Gauley River near Craigsville	166-167	at Glenville	134-135
Gilmer County, ground-water records in	252	at Grantsville	209,215
Glen Lyn, Va., New River at	142-145	at Palestine	136-139
Glenhayes, Tug Fork at	213,217	below Burnsville Dam	209,214
Glenville, Little Kanawha River at	134-135	near Wildcat	132-133
Grafton, Three Fork Creek near	100-101,220	Little Kanawha, West Fork at Rocksdales	210,215
Grant County, ground-water records in	253	Location, explanation of:	
Grantsville, Little Kanawha River at	209,215	ground-water levels	17
Great Cacapon, Cacapon River near	68-71	stage and water-discharge	9
Green algae, definition of	24	surface-water quality	15
Greenbrier County, ground-water records in	254	Logan, Guyandotte River at	194-197
Greenbrier River at Alderson	154-155	Luke, Md., North Branch Potomac River at	42-43
Greenbrier River at Buckeye	152-153		
at Durbin	150-151		
at Hilldale	156-157		
Greenbrier River, East Fork at Frank	148-149		

INDEX

	Page		Page
Man, Guyandotte River at.....	211	Numbering system for wells and miscellaneous sites	7
Marion County, ground-water records in	260		
Marietta, Oh., Ohio River near	209		
Martins Ferry, Oh., Ohio River at.....	124-125	Ohio River at Benwood near Wheeling.....	128-129
Martinsburg, Opequon Creek near.....	74-77	at Huntington.....	212
Meadow River near Mount Lookout	170-171	at Martins Ferry, Oh.....	124-125
Mean concentration, definition of.....	26	at Point Pleasant	211
Mean discharge, definition of	21	near Marietta, Oh.....	209
Measuring point, definition of	22	On site measurements and sample collection,	
Mercer County, ground-water records in.....	261	surface-water quality	14
Metamorphic stage, definition of.....	22	Opequon Creek near Martinsburg	74-77
Methylene blue active substance, definition of	23	Organic mass, definition of.....	21
Micrograms per gram, definition of.....	23	Organism, definition of.....	23
Microsiemens, definition of	23	Organism count/area, definition of.....	23
Micrograms per liter, definition of	23	Organism count/volume, definition of.....	23
Middle Fork River at Audra.....	92-93		
Middle Island Creek at Little	130-131		
Mill Creek at Hurricane City Park.....	222-223	Palestine, Little Kanawha River at	136-139
Milligrams of carbon per area or volume		Parameter code, definition of.....	24
per unit time, definition of.....	25	Parsons, Cheat River near.....	118-119
Milligrams of oxygen per area or volume		Partial-record station, definition of.....	24
per unit time, definition of.....	25	Partial-record and miscellaneous sites, discharge at..	208-217
Milligrams per liter, definition of	23	Particle size, classification of	24
Millville, Shenandoah River at	78-83	definition of	24
Mineral County, ground-water records in.....	262	Patterson Creek near Headsville.....	48-49,218
Mingo County, ground-water records in.....	263	Paw Paw, Potomac River at.....	66-67
Miscellaneous field determinations	218-221	Peak discharges, explanation of.....	10
Monongalia County, ground-water records in.....	264-265	Percent composition, definition of.....	24
Moorefield, South Fork South Branch		Period of record, explanation of:	
Potomac River near	58-63	ground-water levels	17
Morgan County, ground-water records in.....	266	stage and water discharge	9
Morgantown, Cobun Creek at.....	112-113	surface-water quality	15
Mount Clare, West Fork River near.....	106-107	Periphyton, definition of.....	24
Mount Lookout, Meadow River near	170-171	Pesticides, definition of	24
Mount Storm, Stony River near	38-41	Petersburg, South Branch Potomac River near.....	52-55
		Philippi, Tygart Valley River at.....	98-99
National Geodetic Vertical Datum of 1929,		Phytoplankton, definition of	24
definition of	23	Picocurie, definition of	24
		Pipestem, Bluestone River near	146-147
National stream-quality accounting network		Plankton, definition of	24
(NASQAN) stations	128-129,136-139,	Pocahontas County, ground-water records in.....	268
	142-145,186-187,198-201	Point of Rocks, Md., Potomac River at	84-85
National stream-quality accounting network,		Point Pleasant, Ohio River at.....	211
definition of	6,23	Potomac River at Hancock, Md.....	72-73
National trends network, definition of.....	6,23	at Paw Paw	66-67
Natural substrate, definition of	26	at Point of Rocks	84-85
Nephelometric turbidity units, definition of	23	North Branch, at Luke, Md	42-43
New River at Glen Lyn, Va	142-145	at Steyer, Md	36-37
at Hinton	158-159	near Cumberland, Md	44-47
at Thurmond	160-161	South Branch, at Franklin.....	50-51
Nicholas County, ground-water records in.....	267	near Petersburg.....	52-55
		near Springfield.....	64-65,219
North Branch Potomac River at Luke, Md.....	42-43	Potomac River, South Fork South Branch	
at Steyer, Md	36-37	at Brandywine	56-57,218
near Cumberland, Md.....	44-47	near Moorefield	58-63
		Preston County, ground-water records in	269
		Primary productivity, definition of	25

	Page		Page
Publications on techniques of water-resources investigations.....	29-32	Steyer, Md., North Branch Potomac River at.....	36-37
Queen Shoals, Elk River at.....	178-179	Stonewall Jackson Dam near Weston, West Fork River below	221
R. D. Bailey Dam, Guyandotte River below	211	Stony River near Mount Storm.....	38-41
Radiochemical program, definition of	6,25	Streamflow, definition of.....	26
Randolph County, ground-water records in.....	270-271	Substrate, definition of.....	26
Records, accuracy of.....	13	Summersville Dam, Gauley River below	168-169
arrangement of.....	14	Surface area, definition of.....	27
explanation of ground-water levels	16	Surficial bed material, definition of.....	27
ground-water quality	18	Suspended, definition of	27
stage and water discharge.....	8	recoverable, definition of	27
surface-water quality.....	13	Suspended sediment, definition of.....	26
other available	13	Suspended-sediment concentration, definition of.....	26
Recoverable from bottom material, definition of	25	Suspended-sediment discharge, definition of.....	26
Remarks codes	35	Suspended-sediment load, definition of	26
Remarks, explanation of		Suspended, total, definition of.....	27
ground-water levels	17	Sutton, Elk River at.....	210,215
stage and water discharge.....	10	Taxonomy, definition of	27
surface-water quality.....	16	Thermograph, definition of.....	27
Return period, definition of	25	Three Fork Creek near Grafton.....	100-101,220
Revised records, explanation of.....	10	Thurmond, New River at.....	160-161
Revisions, stage and water-discharge records	10	Time-weighted average, definition of.....	27
surface-water quality records	16	Tons per acre-foot, definition of.....	27
Richwood, Cranberry River near	164-165	Tons per day, definition of.....	28
Ritchie County, ground-water records in.....	272	Tornado, Coal River at	184-185
Rocksdale, West Fork Little Kanawha River at	210,215	Total coliform bacteria, definition of.....	20
Rockville, Big Sandy Creek at.....	122-123	Total, definition of	28
Rowlesburg, Cheat River at	120-121	Total discharge, definition of.....	28
Runoff in inches, definition of.....	25	Total organism count, definition.....	23
		Total recoverable, definition of	28
		Total sediment discharge, definition of	26
Sand Run near Buckhannon.....	94-95	Tritium network, definition of.....	28
Sea level, definition of	25	Tucker County, ground-water records in.....	273
Sediment, definition of	25	Turbidity, definition of	28
explanation of	15	Tug Fork at Glenhayes.....	213,217
Seven-day, 10-year low flow, definition of	26	at Kermit.....	206-207
Shenandoah River at Millville	78-83	at Welch.....	213,216
Sodium-adsorption-ratio, definition of	26	at Williamson	204-205
Solute, definition of	26	Twelvepole Creek below Wayne.....	212,216
South Branch Potomac River at Franklin.....	50-51	Twelvepole Creek, East Fork near Dunlow.....	202-203
near Petersburg	52-55	Tyler County, ground-water records in	274
near Springfield	64-65,219	Tygart Valley River at Belington	90-91
South Fork South Branch Potomac River		at Colfax	102-103
at Brandywine.....	56-57,218	at Philippi	98-99
near Moorefield	58-63	near Dailey	86-87
Specific conductance, definition of	26	near Elkins.....	88-89
Special networks and programs	6		
Springfield, South Branch Potomac River near.....	64-65,219	Walkersville, West Fork River at	208,214
Stage and water-discharge records, explanation of ...	6	Water-quality records, explanation of	13
Stage-discharge relation, definition of.....	26	Water temperature, explanation of	14
Station identification numbers, definition of.....	7	Water year, definition of.....	28
manuscript, explanation of	9	WATSTORE data, access to.....	19
Statistics, explanation of summary of.....	11	Wayne County, ground-water records in.....	275
monthly mean data, explanation of	11	Wayne, Twelvepole Creek below.....	212,216
		Webster County, ground-water records in.....	276

INDEX

	Page		Page
Webster Springs, Elk River below.....	176-177	Tucker County.....	273
Weighted average, definition of.....	28	Tyler County.....	274
Welch, Tug Fork at.....	213,216	Wayne County.....	275
Well characteristics, explanation of.....	17	Webster County.....	276
Well description and ground-water levels:		Wyoming County.....	277
Berkeley County.....	249	West Fork Little Kanawha River at Rocksdales.....	210,215
Brooke County.....	250	West Fork River at Butcherville.....	104-105
Fayette County.....	251	at Enterprise.....	108-109
Gilmer County.....	252	at Walkersville.....	208,214
Grant County.....	253	below Stonewall Jackson Dam near Weston.....	221
Greenbrier County.....	254	near Mount Clare.....	106-107
Hampshire County.....	255	Weston, West Fork River below Stonewall	
Hardy County.....	256	Jackson Dam near.....	221
Jefferson County.....	257-258	Wet mass, definition of.....	21
Lewis County.....	259	Wheeling Creek at Elm Grove.....	126-127
Marion County.....	260	Wheeling, Ohio River at Benwood near.....	128-129
Mercer County.....	261	Wildcat, Little Kanawha River near.....	132-133
Mineral County.....	262	Williams River at Dyer.....	162-163
Mingo County.....	263	Williamson, Tug Fork at.....	204-205
Monongalia County.....	264-265	Winfield, Kanawha River at Winfield Dam at.....	186-187
Morgan County.....	266	WDR, definition of.....	28
Nicholas County.....	277	WSP, definition of.....	28
Pocahontas County.....	268	Wyoming County, ground-water records in.....	277
Preston County.....	269		
Randolph County.....	270-271		
Ritchie County.....	272	Zooplankton, definition of.....	25

CONVERSION FACTORS AND VERTICAL DATUM

Multiply	By	To obtain
<i>Length</i>		
inch (in.)	2.54×10^1	millimeter
	2.54×10^{-2}	meter
foot (ft)	3.048×10^{-1}	meter
mile (mi)	1.609×10^0	kilometer
<i>Area</i>		
acre	4.047×10^3	square meter
	4.047×10^{-1}	square hectometer
	4.047×10^{-3}	square kilometer
square mile (mi ²)	2.590×10^0	square kilometer
<i>Volume</i>		
gallon (gal)	3.785×10^0	liter
	3.785×10^0	cubic decimeter
	3.785×10^{-3}	cubic meter
million gallons (Mgal)	3.785×10^3	cubic meter
	3.785×10^{-3}	cubic hectometer
cubic foot (ft ³)	2.832×10^1	cubic decimeter
	2.832×10^{-2}	cubic meter
cubic-foot-per-second day [(ft ³ /s) d]	2.447×10^3	cubic meter
	2.447×10^{-3}	cubic hectometer
acre-foot (acre-ft)	1.233×10^3	cubic meter
	1.233×10^{-3}	cubic hectometer
	1.233×10^{-6}	cubic kilometer
<i>Flow</i>		
cubic foot per second (ft ³ /s)	2.832×10^1	liter per second
	2.832×10^1	cubic decimeter per second
	2.832×10^{-2}	cubic meter per second
gallon per minute (gal/min)	6.309×10^{-2}	liter per second
	6.309×10^{-2}	cubic decimeter per second
	6.309×10^{-5}	cubic meter per second
million gallons per day (Mgal/d)	4.381×10^1	cubic decimeter per second
	4.381×10^{-2}	cubic meter per second
<i>Mass</i>		
ton (short)	9.072×10^{-1}	megagram or metric ton

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

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