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West Virginia
1992



Water Resources Data West Virginia Water Year 1992



U.S. GEOLOGICAL SURVEY WATER-DATA REPORT WV-92-1
Prepared in cooperation with the State of West Virginia
and with other agencies

CALENDAR FOR WATER YEAR 1992

1991

OCTOBER

S	M	T	W	T	F	S
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1992

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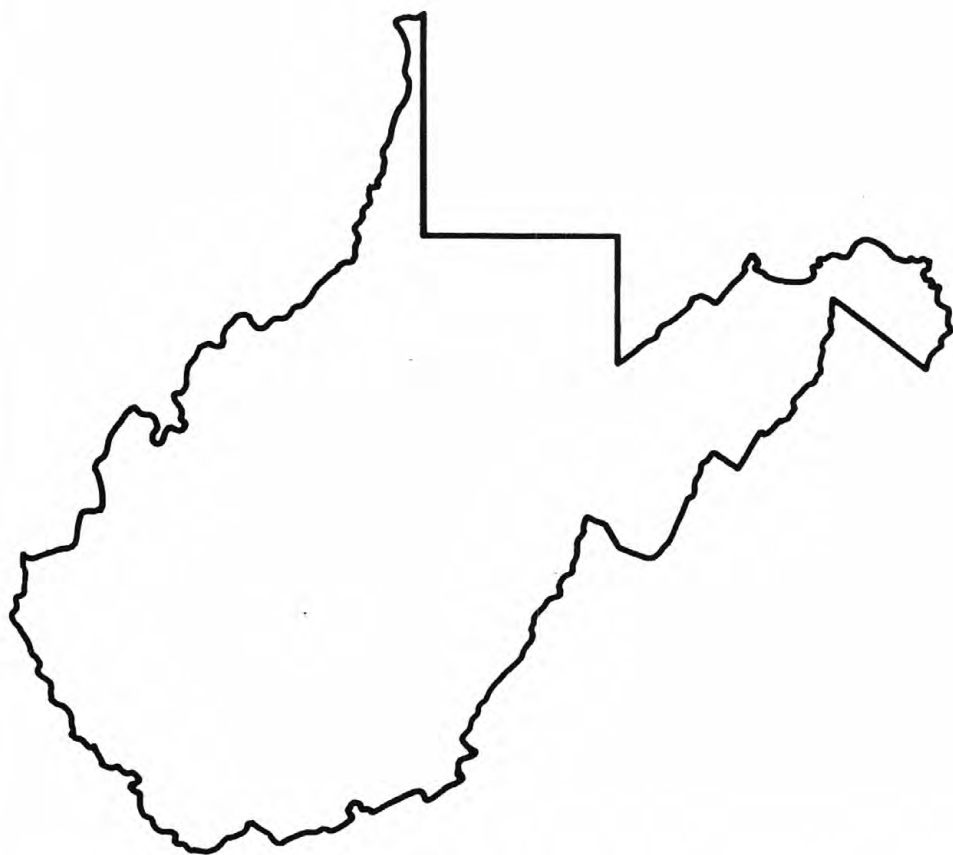
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Water Resources Data West Virginia Water Year 1992

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



U.S. GEOLOGICAL SURVEY WATER-DATA REPORT WV-92-1
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

Dallas L. Peck, Director

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Charleston, West Virginia 25301

1993

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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16. Abstract (Limit: 200 words) Water-resources data for the 1992 water year for West Virginia consist of records of stage, discharge, and water quality of streams; contents of reservoirs; and water levels of observation wells. This report contains discharge records for 82 streamflow-gaging stations; stage only records for 8 gaging stations; annual maximum discharge at 2 crest-stage partial-record stations; change in contents for 1 reservoir; water-quality records for 13 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 measurements. 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.			
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[Letters after station name designate type of data collected: (d) discharge, (c) chemical, (b) biological, (m) microbiological, (t) water temperature, (s) sediment, (e) elevation, gage heights, or contents]

	Station number	Page
<u>NORTH ATLANTIC SLOPE BASINS</u>		
<u>POTOMAC RIVER BASIN</u>		
North Branch Potomac River at Steyer, Md (d).....	01595000	*30
Stony River near Mount Storm (d,t).....	01595200	*34
North Branch Potomac River at Luke, Md (d).....	01598500	*38
North Branch Potomac River near Cumberland, Md (d).....	01603000	*40
Patterson Creek near Headsville (d).....	01604500	*42
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South Branch Potomac River near Petersburg (d).....	01606500	*48
South Fork South Branch Potomac River at Brandywine (d).....	01607500	*50
South Fork South Branch Potomac River near Moorefield (d).....	01608000	*52
South Branch Potomac River near Springfield (d).....	01608500	*56
Potomac River at Paw Paw (d).....	01610000	*58
Cacapon River near Great Cacapon (d).....	01611500	*60
Potomac River at Hancock, Md (d).....	01613000	*62
Opequon Creek near Martinsburg (d).....	01616500	*64
Potomac River at Shepherdstown (d,c).....	01618000	*66
Shenandoah River at Millville (d,c,m,s).....	01636500	*70
Potomac River at Point of Rocks, Md (d,t,s).....	01638500	*74
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<u>MONONGAHELA RIVER BASIN</u>		
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Tygart Valley River at Elkins (t).....	03050400	80
Tygart Valley River near Elkins (d).....	03050500	82
Tygart Valley River at Belington (d).....	03051000	84
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Buckhannon River:		
Sand Run near Buckhannon (d).....	03052500	88
Buckhannon River at Hall (d).....	03053500	90
Tygart Valley River at Philippi (d).....	03054500	92
Three Fork Creek near Grafton (d).....	03056250	94
Tygart Valley River at Colfax (d).....	03057000	96
West Fork River at Walkersville (d).....	03057300	98
West Fork River at Butcherville (d).....	03058500	100
West Fork River near Mount Clare (d).....	03058975	102
West Fork River at Enterprise (d).....	03061000	104
Monongahela River:		
Buffalo Creek at Barrackville (d).....	03061500	106
Coburn Creek at Morgantown (d).....	03062400	108
Dry Fork at Hendricks (d).....	03065000	110
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Little Kanawha River below Burnsville Dam (d).....	03151520	142
Little Kanawha River at Glenville (d).....	03152000	144
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West Fork Little Kanawha River at Rocksdale (e).....	03154000	148
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SURFACE-WATER STATIONS, IN DOWNSTREAM ORDER, FOR WHICH RECORDS ARE PUBLISHED IN THIS VOLUME

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[Letters after station name designate type of data collected: (d) discharge, (c) chemical, (b) biological, (m) microbiological, (t) water temperature, (s) sediment, (e) elevation, gage heights, or contents]

	Station number	Page
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East Fork Greenbrier River at Frank (d).....	03180300	162
Greenbrier River at Durbin (d).....	03180500	164
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Greenbrier River at Alderson (d).....	03183500	168
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New River at Hinton (d).....	03184500	172
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Gauley River:		
Williams River at Dyer (d).....	03186500	176
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Gauley River above Belva (d).....	03192000	186
Kanawha River at Kanawha Falls (d).....	03193000	188
Kanawha River at Glasgow (t).....	03193742	190
Elk River below Webster Springs (d).....	03194700	192
Elk River at Sutton (d).....	03195500	194
Elk River near Frametown (e).....	03196600	196
Elk River at Clay (e).....	03196800	198
Elk River at Queen Shoals (d).....	03197000	200
Kanawha River at Charleston (d).....	03198000	202
Coal River:		
Big Coal River at Ashford (d).....	03198500	204
Coal River at Tornado (d).....	03200500	206
Kanawha River at Poca (t).....	03200650	208
Kanawha River at Winfield Dam, at Winfield (c,m,s).....	03201300	210
Ohio River at Point Pleasant (e).....	03201500	212
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Guyandotte River near Baileysville (d).....	03202400	214
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Ohio River at Huntington (e).....	03206000	226
<u>TWELVEPOLE CREEK BASIN</u>		
East Fork Twelvepole Creek near Dunlow (d).....	03206600	228
<u>BIG SANDY RIVER BASIN</u>		
Tug Fork at Welch (d).....	03212750	230
Dry Fork at Beartown (d).....	03212980	232
Tug Fork at Vulcan (d).....	03213620	234
Tug Fork at Williamson (d).....	03213700	236
Tug Fork at Kermit (d).....	03214500	238
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* Records furnished by Virginia District, U.S. Geological Survey.

<u>County</u>	<u>Well number</u>	<u>Local number</u>	<u>Location</u>	<u>Page</u>
BERKELEY	392725077582401	20-5-7	Martinsburg	*259
BROOKE	401216080362703		Bethany	260
FAYETTE	380154080571301		Clifftop	261
GILMER	385604080495901	33-3-1	Glenville	262
GRANT	391652079181401		Mount Storm	*263
GREENBRIER	374804080174001	45-8-2	White Sulphur Springs	264
HAMPSHIRE	391257078404601	23-6-46	Augusta	*265
HARDY	385714078441301	25-4-5	Trout Pond Recreation Area	*266
JEFFERSON	391142077551701		Rippon	*267
	392104077554801		Leetown	*268
LEWIS	390553080280802	16-1-9	Jackson's Mill	269
MARION	393101080150501		Farmington	270
MERCER	372149081055001	48-5-1	Princeton	271
MINERAL	392114079081101	22-5-23	Sulphur City	*272
MINGO	373554081493401		Justice	273
MONONGALIA	392923079571801	9-7-33	Halleck	274
	394006080194801	9-1-47	Wadestown	275
MORGAN	393043078174001	19-5-14	Berkeley Springs	*276
NICHOLAS	381513081094201		Belva	277
POCAHONTAS	380653080155301		Droop Mountain State Park	278
PRESTON	393306079474501	11-3-8	Masontown	279
RANDOLPH	385100079522901		Beverly	280
	385341079575401	18-3-110	Coalton	281
RITCHIE	391226081024901	28-3-3	Harrisville	282
TUCKER	390135079275601	15-6-17	Canaan Valley State Park	283
TYLER	393211081021201		Sistersville	284
WAYNE	375827082211501	50-6-5	Cabwaylingo State Forest	285
WEBSTER	382008080292801		Dyer	286
WYOMING	373839081255201	54-2-12	Twin Falls State Park	287

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

DISCONTINUED SURFACE-WATER DISCHARGE STATIONS, LISTED IN DOWNSTREAM ORDER

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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
Skin Creek near Brownsville.....	03057500	25.7	1946-60
West Fork River below Stonewall Jackson Dam near Weston.....	03058000	105	1946-91
(Formerly West Fork River at Brownsville).....		105	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
Tenmile Creek:			
Salem Fork:			
Salem Fork at Salem.....	03060500	8.32	1951-69
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
Deckers Creek at Morgantown.....	03062500	63.2	1946-69
Dry Fork (head of Cheat River):			
Horsecamp Run at Harman.....	03063600	6.57	1969-77
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
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

	Station number	Drainage area (mi ²)	Period of record
<u>OHIO RIVER BASIN</u> --Continued			
<u>MONONGAHELA RIVER BASIN</u> --Continued			
Shavers Fork:			
North Spring at Bowden.....	03068690	---	1975-81
South Spring at Bowden.....	03068710	---	1975-80
Shavers Fork below Bowden.....	03068800	151	1973-81
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
<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 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
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
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

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

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	Station number	Drainage area (mi ²)	Period of record
<u>OHIO RIVER BASIN.--Continued</u>			
<u>KANAWHA RIVER BASIN--Continued</u>			
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, WV.....	03190000	287	1909-16
			1929-71
Peters Creek near Lockwood, WV.....	03191500	40.2	1946-71
			1980-82
Gauley River at Belva.....	03192500	1,402	1908-16
Slaughter Creek:			
Right Fork Little Creek near Chelyan, WV.....	03193776	0.91	1983
Little Creek near Chelyan.....	03193778	1.44	1982-84
Elk River:			
Gilmer Run near Marlinton, WV.....	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
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
Buffalo Creek at Clay.....	03196750	114	1979-84
			1974-75
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
Trace 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
<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

	Station number	Drainage area (mi ²)	Period of record
<u>OHIO RIVER BASIN</u> --Continued			
<u>GUYANDOTTE RIVER BASIN</u> --Continued			
Guyandotte River near Justice.....	03202900	512	1963-68
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
<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
Twelvepole Creek below Wayne.....	03207020	300	1956-66 1915-17 1927-31 1947-54
Beech Fork below Beech Fork Dam.....	03207057	79.2	1956-82 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
Elkhorn Creek at Maitland.....	03212700	69.9	1979-80
Elkhorn Creek Tributary at Welch.....	03212703	0.63	1980-82
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

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

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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
South Branch Potomac River near Springfield.....	01608500	1,471	sK	1968-69
Lost River at McCauley near Baker.....	01610200	155	sK, t	1968-69
Cacapon River near Great Cacapon.....	01611500	677	t	1975-76
				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>				
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 Fork 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	1975-80
			pH	1978-79
			t	1976-79
Taylor Run at Bowden.....	03068610	5.06	sK	1973-80
			pH	1973-74
			t	1978-79
				1973-74
				1976-79
North Spring at Bowden.....	03068690	---	s, U	1975-80
			t	1977-81
South Spring at Bowden.....	03068710	---	U	1975-80
			t	1977-80
Shavers Fork below Bowden.....	03068800	151	U	1975-80
			sK	1973-81
			pH	1973-74
			t	1973-79
				1981
Shavers Fork at Parsons.....	03069000	214	s, U	1975-81
			t	1956-64
				1974-75
<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 Rocksdales.....	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	1979-81
			s	1981
Cranberry River:				
Cranberry River near Richwood.....	03187500	80.4	sK	1979-80
			pH	1989
			t	1982
			s	1980-81
Gauley River:				
Gauley River near Craigsville.....	03189100	529	sK	1981-82
			t	1975-77
				1981-82

xiv 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>KANAWHA RIVER BASIN</u> --Continued				
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 Cabin Creek.....	03193770	8,661	t	1956
Elk River below Webster Springs.....	03194700	266	t	1958-77
Right Fork Holly River at Guardian.....	03195100	51.9	U t	1974-83 1974-75
Left Fork Holly River near Replete.....	03195250	46.5	U t	1974
Elk River at Sutton.....	03195500	542	sK t	1974-75 1985-87 1960-83 1985-87
			s U	1985-87 1974-75
Elk River near Frametown.....	03196600	751	t	1985-87 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	1973-83 1974-84
			s U	1973-84 1981-91
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
Slab Fork:				
Marsh Fork at Maben.....	03202245	4.85	sK, t, s, U pH	1978-80 1978-79
Still Run at Itmann.....	03202255	7.12	sK, t, s, U pH	1978-80 1978-79
Rockcastle Creek:				
Bearhole Fork at Pineville.....	03202310	6.27	sK, t, s, U pH	1978-80 1978-79
Guyandotte River near Baileysville.....	03202400	306	sK t	1971-79 1971-82
			s	1973-79
Indian Creek at Fanrock.....	03202490	41.3	sK, s t	1974-78 1975-81

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

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	Station number	Drainage area (mi ²)	Type of record	Period of record
<u>OHIO RIVER BASIN</u> --Continued				
<u>GUYANDOTTE RIVER BASIN</u> --Continued				
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
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
Pigeon Creek near Lenore.....	03213800	93.9	t	1973-75
Tug Fork near Kermit.....	03214000	1,188	sK, t, s	1979-81
Tug Fork at Kermit.....	03214500	1,280	t	1956
Rockcastle Creek at Inez, Ky.....	03214700	63.1	s	1947-81
Tug Fork at Glenhayes.....	03214900	1,507	sK, s	1980-81
			t	1977-80
				1979-80

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WATER RESOURCES DATA - WEST VIRGINIA, 1992

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 82 streamflow-gaging stations; stage only records for 8 gaging stations; annual maximum discharge at 2 crest-stage partial-record stations; change in contents for 1 reservoir; water-quality records for 13 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 measurements. 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-92-1." 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, L. Eli McCoy, Chief.

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

West Virginia Department 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, U.S. Soil Conservation Service, National Park Service, and Federal Power Commission.

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

The following organizations aided in collecting records: Appalachian Power Company and the Monongahela Power Company.

Organizations that provided data are acknowledged in station descriptions.

WATER RESOURCES DATA - WEST VIRGINIA, 1992

SUMMARY OF HYDROLOGIC CONDITIONS

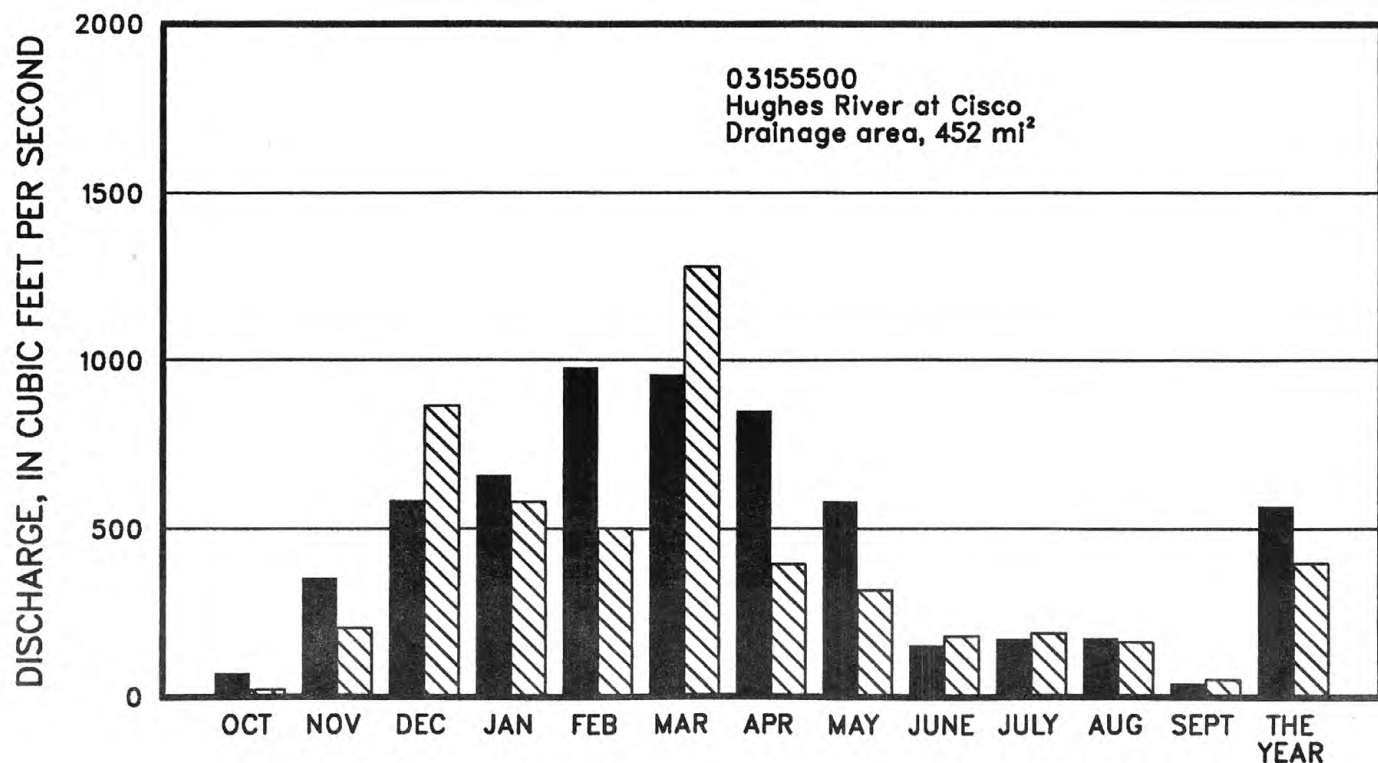
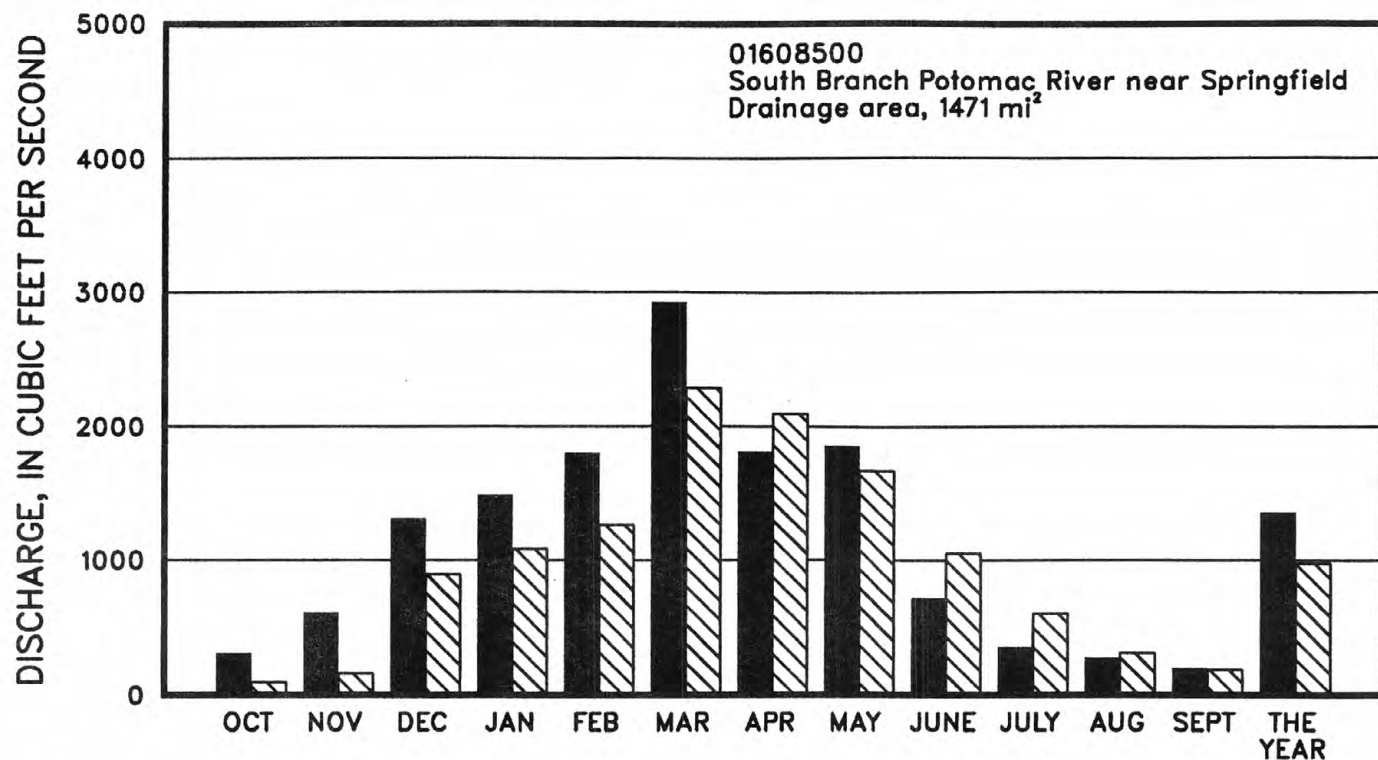
Streamflow during the 1992 water year was below normal throughout the State. Figures 1 and 2 show the median of mean monthly and yearly discharges for water years 1961-90 (normal period) compared to the monthly and yearly mean discharges during the 1992 water year at four sites in different parts of the State. Precipitation data and associated flood information were obtained from "Monthly Reports of River and Flood Conditions", October 1991 to September 1992, National Weather Service, Charleston, West Virginia.

Streamflow and precipitation in October 1991 were below normal (1961-90) throughout the State. Dry conditions for August and September 1991 continued into October across the State. Streamflow was below normal in November throughout the State, whereas precipitation was above normal. Streamflow and precipitation in December were above normal throughout the State. Minor flooding of less than two feet above flood stage occurred December 2-3 in the Elk, Coal, Tygart Valley, and Greenbrier River basins. Streamflow and precipitation in January and February were below normal throughout the State. Minor flash flooding occurred February 25-27 in the southeastern part of the State. Snowcover by the end of February was below normal, and this deficit reduced flooding caused by spring snowmelt. Streamflow and precipitation in March were above normal throughout the State, although mainstem rivers did not reach 1/2 bankfull stage during the month. Streamflow was above normal in April throughout the State, whereas precipitation was below normal. Streamflow was below normal in May throughout the State, whereas precipitation was above normal throughout the State. No flood warnings were issued during March to May across the State. Streamflow in June and July were above normal throughout the State, whereas precipitation was below normal in June and above normal in July. Localized flash flooding associated with intense thunderstorms occurred in June, July, and August in several areas of the State. No flood warnings were issued for June or August, but minor flooding of less than three feet above flood stage occurred July 27-28 in the Tygart Valley and Buckhannon River basins. Streamflow and precipitation in August and September were below normal throughout the State.

Water-quality data were collected periodically at four NASQAN and two project sites during the year. The amount of data was insufficient to provide a summary statement.

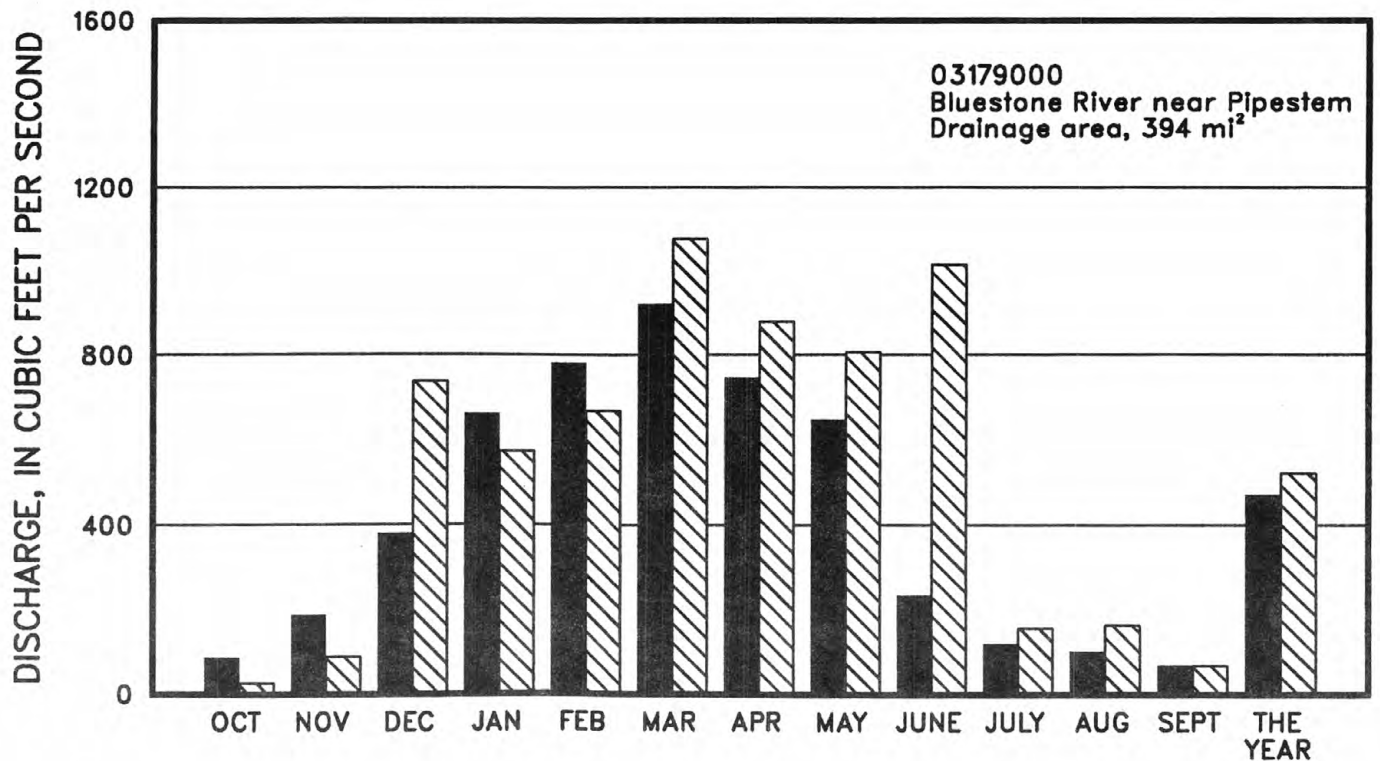
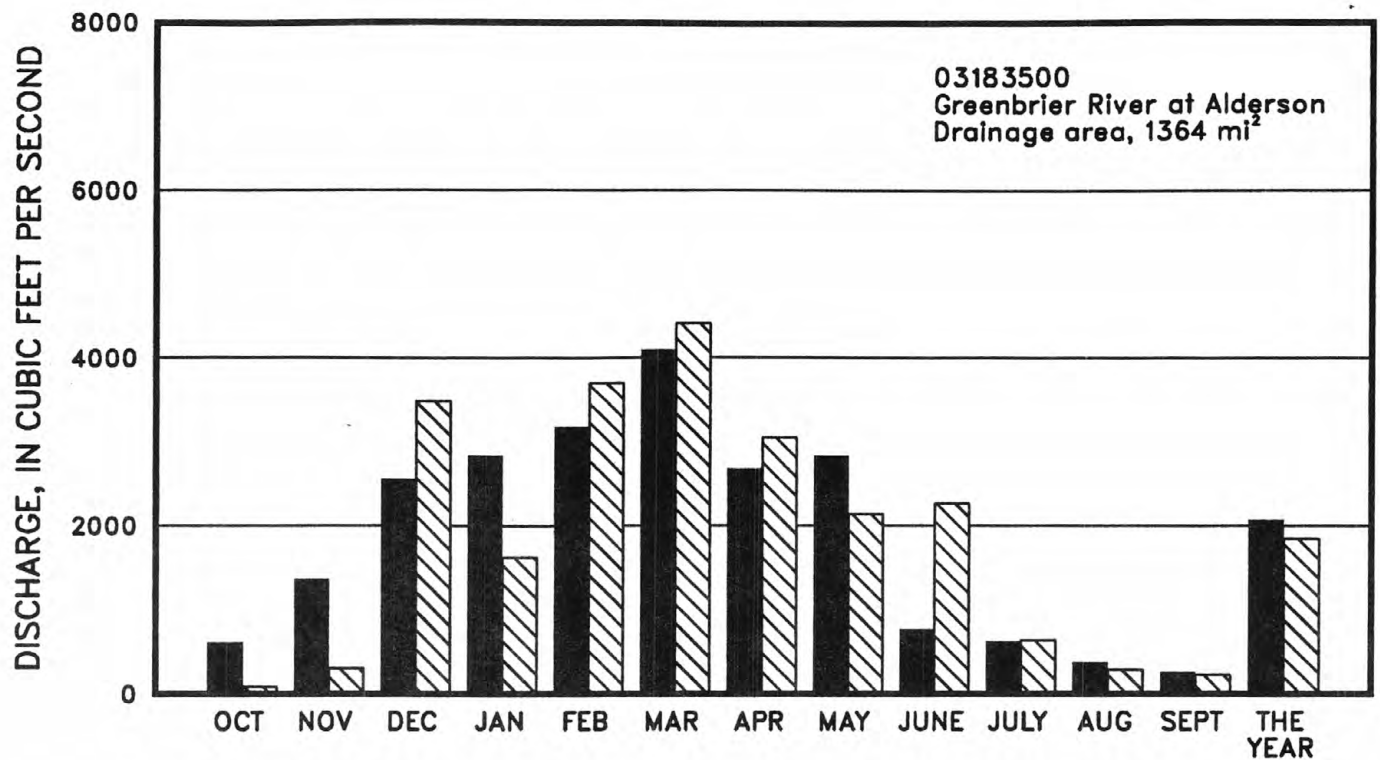
Ground-water levels were generally above average (for the period of record for each observation well) throughout most of the State for the 1992 water year. (Periods of record for the observed wells range from 5 to 52 years.) In October, water levels declined and were below average throughout most of the State. Water levels generally rose from November to March throughout the State and were below average for November and January but above average for December, February, and March. Water levels declined in April, May, and June but were above average. Water levels rose in July but declined in August and September and were above average for all three months throughout the State.

The index well in Gilmer County, near the center of the State, recorded above-average water levels in 1992 water year. The index well, for which 38 years of record are available, had record high water levels for each month of the water year. Modification of the well's construction from open-hole, dug well to gravel-pack construction in July 1988 could have affected the degree of water-level fluctuation at this well.



■ Median of monthly and yearly mean discharges for water years 1961-90.
 ▨ Monthly and yearly mean discharges during 1992 water year.

Figure 1. -- Discharge at the South Branch Potomac River and the Hughes River index gaging stations during the 1992 water year compared to median discharge for the period 1961-1990.



 Median of monthly and yearly mean discharges for water years 1961-90.
 Monthly and yearly mean discharges during 1992 water year.

Figure 2. -- Discharge at the Greenbrier River and the Bluestone River index gaging stations during the 1992 water year compared to median discharge for the period 1961-1990.

SPECIAL NETWORKS AND PROGRAMS

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.

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).

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 more than one-third 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 1992 water year that began October 1, 1991, and ended September 30, 1992. 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.

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.

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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.)

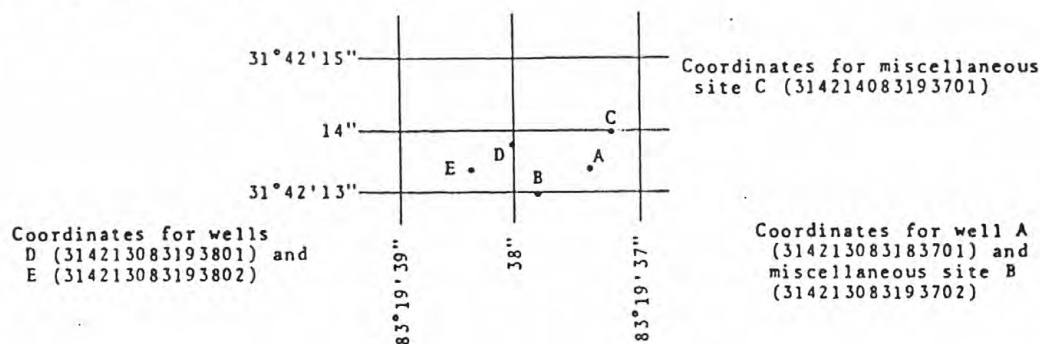


Figure 3. System for numbering wells and miscellaneous sites (latitude and longitude).

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, in Water-Supply Paper 2175, and in U.S. Geological Survey Techniques of Water-Resources Investigations, Book 3, Chapter A6.

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

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

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

In computing records of lake or reservoir contents, it is necessary to have available from surveys, curves or tables defining the relationship of stage and content. The application of stage to the stage-content curves or tables gives the contents from which daily, monthly, or yearly changes then are determined. If the stage-content relationship changes because of deposition of sediment in 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.

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 National Geodetic Vertical Datum of 1929 (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.

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.

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.

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.

Arrangement of Records

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

On-site Measurements and Sample Collection

In obtaining water-quality data, a major concern needs to be assuring that the data obtained represent the in situ quality of the water. To assure this, certain measurements, such as water temperature, pH, and dissolved oxygen, need to be made onsite when the samples are taken. To assure that measurements made in the laboratory also represent the in situ water, carefully prescribed procedures need to be followed in collecting the samples, in treating the samples to prevent changes in quality pending analysis, and in shipping the samples to the laboratory. Procedures for onsite measurements and for collecting, treating, and shipping samples are given in publications on "Techniques of Water-Resources Investigations," Book 1, Chap. D2; Book 3, Chap. C2; Book 5, Chap. A1, A3, and A4. All of these references are listed under "PUBLICATIONS ON TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS" which appears at the end of the introductory text. Detailed information on collecting, treating, and shipping samples may be obtained from the West Virginia District Office.

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

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

For chemical-quality stations equipped with digital monitors, the records consist of daily maximum, minimum, and mean values for each constituent measured and are 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.

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.

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 in analyzing sediment samples and computing sediment records are given in TWRI, Book 5, Chap. C1. Methods used by the Geological Survey laboratories are given in TWRI, Book 1, Chap. D2; Book 3, Chap. C2; Book 5, Chap. A1, A3, and A4.

WATER RESOURCES DATA - WEST VIRGINIA, 1992

Data Presentation

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

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

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

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

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

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

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

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

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

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

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

Remark Codes

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

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

Records of Ground-Water Levels

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.

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) National Geodetic Vertical Datum of 1929 (NGVD of 1929); it is reported with a precision depending on the method of determination.

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

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

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

A table of water levels follows the station description for each well. Water levels are reported in feet below land-surface datum 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.

WATER RESOURCES DATA - WEST VIRGINIA, 1992

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

ACCESS TO WATSTORE DATA

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

- * **Station Header File** - Contains descriptive information on 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.

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 $0.45 \mu\text{m}$ membrane filter. This is a convenient operational definition used by Federal agencies that collect water data. Determinations of "dissolved" constituents are made on subsamples of the filtrate.

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

Drainage area of a stream at a 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.

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.

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.

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.

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

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

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

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

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

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

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

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

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

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

7-day 10-year low flow (7 Q₁₀) 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.

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 μ m membrane filter has been digested by a method (usually using a dilute acid solution) that results in dissolution of only readily soluble substances. Complete dissolution of all the particulate matter is not achieved by the digestion treatment and thus the determination represents something less than the "total" amount (that is, less than 95 percent) of the constituent present in the sample. To achieve comparability of analytical data, equivalent digestion procedures 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 hierarchical scheme beginning with Kingdom and ending with Species at the base. The higher the classification level, the fewer features the organisms have in common. For example, the taxonomy of a particular mayfly, Hexagenia limbata, is the following:

Kingdom.....	Animal
Phylum.....	Arthropoda
Class.....	Insecta
Order.....	Ephemeroptera
Family.....	Ephemeridae
Genus.....	<u>Hexagenia</u>
Species.....	<u>Hexagenia limbata</u>

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

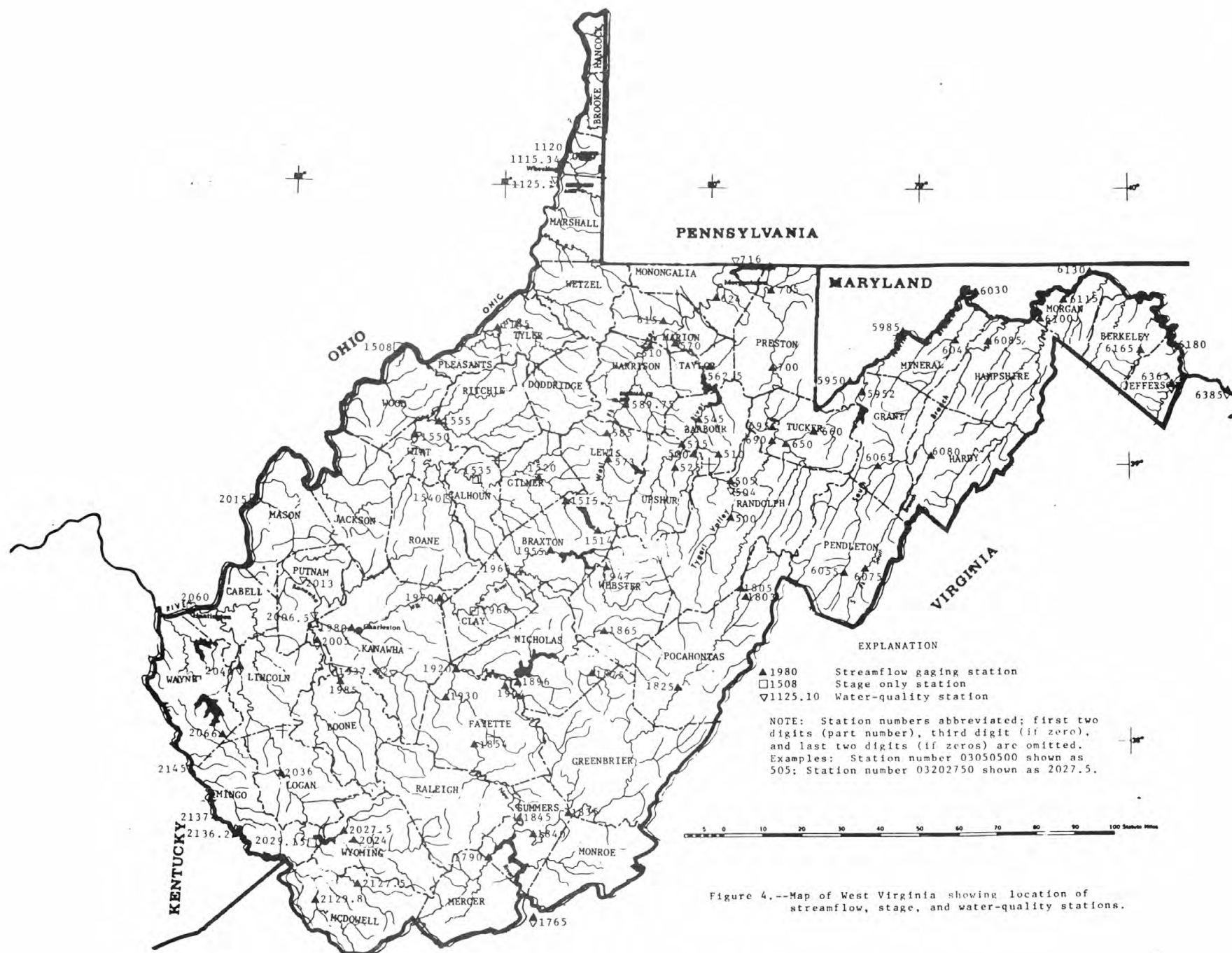
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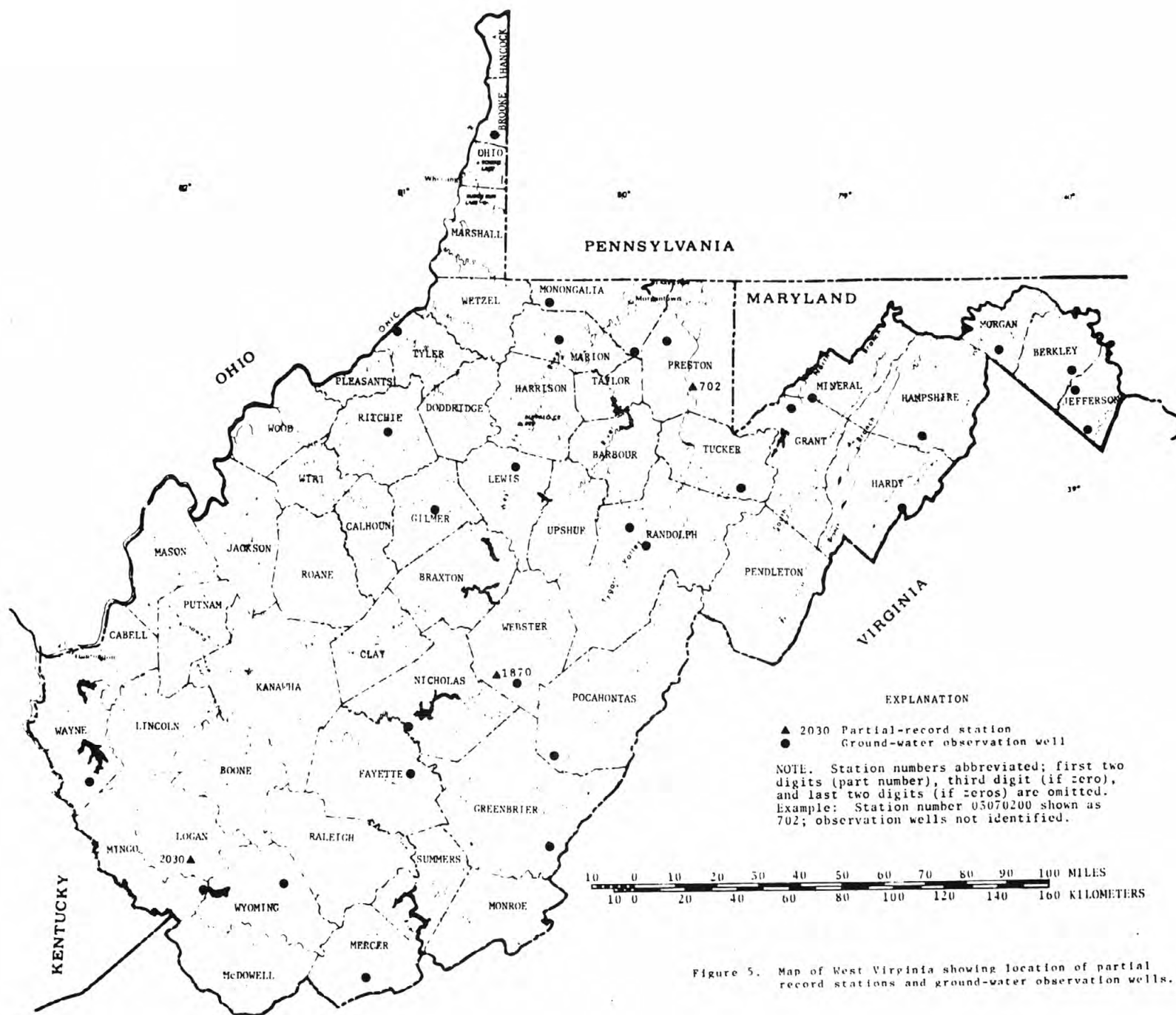


Figure 5. Map of West Virginia showing location of partial record stations and ground-water observation wells.

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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). Present 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 will begin using new trace-element protocols in the water year 1994.

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.

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Datum of gage is 2,276.01 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Water-discharge records fair except those for estimated daily discharges (beaverdams, 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)
July 24	1300	*2,490	*6.53	No other peak greater than base discharge.			

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18	e14	52	151	113	305	287	127	82	48	171	35
2	16	e14	340	132	126	260	255	119	74	54	135	43
3	15	e13	788	136	133	221	217	193	66	62	112	40
4	14	e13	299	218	126	199	205	140	62	60	104	41
5	14	e13	168	239	175	170	190	130	103	40	89	43
6	21	e12	127	185	135	150	185	131	160	56	77	39
7	23	e12	114	153	125	e200	172	115	110	56	73	41
8	17	e12	115	134	114	e260	149	142	143	45	68	35
9	17	e12	225	170	105	e280	142	255	167	714	86	38
10	17	e18	488	171	101	e240	132	216	117	270	74	44
11	15	e30	228	139	116	e480	184	180	93	1010	113	65
12	24	e19	165	129	94	e350	160	155	83	441	134	46
13	30	e15	293	136	96	e300	137	142	73	283	110	41
14	24	e17	367	275	139	e260	125	148	73	206	118	41
15	24	25	248	232	221	e200	120	160	72	167	86	35
16	45	24	187	184	600	e180	109	167	89	286	75	33
17	28	24	164	e170	350	e170	108	131	59	171	66	36
18	25	23	141	e160	414	e240	119	124	54	146	68	32
19	24	20	141	e145	504	e480	106	119	90	121	62	37
20	23	23	210	e135	447	454	99	99	102	91	59	37
21	16	24	160	e130	324	331	135	86	76	78	44	34
22	23	150	132	168	291	293	260	82	68	79	44	33
23	18	186	250	219	264	283	173	75	58	85	48	36
24	15	86	338	376	362	243	156	75	59	937	46	35
25	13	57	199	232	396	246	151	78	84	484	43	32
26	e13	45	158	196	1030	393	171	63	71	359	43	33
27	e13	42	136	e180	506	471	201	60	57	1180	43	41
28	e13	35	128	e160	357	348	178	58	49	624	69	42
29	e13	30	303	158	458	285	159	53	49	355	73	39
30	e14	36	243	147	---	258	142	68	40	235	42	36
31	e15	---	183	124	---	347	---	76	---	196	36	---
TOTAL	600	1044	7090	5484	8222	8897	4927	3767	2483	8939	2411	1163
MEAN	19.4	34.8	229	177	284	287	164	122	82.8	288	77.8	38.8
MAX	45	186	788	376	1030	480	287	255	167	1180	171	65
MIN	13	12	52	124	94	150	99	53	40	40	36	32
CFSM	.27	.48	3.13	2.42	3.88	3.93	2.25	1.66	1.13	3.95	1.07	.53
IN.	.31	.53	3.61	2.79	4.19	4.53	2.51	1.92	1.27	4.56	1.23	.59

e Estimated

POTOMAC RIVER BASIN

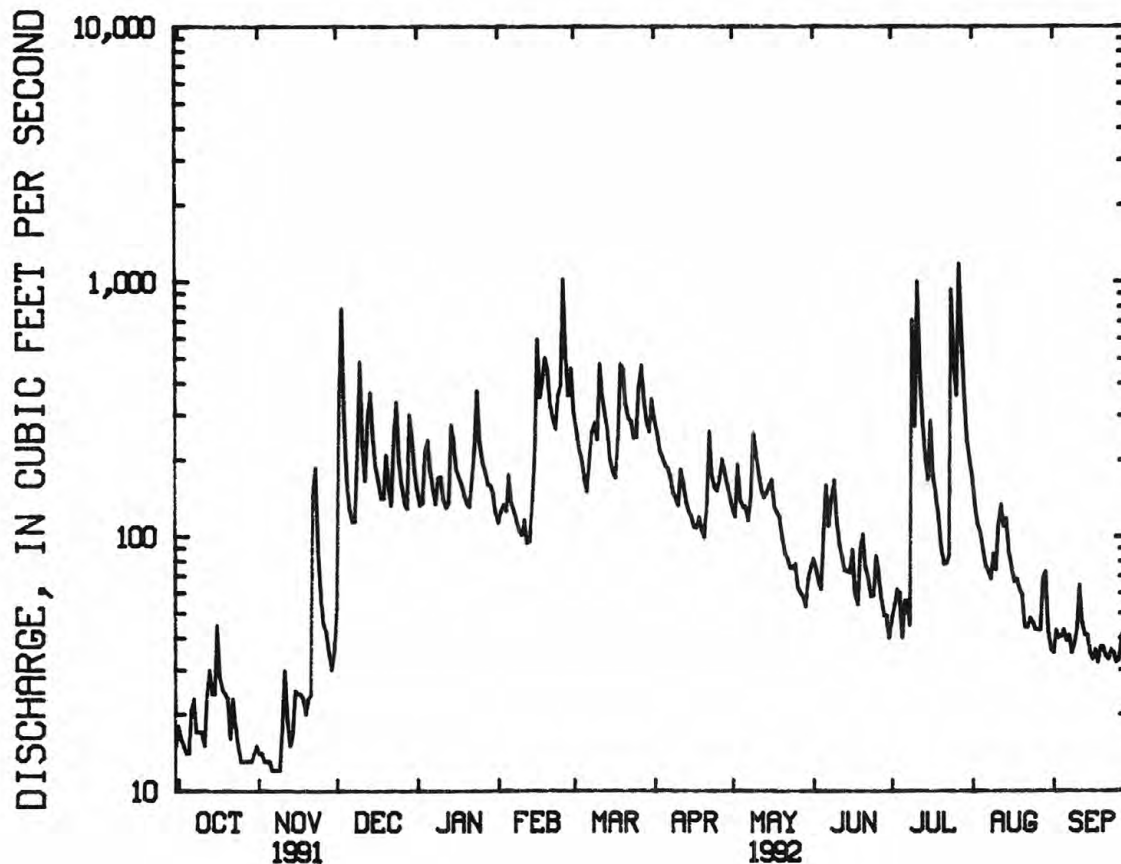
01595000 NORTH BRANCH POTOMAC RIVER AT STEYER, MD--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1956 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	75.6	139	232	231	258	336	281	192	121	90.6	71.0	49.9
MAX	316	588	527	569	491	885	573	419	442	340	334	238
(WY)	1977	1986	1973	1974	1961	1963	1958	1967	1981	1978	1956	1971
MIN	12.8	26.2	56.7	41.8	72.1	112	106	62.5	15.5	14.3	6.72	5.99
(WY)	1964	1966	1966	1977	1978	1990	1968	1965	1965	1965	1965	1959

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR	FOR 1992 WATER YEAR	WATER YEARS 1956 - 1992
ANNUAL TOTAL	46949.1	55027	
ANNUAL MEAN	129	150	172
HIGHEST ANNUAL MEAN			225
LOWEST ANNUAL MEAN			115
HIGHEST DAILY MEAN	788	Dec 3	1180
LOWEST DAILY MEAN	4.5	Sep 3	12
ANNUAL SEVEN-DAY MINIMUM	12	Sep 12	12
INSTANTANEOUS PEAK FLOW			2490
INSTANTANEOUS PEAK STAGE			6.53
INSTANTANEOUS LOW FLOW			UNKNOWN
ANNUAL RUNOFF (CFSM)	1.76	2.06	2.9
ANNUAL RUNOFF (INCHES)	23.92	28.04	32.02
10 PERCENT EXCEEDS	309	311	382
50 PERCENT EXCEEDS	57	118	102
90 PERCENT EXCEEDS	14	23	20

a Nov. 6-9.

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

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

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1979-81, October 1991 to September 1992.

WATER QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH WATER WHOLE FIELD (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	BARO- METRIC PRES- SURE (MM OF HG)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, (PER- CENT SATUR- ATION)	CALCIUM DIS- SOLVED (MG/L AS CA)
JUN 1992 16...	1100	82	704	7.2	16.5	708	9.0	99	110
DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)
JUN 1992 16...	17	9.7	2.4	320	3.9	0.10	4.9	514	<0.010
DATE	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS TOTAL (MG/L AS P)	PHOS- PHORUS DIS- SOLVED (MG/L AS P)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	HARD- NESS TOTAL (MG/L AS CACO3)
JUN 1992 16...	1.40	0.210	0.40	0.010	<0.010	<0.010	5	520	340

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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 National Geodetic Vertical Datum of 1929.

REMARKS.--Water-discharge records fair except those for Oct. 1 to Nov. 1, Aug. 17 to Sept. 30 (beaverdams) and Jan. 17-22 (ice effect), 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, 1,280 ft³/s, Feb. 27, gage height, 6.03 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e2.4	e3.5	6.1	58	54	305	240	48	33	15	37	e19
2	e2.9	3.1	111	58	51	90	156	45	34	13	27	e17
3	e2.6	2.9	166	61	49	89	127	73	33	18	27	e15
4	e2.4	2.8	51	151	58	86	66	60	31	15	25	e15
5	e2.3	3.1	29	293	70	87	64	61	104	11	24	e14
6	e2.7	2.7	23	238	63	167	61	90	261	13	22	e13
7	e3.4	2.9	21	204	51	204	75	147	373	16	23	e13
8	e3.2	3.0	20	174	51	121	78	72	45	12	23	e12
9	e3.0	3.0	43	158	48	224	88	172	58	206	22	e13
10	e2.8	3.7	83	147	47	193	86	247	50	81	19	e15
11	e2.5	9.6	42	102	43	272	89	232	45	214	20	e19
12	e3.2	7.5	30	48	45	230	69	199	45	129	38	e14
13	e4.8	6.4	42	39	48	193	59	174	37	120	35	e13
14	e3.9	5.1	47	97	54	164	62	117	33	85	53	e12
15	e3.8	4.3	33	86	92	58	64	127	39	59	52	e11
16	e7.0	4.0	28	77	197	49	55	224	40	53	39	e10
17	e4.4	3.7	27	e57	160	57	51	227	33	45	e28	e11
18	e4.2	3.4	25	e48	209	88	57	197	29	34	e32	e9.6
19	e3.9	5.5	25	e43	379	344	207	117	32	26	e33	e11
20	e3.1	6.3	27	e41	384	396	254	43	29	27	e28	e10
21	e2.5	4.3	22	e37	116	149	288	38	25	24	e23	e10
22	e3.4	39	18	e50	311	150	329	33	21	23	e19	e10
23	e3.0	30	37	105	351	236	274	31	24	27	e16	e11
24	e2.5	9.6	46	158	210	162	246	29	20	241	e17	e10
25	e2.1	7.5	28	126	99	72	187	29	20	198	e20	e9.6
26	e2.4	7.9	31	110	596	156	47	28	18	154	e17	e9.4
27	e3.9	7.3	24	103	467	359	52	36	16	348	e15	e10
28	e3.9	7.3	24	89	108	187	54	35	14	360	e20	e10
29	e4.0	5.6	77	72	245	74	51	32	13	241	e32	e11
30	e4.0	5.0	77	71	---	79	48	30	19	78	e24	e10
31	e4.1	---	61	66	---	112	---	28	---	45	e21	---
TOTAL	104.3	210.0	1324.1	3167	4656	5153	3584	3021	1574	2931	831	367.6
MEAN	3.36	7.00	42.7	102	161	166	119	97.5	52.5	94.5	26.8	12.3
MAX	7.0	39	166	293	596	396	329	247	373	360	53	19
MIN	2.1	2.7	6.1	37	43	49	47	28	13	11	15	9.4

e Estimated

POTOMAC RIVER BASIN

01595200 STONY RIVER NEAR MOUNT STORM, WV--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1962 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	52.6	93.5	113	113	138	212	156	117	72.3	47.4	29.0	30.7
MAX	234	669	301	239	253	537	371	271	237	205	104	140
(WY)	1977	1986	1973	1974	1982	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 1991 CALENDAR YEAR

FOR 1992 WATER YEAR

WATER YEARS 1962 - 1992

ANNUAL TOTAL	22733.9			26923.0			a97.7					
ANNUAL MEAN	a62.3			a73.6								
HIGHEST ANNUAL MEAN							134			1978		
LOWEST ANNUAL MEAN							42.0			1964		
HIGHEST DAILY MEAN	799			Mar 4			596			Feb 26		
LOWEST DAILY MEAN	2.1			Oct 25			2.1			Oct 25		
ANNUAL SEVEN-DAY MINIMUM	2.7			Oct 1			2.7			Oct 1		
INSTANTANEOUS PEAK FLOW							1280			Feb 27		
INSTANTANEOUS PEAK STAGE							6.03			Feb 27		
INSTANTANEOUS LOW FLOW							UNKNOWN					
10 PERCENT EXCEEDS	141						208			c16.41		
50 PERCENT EXCEEDS	27						38			49		
90 PERCENT EXCEEDS	4.0						4.0			8.8		

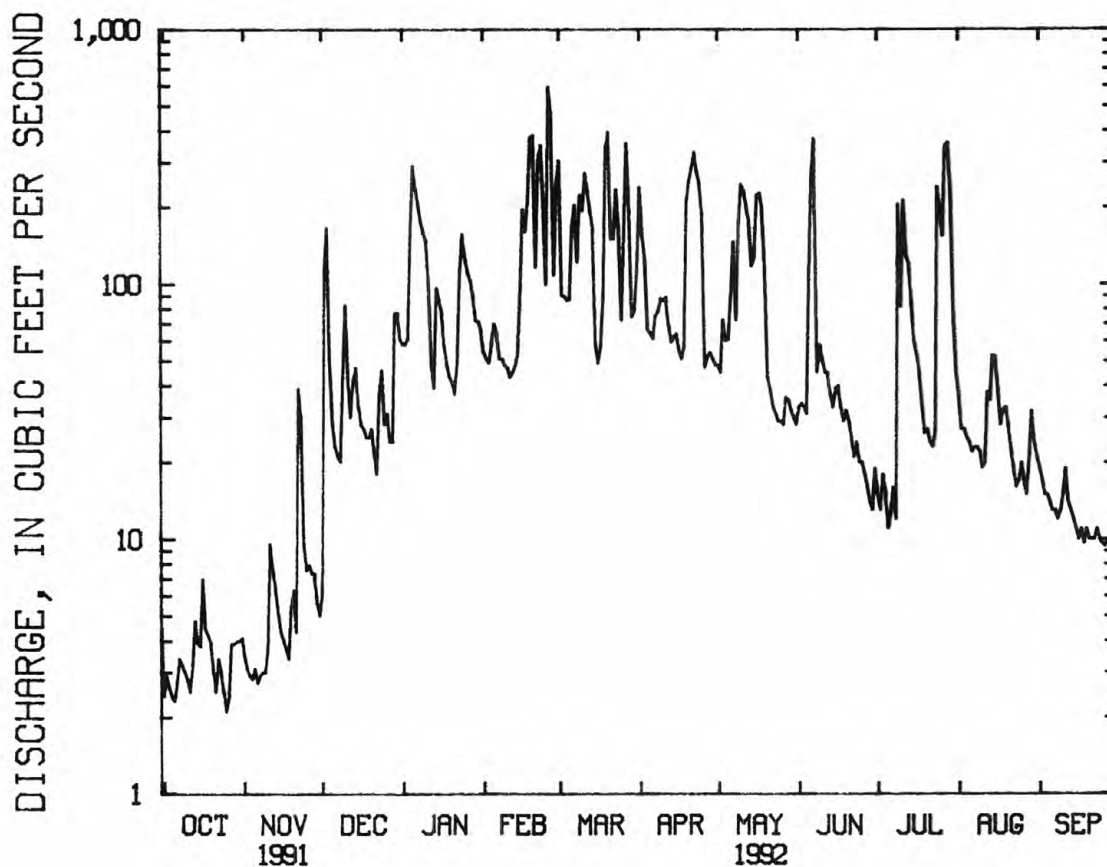
a Unadjusted.

e Estimated.

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 stopped June 1987. Temperature recorder malfunctioned Oct 1-29.

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, 23.5°C, July 28-30; minimum, 3.0°C, Nov. 7-12 and Jan. 16-17.

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14.5	8.5	8.0	---	5.0	9.0	12.5	15.0	13.0	20.0	19.0	19.5
2	15.0	9.5	8.0	---	5.0	8.0	12.5	18.0	14.0	21.5	18.0	19.0
3	15.5	7.0	6.5	6.5	4.0	9.5	9.0	18.0	17.0	20.5	20.0	19.0
4	16.0	6.0	6.5	7.0	4.5	9.5	---	15.5	17.0	21.5	20.0	20.0
5	16.0	5.0	5.5	8.0	5.0	10.5	---	13.0	16.0	21.5	19.0	20.0
6	15.0	4.0	4.0	8.0	4.5	12.5	---	14.0	20.5	21.5	19.0	20.0
7	11.0	3.5	4.0	8.0	4.5	13.5	---	16.0	22.0	20.5	20.0	21.0
8	10.0	3.0	---	8.0	4.5	10.0	---	14.0	20.0	20.5	20.0	22.5
9	11.0	3.0	---	8.0	4.5	13.5	12.0	12.0	19.0	20.5	21.5	23.0
10	11.5	3.0	---	8.5	4.5	12.5	13.5	16.0	19.0	21.5	22.0	21.5
11	11.5	3.0	---	8.0	4.0	12.5	14.5	20.0	19.0	20.5	22.5	20.5
12	11.0	3.5	---	6.5	4.0	9.0	14.0	20.0	20.0	21.5	20.0	18.0
13	10.0	4.0	---	6.0	4.5	9.0	12.0	19.0	19.5	21.5	19.0	17.0
14	9.5	4.0	---	6.0	4.5	8.5	11.0	20.0	19.0	23.0	18.0	17.5
15	9.0	5.5	---	5.5	5.0	7.5	13.5	19.0	20.5	23.0	18.0	18.0
16	9.0	6.5	---	4.0	5.0	5.5	14.0	20.0	20.5	21.5	18.5	18.0
17	9.0	6.0	---	3.5	6.5	6.5	15.0	20.0	21.5	21.0	18.5	18.5
18	9.0	5.5	---	3.5	7.0	6.5	15.5	20.0	20.5	21.5	19.5	17.5
19	9.0	7.0	---	3.5	10.0	9.0	19.5	20.0	20.0	21.5	20.0	18.0
20	9.0	9.0	---	3.5	10.0	10.0	19.0	18.0	19.5	22.0	19.5	16.5
21	8.0	9.5	---	3.5	9.0	10.0	19.0	17.0	18.5	21.5	19.5	17.5
22	9.5	9.5	---	4.5	10.5	10.0	18.0	18.0	17.0	20.0	19.5	18.0
23	10.5	9.5	---	5.0	11.0	10.5	19.0	19.0	16.5	21.5	20.5	18.0
24	11.5	9.0	---	5.0	11.0	10.5	19.0	18.0	18.5	20.5	20.5	15.0
25	12.5	6.0	---	4.5	8.0	7.5	18.0	16.0	18.0	22.5	22.5	13.0
26	12.5	5.0	---	4.0	10.5	10.0	15.0	14.0	19.5	22.0	22.5	16.0
27	12.5	4.0	---	5.0	10.5	11.0	11.0	14.0	20.5	21.5	22.0	16.5
28	12.5	4.0	---	5.5	7.0	11.0	10.5	14.0	20.5	23.5	21.0	17.5
29	12.5	5.0	---	5.5	8.5	7.0	13.0	14.0	20.5	23.5	19.0	15.5
30	9.5	7.5	---	5.0	---	8.5	12.0	14.0	21.5	23.5	19.5	13.5
31	8.5	---	---	5.0	---	9.5	---	13.0	---	20.5	20.0	---
MAX	16.0	9.5	---	---	11.0	13.5	---	20.0	22.0	23.5	22.5	23.0

WTR YR 1992 MAX 23.5

POTOMAC RIVER BASIN

01595200 STONY RIVER NEAR MOUNT STORM, WV--Continued

WATER-QUALITY RECORDS

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MINIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12.5	7.5	7.5	---	5.0	6.0	9.0	11.0	13.0	19.5	18.0	18.0
2	12.5	7.0	6.5	---	4.0	5.5	8.5	14.0	13.0	18.5	16.0	17.0
3	13.5	6.0	6.0	5.0	4.0	7.5	8.0	15.0	14.0	19.5	17.0	18.0
4	14.5	5.0	5.5	6.5	4.0	8.0	---	13.0	16.0	19.5	18.0	18.0
5	15.0	4.0	3.5	7.0	4.5	9.0	---	12.0	15.0	17.5	16.0	19.0
6	11.0	3.5	3.5	8.0	4.5	10.0	---	12.0	16.0	18.5	16.0	19.5
7	9.5	3.0	4.0	8.0	4.5	10.0	---	14.0	20.0	17.0	17.5	19.0
8	8.5	3.0	---	7.5	4.5	9.5	---	11.0	19.0	17.5	18.0	20.5
9	8.5	3.0	---	7.5	4.5	9.5	10.5	11.0	18.0	18.5	19.0	20.5
10	9.5	3.0	---	8.0	4.0	11.0	12.0	12.0	17.0	19.0	19.0	19.5
11	11.0	3.0	---	6.5	4.0	8.5	12.5	15.0	17.0	19.0	20.0	18.0
12	10.0	3.0	---	6.0	4.0	8.5	12.0	17.5	17.0	20.5	18.5	16.0
13	9.5	3.5	---	6.0	4.0	8.5	9.0	18.0	17.5	21.5	17.5	15.0
14	7.5	3.5	---	5.5	4.5	7.5	10.0	18.0	18.0	21.5	17.5	15.0
15	8.5	4.0	---	4.0	4.5	5.5	11.0	16.0	17.5	21.5	17.5	16.0
16	8.5	5.5	---	3.0	5.0	3.5	11.5	16.0	18.0	20.5	17.0	16.0
17	7.0	5.5	---	3.0	5.0	4.0	13.5	20.0	18.5	19.5	18.0	16.0
18	7.0	4.5	---	3.5	6.5	4.5	14.0	20.0	19.0	20.0	18.0	16.0
19	8.5	5.0	---	3.5	7.0	4.5	15.5	18.0	18.5	19.5	18.5	16.0
20	8.0	7.0	---	3.5	9.0	9.0	19.0	15.0	18.5	19.5	17.5	14.5
21	7.5	9.0	---	3.5	7.0	6.0	17.0	13.0	15.5	19.5	17.0	16.5
22	7.5	9.5	---	3.5	7.0	6.0	17.0	14.0	13.5	19.5	18.0	17.5
23	9.0	9.0	---	4.0	10.5	9.0	17.5	15.0	14.5	19.5	19.0	15.0
24	10.0	6.0	---	4.5	8.0	7.5	18.0	16.0	15.5	18.5	18.5	12.5
25	11.0	5.0	---	4.0	7.0	6.0	15.0	14.0	16.0	18.5	19.5	12.5
26	11.0	4.0	---	4.0	7.0	7.0	11.0	14.0	16.0	21.5	20.0	12.5
27	11.0	4.0	---	4.0	7.0	10.0	10.0	14.0	17.5	19.5	20.0	16.0
28	12.5	4.0	---	5.0	6.5	7.0	9.5	12.0	15.5	19.5	19.0	15.0
29	9.5	4.0	---	5.0	5.0	5.5	9.0	12.0	16.5	23.5	18.0	13.5
30	7.0	5.0	---	5.0	---	6.5	11.0	13.0	18.5	20.5	17.5	12.0
31	7.5	---	---	5.0	---	8.5	---	13.0	---	19.0	19.0	---
MIN	7.0	3.0	---	---	4.0	3.5	---	11.0	13.0	17.0	16.0	12.0

WTR YR 1992 MIN 3.0

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 National Geodetic Vertical Datum of 1929. 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, 3,650 ft³/s, July 27, gage height, 6.10 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	166	137	134	427	484	2400	1360	669	373	341	877	379
2	167	138	192	402	482	1690	1350	781	356	362	856	406
3	172	137	428	386	481	1320	1150	754	359	313	460	402
4	171	137	423	393	483	1260	957	541	364	295	441	415
5	172	137	270	402	488	1030	897	501	460	303	438	392
6	169	137	241	404	484	946	768	479	479	294	438	393
7	165	137	240	409	483	960	597	476	490	285	436	390
8	161	137	239	407	483	962	511	678	487	283	439	388
9	160	137	244	409	479	979	505	1650	428	290	457	387
10	158	145	247	410	477	1000	579	1710	422	292	436	391
11	541	143	244	407	468	1680	799	1460	419	539	441	367
12	494	135	266	407	430	1810	758	1150	426	999	437	363
13	507	121	301	407	431	1450	565	1070	432	900	436	360
14	143	123	302	419	431	1250	492	1240	430	650	435	360
15	144	128	300	417	443	1050	491	1260	431	497	439	360
16	141	127	299	419	473	936	489	1530	397	423	440	375
17	139	127	299	420	464	896	476	1560	374	492	445	398
18	139	126	298	417	476	985	652	884	377	620	419	397
19	139	121	297	415	484	1510	629	601	366	406	407	795
20	139	120	297	417	548	1980	466	472	354	375	410	888
21	139	122	301	416	637	1720	811	456	353	364	408	397
22	140	164	299	418	637	1560	1490	422	352	386	409	388
23	143	196	300	430	638	1450	1190	370	356	370	410	400
24	140	161	303	438	680	1080	1320	371	346	915	408	379
25	138	137	301	431	964	1020	1210	367	322	1750	389	373
26	143	116	301	427	2330	1200	991	365	322	870	383	372
27	143	119	301	425	2960	1750	833	362	320	2220	398	373
28	143	132	306	426	2900	2040	732	425	319	3250	425	370
29	143	131	413	426	2700	1860	702	364	317	2140	409	367
30	143	131	447	442	---	1580	700	626	315	1440	401	364
31	140	---	432	485	---	1380	---	613	---	934	397	---
TOTAL	5742	4059	9265	12958	23918	42734	24470	24207	11546	23598	14024	12389
MEAN	185	135	299	418	825	1379	816	781	385	761	452	413
MAX	541	196	447	485	2960	2400	1490	1710	490	3250	877	888
MIN	138	116	134	386	430	896	466	362	315	283	383	360

POTOMAC RIVER BASIN

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

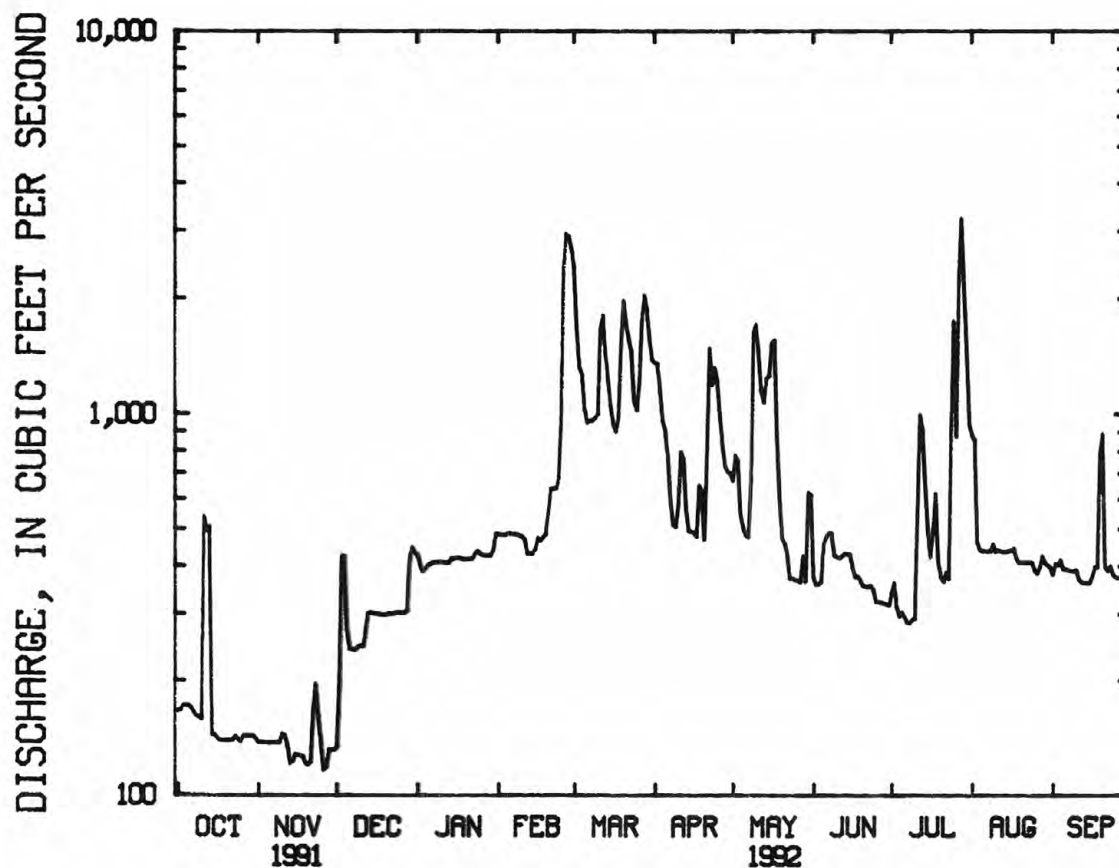
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1950 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	367	486	829	891	1114	1498	1146	910	511	323	309	268
MAX	1423	2806	2536	2276	2421	3414	2442	2238	1493	1294	1401	737
(WY)	1955	1986	1973	1952	1956	1963	1958	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 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1950 - 1992	
ANNUAL TOTAL	222528		208910			
ANNUAL MEAN	610		571		719	
ANNUAL MEAN ⁺	534		576		715	
HIGHEST ANNUAL MEAN					943	
LOWEST ANNUAL MEAN					412	
HIGHEST DAILY MEAN	4390	Apr 16	3250	Jul 28	18400	Aug 18 1955
LOWEST DAILY MEAN	116	Nov 26	116	Nov 26	36	Oct 20 1951
ANNUAL SEVEN-DAY MINIMUM	124	Nov 15	124	Nov 15	38	Oct 18 1951
INSTANTANEOUS PEAK FLOW			3650	Jul 27	a39400	Oct 15 1954
INSTANTANEOUS PEAK STAGE			6.10	Jul 27	17.15	Oct 15 1954
INSTANTANEOUS LOW FLOW			115	(b)	UNKNOWN	
ANNUAL RUNOFF (CFSM) ⁺	1.32		1.43		1.77	
ANNUAL RUNOFF (INCHES) ⁺	17.93		19.39		24.03	
10 PERCENT EXCEEDS	1510		1250		1610	
50 PERCENT EXCEEDS	270		418		412	
90 PERCENT EXCEEDS	142		142		112	

⁺ 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.

b Nov. 26, 27.



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.

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 National Geodetic Vertical Datum of 1929. Prior to June 18, 1929, nonrecording gage at same site and datum.

REMARKS.--Records good except those for estimated daily discharges (ice effect), which are fair. 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. 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, 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, 6,430 ft³/s, Feb. 26, gage height, 7.32 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	207	198	208	531	709	3380	2470	1200	869	461	1140	531
2	206	196	266	515	656	2480	2290	1130	650	570	1060	479
3	209	195	839	513	682	1870	2110	1180	598	618	859	497
4	216	195	785	512	676	1710	1740	1090	612	776	637	515
5	230	195	512	551	698	1490	1580	921	1450	586	612	513
6	224	195	369	573	703	1270	1450	881	1910	550	582	581
7	210	195	326	550	698	1530	1230	835	1400	487	558	611
8	209	199	317	529	711	1700	1050	928	1280	448	556	560
9	206	202	322	517	662	1610	1000	3050	1120	456	711	563
10	204	215	340	517	607	1630	986	4020	967	535	627	560
11	234	257	342	510	650	3230	1170	3150	867	533	577	599
12	539	235	328	496	619	3830	1310	2380	804	970	606	545
13	515	213	347	499	589	2840	1050	2040	768	1120	565	539
14	484	198	368	551	598	2340	905	2020	727	890	577	526
15	201	195	350	610	663	1960	880	1880	703	745	609	508
16	200	199	343	576	862	1640	862	1940	672	563	592	498
17	194	198	339	542	944	1500	858	2110	601	574	589	506
18	191	198	336	e590	934	1590	865	1720	583	623	579	508
19	191	196	323	e580	1030	2330	971	1210	581	649	526	529
20	184	193	319	e570	1160	3270	913	996	561	474	509	1070
21	188	197	338	e560	1230	3190	948	882	538	442	506	685
22	191	331	348	560	1190	2790	3230	848	531	436	491	490
23	192	543	340	586	1140	2750	2570	765	511	486	486	463
24	193	335	345	723	1290	2070	2370	732	516	859	484	459
25	195	253	342	676	1630	2020	2280	717	513	2900	466	428
26	193	220	337	664	5170	2790	1890	680	497	1750	435	445
27	198	195	332	612	5400	4270	1620	665	479	2920	463	446
28	199	192	350	629	4250	4130	1410	634	462	4300	673	450
29	196	203	571	629	3770	3670	1270	665	446	3070	968	432
30	196	202	764	623	---	2940	1220	738	442	2050	625	424
31	198	---	613	693	---	2740	---	987	---	1370	563	---
TOTAL	7193	6738	12359	17787	39921	76560	44498	42994	22658	33211	19231	15960
MEAN	232	225	399	574	1377	2470	1483	1387	755	1071	620	532
MAX	539	543	839	723	5400	4270	3230	4020	1910	4300	1140	1070
MIN	184	192	208	496	589	1270	858	634	442	436	435	424

e Estimated

POTOMAC RIVER BASIN

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

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1929 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	610	757	1291	1536	1984	2837	2333	1714	886	515	435	387
MAX	3791	5350	4652	5115	4125	8763	4888	3902	2375	2270	2028	2036
(WY)	1943	1886	1973	1937	1961	1936	1970	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

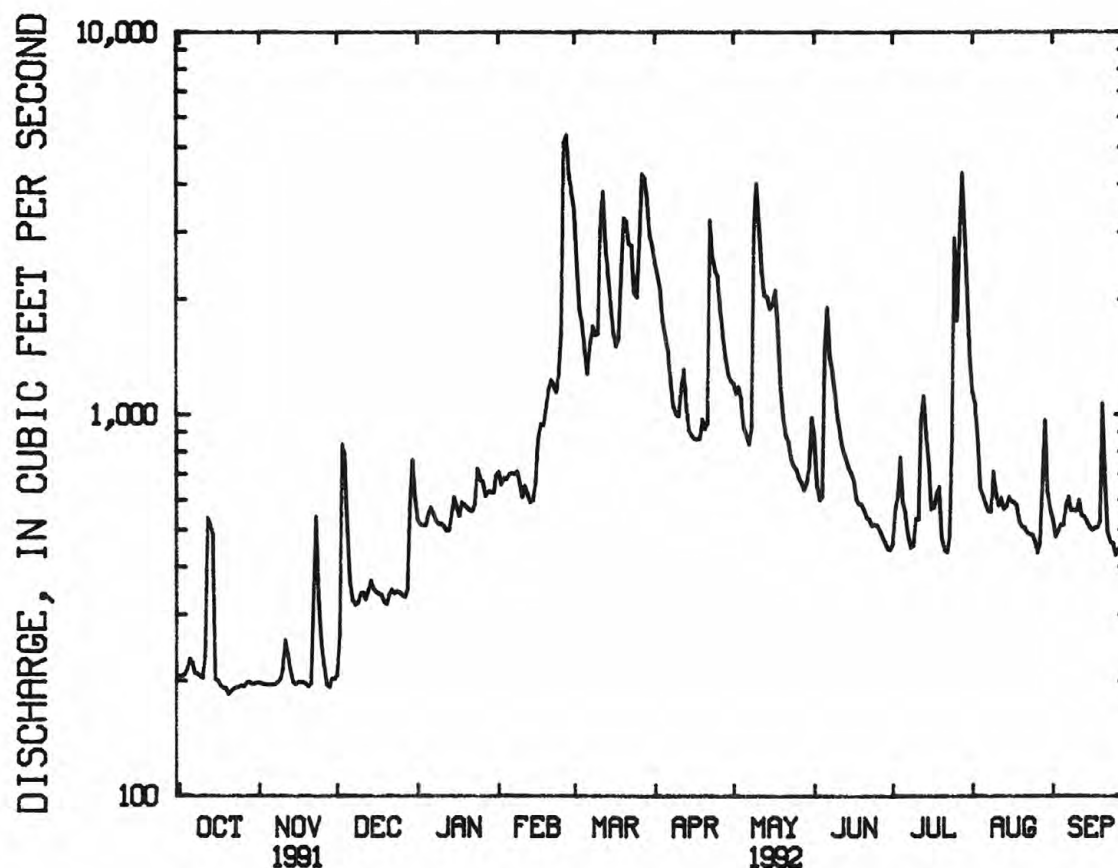
SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1929 - 1992	
ANNUAL TOTAL	388841		339110			
ANNUAL MEAN	1065		927		1272	
ANNUAL MEAN+	989		932		1272	
HIGHEST ANNUAL MEAN					1801	
LOWEST ANNUAL MEAN					632	
HIGHEST DAILY MEAN	7500		5400		47400	
LOWEST DAILY MEAN	184		184		13	
ANNUAL SEVEN-DAY MINIMUM	190		190		16	
INSTANTANEOUS PEAK FLOW			6430		b88200	
INSTANTANEOUS PEAK STAGE			7.32		29.10	
INSTANTANEOUS LOW FLOW			184		12	
ANNUAL RUNOFF (CFSM)+	1.13		1.07		1.45	
ANNUAL RUNOFF (INCHES)+	15.35		14.46		19.74	
10 PERCENT EXCEEDS	2600		2110		2950	
50 PERCENT EXCEEDS	345		591		664	
90 PERCENT EXCEEDS	202		202		162	

+ Adjusted for change in reservoir contents since October 1981.

a Sept. 21-24, 1932.

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

c Oct. 20, 21.



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.

WATER-DISCHARGE RECORDS

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 National Geodetic Vertical Datum of 1929 (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.--Water-discharge records good except those for estimated daily discharges (ice effect), 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.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,000 ft³/s, Aug. 19, 1955, gage height, 12.20 ft, from rating curve extended above 4,900 ft³/s, on basis of contracted-opening measurement at gage height 11.53 ft; minimum daily discharge, 1.2 ft³/s, Aug. 18, 1988.

PEAK DISCHARGE FOR CURRENT YEAR.--Peak discharge, 1,310 ft³/s, Feb. 26, gage height, 6.74 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.1	2.4	4.1	121	e49	383	273	171	82	33	134	51
2	2.0	2.5	17	99	e50	331	242	146	71	42	97	39
3	2.1	2.5	431	83	e48	278	215	128	62	52	75	32
4	2.1	2.6	305	82	e47	237	193	113	59	54	65	31
5	2.4	2.7	205	139	e50	203	170	101	160	39	50	28
6	2.7	2.7	143	169	e47	172	147	93	225	32	40	33
7	2.2	3.1	102	146	e43	179	131	85	177	27	31	50
8	1.7	2.7	77	122	e42	262	119	93	181	22	28	43
9	1.8	2.4	64	106	e40	250	108	308	216	26	50	34
10	1.9	3.1	94	94	e38	228	101	428	170	116	37	31
11	2.0	6.5	89	81	e40	655	107	369	134	104	29	27
12	2.1	5.9	76	71	41	599	104	313	107	90	27	21
13	2.2	5.7	66	64	40	478	93	279	91	81	25	16
14	2.2	5.0	57	62	40	398	84	294	83	64	47	15
15	2.2	4.0	46	e52	50	339	77	347	76	49	77	14
16	2.3	3.3	41	e41	98	282	73	540	65	37	67	13
17	2.4	2.5	36	e38	142	242	70	439	57	28	54	11
18	2.3	2.5	33	e38	204	215	69	380	53	24	50	10
19	2.3	2.5	26	e36	302	320	72	334	57	20	41	9.9
20	2.2	2.3	23	e33	277	532	76	289	52	16	40	9.0
21	2.2	2.4	31	e33	236	562	100	248	49	13	36	8.9
22	2.3	7.3	27	e30	200	491	894	216	45	12	31	10
23	2.3	13	26	e33	169	482	622	186	37	16	32	13
24	2.2	11	27	e38	172	429	507	165	30	32	33	9.9
25	2.2	8.1	26	e42	216	377	437	149	31	77	36	10
26	2.2	6.1	24	e39	983	396	376	126	29	90	44	14
27	3.1	5.1	24	e42	716	460	321	110	25	191	39	13
28	2.4	4.5	25	e47	545	409	268	94	20	480	87	13
29	2.4	3.9	95	e44	456	358	227	81	17	318	118	10
30	2.4	3.4	172	e43	---	320	197	80	18	233	91	9.2
31	2.4	---	153	e48	---	312	---	92	---	175	67	---
TOTAL	69.3	131.7	2565.1	2116	5381	11179	6473	6797	2479	2593	1678	628.9
MEAN	2.24	4.39	82.7	68.3	186	361	216	219	82.6	83.6	54.1	21.0
MAX	3.1	13	431	169	983	655	894	540	225	480	134	51
MIN	1.7	2.3	4.1	30	38	172	69	80	17	12	25	8.9
CFSM	.01	.02	.38	.31	.85	1.65	.99	1.00	.38	.38	.25	.10
IN.	.01	.02	.44	.36	.91	1.90	1.10	1.15	.42	.44	.29	.11

e Estimated

POTOMAC RIVER BASIN

01604500 PATTERSON CREEK NEAR HEADSVILLE, WV--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1938 - 1992, BY WATER YEAR (WY)

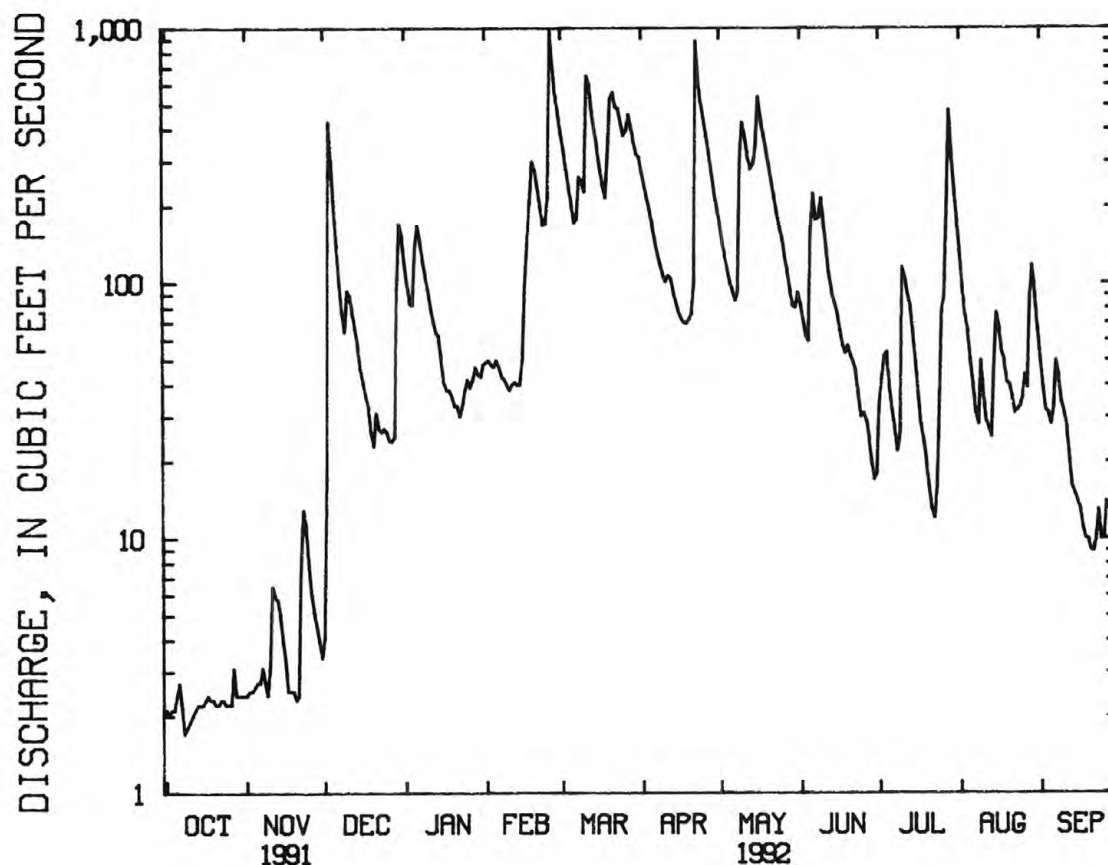
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	79.4	81.4	160	195	300	409	307	221	109	60.4	49.7	39.7
MAX	745	901	825	558	752	1346	845	763	379	415	475	395
(WY)	1943	1986	1973	1991	1971	1963	1984	1988	1940	1989	1955	1945
MIN	2.24	4.39	9.70	22.0	30.7	58.3	54.1	21.2	13.4	4.45	5.20	2.80
(WY)	1992	1992	1944	1981	1954	1990	1969	1969	1969	1966	1966	1991

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1938 - 1992	
ANNUAL TOTAL	49678.9		42091.0		167	
ANNUAL MEAN	136		115		299	
HIGHEST ANNUAL MEAN					35.1	
LOWEST ANNUAL MEAN					11100	
HIGHEST DAILY MEAN	1680	Jan 17	983	Feb 26	11100	Oct 15 1942
LOWEST DAILY MEAN	1.7	Oct 8	1.7	Oct 8	1.2	Aug 18 1988
ANNUAL SEVEN-DAY MINIMUM	2.0	Oct 7	2.0	Oct 7	1.7	Sep 5 1965
INSTANTANEOUS PEAK FLOW			1310	Feb 26	a16000	Aug 19 1955
INSTANTANEOUS PEAK STAGE			6.74	Feb 26	12.20	Aug 19 1955
INSTANTANEOUS LOW FLOW			1.6	(b)	1.1	(c)
ANNUAL RUNOFF (CFSM)	.62		.53		.76	
ANNUAL RUNOFF (INCHES)	8.44		7.15		10.36	
10 PERCENT EXCEEDS	429		320		422	
50 PERCENT EXCEEDS	26		50		58	
90 PERCENT EXCEEDS	2.4		2.5		9.8	

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

b Oct. 7, 8.

c Aug. 18, 19, 1988.



POTOMAC RIVER BASIN

01604500 PATTERSON CREEK NEAR HEADSVILLE, WV--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1960-61, 1969 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH WATER WHOLE FIELD (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	BARO- METRIC PRES- SURE (MM OF HG)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)
OCT 1991								
07...	1100	2.5	230	7.6	14.0	747	8.1	80
DEC								
09...	1425	54	272	8.0	9.5	760	10.8	95
FEB 1992								
12...	1245	42	115	8.6	1.5	760	16.0	114
APR								
01...	1030	264	101	7.2	5.0	780	12.7	97
JUN								
16...	1000	77	135	7.9	20.0	760	7.8	86
AUG								
05...	1300	54	164	8.0	23.5	760	--	--
SEP								
14...	0930	15	168	--	22.0	760	7.6	87

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

REMARKS.--Records good except those for periods of estimated daily discharges (ice effect, doubtful gage-height record), 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)
Apr. 21	2400	*5,460	*6.76	No other peak greater than peak discharge.			

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	26	26	54	137	80	353	188	195	169	133	98	36
2	26	26	303	122	69	295	174	174	154	176	67	34
3	25	27	549	131	73	249	162	194	145	140	58	37
4	25	26	289	502	73	218	153	168	156	e172	59	43
5	27	26	178	440	75	195	146	156	678	e128	53	109
6	37	26	132	318	71	177	136	147	648	133	51	90
7	30	27	104	235	68	239	130	137	474	110	48	73
8	28	26	90	189	68	389	124	232	392	95	47	60
9	27	26	82	163	61	318	124	336	350	89	51	78
10	27	30	98	145	e50	326	132	305	324	83	48	57
11	27	41	88	128	e52	680	125	268	269	74	44	57
12	28	34	80	111	e51	523	120	240	229	70	45	50
13	27	31	76	101	e54	415	114	227	202	65	44	45
14	27	29	86	103	60	330	111	225	182	62	58	43
15	27	28	86	96	95	280	110	285	171	68	50	41
16	28	28	77	82	186	233	108	479	157	59	47	39
17	28	27	74	e80	156	209	106	483	141	55	46	38
18	27	27	70	e72	151	212	107	384	277	57	46	37
19	26	27	58	e64	162	528	107	381	488	53	42	38
20	26	27	59	e68	157	455	101	341	275	51	40	37
21	26	28	63	e64	143	378	1040	288	208	49	39	36
22	26	66	58	e62	130	326	2530	254	172	49	38	36
23	27	89	57	e64	123	296	921	225	147	58	37	35
24	27	48	65	e67	240	243	596	208	133	68	36	33
25	29	38	59	e64	321	214	478	193	125	88	35	33
26	28	34	53	e63	775	241	387	185	112	60	35	36
27	28	31	54	71	577	265	321	175	100	67	35	35
28	27	32	55	72	428	237	273	152	90	73	44	35
29	27	31	267	75	441	217	235	144	84	58	73	33
30	26	31	232	79	---	208	212	156	85	53	44	31
31	26	---	171	81	---	205	---	194	---	87	39	---
TOTAL	846	993	3767	4049	4990	9454	9571	7531	7137	2583	1497	1385
MEAN	27.3	33.1	122	131	172	305	319	243	238	83.3	48.3	46.2
MAX	37	89	549	502	775	680	2530	483	678	176	98	109
MIN	25	26	53	62	50	177	101	137	84	49	35	31
CFSM	.15	.18	.67	.72	.95	1.68	1.75	1.33	1.31	.46	.27	.25
IN.	.17	.20	.77	.83	1.02	1.93	1.96	1.54	1.46	.53	.31	.28

e Estimated

POTOMAC RIVER BASIN

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

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	83.6	138	156	193	250	384	284	220	136	70.3	76.7	66.6
MAX	546	2219	444	474	580	832	797	616	664	381	351	300
(WY)	1977	1986	1949	1979	1982	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 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1940 - 1992	
ANNUAL TOTAL	55186		53803			
ANNUAL MEAN	151		147		170	
HIGHEST ANNUAL MEAN					304	
LOWEST ANNUAL MEAN					88.8	
HIGHEST DAILY MEAN	e2400		2530		25000	
LOWEST DAILY MEAN	25		25		14	
ANNUAL SEVEN-DAY MINIMUM	26		26		14	
INSTANTANEOUS PEAK FLOW			5460		c44000	
INSTANTANEOUS PEAK STAGE			6.76		d22.58	
INSTANTANEOUS LOW FLOW			25		13	
ANNUAL RUNOFF (CFSM)	.83		.81		.93	
ANNUAL RUNOFF (INCHES)	11.28		11.00		12.67	
10 PERCENT EXCEEDS	316		325		360	
50 PERCENT EXCEEDS	59		82		87	
90 PERCENT EXCEEDS	27		28		31	

a Oct. 3, 4.

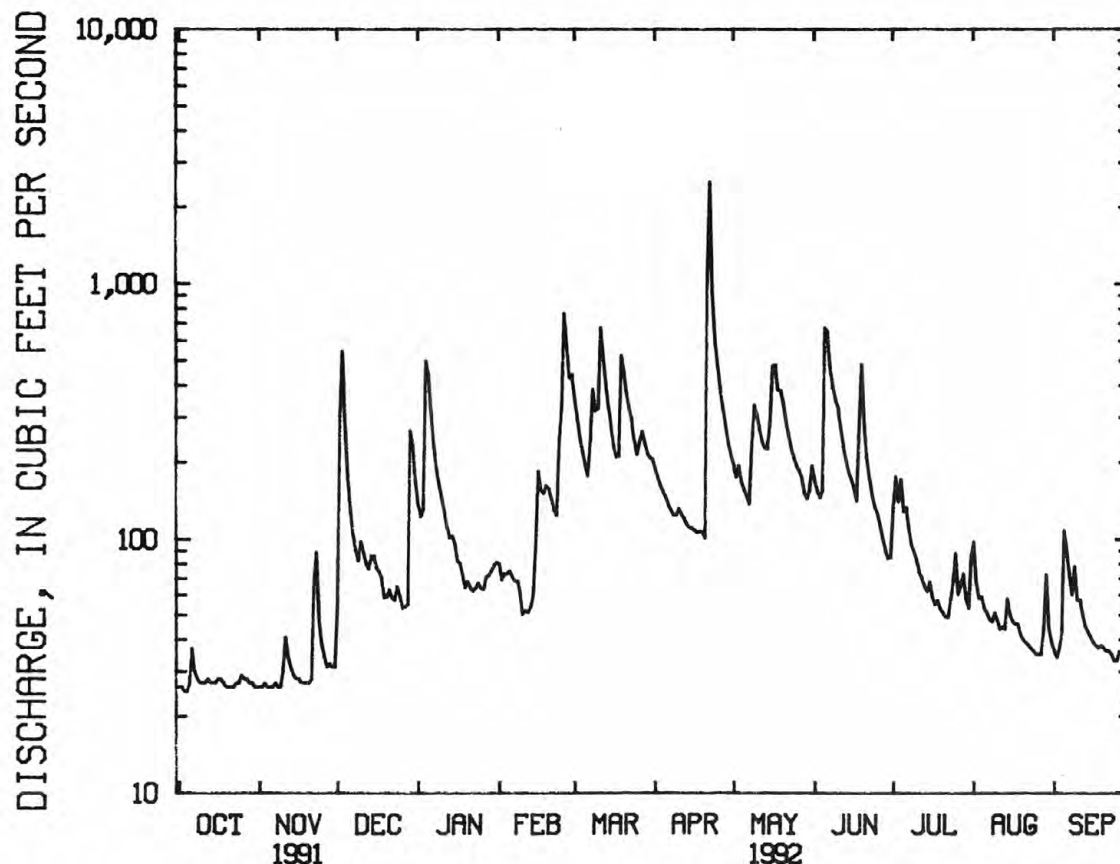
b Sept. 7-12, 1966.

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

d From floodmarks.

e Estimated.

f Oct. 1-5.



POTOMAC RIVER BASIN

01606500 SOUTH BRANCH POTOMAC RIVER NEAR PETERSBURG, WV

LOCATION (REVISED).--Lat $38^{\circ}59'28''$, long $79^{\circ}10'34''$, 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.

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 968.34 ft above National Geodetic Vertical Datum of 1929. 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 6.34 ft lower.

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

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 130,000 ft³/s, Nov. 5, 1985, gage height, 21.80 ft, from floodmarks, from rating curve extended above 63,000 ft³/s, on basis of slope-area measurement of peak flow; minimum, 42 ft³/s, Sept. 28, 29, 1959, Sept. 11, 12, 1966; minimum gage height, 0.45 ft, part or all of each day Aug. 11-20, 1988.

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)
Dec. 3	0300	6,340	5.72	Apr. 22	0500	*11,000	*7.52

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	61	65	117	775	440	1890	971	763	423	373	436	153
2	60	65	362	609	418	1550	899	638	389	585	378	136
3	60	64	4660	550	397	1320	818	798	367	450	308	128
4	60	64	2320	1440	e340	1100	726	851	355	524	263	127
5	60	64	1300	2350	e320	921	653	736	1020	443	238	150
6	61	64	781	1860	e330	787	579	650	1870	390	207	245
7	62	64	510	1390	e330	731	511	560	1480	390	185	258
8	66	64	412	1070	e310	1270	507	684	1440	320	174	211
9	64	64	397	867	e295	1640	498	1620	1330	335	183	189
10	61	66	399	792	e280	1480	528	1860	1250	344	174	197
11	61	75	433	662	e260	2540	546	1630	1020	291	165	175
12	61	85	424	590	e250	2810	536	1360	812	250	158	170
13	62	92	380	538	e240	2130	495	1160	643	224	153	156
14	63	94	358	536	e250	1620	457	1060	531	204	184	143
15	64	89	358	536	e260	1340	451	936	497	188	222	139
16	65	80	358	513	401	1100	434	1250	453	189	199	135
17	66	77	333	417	717	906	424	1380	408	174	227	125
18	66	74	329	e400	1150	850	440	1150	414	167	233	119
19	66	74	298	e360	1190	2220	441	1050	908	170	202	114
20	65	74	211	e355	1270	3160	416	981	663	157	177	113
21	65	74	220	e350	1230	2400	808	804	490	145	161	113
22	65	105	244	e360	1030	1860	8050	687	422	141	150	112
23	65	373	225	e370	888	1710	4370	593	371	208	146	110
24	65	338	339	e380	1030	1410	2820	520	339	341	137	104
25	65	227	420	e400	1730	1210	2280	489	321	404	130	107
26	65	173	402	e410	3200	1100	1730	457	307	335	123	116
27	65	146	366	e430	3700	1200	1360	452	275	945	124	115
28	65	128	324	453	2400	1220	1150	416	248	1680	186	110
29	65	118	514	443	2050	1110	988	378	230	716	297	103
30	65	114	1240	439	---	1010	833	384	282	448	266	97
31	65	---	1020	440	---	986	---	429	---	363	180	---
TOTAL	1969	3254	20054	21085	26706	46581	35719	26726	19558	11894	6366	4270
MEAN	63.5	108	647	680	921	1503	1191	862	652	384	205	142
MAX	66	373	4660	2350	3700	3160	8050	1860	1870	1680	436	258
MIN	60	64	117	350	240	731	416	378	230	141	123	97
CFSM	.10	.17	1.01	1.06	1.43	2.34	1.85	1.34	1.02	.60	.32	.22
IN.	.11	.19	1.16	1.22	1.55	2.70	2.07	1.55	1.13	.69	.37	.25

e Estimated

POTOMAC RIVER BASIN

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

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1928 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	341	481	699	877	1121	1565	1263	965	536	286	273	224
MAX	1863	5569	2511	2355	2880	4090	2669	2374	2175	1479	1290	1196
(WY)	1977	1986	1973	1937	1939	1936	1958	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 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1928 - 1992	
ANNUAL TOTAL	217271		224182			
ANNUAL MEAN	595		613		717	
HIGHEST ANNUAL MEAN					1181	
LOWEST ANNUAL MEAN					365	
HIGHEST DAILY MEAN	8930	Mar 23	8050	Apr 22	77000	Nov 5 1985
LOWEST DAILY MEAN	60	(a)	60	(a)	43	(b)
ANNUAL SEVEN-DAY MINIMUM	60	Sep 30	61	Oct 1	44	Sep 6 1966
INSTANTANEOUS PEAK FLOW			11000	Apr 22	c130000	Nov 5 1985
INSTANTANEOUS PEAK STAGE			7.52	Apr 22	d21.80	Nov 5 1985
INSTANTANEOUS LOW FLOW			60	(a)	42	(f)
ANNUAL RUNOFF (CFSM)	.93		.95		1.12	
ANNUAL RUNOFF (INCHES)	12.59		12.99		15.77	
10 PERCENT EXCEEDS	1340		1400		1600	
50 PERCENT EXCEEDS	232		378		372	
90 PERCENT EXCEEDS	65		66		96	

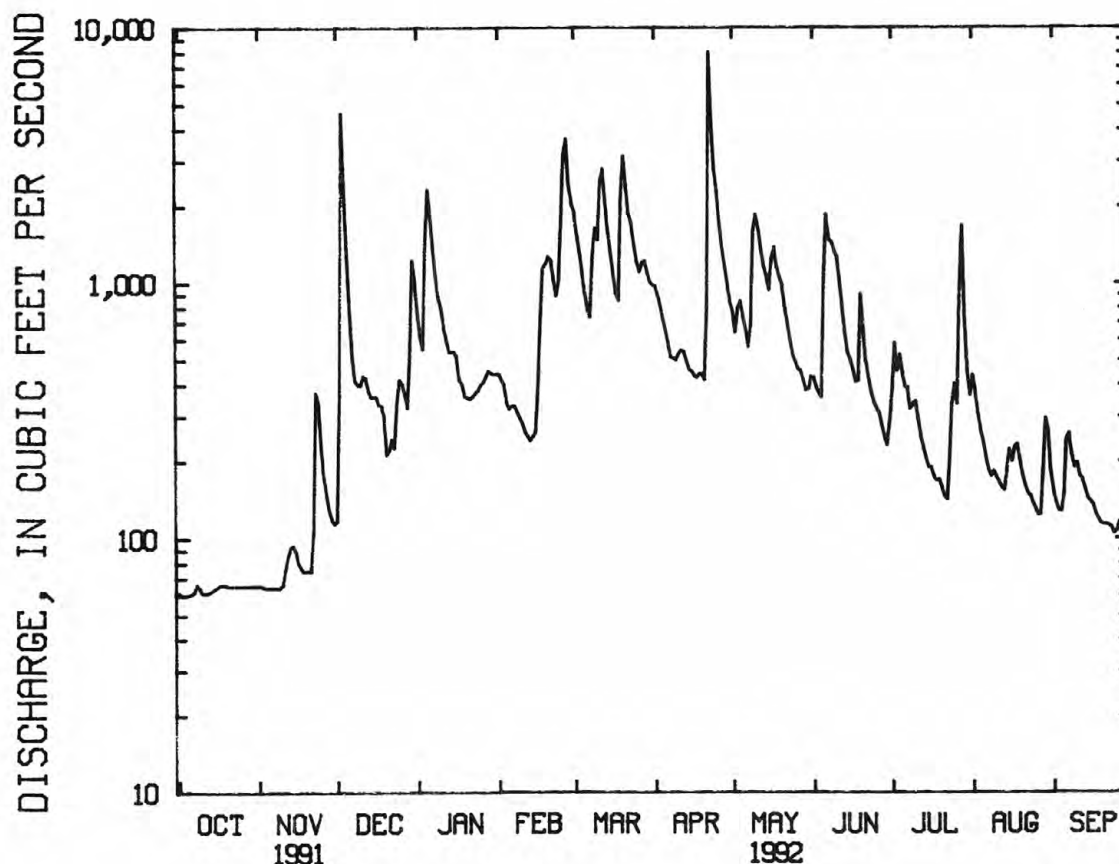
a Oct. 2-5.

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

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

d From floodmarks.

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



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 National Geodetic Vertical Datum of 1929. 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, 3,750 ft³/s, Apr. 22, gage height, 5.99 ft.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.8	7.4	13	78	25	137	73	96	81	32	17	6.8
2	5.8	7.3	181	62	24	120	68	87	70	31	13	6.3
3	5.9	6.9	529	128	25	110	66	96	66	29	12	6.4
4	5.9	7.0	259	1200	25	103	63	89	65	59	11	8.5
5	5.7	6.9	181	833	23	96	60	88	440	42	9.5	19
6	8.2	7.1	65	407	22	89	54	81	543	50	9.1	16
7	7.6	7.2	46	244	21	104	50	70	253	45	8.7	19
8	6.4	7.2	35	174	22	171	48	201	182	33	8.3	16
9	6.3	7.3	29	139	20	172	47	411	148	26	8.4	18
10	6.4	8.9	37	117	23	175	51	298	133	21	7.8	14
11	6.6	11	36	99	20	800	49	221	110	18	7.2	13
12	6.6	10	31	85	20	442	47	181	92	16	7.0	12
13	6.4	9.4	31	78	20	260	42	156	79	14	7.6	11
14	6.3	8.3	35	76	20	199	39	161	70	13	17	10
15	6.8	7.7	32	70	23	166	39	202	64	13	14	9.6
16	7.2	7.6	27	62	48	139	39	566	58	12	11	9.1
17	7.2	7.3	26	50	51	122	40	477	52	10	10	8.6
18	7.0	7.3	24	49	53	122	42	269	128	9.9	9.5	8.1
19	6.9	10	21	46	55	268	43	231	636	9.0	10	8.2
20	6.7	21	e22	e45	56	259	39	260	313	8.4	7.8	8.0
21	6.7	30	21	e42	54	205	721	232	209	7.8	7.8	7.7
22	6.9	15	18	e39	51	170	2430	195	151	7.4	8.0	7.7
23	7.0	28	18	e37	49	137	1400	163	111	8.4	7.7	7.3
24	7.3	14	18	e37	89	104	932	141	89	21	7.4	6.7
25	8.1	11	16	e36	154	88	519	123	77	27	7.1	7.0
26	8.3	8.9	14	e34	1060	90	199	109	65	15	7.0	7.6
27	7.8	8.1	15	e32	486	95	162	102	53	16	6.4	7.6
28	8.0	7.9	15	34	238	94	143	83	44	18	7.4	7.4
29	7.7	8.0	186	27	181	87	126	75	36	14	12	7.2
30	7.4	8.0	221	25	---	82	108	76	32	12	9.5	6.7
31	7.6	---	171	26	---	80	---	85	---	17	7.9	---
TOTAL	214.5	311.7	2373	4411	2958	5286	7739	5625	4450	654.9	294.1	300.5
MEAN	6.92	10.4	76.5	142	102	171	258	181	148	21.1	9.49	10.0
MAX	8.3	30	529	1200	1060	800	2430	566	636	59	17	19
MIN	5.7	6.9	13	25	20	80	39	70	32	7.4	6.4	6.3
CF5M	.07	.10	.75	1.40	1.00	1.67	2.53	1.78	1.45	.21	.09	.10
IN.	.08	.11	.87	1.61	1.08	1.93	2.82	2.05	1.62	.24	.11	.11

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 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	63.4	85.9	108	118	146	217	165	125	73.8	31.4	37.7	39.5
MAX	340	965	473	311	351	497	583	324	570	220	301	242
(WY)	1973	1986	1974	1979	1979	1963	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

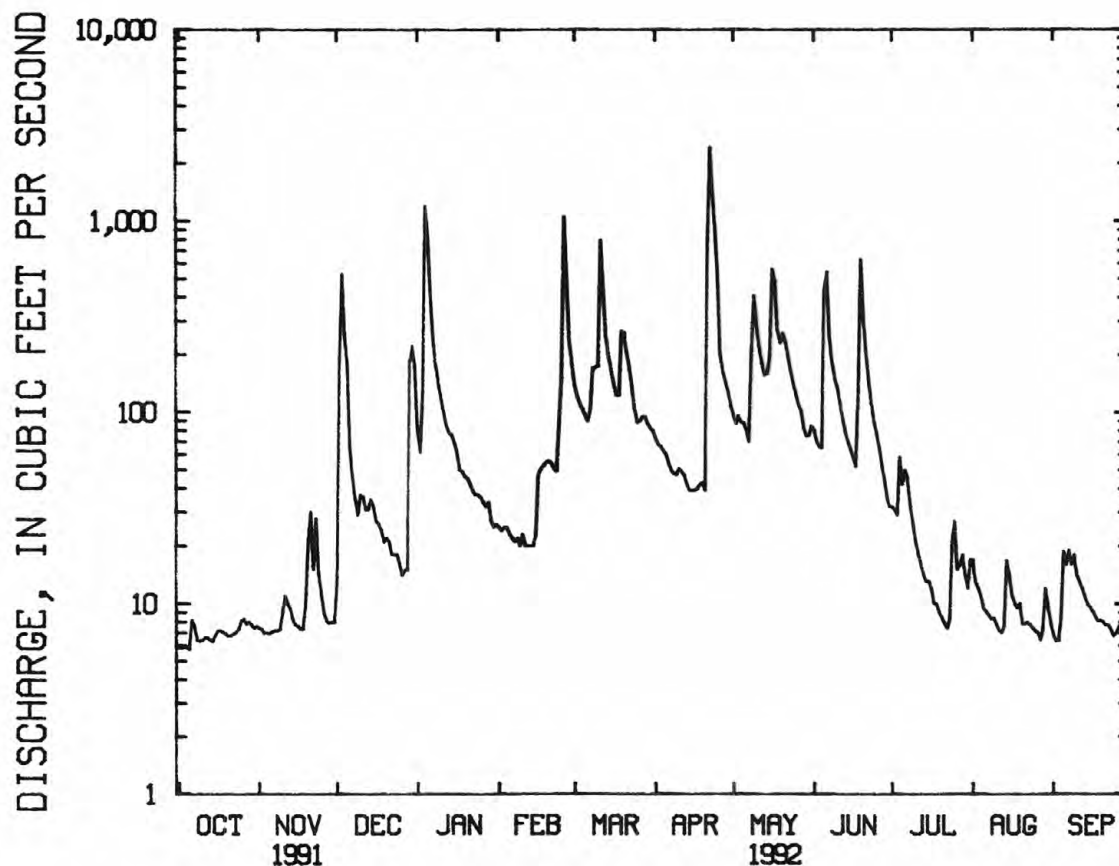
SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1943 - 1992	
ANNUAL TOTAL	30967.6		34617.7		101	
ANNUAL MEAN	84.8		94.6		197	
HIGHEST ANNUAL MEAN					38.6	
LOWEST ANNUAL MEAN					7500	
HIGHEST DAILY MEAN	1720	Mar 4	2430	Apr 22		Nov 4 1985
LOWEST DAILY MEAN	5.7	Oct 5	5.7	Oct 5		Sep 10 1965
ANNUAL SEVEN-DAY MINIMUM	5.9	Sep 29	6.4	Oct 1		Sep 4 1965
INSTANTANEOUS PEAK FLOW			3750	Apr 22	a41200	Jun 17 1949
INSTANTANEOUS PEAK STAGE			5.99	Apr 22	b18.42	Nov 4 1985
INSTANTANEOUS LOW FLOW			5.3	(c)	.30	(d)
ANNUAL RUNOFF (CFSM)	.83		.93		.99	
ANNUAL RUNOFF (INCHES)	11.29		12.63		13.42	
10 PERCENT EXCEEDS	183		203		215	
50 PERCENT EXCEEDS	29		32		39	
90 PERCENT EXCEEDS	6.9		7.2		7.2	

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

b From floodmarks.

c Oct. 4, 5, Aug. 27.

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 National Geodetic Vertical Datum of 1929 (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 Jan. 17-29 (ice effect) and Mar. 2-31 (missing record), 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, 9,430 ft³/s, Apr. 22, gage height, 7.43 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	14	23	244	51	294	164	225	130	81	82	22
2	11	14	76	161	49	e210	154	201	124	100	88	20
3	11	14	843	139	45	e170	144	210	116	83	65	19
4	11	14	650	1290	47	e150	135	204	113	100	57	19
5	11	15	398	2370	47	e130	133	188	133	102	49	21
6	12	15	266	1260	42	e120	125	181	902	94	43	22
7	12	15	152	694	42	e115	117	172	644	90	38	44
8	11	15	117	437	41	e130	112	266	409	86	34	36
9	11	15	99	317	40	e180	107	1210	293	89	37	46
10	15	17	98	252	35	e190	106	1060	238	83	31	41
11	13	22	99	198	34	e270	108	755	196	70	30	43
12	14	22	99	161	34	e480	107	534	168	58	29	37
13	13	20	92	137	35	e350	102	390	147	50	28	33
14	13	20	88	127	34	e260	97	340	132	44	28	30
15	13	19	86	116	37	e210	94	316	124	36	29	28
16	14	18	82	104	41	e170	92	495	127	33	40	26
17	13	17	75	e94	62	e150	89	717	113	29	35	25
18	13	17	73	e79	70	e140	93	525	115	28	32	22
19	13	16	67	e84	74	e170	96	394	421	25	29	22
20	13	16	64	e70	82	e410	93	393	481	22	26	21
21	13	17	54	e73	84	e360	220	382	300	23	25	21
22	13	56	56	e66	80	e280	5330	315	217	23	23	21
23	13	55	52	e58	82	e240	2350	259	167	28	22	21
24	13	45	52	e60	106	e210	1470	218	140	30	21	19
25	13	42	48	e64	367	e180	1100	193	125	30	21	23
26	13	32	45	e56	1630	e160	637	175	113	54	20	26
27	13	26	42	e58	898	e170	432	165	102	63	20	23
28	14	22	41	53	570	e180	342	151	89	162	21	22
29	14	21	66	54	401	e175	286	136	85	102	21	21
30	14	21	342	51	---	e170	249	131	81	70	19	20
31	14	---	337	51	---	e170	---	129	---	54	21	---
TOTAL	396	672	4682	8978	5160	6594	14684	11030	6545	1942	1064	794
MEAN	12.8	22.4	151	290	178	213	489	356	218	62.6	34.3	26.5
MAX	15	56	843	2370	1630	480	5330	1210	902	162	88	46
MIN	11	14	23	51	34	115	89	129	81	22	19	19
CFSM	.05	.08	.53	1.02	.63	.75	1.73	1.26	.77	.22	.12	.09
IN.	.05	.09	.62	1.18	.68	.87	1.93	1.45	.86	.26	.14	.10

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 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	137	179	207	243	321	462	407	324	168	83.9	102	77.3
MAX	776	2951	879	716	892	1086	1787	946	1071	510	801	497
(WY)	1977	1986	1974	1991	1939	1963	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

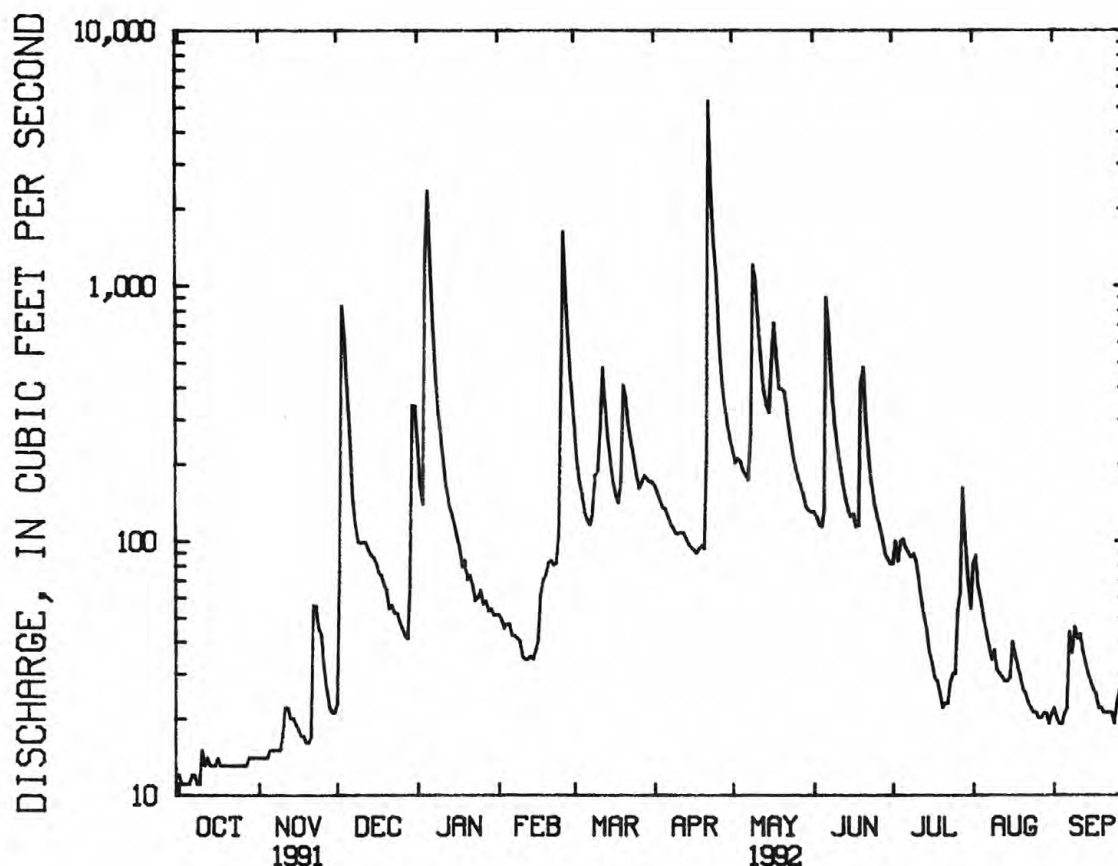
SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR	FOR 1992 WATER YEAR	WATER YEARS 1928 - 1992
ANNUAL TOTAL	70500	62541	
ANNUAL MEAN	193	171	225
HIGHEST ANNUAL MEAN			418
LOWEST ANNUAL MEAN			85.9
HIGHEST DAILY MEAN	4400	Mar 24	28000
LOWEST DAILY MEAN	11	(a)	4.4
ANNUAL SEVEN-DAY MINIMUM	11	Oct 2	5.3
INSTANTANEOUS PEAK FLOW		9430	Apr 22
INSTANTANEOUS PEAK STAGE		7.43	Apr 22
INSTANTANEOUS LOW FLOW		10	Oct 5
ANNUAL RUNOFF (CFSM)	.68	.60	c19.99
ANNUAL RUNOFF (INCHES)	9.27	8.22	4.4
10 PERCENT EXCEEDS	365	371	.80
50 PERCENT EXCEEDS	64	74	10.82
90 PERCENT EXCEEDS	13	15	490
			95
			21

a Oct. 2-5, 8,9.

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

c From floodmarks.

d 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 1991 TO SEPTEMBER 1992

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH WATER WHOLE FIELD (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	BARO- METRIC PRES- SURE (MM OF HG)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)
OCT 1991								
02...	1300	12	200	6.0	20.0	737	10.5	120
DEC								
09...	1200	96	169	7.7	9.5	740	10.9	98
FEB 1992								
12...	0930	49	98	7.0	1.5	757	8.2	59
APR								
02...	0920	155	77	7.0	6.5	--	12.5	--
23...	1200	2410	76	6.6	12.5	760	--	--
MAY								
18...	1045	556	83	7.8	17.0	747	--	--
JUN								
15...	1015	124	135	7.5	20.0	760	9.4	104
AUG								
05...	1015	77	151	8.3	21.0	760	--	--

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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 National Geodetic Vertical Datum of 1929. 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 Oct. 1 to Nov. 23 (backwater from leaves) and Jan. 18-30 (ice effect), which are fair. National Weather Service gage-height telemeter and 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 years have been collected at this 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)
Apr. 22	2200	*18,000	*13.15	No other peak greater than base discharge.			

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e94	e100	184	1260	613	2670	1500	1350	814	454	654	267
2	e94	e100	217	1020	604	2190	1420	1240	802	570	671	208
3	e94	e100	3430	871	558	1870	1320	1140	736	918	666	178
4	e94	e100	4290	825	534	1630	1230	1240	681	771	533	163
5	e94	e100	2240	4790	524	1450	1140	1240	798	791	433	149
6	e94	e100	1470	4110	538	1310	1070	1160	1880	772	374	163
7	e94	e100	1060	2580	572	1270	987	1080	2550	629	331	220
8	e94	e100	831	1840	547	1420	938	1030	2050	592	300	327
9	e94	e100	713	1440	527	2020	918	2510	1920	557	327	313
10	e96	e110	735	1220	498	2050	905	4080	1690	751	283	270
11	e96	e120	723	1080	436	2940	941	3320	1550	689	266	295
12	e98	e120	736	952	417	5200	969	2570	1340	539	258	293
13	e98	e120	677	845	431	3810	931	2110	1170	452	243	230
14	e100	e120	625	778	422	2830	881	1970	1020	407	245	221
15	e100	e120	583	742	430	2250	838	2140	910	349	247	197
16	e100	e120	565	754	517	1900	808	2820	854	305	282	180
17	e100	e120	548	676	1110	1620	790	2600	813	273	306	167
18	e100	e115	514	e560	1320	1470	786	2350	714	263	311	154
19	e100	e115	483	e540	1430	1810	822	2010	870	241	351	145
20	e100	e110	441	e550	1480	4500	856	1780	1460	223	304	140
21	e100	e120	389	e560	1450	4020	871	1640	1240	217	259	134
22	e100	e150	383	e540	1270	3090	10800	1460	992	202	229	135
23	e100	e260	414	e520	1130	2660	11200	1300	841	196	207	138
24	e100	385	386	e540	1080	2330	5770	1190	731	247	191	132
25	e100	476	454	e600	1490	1960	3930	1120	644	438	181	131
26	e100	336	582	e580	3270	1790	2980	1030	576	620	172	144
27	e100	264	524	e560	6390	1930	2260	964	539	623	160	171
28	e100	226	480	e560	4120	1930	1900	917	473	1940	155	161
29	e100	205	545	e560	2920	1750	1660	831	420	1760	175	148
30	e100	186	993	e580	---	1610	1480	782	413	1130	273	135
31	e100	---	1540	586	---	1540	---	787	---	820	351	---
TOTAL	3034	4798	27755	33619	36628	70820	62901	51761	31491	18739	9738	5709
MEAN	97.9	160	895	1084	1263	2285	2097	1670	1050	604	314	190
MAX	100	476	4290	4790	6390	5200	11200	4080	2550	1940	671	327
MIN	94	100	184	520	417	1270	786	782	413	196	155	131
CFSM	.07	.11	.61	.74	.86	1.55	1.43	1.14	.71	.41	.21	.13
IN.	.08	.12	.70	.85	.93	1.79	1.59	1.31	.80	.47	.25	.14

e Estimated

POTOMAC RIVER BASIN

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

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1899 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	649	852	1230	1542	1987	2892	2367	1769	1031	521	506	397
MAX	4629	12850	5000	4595	5137	10490	6421	4079	5231	2638	3923	1980
(WY)	1977	1986	1973	1937	1939	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 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1899 - 1992	
ANNUAL TOTAL	404644		356993		1308	
ANNUAL MEAN	1109		975		2232	
HIGHEST ANNUAL MEAN					566	
LOWEST ANNUAL MEAN					145000	
HIGHEST DAILY MEAN	23900	Mar 24	11200	Apr 23	Nov 5	1985
LOWEST DAILY MEAN	e94	(a)	e94	(a)	(b)	
ANNUAL SEVEN-DAY MINIMUM	94	Oct 1	94	Oct 1	Sep 7	1966
INSTANTANEOUS PEAK FLOW			18000	Apr 22	Nov 5	1985
INSTANTANEOUS PEAK STAGE			13.15	Apr 22	Nov 5	1985
INSTANTANEOUS LOW FLOW			UNKNOWN		29	(f)
ANNUAL RUNOFF (CFSM)	.75		.66		.89	
ANNUAL RUNOFF (INCHES)	10.23		9.03		12.08	
10 PERCENT EXCEEDS	2580		2150		2970	
50 PERCENT EXCEEDS	383		582		636	
90 PERCENT EXCEEDS	100		100		153	

e estimated

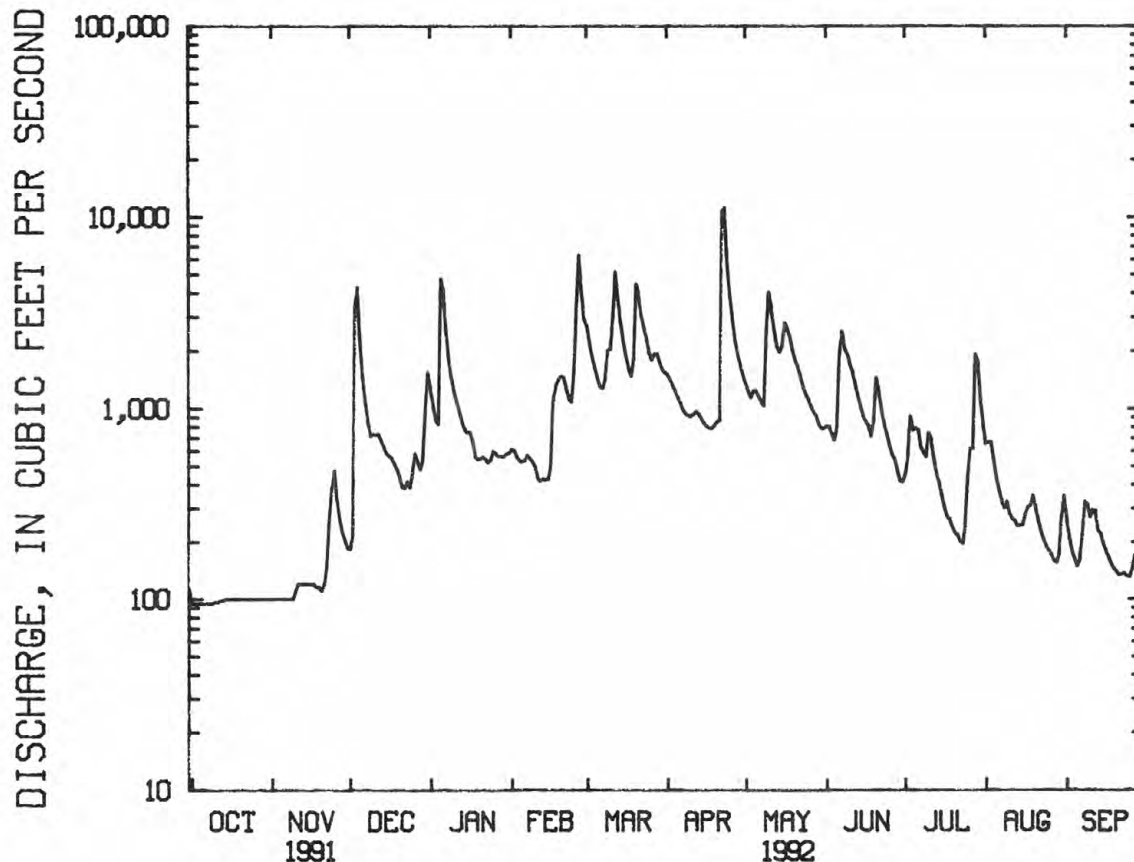
a Oct. 1-9.

b Sept. 11, 12, 1966.

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

d From floodmarks.

f 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 National Geodetic Vertical Datum of 1929. 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)
Apr. 22	2315	*25,100	*17.37	No other peak greater than base discharge.			

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	350	315	455	2580	1600	7160	5160	3370	2170	1380	2450	1080
2	347	315	516	2200	1550	5990	4790	3090	1830	1500	2120	933
3	345	315	3320	1940	1510	4950	4460	2990	1660	2060	2060	871
4	345	312	6890	1800	1500	4260	3970	2870	1540	2510	1560	848
5	342	309	4130	4410	1440	3820	3590	2730	2410	1840	1350	848
6	340	306	2730	5880	1420	3340	3240	2540	5320	1650	1230	1040
7	340	306	2030	4260	1450	3680	2890	2360	5590	1400	1140	1220
8	340	304	1610	3280	1470	4700	2610	2340	4540	1220	1080	1150
9	340	301	1400	2690	1400	4820	2420	6290	4120	1160	1190	1260
10	340	301	1560	2350	1270	4880	2350	10400	3580	1290	1300	1230
11	340	349	1580	2140	1230	6900	2450	8710	3170	1500	1140	1170
12	574	491	1500	1940	1210	11000	2740	6790	2730	1460	1120	1170
13	700	462	1390	1760	1150	9000	2550	5600	2410	1840	1090	1020
14	687	434	1330	1670	1150	7060	2250	5380	2150	1690	1040	943
15	500	401	1220	1720	1190	5830	2080	5250	1940	1350	1050	906
16	372	388	1140	1690	1610	4930	2010	6870	1800	1150	1070	856
17	354	382	1120	1540	2360	4280	1970	6150	1680	947	1100	820
18	342	366	1070	1400	3020	4050	1940	5810	1520	1010	1090	819
19	337	352	989	1150	3330	5050	2130	4760	1520	1090	1080	797
20	332	345	949	1290	3530	9240	2140	4030	2110	867	1020	1040
21	327	341	912	1450	3570	9800	2050	3530	2200	791	951	1330
22	324	422	880	1350	3320	8080	11900	3160	1790	753	893	842
23	322	927	895	1420	3020	7240	17600	2840	1550	806	857	820
24	321	945	901	1460	2930	6310	10300	2610	1400	1280	829	773
25	323	1000	868	1470	3580	5480	8110	2560	1340	3720	808	741
26	323	787	1070	1770	9210	5800	6650	2300	1250	3480	784	752
27	322	614	1060	1520	14000	8770	5400	2130	1200	4310	754	780
28	320	513	995	1500	10500	8170	4580	1980	1140	6680	941	804
29	320	470	1380	1570	8260	7200	3990	1860	1040	6340	1560	766
30	320	460	2320	1470	---	6000	3610	1760	1020	4150	1310	720
31	317	---	3080	1500	---	5600	---	2190	---	3230	1190	---
TOTAL	11506	13533	51290	64170	92780	193390	131930	125250	67720	64454	37157	28349
MEAN	371	451	1655	2070	3199	6238	4398	4040	2257	2079	1199	945
MAX	700	1000	6890	5880	14000	11000	17600	10400	5590	6680	2450	1330
MIN	317	301	455	1150	1150	3340	1940	1760	1020	753	754	720
CFSM	.12	.15	.53	.67	1.03	2.01	1.41	1.30	.73	.67	.39	.30
IN.	.14	.16	.61	.77	1.11	2.31	1.58	1.50	.81	.77	.44	.34

POTOMAC RIVER BASIN

01610000 POTOMAC RIVER AT PAW PAW, WV--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1589	1983	3280	3788	5233	7195	5931	4423	2572	1345	1178	991
MAX	9709	17180	12300	9099	11440	17120	13050	10450	7612	5071	6458	5012
(WY)	1977	1986	1973	1991	1939	1963	1987	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 1991 CALENDAR YEAR

FOR 1992 WATER YEAR

WATER YEARS 1939 - 1992

ANNUAL TOTAL	1007598		881529									
ANNUAL MEAN	2761		2409									
HIGHEST ANNUAL MEAN												1973
LOWEST ANNUAL MEAN												1969
HIGHEST DAILY MEAN	34700	Mar 24	17600	Apr 23					125000	Nov 6	1985	
LOWEST DAILY MEAN	301	(a)	301	(a)					172	(b)		
ANNUAL SEVEN-DAY MINIMUM	306	Nov 4	306	Nov 4					179	Sep 7	1966	
INSTANTANEOUS PEAK FLOW			25100	Apr 22					c235000	Nov 5	1985	
INSTANTANEOUS PEAK STAGE			17.37	Apr 22					53.58	Nov 5	1985	
INSTANTANEOUS LOW FLOW			301	(d)					164	(f)		
ANNUAL RUNOFF (CFSM)	.89		.77						1.06			
ANNUAL RUNOFF (INCHES)	12.06		10.55						14.34			
10 PERCENT EXCEEDS	6490		5800						7430			
50 PERCENT EXCEEDS	936		1500						1770			
90 PERCENT EXCEEDS	348		348						425			

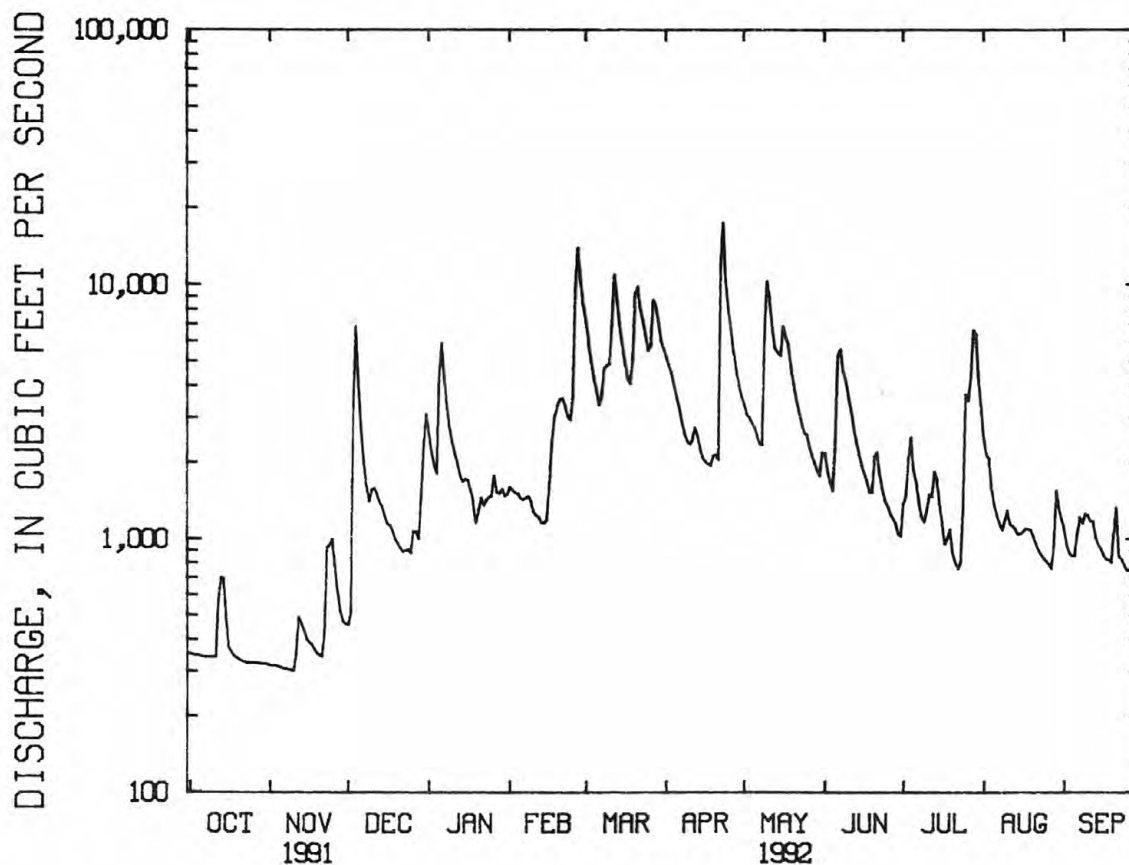
a Nov. 9, 10.

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 Nov. 8-11.

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.

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 National Geodetic Vertical Datum of 1929. (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.--Records good except those for Oct. 1-9, Nov. 11-20, Sept. 15 (missing record) and Jan. 14-20 (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)
Apr. 22	1900	*10,200	*10.84	No other peak greater than base discharge.			

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e50	53	77	442	154	740	693	616	299	168	242	130
2	e52	55	87	330	146	593	607	575	287	213	199	99
3	e51	60	929	288	148	489	536	509	260	407	229	86
4	e50	57	1520	271	151	414	474	476	240	373	229	79
5	e78	54	719	447	139	358	423	483	305	261	175	80
6	e100	54	428	1400	141	326	377	426	1720	210	166	232
7	e160	55	304	967	139	332	340	389	1570	177	149	596
8	e120	58	237	680	135	486	314	446	1090	153	129	681
9	e72	70	201	517	132	665	293	1530	919	140	122	483
10	48	e98	254	423	123	635	279	2890	716	138	134	409
11	52	e110	348	361	126	661	278	2040	564	225	131	354
12	53	e120	331	316	125	1750	284	1470	447	266	130	319
13	54	e130	297	278	116	1600	271	1140	360	197	127	243
14	54	e120	257	e240	121	1230	253	967	310	163	145	203
15	51	e100	224	e230	128	984	235	1010	273	137	196	e180
16	53	e90	192	e220	151	820	218	1650	241	120	162	148
17	57	e80	168	e210	220	691	210	1360	216	107	143	135
18	57	e70	153	e200	274	632	210	1090	210	100	136	123
19	55	e66	136	e200	291	696	223	1090	302	97	125	113
20	53	e64	143	e210	339	995	254	1420	376	86	115	104
21	54	66	135	237	357	1320	289	1090	320	79	106	98
22	55	82	122	194	340	1300	4120	837	259	74	98	98
23	54	108	122	194	313	1120	4820	696	213	74	91	101
24	52	121	120	189	300	957	2200	607	188	116	85	96
25	52	134	118	210	332	779	1620	595	174	181	79	98
26	54	132	112	176	538	745	1330	544	171	158	77	103
27	55	108	112	190	1430	1230	1100	474	166	254	77	138
28	55	91	109	191	1310	1280	913	453	144	453	77	215
29	54	82	134	168	952	1020	770	369	133	740	74	196
30	54	77	308	152	---	842	680	323	129	471	75	160
31	54	---	583	162	---	752	---	308	---	317	102	---
TOTAL	1913	2565	8980	10293	9171	26442	24614	27873	12602	6655	4125	6100
MEAN	61.7	85.5	290	332	316	853	820	899	420	215	133	203
MAX	160	134	1520	1400	1430	1750	4820	2890	1720	740	242	681
MIN	48	53	77	152	116	326	210	308	129	74	74	79
CFSM	.09	.13	.43	.49	.47	1.26	1.21	1.33	.62	.32	.20	.30
IN.	.11	.14	.49	.57	.50	1.45	1.35	1.53	.69	.37	.23	.34

e Estimated

POTOMAC RIVER BASIN

01611500 CACAPON RIVER NEAR GREAT CACAPON, WV--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1923 - 1992, BY WATER YEAR (WY)

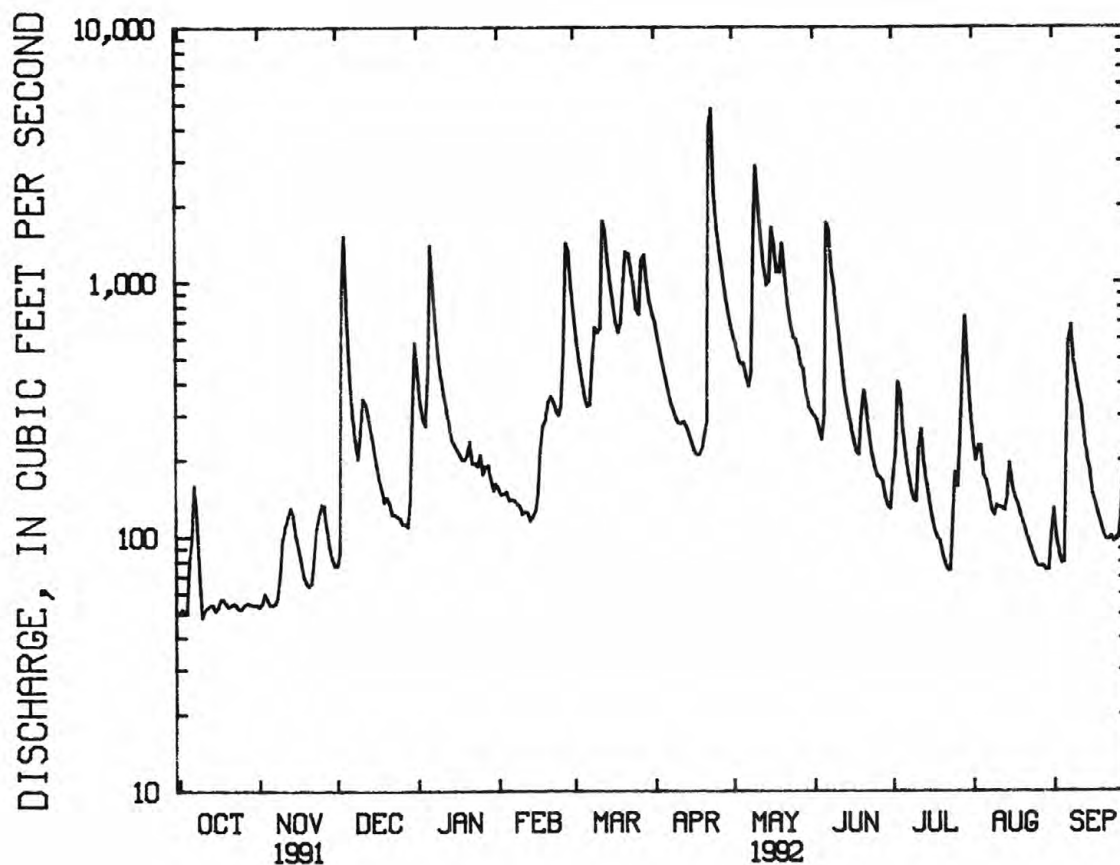
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	339	355	499	618	872	1227	1113	877	440	196	236	180
MAX	2976	2577	2121	1683	2243	5708	2976	3565	3525	936	2791	1636
(WY)	1943	1986	1973	1991	1971	1936	1987	1924	1972	1972	1955	1975
MIN	44.8	51.1	56.5	69.6	89.1	247	242	157	77.0	56.4	39.8	39.4
(WY)	1931	1966	1966	1956	1934	1990	1947	1969	1969	1930	1966	1932

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1923 - 1992	
ANNUAL TOTAL	166505		141333			
ANNUAL MEAN	456		386		582	
HIGHEST ANNUAL MEAN					1135	
LOWEST ANNUAL MEAN					180	
HIGHEST DAILY MEAN	11200		4820		67900	
LOWEST DAILY MEAN	48		48		26	
ANNUAL SEVEN-DAY MINIMUM	51		52		28	
INSTANTANEOUS PEAK FLOW			10200		a87600	
INSTANTANEOUS PEAK STAGE			10.84		30.10	
INSTANTANEOUS LOW FLOW			47		26	
ANNUAL RUNOFF (CFSM)	.67		.57		.86	
ANNUAL RUNOFF (INCHES)	9.15		7.77		11.67	
10 PERCENT EXCEEDS	1050		972		1310	
50 PERCENT EXCEEDS	143		210		240	
90 PERCENT EXCEEDS	57		66		66	

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

b Oct. 9, 10.

c Sept. 11-13, 1966.



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 National Geodetic Vertical Datum of 1929.

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)
Apr. 23	0615	*28,500	*14.77	No other peak greater than base discharge.			

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	461	513	725	3330	1690	8080	6160	4070	2490	1400	3080	1420
2	459	530	745	2750	1740	7110	5600	3770	2370	1880	2470	1280
3	454	531	1300	2400	1710	5770	5140	3470	2050	2020	2270	1140
4	453	521	7760	2180	1680	4800	4740	3290	1900	3740	2180	1070
5	457	510	5910	2210	1640	4290	4180	3270	2230	2820	1720	1030
6	470	506	3770	7320	1600	3820	3800	3030	5820	2130	1560	1250
7	477	510	2730	5830	1590	3690	3450	2830	7370	1880	1440	1870
8	494	511	2140	4310	1610	5130	3100	2690	6020	1610	1350	2030
9	463	520	1830	3430	1610	5480	2820	5390	5110	1450	1300	1870
10	460	535	1780	2900	1530	5650	2650	12900	4540	1380	1410	1910
11	477	594	2040	2580	1420	5890	2600	11800	3840	1580	1470	1750
12	498	638	1960	2360	1390	11600	2750	9090	3340	1790	1360	1700
13	664	755	1870	2150	1380	11600	2940	7180	2900	1800	1350	1530
14	872	762	1720	2010	1330	8980	2660	6350	2570	1960	1310	1370
15	865	708	1620	1960	1350	7310	2410	6200	2310	1770	1310	1270
16	750	660	1490	2080	1490	6160	2280	7800	2100	1480	1330	1200
17	523	636	1400	1980	2090	5240	2200	7620	1970	1300	1310	1120
18	501	624	1360	1820	3000	4690	2170	6990	1850	1140	1320	1100
19	490	601	1290	1690	3340	4860	2160	6030	1800	1180	1290	1090
20	486	582	1220	1370	3740	8120	2350	5610	1970	1240	1270	1020
21	481	587	1200	e1600	3880	11600	2430	4760	2520	1030	1200	1290
22	476	677	1140	e1750	3790	10300	6390	4110	2240	957	1140	1480
23	476	747	1100	1750	3430	8870	24200	3630	1910	944	1080	1080
24	477	1240	1100	1660	3210	7990	14100	3250	1730	1120	1040	1030
25	486	1240	1100	1700	3340	6750	10400	3170	1610	2620	1010	994
26	496	1310	1070	1840	6480	6520	8660	2980	1550	4660	986	1030
27	509	1090	1260	2040	15200	11000	7020	2670	1520	4080	970	1000
28	509	915	1240	2080	13100	10600	5840	2500	1430	6200	956	1110
29	513	798	1290	1900	9760	8990	5010	2320	1330	7980	1240	1160
30	518	734	2000	1740	---	7660	4430	2180	1260	5670	1800	1070
31	516	---	3170	1660	---	6650	---	2160	---	4040	1450	---
TOTAL	16231	21085	60330	76380	99120	225200	154640	153110	81650	74851	44972	39264
MEAN	524	703	1946	2464	3418	7265	5155	4939	2722	2415	1451	1309
MAX	872	1310	7760	7320	15200	11600	24200	12900	7370	7980	3080	2030
MIN	453	506	725	1370	1330	3690	2160	2160	1260	944	956	994
CFSM	.13	.17	.48	.60	.84	1.78	1.27	1.21	.67	.59	.36	.32
IN.	.15	.19	.55	.70	.91	2.06	1.41	1.40	.75	.68	.41	.36

e Estimated

POTOMAC RIVER BASIN

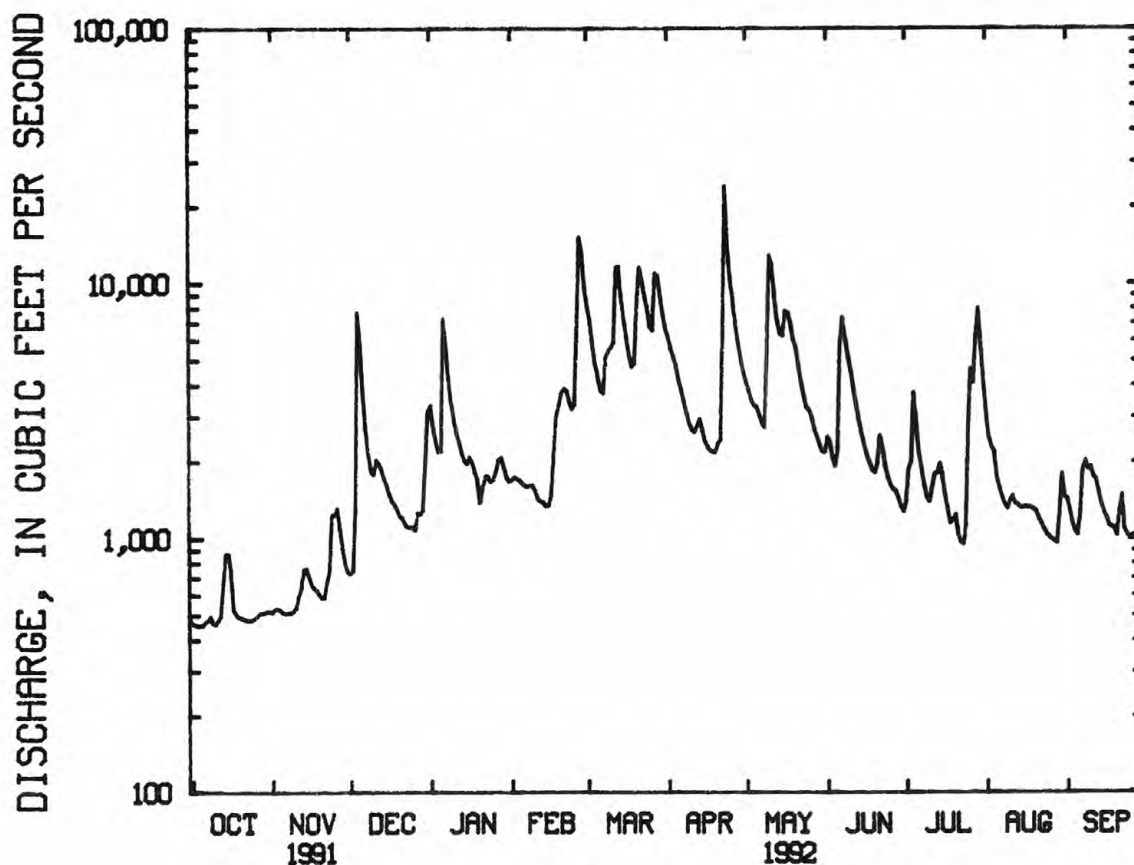
01613000 POTOMAC RIVER AT HANCOCK, MD--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1933 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	2097	2437	3960	4927	6502	9103	7611	5495	3117	1574	1504	1265
MAX	13270	20090	15160	15450	16720	32280	16950	13260	13390	6677	9479	6756
(WY)	1977	1986	1973	1937	1971	1936	1987	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 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1933 - 1992	
ANNUAL TOTAL	1212926		1046833		4121	
ANNUAL MEAN	3323		2860		6319	
HIGHEST ANNUAL MEAN					1770	
LOWEST ANNUAL MEAN					261000	
HIGHEST DAILY MEAN	40500	Mar 24	24200	Apr 23	1770	1969
LOWEST DAILY MEAN	453	Oct 4	453	Oct 4	184	Oct 3 1932
ANNUAL SEVEN-DAY MINIMUM	462	Oct 1	462	Oct 1	215	Sep 7 1966
INSTANTANEOUS PEAK FLOW			28500	Apr 23	a340000	Mar 18 1936
INSTANTANEOUS PEAK STAGE			14.77	Apr 23	47.60	Mar 18 1936
INSTANTANEOUS LOW FLOW			446	(b)	180	Oct 4 1932
ANNUAL RUNOFF (CFSM)	.82		.70		1.01	
ANNUAL RUNOFF (INCHES)	11.08		9.56		13.75	
10 PERCENT EXCEEDS	7770		6560		9360	
50 PERCENT EXCEEDS	1210		1800		2140	
90 PERCENT EXCEEDS	514		534		520	

a From rating curve extended above 120,000 ft³/s on basis of slope-area measurement of peak flow.
b Oct. 4, 5, 9, 10.



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.

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 National Geodetic Vertical Datum of 1929. 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.--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 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)
Mar. 7	2300	2,700	10.03	June 6	1300	2,270	9.17
Apr. 22	1400	*12,300	*15.27				

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	48	48	47	128	67	186	226	248	256	134	109	66
2	48	48	184	105	64	163	211	230	188	126	83	61
3	47	46	632	102	62	147	196	219	158	94	75	63
4	45	45	233	129	61	136	183	202	142	85	114	68
5	57	45	126	623	61	129	173	192	815	76	113	67
6	130	46	92	379	59	130	162	185	1750	92	106	134
7	70	44	77	223	57	1560	159	174	580	86	91	329
8	50	43	67	167	57	1260	153	213	362	79	86	175
9	48	42	66	146	57	539	147	872	280	71	92	215
10	46	47	165	143	53	377	146	534	231	73	91	213
11	51	62	156	127	55	473	150	358	202	65	93	254
12	52	64	108	110	54	474	144	280	178	63	95	196
13	49	52	89	101	55	355	136	240	158	62	93	124
14	46	50	89	e96	57	289	129	234	148	61	89	102
15	47	47	77	e92	70	257	128	224	138	61	86	94
16	47	45	66	e86	126	230	124	330	129	62	94	86
17	47	44	61	e84	128	212	124	262	122	62	98	80
18	49	42	60	e80	132	205	129	225	124	59	91	77
19	50	42	56	e82	173	254	127	224	166	56	85	75
20	46	43	58	e76	175	331	123	192	186	55	88	69
21	43	43	58	e72	147	297	673	170	135	56	72	67
22	45	78	53	e70	126	260	8470	157	112	80	69	85
23	45	126	51	70	115	244	1420	144	103	70	69	125
24	47	83	53	76	150	218	662	140	101	73	67	85
25	47	54	51	69	291	197	530	170	111	164	67	86
26	46	46	47	65	602	237	447	165	113	137	64	178
27	46	42	46	67	557	615	372	202	95	93	64	152
28	46	42	48	73	309	421	320	162	84	139	84	125
29	45	41	265	64	237	308	288	139	81	96	164	115
30	46	41	375	66	---	267	263	137	90	74	115	89
31	46	---	183	67	---	251	---	290	---	65	75	---
TOTAL	1575	1541	3739	3838	4157	11022	16515	7514	7338	2569	2782	3655
MEAN	50.8	51.4	121	124	143	356	550	242	245	82.9	89.7	122
MAX	130	126	632	623	602	1560	8470	872	1750	164	164	329
MIN	43	41	46	64	53	129	123	137	81	55	64	61
CFSM	.19	.19	.44	.46	.53	1.31	2.02	.89	.90	.30	.33	.45
IN.	.22	.21	.51	.52	.57	1.51	2.26	1.03	1.00	.35	.38	.50

e Estimated

POTOMAC RIVER BASIN

01616500 OPEQUON CREEK NEAR MARTINSBURG, WV--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1947 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	146	158	224	256	332	397	365	277	214	136	127	115
MAX	788	504	821	700	1022	990	1199	1091	1190	456	543	911
(WY)	1977	1971	1973	1979	1984	1984	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 1991 CALENDAR YEAR

FOR 1992 WATER YEAR

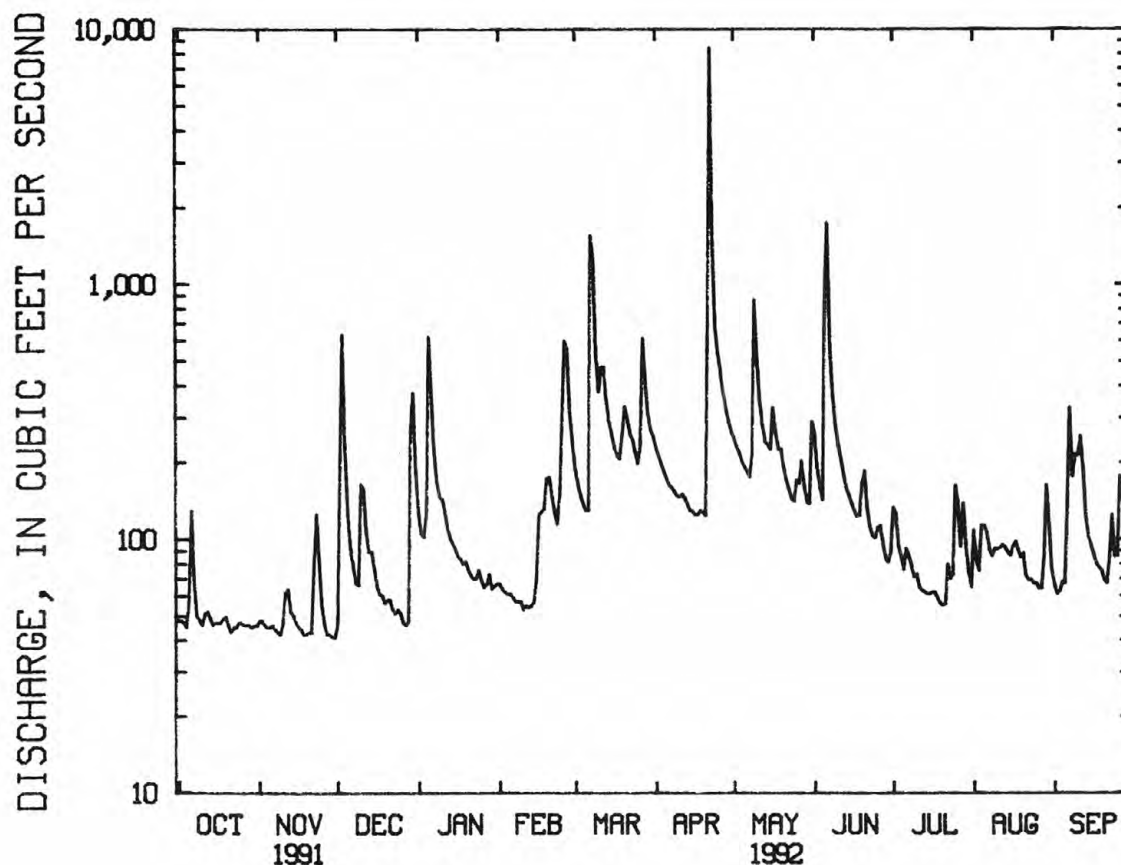
WATER YEARS 1947 - 1992

ANNUAL TOTAL	70260	66245	
ANNUAL MEAN	192	181	228
HIGHEST ANNUAL MEAN			464
LOWEST ANNUAL MEAN			85.7
HIGHEST DAILY MEAN	2850	Mar 24	8470
LOWEST DAILY MEAN	41	(a)	41
ANNUAL SEVEN-DAY MINIMUM	44	Nov 15	44
INSTANTANEOUS PEAK FLOW			12300
INSTANTANEOUS PEAK STAGE			15.27
INSTANTANEOUS LOW FLOW			40
ANNUAL RUNOFF (CFSM)	.71	.67	.84
ANNUAL RUNOFF (INCHES)	9.61	9.06	11.41
10 PERCENT EXCEEDS	414	293	443
50 PERCENT EXCEEDS	98	97	136
90 PERCENT EXCEEDS	47	47	55

a Nov. 29, 30.

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

c Observed.



POTOMAC RIVER BASIN

01618000 POTOMAC RIVER AT SHEPHERDSTOWN, WV

LOCATION.--Lat 39°26'04", long 77°48'07", Jefferson County, Hydrologic Unit 02070004, on right bank, 0.1 mi downstream from Rumsey Bridge at Shepherdstown, 3.3 mi upstream from Antietam Creek, and at mile 184.

DRAINAGE AREA.--5,936 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1928 to September 1953. Annual maximums, water years 1954-64. July 1964 to current year. Gage-height record and estimated discharges October 1953 to June 1964 available in files of the Maryland/Delaware/DC district office.

REVISED RECORDS.--WSP 756: Drainage area. WSP 781: 1929(M).

GAGE.--Water-stage recorder. Datum of gage is 281.00 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Water-discharge records good except those for estimated daily discharges (doubtful or missing record), which are fair. Some regulation at low flow by power plants upstream from station, prior 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. National Weather Service gage height telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Floods in June 1889 and May 1924 reached stages of 39.2 ft and 29.8 ft respectively, from floodmarks, discharges, about 290,000 ft³/s and 168,000 ft³/s respectively, from rating curve extended as explained above.

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)
Apr. 23	1500	*39,900	*12.46	No other peak greater than base discharge.			

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	865	1020	1320	e5400	2210	11600	9910	7460	4440	3630	5050	e2100
2	731	921	2160	e4400	2010	9860	8800	7430	4370	3490	4110	e1950
3	710	943	3850	3750	2230	8280	7940	6910	3720	3880	3470	e1900
4	684	958	7490	3470	2290	6760	7240	5620	3270	4440	3610	e1850
5	728	1090	7890	3680	2260	5920	6550	5080	3370	6070	3430	e1800
6	1010	921	5250	5260	2360	5260	5810	4880	9770	4410	2720	e1800
7	1270	772	3790	8930	2150	6290	5280	4660	12800	3480	2340	e2100
8	938	661	2960	6660	2060	11300	4850	4460	10700	2960	2090	e3000
9	998	824	2780	5210	1970	10600	4430	5780	8350	2560	1960	e3500
10	939	929	2990	4360	1940	9190	4080	13500	7220	2290	1930	e3300
11	731	1220	3260	3790	1880	8830	3870	17600	6220	2120	1980	e3200
12	804	1130	3030	3430	1810	11500	3880	13900	5330	2210	2040	e3100
13	696	1070	2660	3060	1770	16800	3900	10900	4630	2430	2320	e3000
14	776	1140	2600	2860	1830	14100	3930	9100	4190	2380	2190	e2800
15	1090	1060	2500	3030	2060	11500	3600	8540	3790	2580	e2200	e2500
16	1170	1120	2250	3200	1880	9490	3340	9420	3370	2420	e2200	e2300
17	1020	987	1960	2970	e2500	8050	3190	11600	3100	2070	e2200	e2100
18	840	1010	1620	2750	e3800	7020	3120	10200	3110	1890	e2200	e2000
19	881	1080	1710	2350	e4300	6790	3000	9280	3080	1760	e2200	e1900
20	596	925	1880	2000	e4600	8080	2990	7990	3150	1670	e2200	e1800
21	743	969	1810	1640	e5000	13900	3420	7200	3460	1640	e2150	e1750
22	726	1520	1690	2340	e4800	15500	15200	6160	3640	1570	e2100	e2000
23	653	2010	1690	2610	e4500	13600	35600	5450	3230	1450	e2000	e2500
24	650	2150	1550	2550	e4000	11900	27000	4920	2860	1740	e1900	e2100
25	659	2250	1620	2260	e4200	10400	18300	4630	2670	4100	e1800	e1800
26	673	2000	1860	2150	e5000	9250	14700	4580	2620	8430	e1750	e1750
27	669	1880	2400	2240	15800	15600	12300	4410	2750	7200	e1700	e1750
28	971	1540	3740	2280	20000	20300	10000	3980	2630	7310	e1650	e1750
29	960	1430	4290	2260	15000	15800	8620	3630	2300	9360	e1600	e1800
30	868	1180	e4600	2290	---	13000	7680	3370	2260	9120	e1900	e2000
31	944	---	e5000	2330	---	10900	---	3640	---	6400	e2900	---
TOTAL	25993	36710	94200	105510	126210	337370	252530	226280	136400	117060	73890	67200
MEAN	838	1224	3039	3404	4352	10880	8418	7299	4547	3776	2384	2240
MAX	1270	2250	7890	8930	20000	20300	35600	17600	12800	9360	5050	3500
MIN	596	661	1320	1640	1770	5260	2990	3370	2260	1450	1600	1750
CFSM	.14	.21	.51	.57	.73	1.83	1.42	1.23	.77	.64	.40	.38
IN.	.16	.23	.59	.66	.79	2.11	1.58	1.42	.85	.73	.46	.42

e Estimated

POTOMAC RIVER BASIN

01618000 POTOMAC RIVER AT SHEPHERDSTOWN, WV--Continued

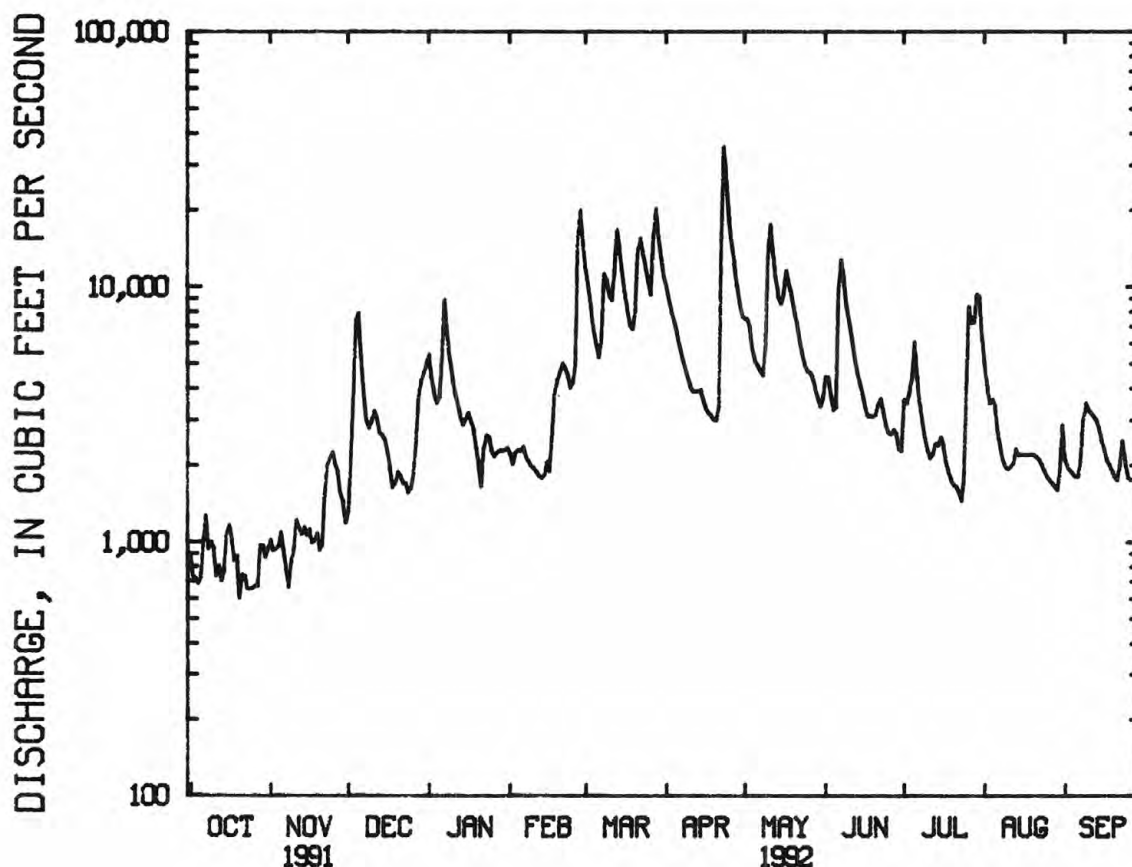
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1928 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	3186	3666	5618	6866	9068	12670	11100	8086	4586	2478	2247	1973
MAX	20080	24780	22070	20480	23770	45990	25020	20450	22600	9529	12140	11750
(WY)	1977	1986	1973	1937	1971	1936	1984	1988	1972	1949	1955	1975
MIN	351	395	621	1009	1580	3081	4010	2049	970	556	429	378
(WY)	1931	1931	1931	1981	1934	1990	1969	1930	1969	1966	1930	1930

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1928 - 1992	
ANNUAL TOTAL	1856108		1599353			
ANNUAL MEAN	5085		4370		5944	
HIGHEST ANNUAL MEAN					9988	
LOWEST ANNUAL MEAN					2607	
HIGHEST DAILY MEAN	54000	Jan 18	35600	Apr 23	287000	Mar 19 1936
LOWEST DAILY MEAN	596	Oct 20	596	Oct 20	185	Jul 31 1966
ANNUAL SEVEN-DAY MINIMUM	671	Oct 20	671	Oct 20	294	Sep 4 1966
INSTANTANEOUS PEAK FLOW			39900	Apr 23	a335000	Mar 19 1936
INSTANTANEOUS PEAK STAGE			12.46	Apr 23	b42.10	Mar 19 1936
INSTANTANEOUS LOW FLOW			493	Oct 11	170	Aug 1 1966
ANNUAL RUNOFF (CFSM)	.86		.74		1.00	
ANNUAL RUNOFF (INCHES)	11.63		10.02		13.61	
10 PERCENT EXCEEDS	11400		9870		13400	
50 PERCENT EXCEEDS	1880		2880		3200	
90 PERCENT EXCEEDS	909		995		862	

a From rating curve extended above 200,000 ft³/s on basis of slope-area measurement of peak flow.

b From floodmarks.



POTOMAC RIVER BASIN

01618000 POTOMAC RIVER AT SHEPHERDSTOWN, WV--Continued
(National stream-quality accounting network station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1979 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1980 to September 1981.

WATER TEMPERATURE: October 1980 to September 1981.

EXTREMES FOR PERIOD OF DAILY RECORD--

SPECIFIC CONDUCTANCE: Maximum, 670 microsiemens, Aug. 6, 10, 15, 30, Sept. 3, 1981; minimum, 160 microsiemens, Apr. 14-15, 1981.

WATER TEMPERATURE: Maximum, 30.0°C, July 17, 21, 25, 1981; minimum, 1.0°C, Feb. 13, 1981.

WATER QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	SPE- CIFIC CON- DUCT- ANCE LAB (US/CM)	PH WATER WHOLE FIELD (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	TEMPER- ATURE AIR (DEG C)	BARO- METRIC PRES- SURE (MM OF HG)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)
OCT 1991											
28...	0930	1090	400	577	8.0	15.0	21.0	763	1.7	10.6	105
JAN 1992											
29...	1030	1800	372	366	8.1	2.0	8.0	764	2.7	14.4	104
MAR											
02...	0730	9900	232	215	7.5	7.0	14.0	758	5.3	12.5	104
MAY											
18...	1030	10400	225	208	8.0	17.0	25.0	760	4.9	9.3	97
AUG											
31...	0800	3300	433	428	8.1	24.0	26.0	757	1.2	7.0	84

DATE	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOC- CI, KF AGAR (COLS. PER 100 ML)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY WAT DIS TOT IT FIELD MG/L AS CAO3	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)
OCT 1991										
28...	120	130	80	13	24	3.8	162	198	91	37
JAN 1992										
29...	<1	K7	48	8.0	13	2.2	79	96	69	20
MAR										
02...	K85	35	26	5.1	5.3	1.5	39	48	47	8.8
MAY										
18...	K65	120	27	5.2	5.5	1.9	60	72	35	7.9
AUG										
31...	110	220	55	10	14	3.0	118	143	61	24
SEP										

DATE	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITU- ENTS, DIS- SOLVED (MG/L)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)
OCT 1991										
28...	0.10	2.7	349	357	1.68	0.010	0.020	1.60	1.70	0.020
JAN 1992										
29...	0.20	2.8	233	218	--	0.010	<0.010	1.60	1.60	0.020
MAR										
02...	<0.10	5.9	126	131	--	0.010	<0.010	1.60	1.60	0.050
MAY										
18...	0.20	5.3	121	128	0.920	0.020	0.020	0.970	0.940	0.060
AUG										
31...	0.20	3.9	243	249	--	<0.010	<0.010	1.50	1.50	0.060

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

POTOMAC RIVER BASIN

01618000 POTOMAC RIVER AT SHEPHERDSTOWN, WV--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	PHOS- PHORUS TOTAL (MG/L AS P)	PHOS- PHORUS DIS- SOLVED (MG/L AS P)	PHOS- PHORUS ORTHO TOTAL (MG/L AS P)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	BARIUM, DIS- SOLVED (UG/L AS BA)	COBALT, DIS- SOLVED (UG/L AS CO)
OCT 1991 28...	0.020	0.40	2.0	0.030	0.030	0.020	0.010	<10	65	<3
JAN 1992 29...	0.030	<0.20	--	0.030	0.020	0.020	0.020	<10	42	<3
MAR 02...	0.050	0.30	1.9	0.050	<0.010	0.010	<0.010	20	33	<3
MAY 18...	0.070	<0.20	--	0.040	0.030	0.030	0.020	40	39	<3
AUG 31...	0.070	0.50	2.0	0.060	0.040	0.040	0.040	20	50	<3

DATE	IRON, DIS- SOLVED (UG/L AS FE)	LITHIUM DIS- SOLVED (UG/L AS LI)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)	VANA- DIUM, DIS- SOLVED (UG/L AS V)	HARD- NESS TOTAL (MG/L AS CACO3)
OCT 1991 28...	24	11	39	<10	3	<1	<1.0	370	<6	250
JAN 1992 29...	32	10	51	<10	3	<1	<1.0	230	<6	150
MAR 02...	26	5	54	<10	3	<1	<1.0	120	<6	86
MAY 18...	46	5	21	<10	3	<1	<1.0	140	<6	89
AUG 31...	8	6	21	<10	3	<1	<1.0	270	<6	180

SUSPENDED SEDIMENT DISCHARGE

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT 1991 28...	0930	1090	4	12	90
JAN 1992 29...	1030	1800	2	9.7	100
MAR 02...	0730	9900	12	321	96
MAY 18...	1030	10400	17	477	98
AUG 31...	0800	3300	5	45	96

POTOMAC RIVER BASIN

01636500 SHENANDOAH RIVER AT MILLVILLE, WV
(National stream-quality accounting network station)

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 National Geodetic Vertical Datum of 1929. 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)
Apr. 23	1015	*52,400	*15.36	June 7	0145	17,000	8.75

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	498	447	543	2430	1040	4950	2600	3730	2140	1270	1450	702
2	495	453	616	2240	1010	3990	2450	3350	2030	1240	1360	678
3	460	448	872	1960	980	3300	2290	3140	1940	1210	1180	670
4	481	449	1680	1930	950	2780	2140	2920	1800	1220	1110	668
5	473	450	2880	4350	942	2420	2020	2710	2220	1290	951	643
6	511	456	2580	9660	894	2180	1890	2530	9400	1310	854	2810
7	514	459	1860	7570	883	2620	1800	2310	14500	1300	814	6070
8	485	454	1490	5460	875	4980	1740	2370	9440	1240	744	2890
9	488	445	1260	4180	872	5790	1630	4010	6640	1200	752	2340
10	538	507	1280	3370	851	5240	1580	7960	5040	1180	732	2340
11	521	530	1300	2760	833	4930	1510	7670	4180	1130	750	2090
12	491	634	1250	2390	819	5810	1520	6030	3640	1010	732	2450
13	497	669	1360	2080	823	7060	1470	4870	3060	929	918	1810
14	482	685	1240	1900	821	5880	1370	4180	2670	973	888	1570
15	471	713	1130	1770	834	4810	1310	3880	2360	877	808	1350
16	474	631	1020	1620	848	4100	1310	3960	2110	878	843	1190
17	486	539	931	1560	911	3540	1230	5330	1920	850	844	1060
18	492	520	881	1530	1040	3130	1240	5260	1870	767	851	957
19	480	500	870	1480	1130	2910	1260	4750	1840	752	826	876
20	470	495	824	1250	1230	2930	1320	4460	2100	733	792	809
21	455	488	766	1380	1230	3420	1750	4330	1940	745	751	790
22	458	534	791	1300	1210	3680	31000	4200	2060	822	711	785
23	453	575	767	1240	1200	3490	48200	3670	1910	771	679	816
24	461	656	744	1230	1200	3200	22600	3200	1760	835	653	768
25	466	647	754	1200	1230	2920	13100	2900	1650	1040	616	752
26	444	623	735	1160	1460	2710	9610	2670	1540	1020	602	1030
27	454	668	724	1250	4370	2910	7210	2620	1480	1570	575	2030
28	464	607	718	1170	9270	3300	5820	2430	1460	1830	563	2030
29	460	556	845	1140	6630	3240	4840	2320	1270	1740	569	1690
30	453	530	1220	1100	---	2920	4180	2200	1230	1430	690	1410
31	450	---	1580	1060	---	2730	---	2260	---	1310	723	---
TOTAL	14825	16368	35511	74720	46386	117870	181990	118220	97200	34472	25331	46074
MEAN	478	546	1146	2410	1600	3802	6066	3814	3240	1112	817	1536
MAX	538	713	2880	9660	9270	7060	48200	7960	14500	1830	1450	6070
MIN	444	445	543	1060	819	2180	1230	2200	1230	733	563	643
CFSM	.16	.18	.38	.79	.53	1.25	2.00	1.25	1.07	.37	.27	.51
IN.	.18	.20	.43	.91	.57	1.44	2.23	1.45	1.19	.42	.31	.56

POTOMAC RIVER BASIN

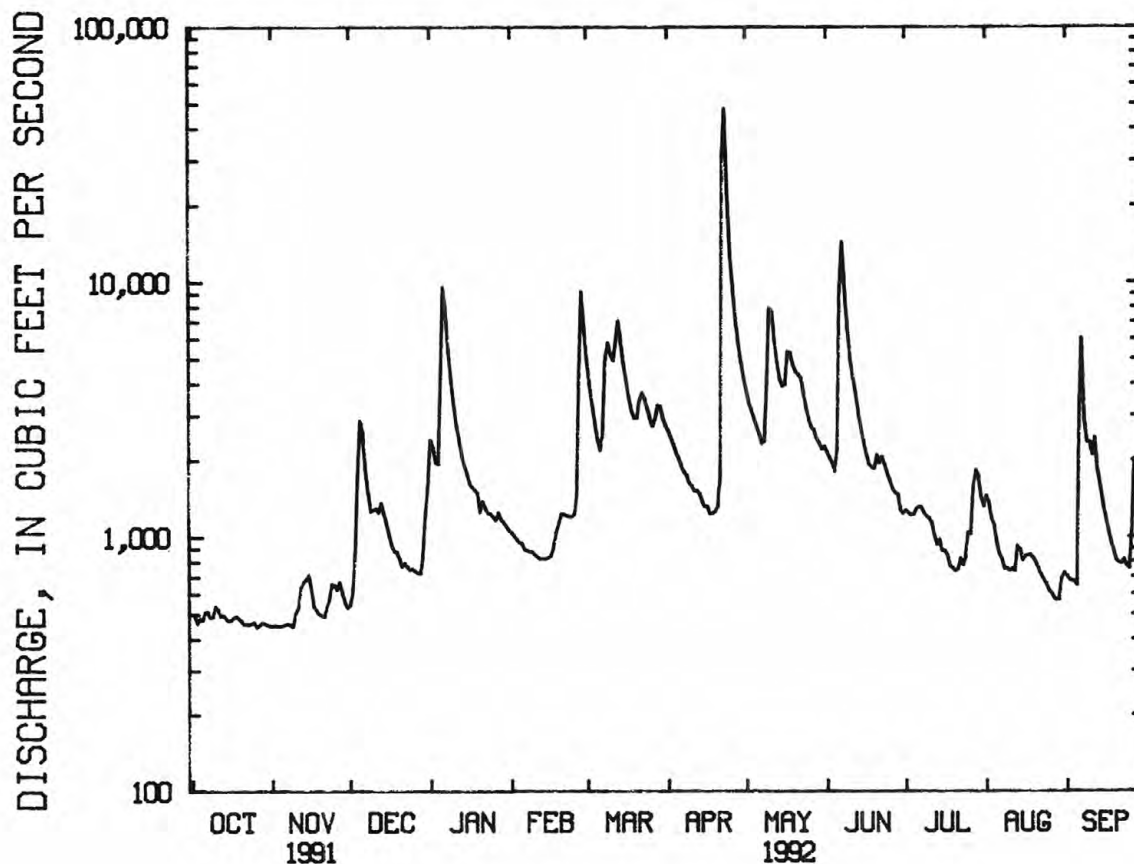
01636500 SHENANDOAH RIVER AT MILLVILLE, WV--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1895 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1980	1815	2416	3019	3777	4795	4326	3352	2381	1431	1623	1326
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 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1895 - 1992	
ANNUAL TOTAL	854258		808967		2680	
ANNUAL MEAN	2340		2210		4838	
HIGHEST ANNUAL MEAN					1111	
LOWEST ANNUAL MEAN					192000	
HIGHEST DAILY MEAN	21800	Mar 24	48200	Apr 23	194	Oct 16 1942
LOWEST DAILY MEAN	367	Sep 13	444	Oct 26	240	Jul 24 1930
ANNUAL SEVEN-DAY MINIMUM	450	Oct 30	450	Oct 30	230000	Sep 7 1966
INSTANTANEOUS PEAK FLOW			52400	Apr 23	32.40	Oct 16 1942
INSTANTANEOUS PEAK STAGE			15.36	Apr 23	59	Oct 16 1942
INSTANTANEOUS LOW FLOW			315	Nov 19	.88	Oct 4 1930
ANNUAL RUNOFF (CFSM)	.77		.73		11.98	
ANNUAL RUNOFF (INCHES)	10.45		9.90		5400	
10 PERCENT EXCEEDS	5280		4400		1590	
50 PERCENT EXCEEDS	1250		1240		607	
90 PERCENT EXCEEDS	484		496			

a From floodmarks.



POTOMAC RIVER BASIN

01636500 SHENANDOAH RIVER AT MILLVILLE, WV--Continued
(National stream-quality accounting network station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1960-63, 1965, 1969-71, 1979 to current year.

INSTRUMENTATION.--Water-quality monitor October 1980 to September 1983.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1980 to September 1983.

WATER TEMPERATURES: October 1980 to September 1983.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE (water years 1981-82): Maximum, 778 microsiemens, Dec. 29, 1980; minimum, 212 microsiemens, Jan. 17, 1982.

WATER TEMPERATURE: Maximum, 30.0°C, July 20, 21, 1981; minimum, 0.0°C on many days during winter periods.

WATER QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	SPE- CIFIC CON- DUCT- ANCE LAB (US/CM)	PH WATER WHOLE FIELD (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	TEMPER- ATURE AIR (DEG C)	BARO- METRIC PRES- SURE (MM OF HG)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	OXYGEN, DIS- SOLVED (MG/L)
OCT 1991 28...	1200	468	390	380	8.2	17.0	19.0	762	1.2	10.5	109
JAN 1992 29...	1330	1100	330	313	8.2	2.0	7.0	761	0.80	15.0	109
MAR 02...	1130	3900	203	186	7.6	8.0	22.0	758	9.2	11.2	95
MAY 18...	1330	5100	237	221	7.7	20.0	25.0	760	2.0	9.2	102
AUG 31...	1200	732	345	343	8.3	24.0	23.0	756	1.0	7.4	89

DATE	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY WAT DIS TOT IT MG/L AS CACO3	BICAR- BONATE WATER DIS IT MG/L AS HCO3	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)
OCT 1991 28...	K75	510	42	17	13	3.3	163	199	17	18
JAN 1992 29...	<1	K4	40	11	8.7	2.1	123	149	19	14
MAR 02...	K95	22	24	5.1	3.9	1.9	64	79	22	7.2
MAY 18...	730	870	28	7.5	5.1	2.0	87	104	13	7.6
AUG 31...	K80	510	37	14	14	2.5	131	157	23	18

DATE	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)
OCT 1991 28...	0.10	0.51	205	210	0.230	<0.010	0.010	0.250	0.240	0.020
JAN 1992 29...	0.10	1.3	176	177	1.59	<0.010	0.010	1.60	1.60	<0.010
MAR 02...	<0.10	5.8	123	115	1.39	0.020	0.010	1.40	1.40	0.100
MAY 18...	0.20	3.2	126	124	1.28	0.020	0.020	1.20	1.30	0.030
AUG 31...	0.20	2.2	170	191	--	<0.010	<0.010	0.560	0.590	0.040

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

POTOMAC RIVER BASIN

01636500 SHENANDOAH RIVER AT MILLVILLE, WV--Continued

WATER QUALITY DATA, WATER YEAR OCT 1991OBER 1991 TO SEPTEMBER 1992

DATE	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	PHOS- PHORUS TOTAL (MG/L AS P)	PHOS- PHORUS DIS- SOLVED (MG/L AS P)	PHOS- PHORUS ORTHO TOTAL (MG/L AS P)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	BARIUM, DIS- SOLVED (UG/L AS BA)	COBALT, DIS- SOLVED (UG/L AS CO)
OCT 1991 28...	0.020	0.40	0.65	0.040	0.040	0.030	0.020	10	34	<3
JAN 1992 29...	<0.010	<0.20	--	0.080	0.070	0.060	0.050	<10	27	<3
MAR 02...	0.100	0.50	1.9	0.130	0.070	0.060	0.060	30	18	<3
MAY 18...	0.050	0.20	1.4	0.090	0.060	0.060	0.050	10	30	<3
AUG 31...	0.050	0.40	0.96	0.090	0.080	0.070	0.060	<10	33	<3

DATE	IRON, DIS- SOLVED (UG/L AS FE)	LITHIUM DIS- SOLVED (UG/L AS LI)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)	VANA- DIUM, DIS- SOLVED (UG/L AS V)	HARD- NESS TOTAL (MG/L AS CACO3)
OCT 1991 28...	13	8	11	<10	3	3	<1.0	170	<6	180
JAN 1992 29...	7	7	3	<10	<1	<1	<1.0	130	<6	150
MAR 02...	54	6	9	<10	2	<1	<1.0	76	<6	81
MAY 18...	23	4	9	<10	1	<1	<1.0	93	<6	100
AUG 31...	11	7	15	<10	<1	<1	<1.0	150	<6	150

SUSPENDED SEDIMENT DISCHARGE

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT 1991 28...	1200	468		4 5.1	76
JAN 1992 29...	1330	1100		1 3.0	87
MAR 02...	1130	3900		24 253	88
MAY 18...	1330	5100		18 248	98
AUG 31...	1200	732		8 16	93

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.

WATER-DISCHARGE RECORDS

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 National Geodetic Vertical Datum of 1929. Prior to Oct. 28, 1929, nonrecording gage at same site. Prior to Sept. 2, 1902, at datum about 0.45 ft higher.

REMARKS.--Water-discharge records good except those for estimated daily discharges (backwater from grass), 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)
Apr. 23	1700	*90,000	*16.25	No other peak greater than base discharge.			

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e1400	e1200	1920	7330	3810	18100	13400	11000	6580	4040	7180	3680
2	e1350	e1100	2060	7610	3510	14900	12200	10000	6780	4300	6140	3160
3	e1300	e1100	3770	6640	3470	12800	11100	9270	6160	4740	5040	3030
4	e1300	e1100	6810	6020	3560	10600	10100	8540	5510	4950	5200	2880
5	e1300	e1200	13200	7480	3410	8970	9360	8010	5680	7320	4860	2740
6	e1500	e1300	11300	13800	3430	8220	8400	7650	13800	6320	4210	2860
7	e1800	e1100	7980	17600	3270	9810	7770	7130	27300	5070	3640	9660
8	e1900	e1100	6050	14100	3060	16300	7210	6970	21300	4450	3370	6660
9	e1500	e1000	4920	10800	3120	17500	6640	8540	16000	4000	3160	6420
10	e1700	e1100	4720	8780	3110	15800	6210	17700	12900	3640	3140	6940
11	e1500	e1300	4880	7480	2980	15400	5930	24900	10900	3470	3250	7050
12	e1400	e1300	5060	6580	2850	16400	5850	21200	9320	3250	3600	7350
13	e1400	e1400	4990	5910	2890	23600	5730	16900	8050	3480	3590	6130
14	e1300	e1400	4590	5390	2800	21700	5770	14000	7030	3350	3800	5240
15	e1300	e1600	4290	5340	3060	17800	5400	12500	6340	3560	3440	4610
16	e1600	e1600	3930	5360	3110	14800	5060	13100	5720	3540	3430	4140
17	e2200	e1500	3720	5180	3500	12600	4810	16300	5160	3370	3450	3760
18	e2000	e1400	3380	4810	4690	10900	4720	15900	4900	2910	3420	3530
19	e1700	e1400	3250	4750	5780	10300	4630	14400	4950	2740	3380	3330
20	e1500	e1400	3350	4000	6510	10700	4640	12700	5090	2650	3320	3190
21	e1300	e1300	2430	3560	6980	15500	5700	11800	5270	2460	3170	3070
22	e1400	e1800	2820	3620	6930	19100	38400	10700	5550	2620	2990	3030
23	e1400	2440	2840	4310	6700	18000	82300	9430	5350	2550	2820	3800
24	e1300	2740	2730	4310	6290	15900	58200	8340	4800	2740	2760	3700
25	e1300	2930	2630	4220	6130	14200	34700	7700	4490	5070	2680	3220
26	e1200	3210	2600	3630	6930	12700	26400	7370	4430	9380	2600	3350
27	e1200	2700	2520	3840	15100	16500	21100	7280	4400	9710	2540	4380
28	e1200	2790	2530	3850	28400	24200	17000	6680	4380	9070	2460	4890
29	e1200	2380	3210	3820	23200	21100	14300	6200	3870	10700	2610	4430
30	e1200	2230	4110	3780	---	17400	12300	5870	3580	11600	2890	3850
31	e1100	---	6030	3800	---	15000	---	6490	---	8950	3490	---
TOTAL	44750	50120	138620	197700	178580	476800	455330	344570	235590	156000	111630	134080
MEAN	1444	1671	4472	6377	6158	15380	15180	11120	7853	5032	3601	4469
MAX	2200	3210	13200	17600	28400	24200	82300	24900	27300	11600	7180	9660
MIN	1100	1000	1920	3560	2800	8220	4630	5870	3580	2460	2460	2740
CFSM	.15	.17	.46	.66	.64	1.59	1.57	1.15	.81	.52	.37	.46
IN.	.17	.19	.53	.76	.69	1.84	1.76	1.33	.91	.60	.43	.52

e Estimated

POTOMAC RIVER BASIN

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

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1895 - 1992, BY WATER YEAR (WY)

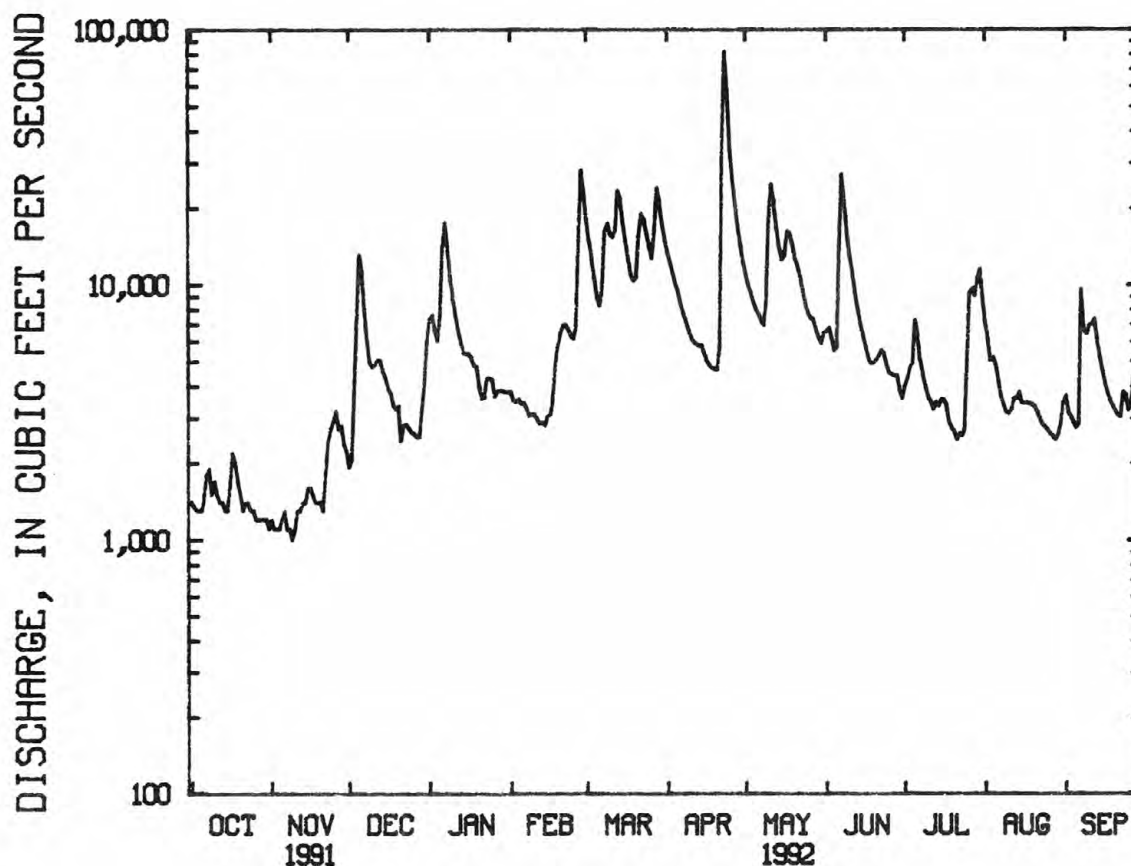
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	5094	5485	8341	11080	14210	19160	16360	12320	8016	4518	4192	3496
MAX	37030	39000	32610	31350	42640	68360	39840	41970	40400	16000	23580	17820
(WY)	1943	1886	1973	1837	1897	1936	1918	1924	1972	1949	1955	1975
MIN	706	840	1253	1703	2661	5400	4368	3276	1932	1056	771	834
(WY)	1931	1931	1966	1981	1934	1931	1915	1930	1969	1966	1930	1930

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1895 - 1992	
ANNUAL TOTAL	2797680		2523770			
ANNUAL MEAN	7665		6896		9341	
HIGHEST ANNUAL MEAN					15840	
LOWEST ANNUAL MEAN					4366	
HIGHEST DAILY MEAN	78100		82300		434000	
LOWEST DAILY MEAN	e1000		e1000		540	
ANNUAL SEVEN-DAY MINIMUM	1130		1130		593	
INSTANTANEOUS PEAK FLOW			90000		a480000	
INSTANTANEOUS PEAK STAGE			16.25		41.03	
INSTANTANEOUS LOW FLOW			UNKNOWN		530	
ANNUAL RUNOFF (CFSM)	.79		.71		.97	
ANNUAL RUNOFF (INCHES)	10.78		9.73		13.15	
10 PERCENT EXCEEDS	17600		15200		20300	
50 PERCENT EXCEEDS	3250		4630		5380	
90 PERCENT EXCEEDS	1400		1400		1650	

e Estimated.

a 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.

b September 11, 12, 1966.



POTOMAC RIVER BASIN

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

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1961 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: October 1960 to current year.

SUSPENDED-SEDIMENT DISCHARGE: October 1960 to current year.

REMARKS.--Water temperatures are measured daily in field by local observer at time of sampling.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURE (water years 1961-1990): Maximum daily, 33.5°C, Aug. 24, 1964, July 19, 1977; minimum daily, 0.0°C on many days during winter periods.

SEDIMENT CONCENTRATION: Maximum daily mean, 2,690 mg/L, Nov. 7, 1985; minimum daily mean, 1 mg/L, on many days most years.

SEDIMENT LOAD: Maximum daily, 1,930,000 tons, Nov. 7, 1985; minimum daily, 2.0 tons on many days during 1964, 1966-1969.

EXTREMES FOR CURRENT YEAR.--

SEDIMENT CONCENTRATION: Maximum daily mean, 775 mg/L, Apr. 23; minimum daily mean, 1 mg/L, on many days.

SEDIMENT LOAD: Maximum daily, 170,000 tons, Apr. 23; minimum daily, 3.0 tons, Oct. 31, Nov. 2-4.

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SEDI- MENT, DIS- CHARGE, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. FALL DIAM. % FINER THAN .002 MM	SED. SUSP. FALL DIAM. % FINER THAN .004 MM	SED. SUSP. FALL DIAM. % FINER THAN .008 MM	SED. SUSP. FALL DIAM. % FINER THAN .016 MM
APR 1992 23...	0845	79900	655	141000	37	50	62	74
DATE		SED. SUSP. FALL DIAM. % FINER THAN .031 MM	SED. SUSP. FALL DIAM. % FINER THAN .062 MM	SED. SUSP. FALL DIAM. % FINER THAN .125 MM	SED. SUSP. FALL DIAM. % FINER THAN .250 MM	SED. SUSP. FALL DIAM. % FINER THAN .500 MM	SED. SUSP. FALL DIAM. % FINER THAN 1.00 MM	SED. SUSP. FALL DIAM. % FINER THAN 2.00 MM
APR 1992 23...		81	89	96	99	99	100	100

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY INSTANTANEOUS VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22.0	14.0	11.0	4.0	2.0	8.0	10.0	---	17.0	---	---	---
2	22.0	---	10.0	4.0	---	11.0	8.0	21.0	---	27.0	25.0	---
3	21.0	12.0	---	4.0	4.0	9.0	8.0	---	22.0	23.0	26.0	---
4	23.0	8.0	5.0	5.0	3.0	8.0	9.0	---	---	---	27.0	---
5	24.0	7.0	6.0	6.0	4.0	9.0	---	---	21.0	25.0	---	---
6	20.0	7.0	6.0	7.0	4.0	---	12.0	16.0	---	27.0	24.0	---
7	16.0	---	7.0	4.0	2.0	11.0	13.0	14.0	22.0	27.0	24.0	---
8	17.0	10.0	5.0	6.0	3.0	10.0	14.0	---	21.0	26.0	25.0	---
9	19.0	---	10.0	7.0	2.0	10.0	14.0	15.0	23.0	---	---	---
10	19.0	---	8.0	6.0	1.0	11.0	15.0	16.0	27.0	30.0	28.0	---
11	16.0	---	7.0	5.0	4.0	---	---	18.0	---	27.0	30.0	25.0
12	---	---	7.0	5.0	2.0	10.0	---	14.0	---	28.0	---	---
13	15.0	---	8.0	5.0	.0	8.0	14.0	15.0	---	---	24.0	---
14	16.0	10.0	10.0	9.0	5.0	5.0	16.0	21.0	---	29.0	24.0	23.0
15	18.0	14.0	5.0	4.0	3.0	5.0	15.0	18.0	---	30.0	---	---
16	15.0	12.0	7.0	1.0	5.0	3.0	---	18.0	---	30.0	22.0	---
17	14.0	10.0	4.0	3.0	5.0	9.0	---	18.0	---	30.0	23.0	25.0
18	12.0	9.0	3.0	.0	4.0	5.0	---	---	---	---	---	---
19	---	10.0	.0	.0	6.0	---	13.0	20.0	23.0	---	25.0	---
20	---	13.0	1.0	2.0	7.0	7.0	15.0	---	---	30.0	25.0	---
21	---	13.0	4.0	4.0	7.0	---	---	---	---	29.0	---	23.0
22	15.0	15.0	---	3.0	---	5.0	18.0	22.0	22.0	26.0	24.0	---
23	16.0	15.0	3.0	2.0	8.0	6.0	17.0	20.0	22.0	28.0	25.0	---
24	17.0	---	---	---	7.0	8.0	15.0	---	23.0	26.0	---	20.0
25	18.0	7.0	---	.0	---	8.0	---	17.0	24.0	23.0	---	---
26	---	6.0	2.0	7.0	---	---	---	18.0	26.0	24.0	29.0	18.0
27	---	5.0	4.0	.0	5.0	8.0	15.0	20.0	---	25.0	---	20.0
28	19.0	5.0	3.0	3.0	6.0	8.0	---	---	23.0	25.0	27.0	---
29	16.0	10.0	3.0	4.0	6.0	8.0	16.0	20.0	---	25.0	---	18.0
30	14.0	10.0	5.0	4.0	---	9.0	---	---	27.0	---	---	---
31	14.0	---	3.0	2.0	---	11.0	---	17.0	---	26.0	---	---

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 National Geodetic Vertical Datum, 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 fair. 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. 03	0945	*10,100	*12.67	July 27	1645	6,560	11.21

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	12	934	382	295	1030	844	304	90	128	462	47
2	9.7	11	1920	305	221	659	602	253	87	440	269	35
3	8.5	11	6420	265	217	467	441	1420	79	381	207	30
4	7.8	11	2090	253	239	358	350	1190	72	701	163	34
5	7.5	10	796	299	421	286	297	661	81	327	128	34
6	9.9	10	484	308	391	239	265	427	141	934	99	34
7	7.0	10	355	249	324	244	294	303	127	864	80	30
8	6.4	9.9	301	202	271	605	309	255	950	415	67	31
9	7.3	9.9	291	199	205	740	299	257	698	275	63	30
10	6.8	10	873	255	137	573	464	242	673	238	72	26
11	6.1	38	712	257	e120	1370	475	227	410	168	60	29
12	13	81	452	233	e130	1090	398	210	267	128	70	34
13	25	54	346	247	e140	709	309	195	185	108	80	25
14	17	42	585	519	496	505	248	380	174	101	78	20
15	37	40	794	762	876	415	222	311	216	86	94	16
16	119	49	518	545	2250	328	193	301	212	81	77	14
17	94	55	358	455	1400	305	171	232	175	69	98	13
18	58	56	273	357	856	529	216	197	216	64	82	11
19	40	50	199	242	814	2200	234	286	656	66	66	13
20	32	46	147	e180	734	1540	235	333	399	61	55	23
21	26	47	175	e150	515	868	342	274	241	47	48	19
22	22	442	206	e170	431	604	2200	208	172	84	42	15
23	20	834	299	346	399	824	1070	166	132	265	37	17
24	18	393	2130	1830	554	593	612	140	107	530	32	18
25	17	226	1070	959	661	454	448	128	136	352	29	15
26	16	150	576	579	1940	439	399	113	119	394	26	12
27	16	110	386	389	1330	498	388	110	119	3900	23	12
28	15	90	284	323	743	473	420	91	112	4050	51	15
29	14	77	524	363	1210	453	398	79	83	942	150	17
30	14	69	646	360	---	430	350	80	74	436	92	15
31	17	---	498	336	---	759	---	93	---	344	59	---
TOTAL	718.0	3053.8	25642	12319	18320	20587	13493	9466	7203	16979	2959	684
MEAN	23.2	102	827	397	632	664	450	305	240	548	95.5	22.8
MAX	119	834	6420	1830	2250	2200	2200	1420	950	4050	462	47
MIN	6.1	9.9	147	150	120	239	171	79	72	47	23	11
CFSM	.12	.54	4.42	2.13	3.38	3.55	2.41	1.63	1.28	2.93	.51	.12
IN.	.14	.61	5.10	2.45	3.64	4.10	2.68	1.88	1.43	3.38	.59	.14

e Estimated

MONONGAHELA RIVER BASIN

03050000 TYGART VALLEY RIVER NEAR DAILEY, WV--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1915-1975, 1988-1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	128	235	457	547	589	712	518	420	236	155	155	81.1
MAX	664	818	1269	1032	1148	1780	1054	1162	1066	548	962	424
(WY)	1938	1973	1973	1952	1972	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

SUMMARY STATISTICS

FOR 1991 CALENDAR YEAR

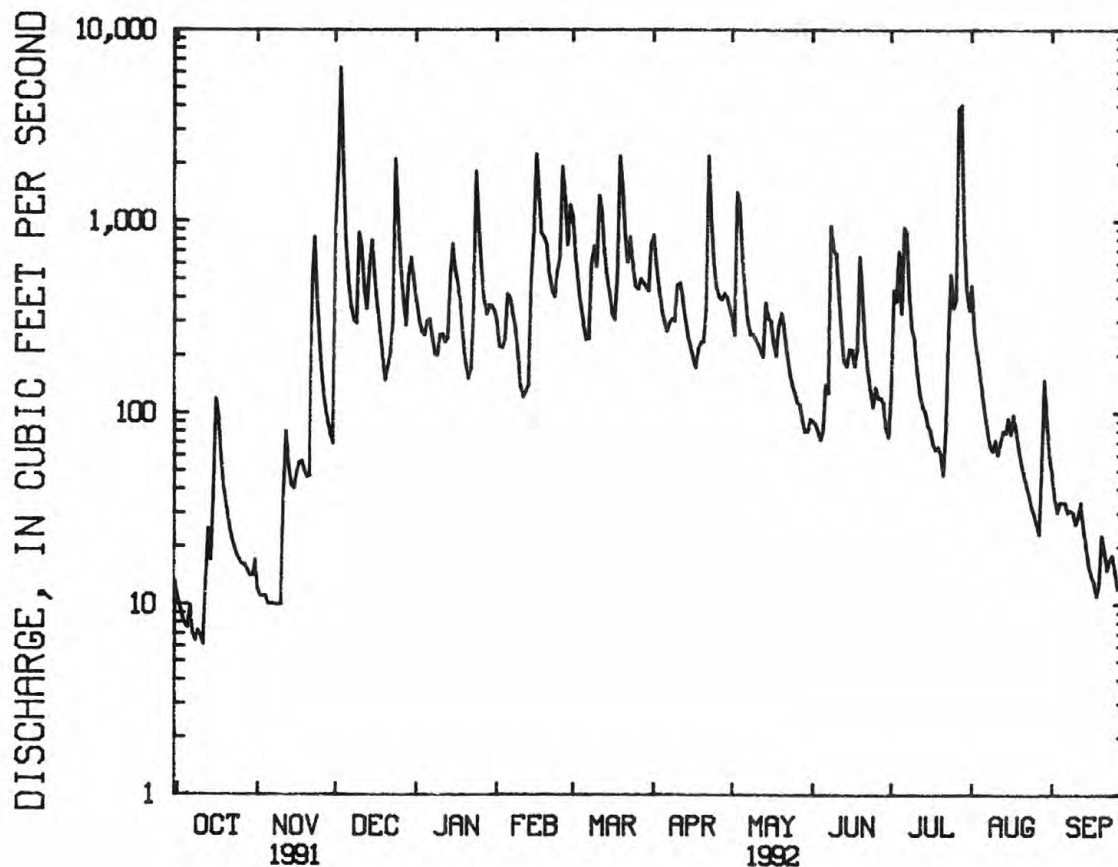
FOR 1992 WATER YEAR

WATER YEARS 1915 - 1975
1988 - 1992

ANNUAL TOTAL	111808.5		131423.8									
ANNUAL MEAN	306		359							353		
HIGHEST ANNUAL MEAN										526		1972
LOWEST ANNUAL MEAN										182		1941
HIGHEST DAILY MEAN	6420	Dec 3	6420	Dec 3						9370	Dec 31	1969
LOWEST DAILY MEAN	3.0	Jul 4	6.1	Oct 11						.00	(a)	
ANNUAL SEVEN-DAY MINIMUM	4.0	Jun 29	7.3	Oct 5						.00	Sep 12	1930
INSTANTANEOUS PEAK FLOW			10100	Dec 3						13100	Feb 4	1932
INSTANTANEOUS PEAK STAGE			12.67	Dec 3						b17.20	Feb 4	1932
INSTANTANEOUS LOW FLOW			4.4	Oct 11						.00	(a)	
ANNUAL RUNOFF (CFSM)	1.64		1.92							1.89		
ANNUAL RUNOFF (INCHES)	22.24		26.14							25.62		
10 PERCENT EXCEEDS	829		801							829		
50 PERCENT EXCEEDS	87		221							162		
90 PERCENT EXCEEDS	9.7		16							18		

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

b From floodmarks.



MONONGAHELA RIVER BASIN

03050400 TYGART VALLEY RIVER AT ELKINS, WV

LOCATION.--Lat 38°55'00", long 79°50'43", Randolph County, Hydrologic Unit 05020001, at city water plant, at Elkins, 2.5 mi upstream from gaging station.

DRAINAGE AREA.--268 mi² upstream from water plant: 272 mi² upstream from gaging station.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: January 1947 to September 1992, discontinued.

REMARKS.--No appreciable inflow between water plant and gaging station except during periods of heavy local rains. During flood periods part of the flow is diverted around the water plant in a flood by-pass channel. Values published are once-daily readings.

COOPERATION.--Temperature records were furnished by City of Elkins pump station.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum daily, 33.0°C, July 22, 1952; minimum daily, 0.0°C on many days during winter months most years.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum daily, 23.0°C, July 13-16, 20-24; minimum daily, 0.0°C, Jan. 19-20, 28.

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY INSTANTANEOUS VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15.0	12.0	7.0	4.0	1.0	5.0	7.0	11.0	14.0	21.0	20.0	19.0
2	14.0	12.0	9.0	3.0	1.0	4.0	5.0	12.0	14.0	21.0	18.0	19.0
3	15.0	11.0	10.0	3.0	2.0	7.0	5.0	14.0	15.0	21.0	18.0	19.0
4	16.0	10.0	9.0	5.0	1.0	7.0	3.0	13.0	16.0	21.0	19.0	19.0
5	16.0	9.0	6.0	6.0	2.0	7.0	3.0	10.0	17.0	22.0	19.0	21.0
6	16.0	8.0	4.0	5.0	2.0	9.0	4.0	10.0	17.0	22.0	19.0	21.0
7	15.0	8.0	4.0	4.0	3.0	10.0	6.0	10.0	18.0	21.0	20.0	21.0
8	13.0	8.0	5.0	3.0	1.0	10.0	8.0	10.0	19.0	20.0	19.0	19.0
9	13.0	6.0	7.0	3.0	1.0	9.0	8.0	10.0	19.0	20.0	20.0	20.0
10	13.0	5.0	8.0	3.0	2.0	10.0	10.0	12.0	17.0	19.0	21.0	20.0
11	13.0	5.0	7.0	4.0	1.0	8.0	11.0	13.0	17.0	19.0	22.0	20.0
12	13.0	5.0	6.0	2.0	1.0	4.0	11.0	14.0	17.0	22.0	22.0	20.0
13	12.0	5.0	6.0	3.0	2.0	4.0	10.0	14.0	17.0	23.0	21.0	20.0
14	11.0	4.0	8.0	4.0	1.0	2.0	10.0	18.0	19.0	23.0	21.0	20.0
15	12.0	5.0	6.0	3.0	3.0	3.0	10.0	17.0	20.0	23.0	21.0	20.0
16	11.0	7.0	3.0	3.0	5.0	3.0	10.0	18.0	19.0	23.0	20.0	20.0
17	10.0	6.0	3.0	2.0	4.0	3.0	12.0	17.0	20.0	22.0	20.0	20.0
18	9.0	6.0	2.0	3.0	5.0	4.0	13.0	17.0	20.0	22.0	20.0	20.0
19	10.0	7.0	2.0	.0	6.0	6.0	14.0	16.0	19.0	22.0	19.0	20.0
20	9.0	7.0	3.0	.0	5.0	5.0	13.0	16.0	21.0	23.0	19.0	19.0
21	9.0	8.0	4.0	2.0	5.0	5.0	15.0	16.0	20.0	23.0	19.0	19.0
22	9.0	11.0	1.0	1.0	4.0	5.0	15.0	17.0	17.0	23.0	19.0	19.0
23	10.0	10.0	2.0	1.0	5.0	5.0	14.0	17.0	17.0	23.0	20.0	19.0
24	10.0	9.0	4.0	1.0	6.0	4.0	13.0	18.0	17.0	23.0	20.0	19.0
25	11.0	8.0	4.0	1.0	7.0	6.0	14.0	17.0	18.0	20.0	20.0	17.0
26	12.0	4.0	4.0	1.0	7.0	6.0	11.0	15.0	18.0	21.0	20.0	17.0
27	12.0	3.0	2.0	1.0	7.0	6.0	9.0	15.0	19.0	21.0	21.0	17.0
28	13.0	3.0	2.0	.0	6.0	6.0	9.0	15.0	20.0	19.0	21.0	17.0
29	12.0	3.0	3.0	1.0	6.0	6.0	9.0	15.0	20.0	20.0	20.0	16.0
30	12.0	5.0	5.0	2.0	---	7.0	10.0	15.0	21.0	18.0	20.0	16.0
31	12.0	---	4.0	2.0	---	6.0	---	15.0	---	19.0	19.0	---

WTR YR 1992 MAX 23.0 MIN .0

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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 National Geodetic Vertical Datum, 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 (ice effect), which are fair. 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. 3	2400	7,690	13.74	July 28	0500	*8,400	*14.33

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	17	558	578	466	1460	1240	477	101	99	688	75
2	11	19	2420	471	363	949	928	397	112	449	451	69
3	7.3	20	6370	407	323	688	688	2050	108	408	326	61
4	4.0	19	5390	378	367	536	549	1930	102	913	265	46
5	3.7	13	1320	407	627	439	473	1010	100	496	209	40
6	7.8	13	769	471	607	367	402	660	170	763	161	44
7	20	14	551	396	497	351	418	476	180	1210	124	46
8	25	14	446	323	417	851	446	384	800	548	101	63
9	25	14	452	320	332	1200	431	379	905	368	92	27
10	24	17	1440	415	220	915	564	349	744	380	89	44
11	25	26	1110	430	e200	1860	640	316	521	265	102	52
12	27	88	710	388	e190	1680	576	288	352	203	103	51
13	45	96	558	385	e230	1070	481	269	252	178	131	47
14	57	86	810	642	739	770	406	441	191	158	103	40
15	34	61	1130	1110	1210	631	364	639	291	142	110	38
16	275	55	786	827	3130	515	318	739	248	98	142	34
17	182	78	540	579	2190	473	308	468	220	104	159	28
18	129	84	419	489	1310	717	355	371	193	109	136	21
19	102	82	308	355	1140	3060	367	376	679	102	106	35
20	72	77	206	281	1010	2500	358	441	522	80	87	26
21	45	78	280	e240	776	1300	438	381	287	101	73	26
22	29	420	333	e280	633	901	2620	297	241	39	66	38
23	33	1290	578	e410	583	1200	1640	237	159	799	62	71
24	36	686	3080	2290	732	922	906	195	136	840	47	65
25	35	356	1650	1460	929	682	692	174	133	814	36	27
26	35	258	845	870	2930	641	646	156	156	542	36	7.1
27	36	186	586	535	2190	761	735	146	138	3790	34	8.8
28	48	151	451	493	1090	743	737	137	145	7250	41	116
29	27	135	704	520	1500	684	643	118	107	2060	156	22
30	32	124	945	536	---	578	549	108	86	707	163	17
31	24	---	754	515	---	958	---	109	---	492	98	---
TOTAL	1471.8	4577	36499	17801	26931	30402	19918	14518	8379	24507	4497	1284.9
MEAN	47.5	153	1177	574	929	981	664	468	279	791	145	42.8
MAX	275	1290	6370	2290	3130	3060	2620	2050	905	7250	688	116
MIN	3.7	13	206	240	190	351	308	108	86	39	34	7.1
CFSM	.17	.56	4.33	2.11	3.41	3.61	2.44	1.72	1.03	2.91	.53	.16
IN.	.20	.63	4.99	2.43	3.68	4.16	2.72	1.99	1.15	3.35	.62	.18

e Estimated

MONONGAHELA RIVER BASIN

03050500 TYGART VALLEY RIVER NEAR ELKINS, WV--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1945 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	200	414	695	756	889	1027	785	568	347	239	207	127
MAX	954	2184	1787	1504	1686	2579	1506	1511	1314	791	1032	755
(WY)	1980	1986	1973	1952	1972	1963	1972	1967	1974	1992	1984	1971
MIN	2.82	1.93	75.7	174	145	484	264	110	28.8	18.4	6.01	2.58
(WY)	1954	1954	1966	1977	1978	1957	1955	1991	1965	1968	1965	1953

SUMMARY STATISTICS

FOR 1991 CALENDAR YEAR

FOR 1992 WATER YEAR

WATER YEARS 1945 - 1992

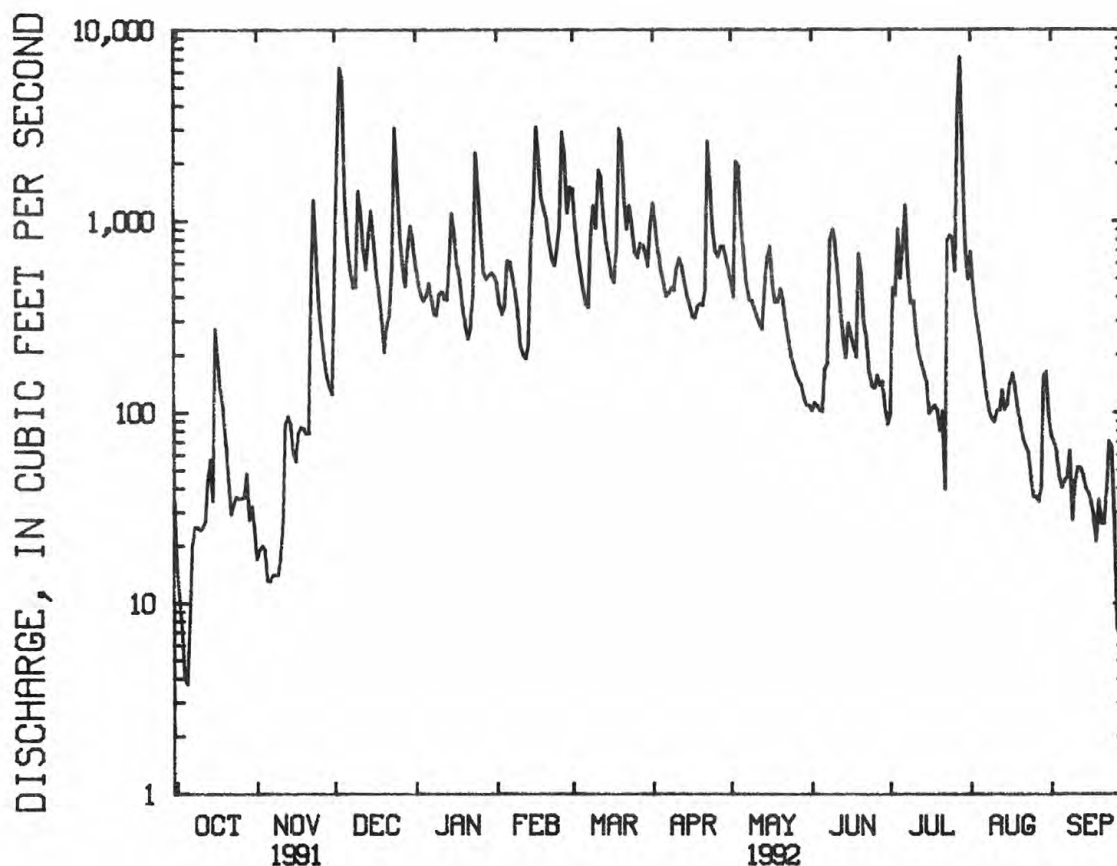
ANNUAL TOTAL	163864.9		190785.7									
ANNUAL MEAN	449		521							520		
HIGHEST ANNUAL MEAN										750		1972
LOWEST ANNUAL MEAN										312		1966
HIGHEST DAILY MEAN	6370	Dec 3	7250	Jul 28					16000	Nov 5	1985	
LOWEST DAILY MEAN	3.7	Oct 5	3.7	Oct 5					e.10	(a)		
ANNUAL SEVEN-DAY MINIMUM	10	Oct 1	10	Oct 1					.10	Sep 20	1959	
INSTANTANEOUS PEAK FLOW			8400	Jul 28					b23500	Nov 5	1985	
INSTANTANEOUS PEAK STAGE			14.33	Jul 28					c22.81	Nov 5	1985	
INSTANTANEOUS LOW FLOW			3.1	Oct 5					e.10	(a)		
ANNUAL RUNOFF (CFSM)	1.65		1.92						1.91			
ANNUAL RUNOFF (INCHES)	22.41		26.09						25.95			
10 PERCENT EXCEEDS	1170		1120						1220			
50 PERCENT EXCEEDS	144		350						247			
90 PERCENT EXCEEDS	17		31						28			

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 National Geodetic Vertical Datum, 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 (ice effect, doubtful gage-height record), which are fair. 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. 4	0200	10,100	13.89	July 28	0600	*11,300	*14.71

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	37	33	530	974	732	2290	2070	827	183	105	912	128
2	25	23	3770	767	582	1490	1580	737	162	325	674	105
3	17	22	9620	645	510	1060	1160	2700	165	470	459	96
4	16	23	7570	576	544	816	908	3440	153	960	397	89
5	14	23	2130	557	910	657	761	1780	172	664	326	69
6	12	20	1180	632	971	550	622	1140	214	720	247	77
7	14	17	833	571	788	544	592	842	259	1580	201	78
8	28	17	656	477	650	1180	618	707	499	779	154	78
9	38	17	660	460	520	2010	602	e600	1220	479	146	89
10	34	19	2650	602	381	1520	682	e530	824	407	140	98
11	38	26	2050	656	e300	2910	819	e470	654	443	170	153
12	60	39	1180	600	e340	2850	795	e430	444	266	297	127
13	76	116	982	576	e440	1790	689	e480	321	296	260	94
14	89	105	1530	750	1320	1250	584	e600	245	299	476	78
15	95	95	1930	1490	1970	1020	525	1360	286	231	298	66
16	330	72	1330	1230	4420	837	470	2130	303	212	242	58
17	331	82	892	869	3640	757	500	1030	284	145	343	52
18	197	102	668	770	2170	1060	1230	712	228	156	272	45
19	146	103	500	555	1820	4480	844	799	569	145	207	65
20	112	96	371	441	1550	4190	677	763	647	129	170	96
21	86	97	397	e360	1210	2210	691	616	420	98	142	66
22	58	674	550	e410	966	1450	3120	474	252	121	120	57
23	44	2320	930	e500	866	2020	2700	373	229	508	110	105
24	46	1160	4480	2970	979	1580	1430	311	164	747	97	126
25	47	600	2790	2410	1420	1110	1090	283	151	1200	74	103
26	44	402	1390	1380	4190	972	1070	249	177	626	61	58
27	43	293	932	880	3740	1130	1440	223	205	4760	58	34
28	43	229	694	774	1840	1180	1450	205	174	10100	73	52
29	45	197	1090	750	2050	1050	1140	185	154	3820	234	132
30	35	180	1740	806	---	918	928	181	120	1130	265	47
31	31	---	1330	794	---	1490	---	181	---	676	179	---
TOTAL	2231	7202	57355	26232	41819	48371	31787	25358	9878	32597	7804	2521
MEAN	72.0	240	1850	846	1442	1560	1060	818	329	1052	252	84.0
MAX	331	2320	9620	2970	4420	4480	3120	3440	1220	10100	912	153
MIN	12	17	371	360	300	544	470	181	120	98	58	34
CFSM	.18	.59	4.53	2.07	3.53	3.82	2.60	2.00	.81	2.58	.62	.21
IN.	.20	.66	5.23	2.39	3.81	4.41	2.90	2.31	.90	2.97	.71	.23

e Estimated

MONONGAHELA RIVER BASIN

03051000 TYGART VALLEY RIVER AT BELINGTON, WV--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1907 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	342	629	1027	1263	1360	1545	1193	968	562	422	341	206
MAX	1765	3431	2837	2731	2544	3765	2310	2764	2449	1997	1981	1201
(WY)	1912	1986	1973	1911	1939	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

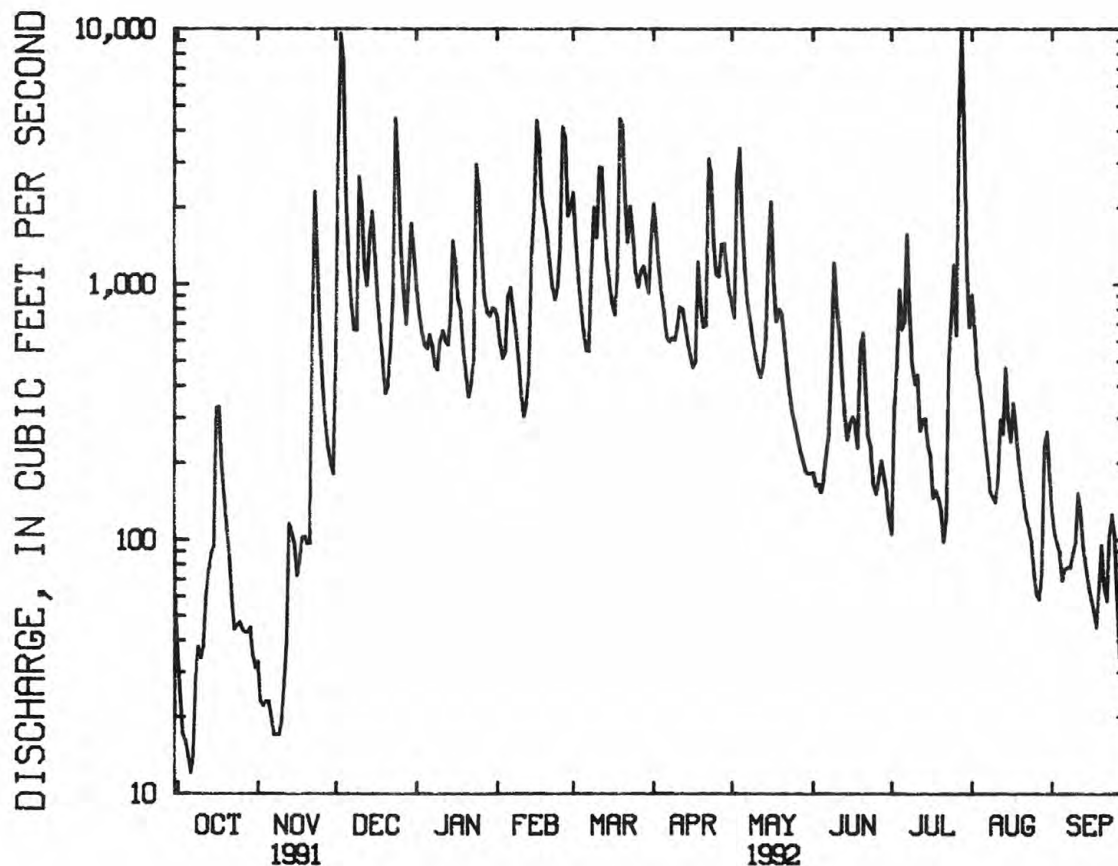
SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1907 - 1992	
ANNUAL TOTAL	266538		293155		817	
ANNUAL MEAN	730		801		1203	
HIGHEST ANNUAL MEAN					506	
LOWEST ANNUAL MEAN					27400	
HIGHEST DAILY MEAN	9620	Dec 3	10100	Jul 28		Nov 5 1985
LOWEST DAILY MEAN	12	Oct 6	12	Oct 6	.10	(a)
ANNUAL SEVEN-DAY MINIMUM	18	Jun 12	18	Oct 2	.17	Sep 13 1930
INSTANTANEOUS PEAK FLOW			11300	Jul 28	b29500	Nov 5 1985
INSTANTANEOUS PEAK STAGE			14.71	Jul 28	c23.65	Nov 5 1985
INSTANTANEOUS LOW FLOW			12	(d)	.10	Sep 13 1930
ANNUAL RUNOFF (CFSM)	1.79		1.96		2.00	
ANNUAL RUNOFF (INCHES)	24.30		26.73		27.22	
10 PERCENT EXCEEDS	2040		1870		1980	
50 PERCENT EXCEEDS	232		499		405	
90 PERCENT EXCEEDS	26		52		47	

a Sept. 13, 16, 1930.

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

c From floodmarks.

d Oct. 5, 6.



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 fair. 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. 3	0200	7,500	10.64	July 27	2145	*10,800	*13.14

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	18	233	471	315	740	738	381	77	36	671	107
2	12	17	1420	395	242	593	667	309	72	58	419	83
3	12	17	4630	347	232	461	539	1490	64	56	313	69
4	10	16	1730	302	256	373	445	1250	55	192	268	63
5	10	15	890	269	340	305	378	772	57	121	204	60
6	17	14	588	242	350	259	322	533	113	320	145	107
7	64	14	433	211	323	292	302	395	110	344	109	104
8	47	13	354	184	293	657	287	319	160	197	83	120
9	33	13	360	190	232	775	265	289	197	141	70	102
10	25	14	1280	264	150	651	309	249	171	217	61	100
11	24	17	902	254	e140	1270	307	196	134	190	61	175
12	47	33	603	229	e155	999	307	170	106	119	199	133
13	102	38	540	247	211	743	287	156	86	111	144	97
14	86	33	816	372	865	573	261	225	71	134	199	75
15	75	33	883	531	947	479	242	331	80	94	277	62
16	173	45	629	470	1690	395	214	762	82	80	266	51
17	131	57	458	365	1240	363	256	504	62	63	234	42
18	91	66	355	333	904	520	403	382	50	52	217	37
19	72	59	259	220	764	1780	335	341	148	70	161	55
20	59	55	169	e190	645	1480	303	270	120	76	130	84
21	50	56	234	e175	504	921	307	196	88	52	112	53
22	41	488	245	e200	443	679	709	153	73	62	99	41
23	36	1150	424	303	396	952	665	125	62	126	83	90
24	33	553	2060	1110	421	722	548	108	50	361	71	104
25	28	323	1100	797	444	549	463	107	46	506	57	69
26	25	228	682	591	1470	457	484	98	66	438	50	53
27	23	169	481	430	1160	438	617	87	64	5380	42	51
28	23	144	375	380	770	416	645	76	55	4180	113	68
29	22	126	495	350	841	407	548	65	42	1110	424	60
30	20	112	653	337	---	407	440	71	35	564	217	43
31	18	---	575	331	---	644	---	81	---	384	144	---
TOTAL	1423	3936	24856	11090	16743	20300	12593	10491	2596	15834	5643	2358
MEAN	45.9	131	802	358	577	655	420	338	86.5	511	182	78.6
MAX	173	1150	4630	1110	1690	1780	738	1490	197	5380	671	175
MIN	10	13	169	175	140	259	214	65	35	36	42	37
CFSM	.31	.88	5.38	2.40	3.87	4.39	2.82	2.27	.58	3.43	1.22	.53
IN.	.36	.98	6.21	2.77	4.18	5.07	3.14	2.62	.65	3.95	1.41	.59

e Estimated

MONONGAHELA RIVER BASIN

03052000 MIDDLE FORK RIVER AT AUDRA, WV--Continued

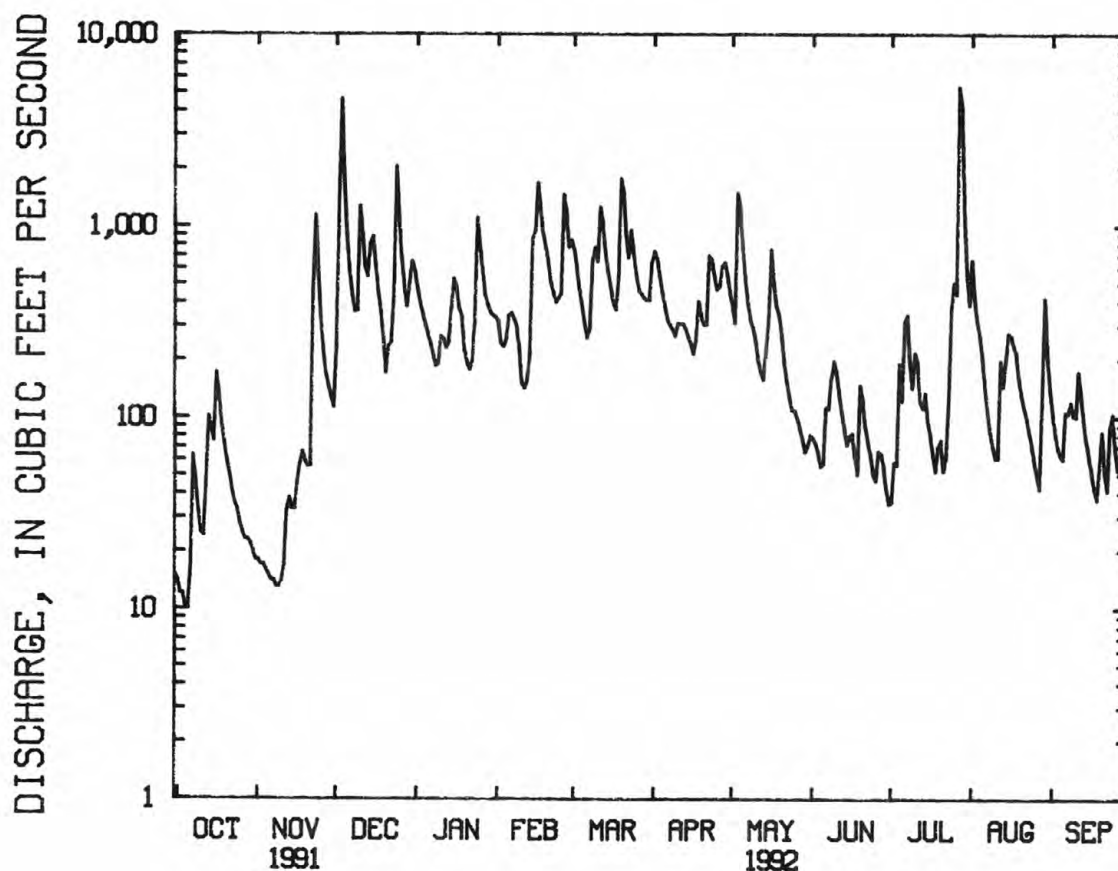
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1942-1979, 1989-1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	129	268	493	553	583	662	523	393	223	150	139	88.5
MAX	548	814	1124	959	1070	1443	1012	962	760	612	690	642
(WY)	1955	1973	1973	1952	1956	1963	1973	1967	1972	1958	1942	1971
MIN	.39	2.40	47.5	96.3	134	372	221	90.3	15.4	5.39	3.35	1.40
(WY)	1954	1954	1966	1977	1978	1966	1971	1991	1965	1966	1965	1946

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1942 - 1979 1989 - 1992	
ANNUAL TOTAL	110284.9		127863		350	
ANNUAL MEAN	302		349		505	
HIGHEST ANNUAL MEAN					203	
LOWEST ANNUAL MEAN					1974	
HIGHEST DAILY MEAN	4630	Dec 3	5380	Jul 27	8120	Jun 23 1972
LOWEST DAILY MEAN	7.0	Jun 16	10	(a)	.20	(b)
ANNUAL SEVEN-DAY MINIMUM	8.0	Jun 13	14	Nov 4	.20	Oct 11 1953
INSTANTANEOUS PEAK FLOW			10800	Jul 27	c11500	Jun 23 1972
INSTANTANEOUS PEAK STAGE			13.14	Jul 27	13.67	Jun 23 1972
INSTANTANEOUS LOW FLOW			8.8	(a)	.20	(b)
ANNUAL RUNOFF (CFSM)	2.03		2.34		2.35	
ANNUAL RUNOFF (INCHES)	27.53		31.92		31.88	
10 PERCENT EXCEEDS	848		763		815	
50 PERCENT EXCEEDS	90		215		186	
90 PERCENT EXCEEDS	11		40		16	

a Oct. 4, 5.

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 National Geodetic Vertical Datum of 1929, 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), which are fair.

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. 2	2215	*1,590	*6.44	July 27	1600	1,240	5.93

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.68	1.8	33	39	25	47	71	22	7.7	3.6	32	9.8
2	.62	1.7	344	30	22	37	58	20	6.7	7.6	19	7.6
3	.59	1.7	372	25	21	29	45	248	5.7	5.7	13	6.8
4	.67	1.6	90	21	21	23	36	87	5.3	7.5	21	6.3
5	3.2	1.5	43	18	24	20	29	48	7.5	6.8	13	5.7
6	9.1	1.5	29	15	23	17	23	32	10	40	9.5	7.8
7	3.8	1.4	21	13	21	27	20	24	7.3	23	7.4	7.7
8	2.6	1.4	17	11	18	80	18	20	9.8	11	6.1	14
9	2.0	1.4	42	16	14	69	18	17	9.4	8.2	5.6	7.4
10	1.8	1.6	159	18	e11	54	18	14	9.1	7.3	5.0	33
11	3.0	3.2	62	19	e10	202	17	12	7.0	6.5	46	46
12	8.3	3.8	36	18	e11	94	16	10	5.9	5.9	46	19
13	7.4	3.6	53	18	27	60	15	12	4.9	18	65	12
14	5.0	3.4	85	53	72	45	14	19	4.4	13	93	8.8
15	13	3.0	59	57	62	39	14	55	4.3	9.1	49	6.8
16	21	2.8	38	39	86	31	15	62	4.1	7.3	50	5.9
17	9.5	2.8	27	33	62	31	21	36	3.7	5.3	35	5.1
18	5.9	2.8	20	22	47	53	38	26	3.5	5.0	27	4.8
19	4.4	2.8	14	e17	36	159	31	24	3.9	4.6	20	13
20	3.7	2.7	16	e14	31	106	27	17	4.0	4.0	19	7.1
21	3.1	4.0	17	e12	27	59	34	13	3.6	3.5	13	5.7
22	2.8	182	18	14	24	51	58	10	3.3	3.7	10	7.3
23	2.6	128	89	49	22	66	44	8.3	3.1	5.7	8.7	13
24	2.4	34	172	98	26	49	33	7.5	2.9	14	6.7	7.5
25	2.2	18	70	55	33	37	27	8.6	2.9	11	5.8	6.2
26	2.2	12	41	38	258	31	33	7.2	3.0	42	5.1	5.6
27	2.2	8.5	28	28	95	30	41	6.4	6.9	437	5.0	7.8
28	2.2	7.4	25	27	53	27	39	5.6	4.5	148	54	6.7
29	2.1	6.2	50	29	58	25	31	5.0	3.1	39	53	5.3
30	1.9	5.8	67	28	---	27	26	8.9	2.7	20	24	4.6
31	1.9	---	52	28	---	70	---	8.7	---	31	14	---
TOTAL	131.86	452.4	2189	902	1240	1695	910	894.2	160.2	954.3	780.9	304.3
MEAN	4.25	15.1	70.6	29.1	42.8	54.7	30.3	28.8	5.34	30.8	25.2	10.1
MAX	21	182	372	98	258	202	71	248	10	437	93	46
MIN	.59	1.4	14	11	10	17	14	5.0	2.7	3.5	5.0	4.6
CFSM	.29	1.04	4.87	2.01	2.95	3.77	2.09	1.99	.37	2.12	1.74	.70
IN.	.34	1.16	5.62	2.31	3.18	4.35	2.33	2.29	.41	2.45	2.00	.78

e Estimated

MONONGAHELA RIVER BASIN

03052500 SAND RUN NEAR BUCKHANNON, WV--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1947 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	11.1	24.7	39.8	41.1	46.8	49.7	40.4	27.2	17.2	14.1	10.6	7.00
MAX	60.3	145	87.3	81.3	92.4	111	83.9	77.6	75.1	59.4	48.5	30.2
(WY)	1977	1986	1973	1952	1986	1963	1973	1989	1989	1958	1977	1979
MIN	.013	.060	3.52	9.44	11.1	12.3	10.2	4.91	.44	.37	.20	.071
(WY)	1954	1954	1966	1977	1978	1987	1971	1982	1965	1966	1957	1953

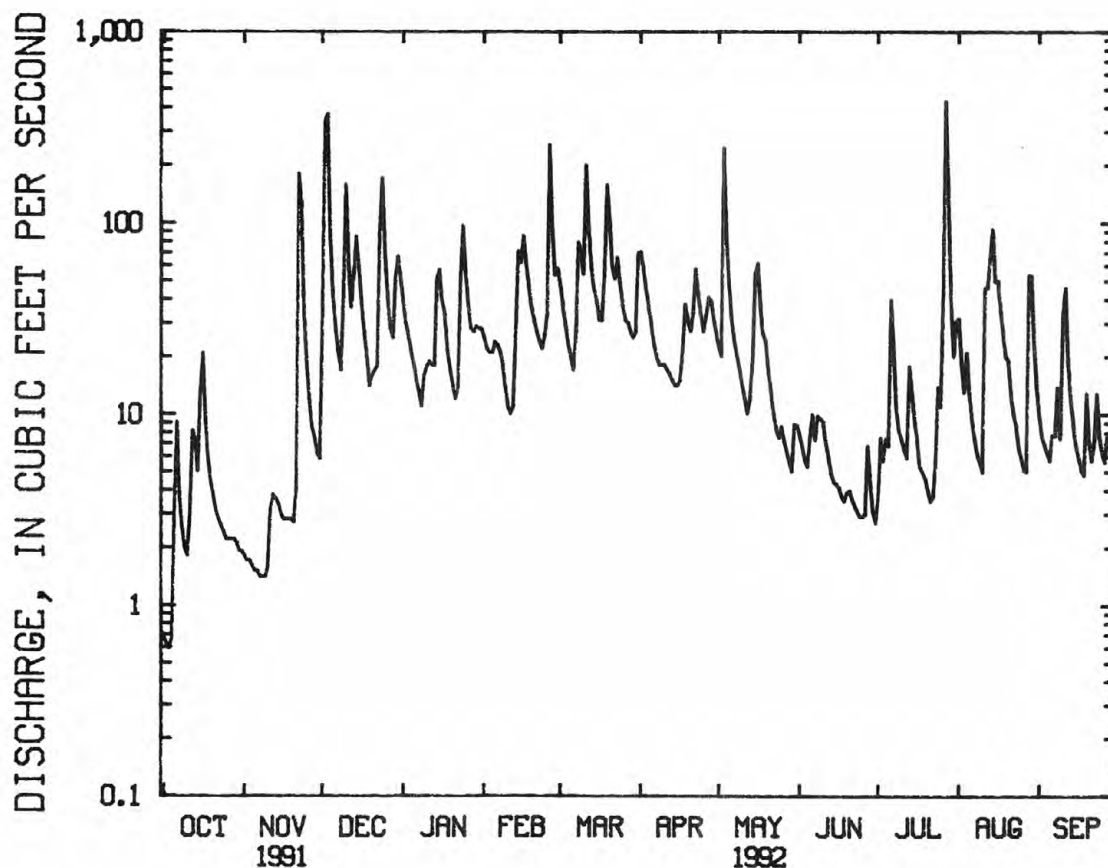
SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR	FOR 1992 WATER YEAR	WATER YEARS 1947 - 1992
ANNUAL TOTAL	9788.11	10614.16	
ANNUAL MEAN	26.8	29.0	27.4
HIGHEST ANNUAL MEAN			38.3
LOWEST ANNUAL MEAN			14.8
HIGHEST DAILY MEAN	372 Dec 3	437 Jul 27	1220 Nov 5 1985
LOWEST DAILY MEAN	.35 Jun 21	.59 Oct 3	.00 (a)
ANNUAL SEVEN-DAY MINIMUM	.53 Jun 10	1.5 Nov 4	.00 Sep 22 1953
INSTANTANEOUS PEAK FLOW		1590 Dec 2	b3200 Nov 4 1985
INSTANTANEOUS PEAK STAGE		6.44 Dec 2	8.34 Nov 4 1985
INSTANTANEOUS LOW FLOW		.59 (c)	.00 (d)
ANNUAL RUNOFF (CFSM)	1.85	2.00	1.89
ANNUAL RUNOFF (INCHES)	25.11	27.23	25.66
10 PERCENT EXCEEDS	69	59	63
50 PERCENT EXCEEDS	7.3	16	13
90 PERCENT EXCEEDS	.88	3.0	1.0

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

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

c Oct. 2-4.

d 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 (ice effect), which are fair. 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. 3	1500	7,960	11.64	July 28	1030	*9,040	*12.44

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	29	35	303	853	535	1220	1510	557	196	180	1050	216
2	25	33	1510	691	448	966	1280	465	159	431	823	167
3	22	31	7130	581	396	751	990	2280	136	210	563	135
4	21	29	4770	500	409	596	791	2620	124	443	622	119
5	25	28	1690	426	434	483	655	1380	145	388	525	117
6	39	26	980	381	466	412	523	894	236	784	348	259
7	77	24	704	336	443	521	459	643	256	957	262	344
8	85	25	552	295	409	1700	430	501	330	539	207	255
9	60	25	504	287	358	1660	409	441	404	365	175	271
10	44	27	1870	368	286	1200	472	373	355	308	155	210
11	37	35	1760	407	e235	2590	505	312	285	320	161	390
12	59	72	1060	385	e250	2370	509	265	225	223	481	334
13	131	93	859	378	e300	1460	462	226	182	238	370	228
14	140	79	1170	466	1220	1050	410	287	147	312	590	174
15	121	74	1350	748	1620	855	386	328	128	222	501	142
16	290	87	1130	701	2480	716	350	760	134	227	874	117
17	311	117	784	552	2200	629	398	631	139	165	695	99
18	200	146	594	514	1400	644	887	472	119	139	501	87
19	147	135	444	e420	1120	1160	659	476	275	128	367	110
20	117	123	330	e330	973	2620	545	433	280	150	290	153
21	98	117	330	e290	776	1640	552	343	200	125	229	132
22	83	850	396	e350	647	1140	1230	270	162	111	179	101
23	75	2870	460	665	570	1510	1170	214	140	214	149	128
24	67	1500	2970	1420	596	1280	867	182	116	723	131	179
25	62	765	2330	1430	700	938	702	177	103	972	111	132
26	55	493	1220	1000	2810	754	705	171	140	757	78	104
27	50	357	809	713	2530	722	835	143	392	4100	81	95
28	46	286	610	632	1380	691	837	127	203	8370	168	107
29	43	247	849	615	1190	623	747	112	127	3560	794	121
30	40	211	1170	584	---	610	635	153	102	1040	495	93
31	38	---	1080	566	---	1140	---	247	---	625	300	---
TOTAL	2637	8940	41718	17884	27181	34651	20910	16483	5940	27326	12275	5119
MEAN	85.1	298	1346	577	937	1118	697	532	198	881	396	171
MAX	311	2870	7130	1430	2810	2620	1510	2620	404	8370	1050	390
MIN	21	24	303	287	235	412	350	112	102	111	78	87
CFSM	.31	1.08	4.86	2.08	3.38	4.04	2.52	1.92	.71	3.18	1.43	.62
IN.	.35	1.20	5.60	2.40	3.65	4.65	2.81	2.21	.80	3.67	1.65	.69

e Estimated

MONONGAHELA RIVER BASIN

03053500 BUCKHANNON RIVER AT HALL, WV--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1915 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	269	507	829	915	1006	1105	826	635	387	293	257	166
MAX	1272	2399	1942	1862	1811	2474	1736	1818	1435	1302	976	815
(WY)	1938	1986	1973	1937	1956	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 1991 CALENDAR YEAR

FOR 1992 WATER YEAR

WATER YEARS 1915 - 1992

ANNUAL TOTAL	200578	221064	
ANNUAL MEAN	550	604	599
HIGHEST ANNUAL MEAN			915
LOWEST ANNUAL MEAN			354
HIGHEST DAILY MEAN	7130	Dec 3	8370
LOWEST DAILY MEAN	10	(a)	21
ANNUAL SEVEN-DAY MINIMUM	12	Jun 11	26
INSTANTANEOUS PEAK FLOW			9040
INSTANTANEOUS PEAK STAGE			12.44
INSTANTANEOUS LOW FLOW			20
ANNUAL RUNOFF (CFSM)	1.98		2.18
ANNUAL RUNOFF (INCHES)	26.94		29.69
10 PERCENT EXCEEDS	1610		1280
50 PERCENT EXCEEDS	144		383
90 PERCENT EXCEEDS	23		82

a June 15, 16.

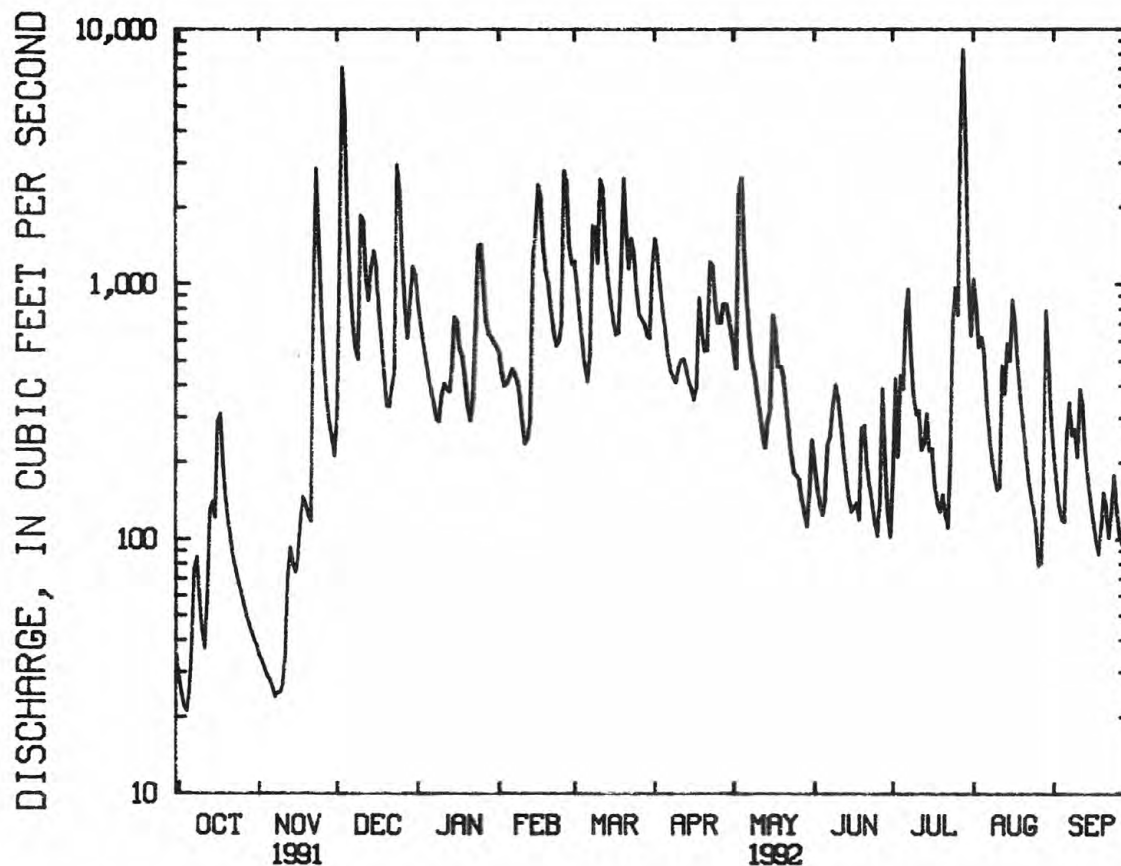
b Oct. 21-23, 25-27, 29, 1930.

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

d From floodmarks.

f Oct. 3, 4.

g 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 National Geodetic Vertical Datum of 1929. Prior to May 23, 1940, nonrecording gage at same site and datum.

REMARKS.--Records good except those for periods of estimated daily discharges (ice effect), which are fair. 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. 3	0700	23,600	18.09	July 28	0200	*28,900	*20.61

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	105	106	716	2640	1810	4680	4670	1890	571	232	2590	522
2	84	106	5470	2130	1520	3420	3980	1570	469	591	2190	397
3	67	94	22000	1800	1290	2580	3050	5910	413	890	1500	328
4	64	88	16300	1570	1350	2040	2440	8220	371	1310	1380	283
5	54	87	5750	1420	1690	1660	2070	4370	393	1440	1230	260
6	69	84	3100	1390	1990	1410	1690	2830	529	1530	855	306
7	92	80	2190	1290	1760	1430	1510	2060	715	2980	645	642
8	166	75	1720	1110	1540	3550	1480	1600	692	1810	504	474
9	147	73	1550	1030	1320	4810	1430	1420	1980	1120	419	507
10	132	77	5960	1310	952	3800	1550	1300	1450	901	370	403
11	116	94	5480	1470	e740	7190	1790	1120	1270	1080	355	669
12	130	123	3220	1390	e790	7270	1810	967	908	723	876	715
13	253	241	2570	1340	e1000	4570	1640	866	689	656	787	490
14	347	273	3950	1600	3190	3290	1440	1040	533	837	1310	377
15	329	248	4760	2850	4780	2670	1330	1670	443	625	1070	303
16	582	238	3490	2690	8460	2250	1200	3810	585	576	1450	250
17	987	265	2390	2200	8380	1980	1130	2470	513	434	1360	216
18	618	346	1820	2090	4960	2290	2620	1760	435	350	1120	187
19	449	355	1410	1570	4010	8750	2160	1720	665	341	845	193
20	359	331	1040	1190	3450	9940	1730	1610	1240	340	664	317
21	289	320	1030	e910	2790	5540	1660	1330	846	309	540	308
22	241	1550	1360	e1000	2280	3660	4540	1030	557	259	428	229
23	193	6910	1660	e1300	2030	4600	5170	819	486	461	358	235
24	174	3830	9510	5870	2090	4070	3150	689	364	1910	311	433
25	166	2000	7420	5650	2690	2940	2480	639	317	2820	264	357
26	156	1280	3830	3460	8950	2410	2460	595	329	1920	206	271
27	143	950	2550	2410	8950	2440	3110	515	580	12000	179	210
28	138	758	1930	2000	4620	2500	3140	455	552	23900	227	202
29	132	655	2450	1910	4130	2280	2610	400	376	10700	1350	307
30	129	574	3820	1930	---	2170	2170	403	276	3290	1190	240
31	116	---	3410	1910	---	3210	---	586	---	1870	753	---
TOTAL	7027	22211	133856	62430	93512	115400	71210	55664	19547	78205	27326	10631
MEAN	227	740	4318	2014	3225	3723	2374	1796	652	2523	881	354
MAX	987	6910	22000	5870	8950	9940	5170	8220	1980	23900	2590	715
MIN	54	73	716	910	740	1410	1130	400	276	232	179	187
CFSM	.25	.81	4.71	2.20	3.52	4.06	2.59	1.96	.71	2.75	.96	.39
IN.	.29	.90	5.44	2.54	3.80	4.69	2.89	2.26	.79	3.18	1.11	.43

e Estimated

MONONGAHELA RIVER BASIN

03054500 TYGART VALLEY RIVER AT PHILIPPI, WV--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	747	1611	2618	2774	3165	3509	2802	2042	1263	913	794	501
MAX	3391	7341	6172	5620	5987	8024	5162	4982	4224	3753	3779	2772
(WY)	1980	1986	1973	1952	1956	1963	1973	1967	1981	1958	1942	1971
MIN	5.88	11.4	273	563	587	1531	1090	483	114	78.4	35.3	16.4
(WY)	1954	1954	1966	1977	1978	1987	1971	1991	1965	1966	1965	1946

SUMMARY STATISTICS

	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1940 - 1992	
ANNUAL TOTAL	633005		697019		1884	
ANNUAL MEAN	1734		1904		2581	
HIGHEST ANNUAL MEAN					1105	
LOWEST ANNUAL MEAN					50900	
HIGHEST DAILY MEAN	22000	Dec 3	23900	Jul 28	50900	Nov 5 1985
LOWEST DAILY MEAN	36	Jun 16	54	Oct 5	4.9	(b)
ANNUAL SEVEN-DAY MINIMUM	50	Jun 14	76	Oct 1	5.2	Oct 9 1953
INSTANTANEOUS PEAK FLOW			28900	Jul 28	c61000	Nov 5 1985
INSTANTANEOUS PEAK STAGE			20.61	Jul 28	d31.83	Nov 5 1985
INSTANTANEOUS LOW FLOW			48	Oct 5	4.9	(f)
ANNUAL RUNOFF (CFSM)	1.89		2.08		2.06	
ANNUAL RUNOFF (INCHES)	25.71		28.31		27.94	
10 PERCENT EXCEEDS	4870		4420		4480	
50 PERCENT EXCEEDS	534		1270		1030	
90 PERCENT EXCEEDS	77		199		118	

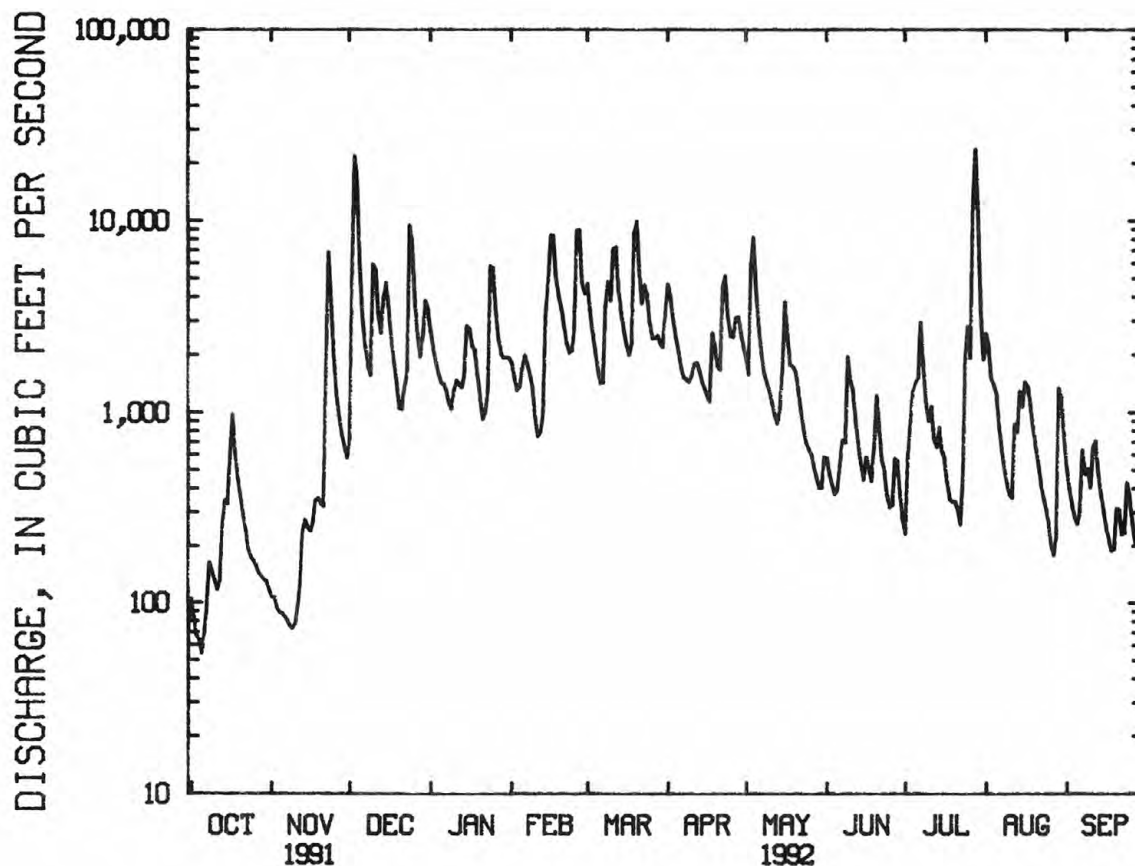
a 1972, 1989.

b Oct. 10, 11, 1953.

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

d From floodmarks.

f 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 National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good except those for periods of estimated daily discharges (ice effect, doubtful gage-height record), which are fair. 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)
July 11	0500	*3,540	*10.99	No other peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.5	2.2	25	196	143	339	405	161	73	8.8	74	33
2	1.3	2.1	118	153	120	268	350	129	54	8.2	55	26
3	1.5	2.0	947	129	110	204	284	164	44	7.3	44	23
4	1.5	2.2	378	110	127	163	236	149	37	7.3	78	25
5	1.6	2.6	180	94	193	134	191	136	51	7.1	96	22
6	2.9	2.3	120	80	180	115	151	134	99	14	57	20
7	3.5	2.6	93	70	162	119	136	110	95	26	42	18
8	4.0	3.5	77	62	139	144	121	98	198	15	34	17
9	3.5	3.5	87	70	108	139	107	106	208	96	32	25
10	2.9	3.2	389	98	68	167	102	103	102	88	27	22
11	3.0	6.5	236	97	e60	1250	102	90	65	1340	346	67
12	3.6	7.4	144	88	e70	614	111	82	47	293	618	35
13	4.9	12	181	88	102	395	94	82	35	154	197	23
14	5.0	9.3	437	155	478	300	87	221	28	110	115	19
15	5.6	7.8	330	244	508	239	83	141	24	76	77	16
16	21	6.7	201	191	751	185	77	104	20	268	61	14
17	19	6.5	137	e150	471	165	77	85	17	133	49	12
18	11	6.0	103	e120	357	205	123	78	16	86	49	11
19	6.5	5.8	71	e95	296	1840	137	71	18	63	40	14
20	4.8	5.7	47	e70	240	933	141	57	21	46	36	20
21	3.7	6.6	74	e65	203	474	158	46	18	37	30	15
22	3.5	454	76	e100	176	398	463	39	15	32	25	15
23	3.0	417	116	567	156	635	333	34	13	28	22	24
24	2.9	133	374	941	178	400	244	31	13	127	20	19
25	3.0	67	244	410	274	297	197	33	16	111	18	14
26	3.0	43	160	277	927	242	210	31	20	92	16	12
27	2.5	29	120	183	569	206	e356	28	19	998	15	13
28	2.3	28	97	158	356	168	327	25	14	681	59	21
29	2.2	26	226	144	404	139	249	23	11	277	190	18
30	2.1	23	321	129	---	135	195	26	9.5	148	73	13
31	2.3	---	264	139	---	412	---	75	---	96	47	---
TOTAL	139.1	1326.5	6373	5473	7926	11424	5847	2692	1400.5	5473.7	2642	626
MEAN	4.49	44.2	206	177	273	369	195	86.8	46.7	177	85.2	20.9
MAX	21	454	947	941	927	1840	463	221	208	1340	618	67
MIN	1.3	2.0	25	62	60	115	77	23	9.5	7.1	15	11
CFSM	.05	.45	2.11	1.81	2.81	3.78	2.00	.89	.48	1.81	.88	.21
IN.	.05	.51	2.43	2.09	3.03	4.36	2.23	1.03	.53	2.09	1.01	.24

e Estimated

MONONGAHELA RIVER BASIN

03056250 THREE FORK CREEK NEAR GRAFTON, WV--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1985 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	62.6	236	255	237	351	282	219	166	96.4	98.9	28.5	21.0
MAX	160	654	578	378	643	433	367	366	238	187	85.2	58.0
(WY)	1990	1986	1991	1991	1986	1991	1987	1989	1989	1990	1992	1990
MIN	4.49	44.2	122	151	200	80.2	151	44.2	7.07	3.85	3.57	3.72
(WY)	1992	1992	1990	1985	1987	1987	1986	1991	1991	1991	1988	1991

SUMMARY STATISTICS

FOR 1991 CALENDAR YEAR

FOR 1992 WATER YEAR

WATER YEARS 1985 - 1992

ANNUAL TOTAL	52369.9		51342.8		170			
ANNUAL MEAN	143		140		209		1989	
HIGHEST ANNUAL MEAN					112		1988	
LOWEST ANNUAL MEAN					5200		Nov 5 1985	
HIGHEST DAILY MEAN	1370	Jan 12	1840	Mar 19				
LOWEST DAILY MEAN	1.0	Jul 21	1.3	Oct 2				
ANNUAL SEVEN-DAY MINIMUM	1.4	Jul 16	2.0	Oct 1				
INSTANTANEOUS PEAK FLOW			3540	Jul 11	b12000		Aug 13 1988	
INSTANTANEOUS PEAK STAGE			10.99	Jul 11	c20.13		Nov 5 1985	
INSTANTANEOUS LOW FLOW			1.1	(d)	.44		(f)	
ANNUAL RUNOFF (CFSM)	1.47		1.44		1.75			
ANNUAL RUNOFF (INCHES)	20.00		19.61		23.72			
10 PERCENT EXCEEDS	417		352		390			
50 PERCENT EXCEEDS	25		81		89			
90 PERCENT EXCEEDS	2.0		5.4		6.5			

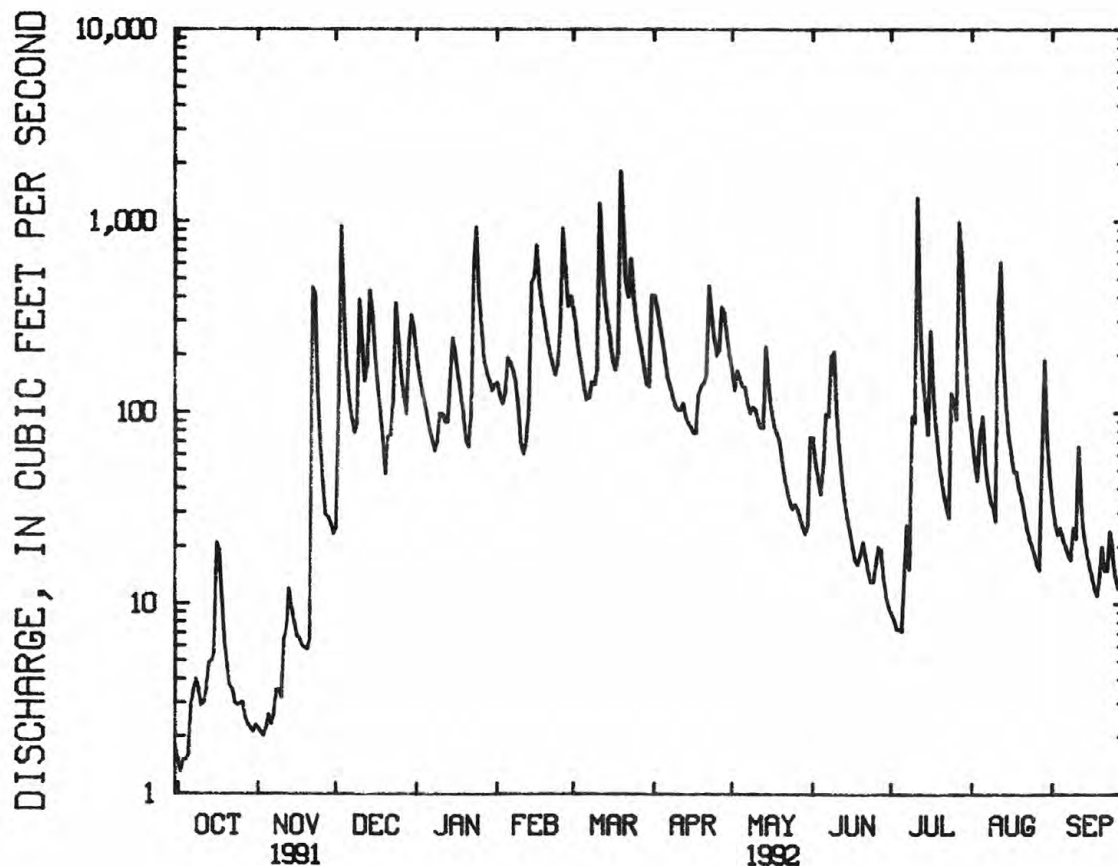
a Aug. 16, 18, 1988.

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

c From floodmarks.

d Oct. 3, 5.

f 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 Guyes Run, and at mile 6.0. Records include flow of Guyes Run.

DRAINAGE AREA.--1,366 mi², including that of Guyes 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 National Geodetic Vertical Datum of 1929, 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 National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for periods of estimated daily discharges (recorder malfunction), which are fair. Flow regulated since June 1938, by Tygart Lake. U.S. Army Corps of Engineers satellite telemeter at station.

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, 16,500 ft³/s, July 29, gage height, 13.72 ft.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	487	511	1540	4260	3060	e8430	4050	3970	665	355	6510	e610
2	492	506	1680	4100	2660	e7960	5790	2580	611	354	4420	e805
3	522	507	3380	3580	2080	5490	5890	2680	590	352	2880	737
4	524	518	4050	2950	1970	3450	4370	3820	578	376	2290	536
5	525	507	7260	2560	1820	2990	3380	6230	607	545	1590	592
6	515	505	9370	1680	1850	2340	2750	6320	649	736	1300	831
7	510	506	9030	1060	1990	2340	1760	5570	655	1440	1150	926
8	506	508	8630	1060	2200	2390	1740	3690	977	2690	824	916
9	494	512	7770	1080	2160	2460	1720	1730	1540	3130	819	919
10	492	516	7410	1130	1960	e2600	1720	1710	2030	2630	754	944
11	497	521	7640	1140	1610	e3000	1710	1680	2530	3150	796	1010
12	496	514	8030	1480	1340	4910	1730	1660	2170	2010	1810	938
13	499	503	7370	2140	e1300	7090	1710	1690	1400	1670	927	908
14	491	442	6140	2230	e1350	8170	2030	2600	959	1100	958	896
15	510	440	6650	2360	e1450	6850	2590	3280	860	987	1030	887
16	490	440	6390	2690	e2000	4770	2130	3780	554	1050	1310	879
17	472	438	6120	3210	e3200	2660	1300	4390	556	971	e1400	871
18	476	435	5390	3130	e5800	2090	1170	2910	549	817	e1600	867
19	543	438	4500	2980	e6700	4340	1840	2210	564	445	e1450	875
20	540	434	3870	2480	e6840	4530	3250	1620	559	412	1380	868
21	540	444	2840	1540	e6620	6590	3390	1590	644	398	e822	866
22	549	1050	1990	1100	6390	5900	3260	1580	938	392	810	867
23	593	1440	1470	1710	e6120	5490	2780	1470	930	386	e738	875
24	576	677	2180	2820	e5900	5160	4140	1180	937	509	e524	857
25	522	1100	4360	3250	e5340	4390	4930	905	818	1250	e523	870
26	520	2750	7280	7120	e5940	3220	3890	658	378	3210	e519	887
27	517	2530	6930	6670	6620	2840	2500	558	367	4830	513	882
28	517	1990	6510	5440	8250	2780	3200	552	361	8760	e610	851
29	516	1570	5480	3730	e8590	2740	4010	545	357	15000	e801	840
30	514	1550	4400	3110	---	2750	4810	580	355	15100	e634	862
31	511	---	4370	3090	---	3150	---	721	---	9690	578	---
TOTAL	15956	24802	170030	86880	113110	133870	89540	74459	25688	84745	42270	25472
MEAN	515	827	5485	2803	3900	4318	2985	2402	856	2734	1364	849
MAX	593	2750	9370	7120	8590	8430	5890	6320	2530	15100	6510	1010
MIN	472	434	1470	1060	1300	2090	1170	545	355	352	513	536

e Estimated

MONONGAHELA RIVER BASIN

03057000 TYGART VALLEY RIVER AT COLFAX, WV--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 1992, BY WATER YEAR (WY) [REGULATED, UNADJUSTED]

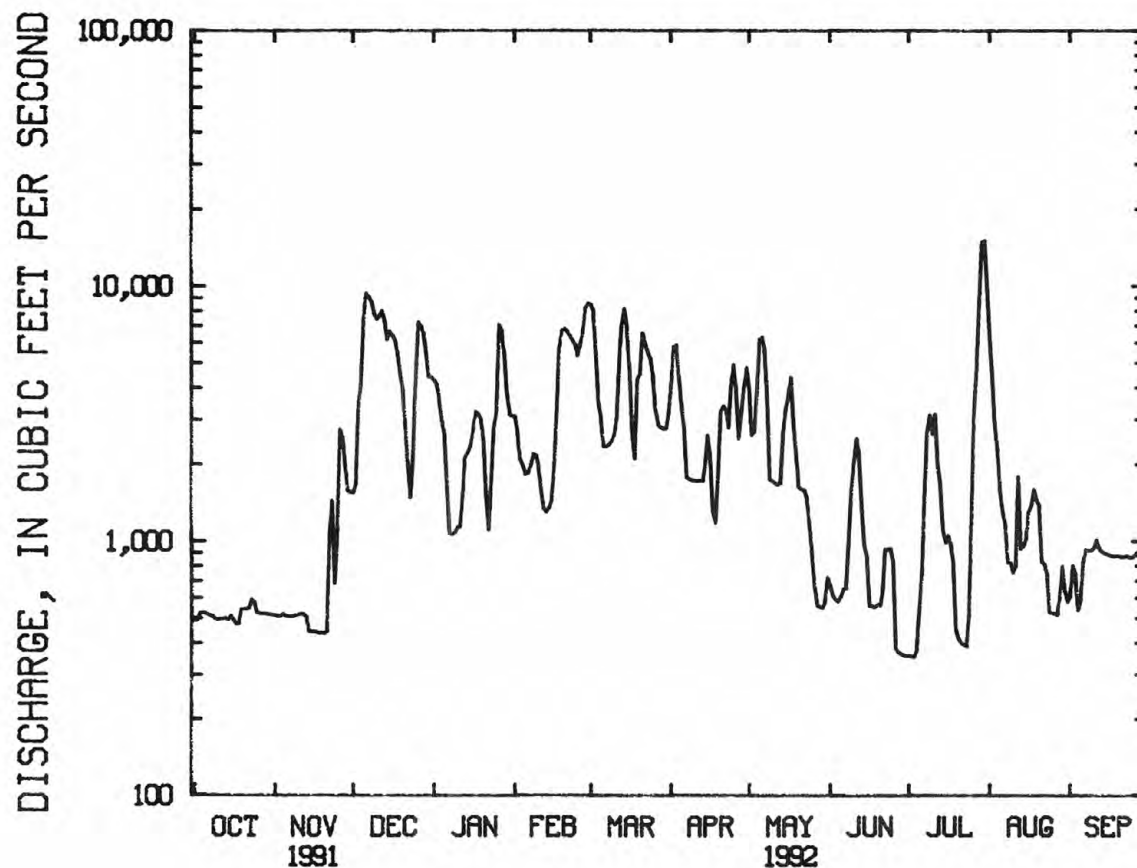
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1321	2358	3858	3940	4516	4952	3081	2585	1815	1311	1331	1007
MAX	5957	8667	9185	7459	9816	12270	6466	7140	7124	4043	5745	4477
(WY)	1980	1986	1973	1952	1956	1963	1965	1967	1981	1958	1958	1971
MIN	359	339	489	861	1304	1824	647	274	264	251	303	336
(WY)	1947	1954	1966	1977	1941	1969	1963	1982	1965	1965	1965	1983

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1939 - 1992	
ANNUAL TOTAL	915708		886822		2666	
ANNUAL MEAN	2509		2423		3561	
HIGHEST ANNUAL MEAN					1570	
LOWEST ANNUAL MEAN					24900	
HIGHEST DAILY MEAN	18100	Jan 3	15100	Jul 30	24900	Nov 5 1985
LOWEST DAILY MEAN	315	Jun 12	352	Jul 3	129	(a)
ANNUAL SEVEN-DAY MINIMUM	323	Jul 15	357	Jun 27	132	May 1 1941
INSTANTANEOUS PEAK FLOW			16500	Jul 29	31700	Nov 5 1985
INSTANTANEOUS PEAK STAGE			13.72	Jul 29	b19.77	Mar 5 1963
INSTANTANEOUS LOW FLOW			349	(c)	94	Jul 3 1946
10 PERCENT EXCEEDS	7250		6170		6680	
50 PERCENT EXCEEDS	540		1570		1430	
90 PERCENT EXCEEDS	337		506		410	

a May 5-7, 1941.

b Backwater from West Fork River.

c July 1-4.



MONONGAHELA RIVER BASIN

03057300 WEST FORK RIVER AT WALKERSVILLE, WV

LOCATION.--Lat 38°52'07" (corrected), 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 downstream from Right Fork, and at mile 95.3.

DRAINAGE AREA.--28.9 mi².

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

GAGE.--Water-stage recorder. Datum of gage is 1,070.64 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records poor due to considerable backwater from Stonewall Jackson Lake. U.S. Army Corps of Engineers satellite telemeter at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 770 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 22	2015	942	10.87	Mar. 11	0345	890	10.66
Dec. 2	2300	2,000	14.40	May 3	0745	802	10.26
Feb. 26	0500	1,100	11.50	July 27	1500	*2,870	*16.57

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e1.7	1.9	51	67	49	51	151	37	e12	e6.0	113	e4.5
2	e1.6	e1.4	448	53	38	34	103	35	e10	e11	25	e3.8
3	e1.5	e1.2	757	43	35	27	68	483	e9.0	e9.0	e21	e3.3
4	e1.4	e1.1	157	35	35	22	50	178	e10	e11	30	e2.9
5	1.6	e1.0	69	27	36	19	38	e80	e12	e10	e19	e2.7
6	e21	e.99	50	23	31	17	31	e60	e16	53	e15	e10
7	e12	e.96	36	19	28	74	28	e40	e12	25	e12	e7.4
8	e7.0	e.91	28	17	25	338	27	e32	e16	17	e10	e6.2
9	e5.6	e1.0	45	26	20	127	28	e26	e14	14	e8.7	e4.8
10	e4.7	e1.7	289	41	16	86	32	e23	e12	20	e7.0	e3.8
11	e8.0	3.2	97	49	20	539	37	e20	e11	15	e9.0	e21
12	e19	9.9	59	44	22	169	35	e16	e9.0	12	e17	e11
13	e16	10	113	42	64	94	33	e14	e7.8	11	e11	e4.0
14	e12	8.8	172	48	211	58	33	37	e7.2	12	e12	3.3
15	15	8.2	95	48	125	41	32	134	e6.6	14	44	2.6
16	18	7.2	61	42	262	32	32	112	e6.3	e11	230	1.9
17	e13	7.3	45	39	117	29	36	47	e6.0	e8.8	e60	1.7
18	e11	7.3	33	31	79	61	80	30	e5.5	e7.8	e42	1.6
19	e9.4	6.6	22	22	61	277	59	25	e5.9	e7.0	e34	e3.5
20	e8.0	6.4	17	21	51	149	47	23	e6.2	e6.3	e28	e2.7
21	e6.8	8.9	30	22	44	69	138	e19	e5.8	e5.8	e22	e2.0
22	e5.7	483	40	25	38	81	309	e16	e5.4	e9.0	e16	e2.5
23	e4.9	288	226	275	35	175	129	e13	e5.0	26	e13	3.7
24	e4.0	e100	387	249	62	79	89	e12	e4.6	57	e11	e2.5
25	e3.6	e50	115	89	93	44	71	e15	e7.0	35	e9.4	e2.2
26	e3.2	e35	67	62	640	36	66	e11	e6.3	84	e8.0	e2.0
27	e2.7	e25	48	46	148	42	57	e9.0	e5.6	1220	e6.0	4.0
28	3.7	e20	43	52	58	47	50	e8.0	e4.6	412	19	3.7
29	3.1	e16	132	63	83	43	42	e7.4	e4.2	97	9.5	e2.8
30	2.9	e14	135	55	---	43	38	e10	e3.9	49	e7.0	e2.0
31	2.4	---	92	54	---	241	---	e14	---	182	e5.5	---
TOTAL	230.5	1126.96	3959	1729	2526	3144	1969	1586.4	246.9	2457.7	874.1	130.1
MEAN	7.44	37.6	128	55.8	87.1	101	65.6	51.2	8.23	79.3	28.2	4.34
MAX	21	483	757	275	640	539	309	483	16	1220	230	21
MIN	1.4	.91	17	17	16	17	27	7.4	3.9	5.8	5.5	1.6
CFSM	.26	1.30	4.42	1.93	3.01	3.51	2.27	1.77	.28	2.74	.98	.15
IN.	.30	1.45	5.10	2.23	3.25	4.05	2.53	2.04	.32	3.16	1.13	.17

e Estimated

MONONGAHELA RIVER BASIN

03057300 WEST FORK RIVER AT WALKERSVILLE, WV--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1984 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	23.2	76.6	79.8	67.8	97.6	85.9	73.5	49.5	22.9	23.8	16.3	10.0
MAX	65.9	214	163	118	159	138	117	144	113	79.3	52.3	22.8
(WY)	1990	1986	1991	1990	1986	1991	1987	1989	1989	1992	1984	1984
MIN	3.83	22.4	30.2	31.2	65.0	19.3	28.5	3.91	.043	.050	.65	.078
(WY)	1988	1991	1989	1985	1988	1987	1985	1991	1987	1987	1987	1985

SUMMARY STATISTICS

FOR 1991 CALENDAR YEAR

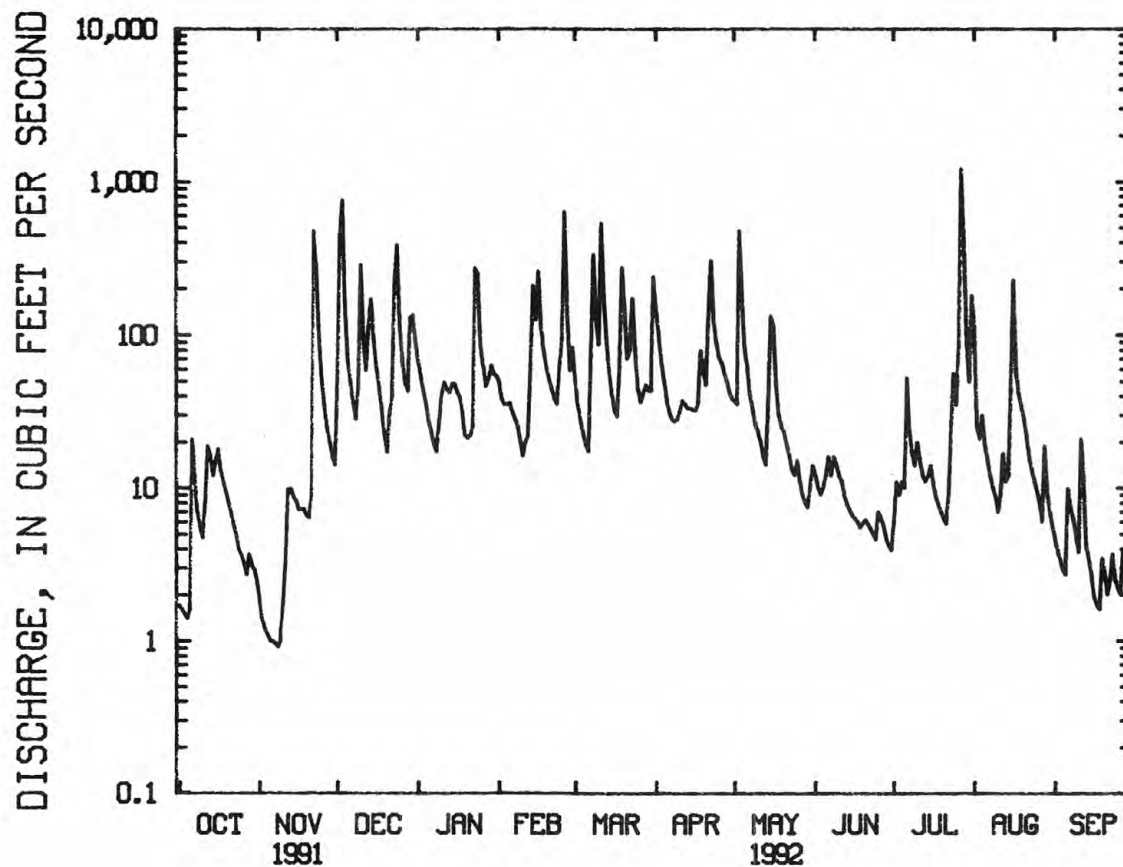
FOR 1992 WATER YEAR

WATER YEARS 1984 - 1992

ANNUAL TOTAL	17834.13	19979.66	
ANNUAL MEAN	48.9	54.6	51.5
HIGHEST ANNUAL MEAN			66.3
LOWEST ANNUAL MEAN			28.9
HIGHEST DAILY MEAN	757	Dec 3	1490
LOWEST DAILY MEAN	e.07	Jun 15	e.91
ANNUAL SEVEN-DAY MINIMUM	.16	Jun 11	1.0
INSTANTANEOUS PEAK FLOW			2870
INSTANTANEOUS PEAK STAGE			16.57
INSTANTANEOUS LOW FLOW			unknown
ANNUAL RUNOFF (CFSM)	1.69	1.89	1.78
ANNUAL RUNOFF (INCHES)	22.96	25.72	24.20
10 PERCENT EXCEEDS	155	126	123
50 PERCENT EXCEEDS	8.0	22	19
90 PERCENT EXCEEDS	.60	3.3	.54

a Many days in 1985, 1987, and 1988 water years.

e Estimated.



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), which are fair. 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, 2,730 ft³/s, July 27, gage height, 6.14 ft.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	74	74	70	423	218	484	579	200	159	123	590	74
2	84	73	390	365	172	459	603	164	162	126	564	70
3	119	74	899	281	129	440	554	1030	146	124	511	70
4	111	74	233	232	127	427	533	399	152	126	719	68
5	98	74	112	224	123	418	511	421	174	126	532	67
6	98	74	84	189	119	349	419	375	156	243	410	89
7	91	74	69	142	118	308	286	344	149	118	243	117
8	65	74	70	138	118	568	220	338	233	120	127	99
9	63	74	135	158	112	414	184	332	237	118	125	69
10	86	80	492	152	97	389	161	322	208	117	126	89
11	89	87	194	134	86	1220	166	315	193	118	246	84
12	73	69	218	127	87	839	164	308	173	116	266	71
13	65	67	345	123	136	812	153	308	108	211	162	80
14	64	65	523	186	288	735	145	323	62	141	141	98
15	106	64	442	192	234	696	143	276	84	111	177	98
16	101	75	413	160	447	662	141	265	149	111	259	98
17	66	74	380	155	264	565	163	255	123	75	271	100
18	61	73	311	141	261	447	318	312	89	86	324	111
19	81	75	234	127	e245	871	339	341	89	96	308	113
20	85	73	188	e110	e230	621	384	187	76	106	301	110
21	84	96	139	e100	126	460	498	157	82	135	244	101
22	84	825	110	104	117	459	699	124	97	138	178	83
23	85	288	285	563	113	644	553	86	95	182	176	87
24	85	96	487	575	115	595	494	85	95	535	174	80
25	82	70	557	531	113	540	479	88	107	206	172	79
26	76	55	600	775	1060	431	488	85	132	501	172	82
27	76	48	494	567	557	280	473	83	224	1370	171	91
28	76	46	397	391	531	262	418	82	134	1010	362	86
29	85	44	573	399	535	248	339	81	125	1040	295	83
30	86	43	542	302	---	267	292	114	122	905	153	82
31	82	---	464	222	---	589	---	253	---	743	114	---
TOTAL	2581	3078	10450	8288	6878	16499	10899	8053	4135	9277	8613	2629
MEAN	83.3	103	337	267	237	532	363	260	138	299	278	87.6
MAX	119	825	899	775	1060	1220	699	1030	237	1370	719	117
MIN	61	43	69	100	86	248	141	81	62	75	114	67

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	b18000
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 - 1992, BY WATER YEAR (WY) [REGULATED, UNADJUSTED]

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	157	342	469	435	499	497	425	288	220	154	119	124
MAX	487	1631	1188	958	897	937	934	729	824	362	300	538
(WY)	1980	1986	1979	1991	1986	1989	1973	1981	1981	1986	1984	1989
MIN	20.7	79.0	124	92.4	143	142	187	49.8	18.2	15.2	33.1	33.0
(WY)	1989	1988	1989	1977	1978	1990	1985	1982	1987	1987	1988	1983

SUMMARY STATISTICS

FOR 1991 CALENDAR YEAR

FOR 1992 WATER YEAR

WATER YEARS 1973 - 1992

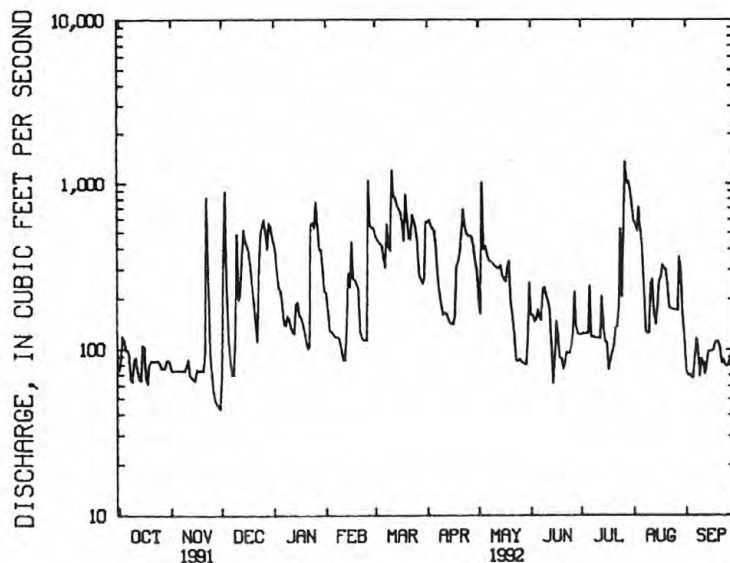
ANNUAL TOTAL	112273	91380	
ANNUAL MEAN	308	250	310
HIGHEST ANNUAL MEAN			444
LOWEST ANNUAL MEAN			159
HIGHEST DAILY MEAN	1610	1370	13400
LOWEST DAILY MEAN	43	43	4.3
ANNUAL SEVEN-DAY MINIMUM	54	54	5.4
INSTANTANEOUS PEAK FLOW		2730	14400
INSTANTANEOUS PEAK STAGE		6.14	15.15
INSTANTANEOUS LOW FLOW		41	4.3
ANNUAL RUNOFF (CFSM)	1.70	1.38	1.71
ANNUAL RUNOFF (INCHES)	23.07	18.78	23.24
10 PERCENT EXCEEDS	831	555	731
50 PERCENT EXCEEDS	119	154	141
90 PERCENT EXCEEDS	73	74	31

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 National Geodetic Vertical Datum of 1929. U.S. Army Corps of Engineers satellite telemeter at the station.

REMARKS.--Records fair. Flow partially regulated since 1973 by Stonecoal Reservoir. Flow regulated since January 1990 by Stonewall Jackson Lake.

PEAK DISCHARGE FOR CURRENT YEAR.--Peak discharge, 4,640 ft³/s, Mar. 11, gage height, 9.66 ft.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	88	93	121	722	495	864	1060	376	412	152	671	174
2	83	84	388	635	435	760	1020	289	302	152	607	135
3	99	81	3790	541	343	684	885	2370	249	152	575	142
4	159	81	1400	469	319	635	804	1200	221	153	838	142
5	149	84	526	420	305	599	750	785	301	158	806	127
6	151	84	334	387	274	571	668	643	367	390	565	123
7	147	84	247	297	259	548	513	553	313	300	406	148
8	128	84	198	257	251	1710	417	511	391	163	236	190
9	93	84	218	277	236	1160	356	497	700	155	178	232
10	85	88	1770	373	200	881	339	472	450	149	169	138
11	110	114	810	342	189	3640	323	437	333	148	215	253
12	116	134	504	305	180	2080	307	415	283	146	882	161
13	98	112	565	287	194	1430	274	526	226	220	375	126
14	80	98	1170	481	673	1110	250	927	156	462	258	127
15	85	88	1050	763	644	1010	244	499	121	204	320	135
16	204	86	755	524	967	926	233	430	149	288	525	132
17	152	99	618	411	868	865	226	376	389	172	403	128
18	91	98	549	344	662	749	332	377	189	128	420	130
19	71	99	406	259	615	2690	403	684	189	132	398	146
20	86	101	344	e230	545	1910	462	424	159	126	374	143
21	88	108	296	e215	413	1040	510	294	130	146	352	143
22	81	1750	348	236	346	875	1360	237	133	224	247	136
23	82	2500	428	1140	313	1370	943	176	135	216	215	133
24	83	541	1180	2930	330	1070	752	146	134	554	210	128
25	83	273	913	1030	359	895	679	155	135	953	201	116
26	80	178	853	1050	2530	803	655	151	147	573	201	110
27	69	139	770	941	1700	602	637	141	368	2540	204	124
28	70	124	579	672	1010	550	617	134	270	2380	431	126
29	72	117	908	671	991	491	501	129	178	1210	1200	109
30	86	107	1100	647	---	482	467	173	161	986	431	98
31	95	---	879	529	---	993	---	490	---	876	260	---
TOTAL	3164	7713	24017	18385	16646	33993	16987	15017	7691	14608	13173	4255
MEAN	102	257	775	593	574	1097	566	484	256	471	425	142
MAX	204	2500	3790	2930	2530	3640	1360	2370	700	2540	1200	253
MIN	69	81	121	215	180	482	226	129	121	126	169	98

e Estimated

MONONGAHELA RIVER BASIN

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

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1987 - 1992, BY WATER YEAR (WY) [REGULATED, UNADJUSTED]

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	249	363	670	834	1050	1040	688	478	376	229	195	188
MAX	758	815	1442	1482	1510	1542	931	1066	1065	471	425	551
(WY)	1990	1990	1991	1991	1989	1989	1991	1989	1989	1992	1992	1989
MIN	48.2	136	265	541	574	417	542	124	122	32.8	46.5	59.5
(WY)	1989	1988	1989	1988	1992	1990	1988	1987	1987	1988	1988	1988

SUMMARY STATISTICS

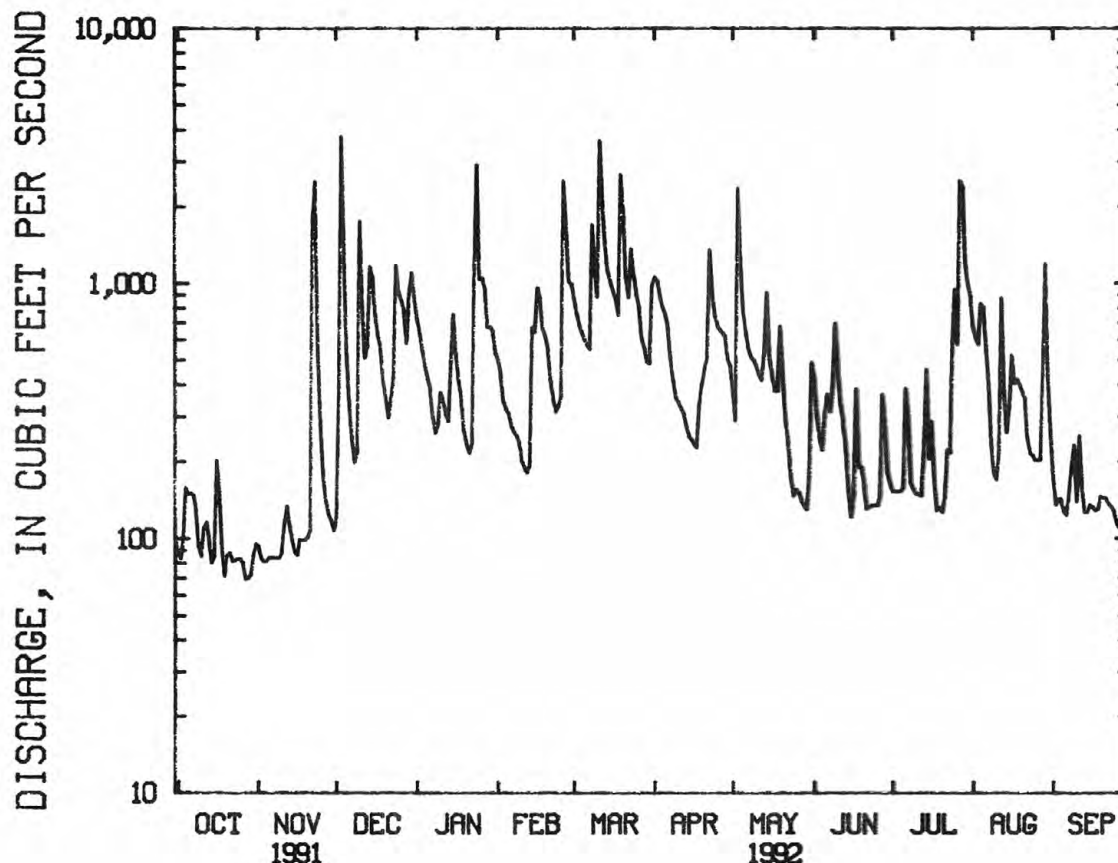
FOR 1991 CALENDAR YEAR

FOR 1992 WATER YEAR

WATER YEARS 1987 - 1992

ANNUAL TOTAL	205360		175649									
ANNUAL MEAN	563		480						545			
HIGHEST ANNUAL MEAN									676			1989
LOWEST ANNUAL MEAN									338			1988
HIGHEST DAILY MEAN	4220	Mar 23				3790	Dec 3		8850		May 27	1990
LOWEST DAILY MEAN	69	Oct 27				69	Oct 27		7.4		Oct 2	1988
ANNUAL SEVEN-DAY MINIMUM	77	Oct 23				77	Oct 23		12		Aug 9	1987
INSTANTANEOUS PEAK FLOW						4640	Mar 11		11300		Mar 7	1989
INSTANTANEOUS PEAK STAGE						9.66	Mar 11		18.22		Mar 7	1989
INSTANTANEOUS LOW FLOW						67	(a)		6.6		Oct 2	1988
10 PERCENT EXCEEDS	1490					1010			1170			
50 PERCENT EXCEEDS	176					313			260			
90 PERCENT EXCEEDS	98					99			46			

a Oct. 19, 27, 28.



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 Binghamon 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 National Geodetic Vertical Datum, 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, recorder malfunction), which are fair. 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, 9,470 ft³/s, Mar. 11, gage height, 11.90 ft.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	127	105	e250	1250	933	1820	2410	730	869	214	831	331
2	119	97	e1000	986	795	1430	2100	609	504	208	672	235
3	108	94	6150	832	680	1190	1760	3180	427	211	634	259
4	139	91	4000	747	611	1020	1500	3100	372	204	895	e234
5	176	91	1280	639	589	905	1350	1570	416	206	1290	202
6	205	93	678	564	527	830	1130	1210	615	351	702	192
7	172	90	498	502	492	836	938	945	568	580	524	187
8	164	91	401	422	476	2340	784	822	602	280	387	284
9	147	94	354	425	450	2400	689	795	2190	222	248	684
10	125	96	2590	570	367	1770	671	746	1070	217	e225	324
11	124	124	2210	587	e330	8090	643	667	604	362	e275	502
12	150	144	966	529	e310	5090	624	604	468	e248	1130	381
13	155	152	781	486	e350	2990	563	591	399	263	677	231
14	134	129	1930	663	1110	2270	514	1290	310	599	390	188
15	137	114	2360	1480	1480	1910	500	801	236	416	e560	186
16	219	107	1380	1070	1770	1620	490	598	213	e345	738	180
17	270	107	952	712	2040	1440	488	535	349	351	578	174
18	185	109	779	638	1440	1370	574	511	379	e214	468	168
19	146	109	615	e490	1220	6790	998	814	286	197	467	199
20	134	112	453	e440	1030	4990	801	729	299	e191	431	198
21	138	117	465	e390	855	2700	916	485	237	183	405	194
22	134	1830	532	443	690	2050	2650	395	213	237	355	202
23	128	5440	607	2000	620	3100	2100	340	212	270	e300	270
24	125	1480	2220	6680	646	2450	1460	272	215	e368	e280	215
25	121	595	1750	2650	711	1860	1210	272	221	1370	e260	181
26	119	e350	1290	1820	3250	1580	1130	276	213	626	e250	164
27	115	e260	1090	1540	4390	1310	1150	257	238	2950	e240	204
28	103	e220	853	1210	2160	1080	1070	240	443	3550	e900	232
29	98	e200	1230	1070	2020	923	926	228	263	1690	2380	199
30	94	e180	2170	1080	---	873	797	284	227	1290	873	173
31	100	---	1700	1030	---	1830	---	637	---	1030	457	---
TOTAL	4411	12821	43534	33945	32342	70857	32936	24533	13658	19443	18822	7373
MEAN	142	427	1404	1095	1115	2286	1098	791	455	627	607	246
MAX	270	5440	6150	6680	4390	8090	2650	3180	2190	3550	2380	684
MIN	94	90	250	390	310	830	488	228	212	183	225	164

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	a36500
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 1973-1983, 1985-1992, BY WATER YEAR (WY) [REGULATED, UNADJUSTED]

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	558	1154	1747	1740	2050	1979	1613	1241	910	491	445	342
MAX	1762	5040	4494	3712	3872	3387	3181	2786	3796	967	1773	1071
(WY)	1977	1986	1979	1979	1986	1989	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 1991 CALENDAR YEAR

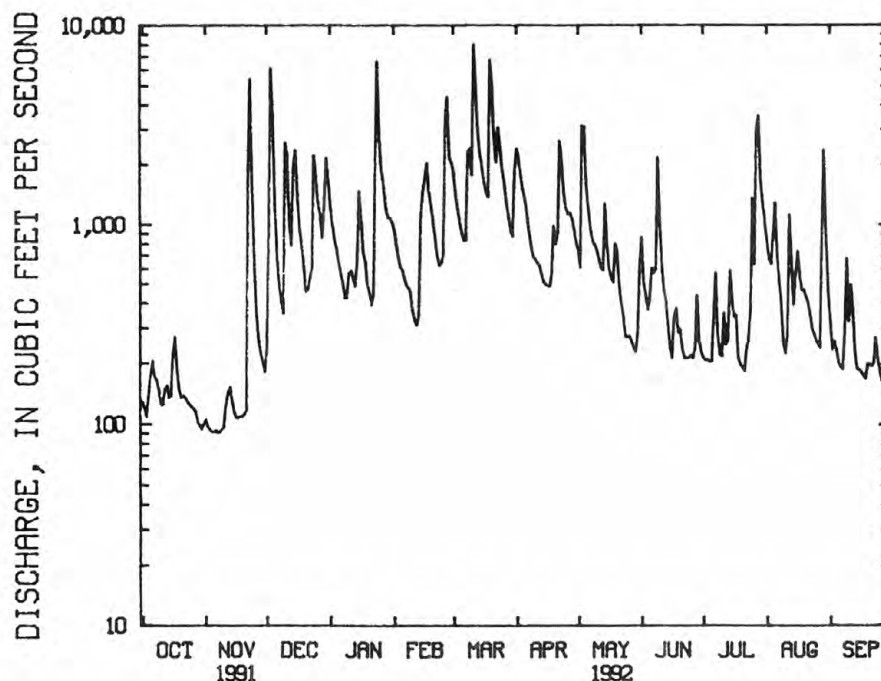
FOR 1992 WATER YEAR

WATER YEARS 1973 - 1983
1985 - 1992

ANNUAL TOTAL	425999	314675	
ANNUAL MEAN	1167	860	1184
HIGHEST ANNUAL MEAN			1700
LOWEST ANNUAL MEAN			583
HIGHEST DAILY MEAN	8910	8090	37900
LOWEST DAILY MEAN	90	90	14
ANNUAL SEVEN-DAY MINIMUM	92	92	20
INSTANTANEOUS PEAK FLOW		9470	b41100
INSTANTANEOUS PEAK STAGE		11.90	30.37
INSTANTANEOUS LOW FLOW		88	12
10 PERCENT EXCEEDS	3250	2030	2790
50 PERCENT EXCEEDS	299	519	590
90 PERCENT EXCEEDS	131	136	116

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.

c Nov. 5, 7.



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 National Geodetic Vertical Datum of 1929. 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 (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)
Mar. 19	0900	*4,120	*10.62	No other peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.1	7.2	13	106	158	288	297	91	35	6.8	49	24
2	2.9	5.5	24	88	e150	213	241	76	24	6.6	38	19
3	2.9	3.1	1250	72	e140	163	200	106	19	7.9	30	22
4	3.9	2.6	330	72	e135	130	169	112	17	7.1	40	18
5	6.1	2.5	134	67	128	118	137	104	22	5.8	41	15
6	7.7	2.6	81	60	123	104	116	102	22	13	34	13
7	8.3	2.7	61	55	112	101	105	89	18	15	25	13
8	8.7	3.0	52	50	97	138	101	80	17	11	21	17
9	6.6	2.8	50	56	e90	150	95	89	16	54	19	70
10	6.6	2.9	236	77	e65	185	93	79	18	57	17	44
11	6.5	4.2	148	87	e52	1190	128	71	15	259	18	36
12	7.8	4.8	94	78	e49	604	144	64	12	80	249	25
13	13	6.2	77	73	e60	387	124	60	10	59	63	18
14	9.1	5.1	229	132	171	270	113	55	9.2	73	36	14
15	7.9	5.7	222	237	219	220	100	44	8.6	50	28	12
16	11	5.9	123	e170	482	182	91	38	7.7	123	28	11
17	11	4.7	83	e140	373	165	88	33	6.5	75	23	10
18	8.1	3.9	66	e110	278	270	109	31	6.2	44	19	9.3
19	5.7	3.8	57	e86	228	3000	118	31	7.9	36	16	12
20	11	3.8	57	e67	185	925	112	27	8.0	35	15	14
21	9.9	4.9	52	e54	151	469	149	22	7.2	31	13	14
22	8.8	263	51	e59	128	384	239	18	6.1	23	12	20
23	10	285	64	1060	119	594	183	16	5.7	19	11	39
24	9.9	82	151	1330	129	373	150	16	7.4	20	10	28
25	9.4	46	119	e500	148	255	130	17	14	23	9.8	19
26	8.8	30	87	e400	313	202	124	16	13	206	9.4	15
27	8.4	22	68	e260	319	165	121	15	11	1130	9.8	17
28	7.7	19	58	e180	225	130	110	13	8.9	503	55	18
29	7.6	16	82	e130	342	111	99	12	7.5	157	245	18
30	7.8	14	154	106	---	107	92	22	6.8	84	73	13
31	7.5	---	130	132	---	279	---	49	---	59	40	---
TOTAL	243.7	864.9	4403	6094	5169	11872	4078	1598	386.7	3273.2	1297.0	617.3
MEAN	7.86	28.8	142	197	178	383	136	51.5	12.9	106	41.8	20.6
MAX	13	285	1250	1330	482	3000	297	112	35	1130	249	70
MIN	2.9	2.5	13	50	49	101	88	12	5.7	5.8	9.4	9.3
CFSM	.07	.25	1.24	1.71	1.55	3.33	1.18	.45	.11	.92	.36	.18
IN.	.08	.28	1.42	1.97	1.67	3.84	1.32	.52	.13	1.06	.42	.20

e Estimated

MONONGAHELA RIVER BASIN

03061500 BUFFALO CREEK AT BARRACKVILLE, WV.--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1907-1909, 1915-1924, 1932-1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	48.4	110	219	276	297	344	252	192	112	67.2	57.6	47.2
MAX	262	530	696	944	655	795	658	543	476	381	357	285
(WY)	1990	1986	1991	1937	1918	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 1991 CALENDAR YEAR

FOR 1992 WATER YEAR

WATER YEARS 1907 - 1909
1915 - 1924
1932 - 1992

ANNUAL TOTAL	49847.2	39896.8	
ANNUAL MEAN	137	109	167
HIGHEST ANNUAL MEAN			275
LOWEST ANNUAL MEAN			80.3
HIGHEST DAILY MEAN	1550	3000	5710
LOWEST DAILY MEAN	1.7 (a)	2.5	.00
ANNUAL SEVEN-DAY MINIMUM	2.0	2.7	.00
INSTANTANEOUS PEAK FLOW		4120	c9490
INSTANTANEOUS PEAK STAGE		10.62	16.20
INSTANTANEOUS LOW FLOW		2.5	.00
ANNUAL RUNOFF (CFSM)	1.19	.95	1.45
ANNUAL RUNOFF (INCHES)	16.12	12.91	19.77
10 PERCENT EXCEEDS	412	240	396
50 PERCENT EXCEEDS	21	51	59
90 PERCENT EXCEEDS	3.0	6.8	4.9

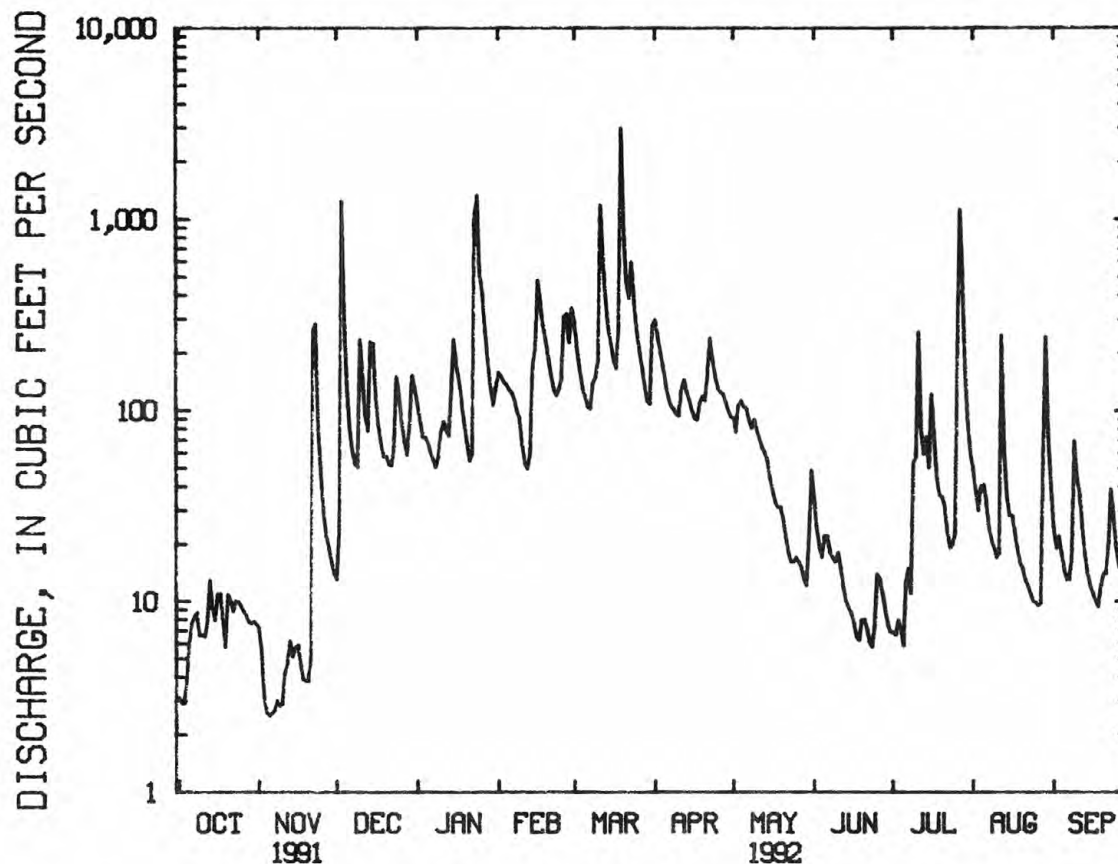
a Aug. 29, 30.

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

c Observed.

d Oct. 3, Nov. 4-6.

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 current year.

GAGE.--Water-stage recorder and concrete and metal control. Elevation of gage is 890 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good except those for periods of estimated daily discharges (ice effect), 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)
Mar. 19	1230	*201	*3.67	No peaks greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	2.2	14	15	25	33	16	8.6	.22	7.2	7.9
2	.00	.00	12	12	13	21	30	15	6.5	.21	4.5	7.2
3	.00	.00	80	11	13	18	25	20	4.6	.42	3.9	13
4	.00	.00	32	10	12	15	22	16	4.2	.52	8.9	12
5	.00	.00	16	8.9	14	13	20	15	19	1.5	7.4	8.5
6	.00	.00	11	8.0	14	12	16	13	37	2.6	4.4	9.6
7	.00	.00	8.7	7.0	13	12	15	11	17	1.1	3.3	8.9
8	.00	.00	7.0	6.1	11	13	13	11	13	.55	2.7	9.8
9	.00	.00	15	9.0	9.2	12	13	13	9.7	1.2	2.5	11
10	.00	.00	40	10	9.4	21	12	12	6.5	2.6	1.9	21
11	.00	.00	21	10	8.6	99	18	10	4.5	3.7	15	15
12	.00	.03	14	8.9	7.6	53	15	9.4	3.4	2.2	22	8.4
13	.00	.32	15	8.8	13	37	13	8.4	2.6	2.4	12	6.0
14	.00	.46	24	24	28	29	12	7.5	2.1	5.0	8.3	4.3
15	.05	.44	19	24	31	24	11	6.3	1.8	10	6.0	3.6
16	.17	.36	14	18	43	20	11	16	1.5	6.2	4.8	2.9
17	.14	.32	11	20	30	18	10	13	1.6	3.0	4.2	2.8
18	.09	.29	9.0	13	26	35	12	11	1.2	2.3	11	2.8
19	.05	.28	7.9	16	22	172	14	8.8	1.1	1.7	16	2.9
20	.05	.41	7.7	11	19	76	12	6.8	.95	2.0	16	2.8
21	.05	.73	8.4	8.7	16	45	22	5.3	.83	3.4	14	2.5
22	.04	52	8.8	8.0	14	46	40	4.0	.75	2.1	13	3.4
23	.04	41	12	78	13	48	28	3.4	.63	1.5	11	3.3
24	.03	13	19	73	17	34	23	3.2	.87	12	9.3	2.5
25	.01	7.1	15	36	21	27	19	3.6	1.4	7.5	7.1	3.6
26	.00	4.2	12	24	58	23	24	3.2	1.0	23	6.2	2.2
27	.00	3.1	9.8	21	41	20	31	2.9	.70	111	5.2	3.6
28	.00	2.9	9.1	17	30	16	26	2.5	.47	47	46	2.2
29	.00	2.6	15	16	33	14	22	2.0	.33	20	37	2.6
30	.00	2.3	18	15	---	17	19	3.4	.26	12	16	2.3
31	.00	---	16	16	---	39	---	9.0	---	9.8	11	---
TOTAL	0.72	131.84	509.6	562.4	594.8	1054	581	281.7	154.09	298.72	337.8	188.6
MEAN	.023	4.39	16.4	18.1	20.5	34.0	19.4	9.09	5.14	9.64	10.9	6.29
MAX	.17	52	80	78	58	172	40	20	37	111	46	21
MIN	.00	.00	2.2	6.1	7.6	12	10	2.0	.26	.21	1.9	2.2
CFSM	.00	.40	1.51	1.66	1.88	3.12	1.78	.83	.47	.88	1.00	.58
IN.	.00	.45	1.74	1.92	2.03	3.60	1.98	.96	.53	1.02	1.15	.64

MONONGAHELA RIVER BASIN

03062400 COBUN CREEK AT MORGANTOWN, WV--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1965 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	6.11	12.7	23.5	22.0	28.6	29.6	25.6	21.0	11.1	7.92	6.22	4.18
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 1991 CALENDAR YEAR	FOR 1992 WATER YEAR	WATER YEARS 1965 - 1992
ANNUAL TOTAL	4978.21	4695.27	
ANNUAL MEAN	13.6	12.8	16.6
HIGHEST ANNUAL MEAN			24.1
LOWEST ANNUAL MEAN			7.75
HIGHEST DAILY MEAN	108 Mar 23	172 Mar 19	1200 Aug 18 1980
LOWEST DAILY MEAN	.00 (a)	.00 (b)	.00 (c)
ANNUAL SEVEN-DAY MINIMUM	.00 Jun 25	.00 Oct 1	.00 Jun 30 1965
INSTANTANEOUS PEAK FLOW		201 Mar 19	d3100 Aug 18 1980
INSTANTANEOUS PEAK STAGE		3.67 Mar 19	f19.94 Aug 18 1980
INSTANTANEOUS LOW FLOW		.00 (b)	.00 (c)
ANNUAL RUNOFF (CFSM)	1.25	1.18	1.53
ANNUAL RUNOFF (INCHES)	16.99	16.02	20.72
10 PERCENT EXCEEDS	42	28	39
50 PERCENT EXCEEDS	1.9	9.2	8.4
90 PERCENT EXCEEDS	.00	.05	.25

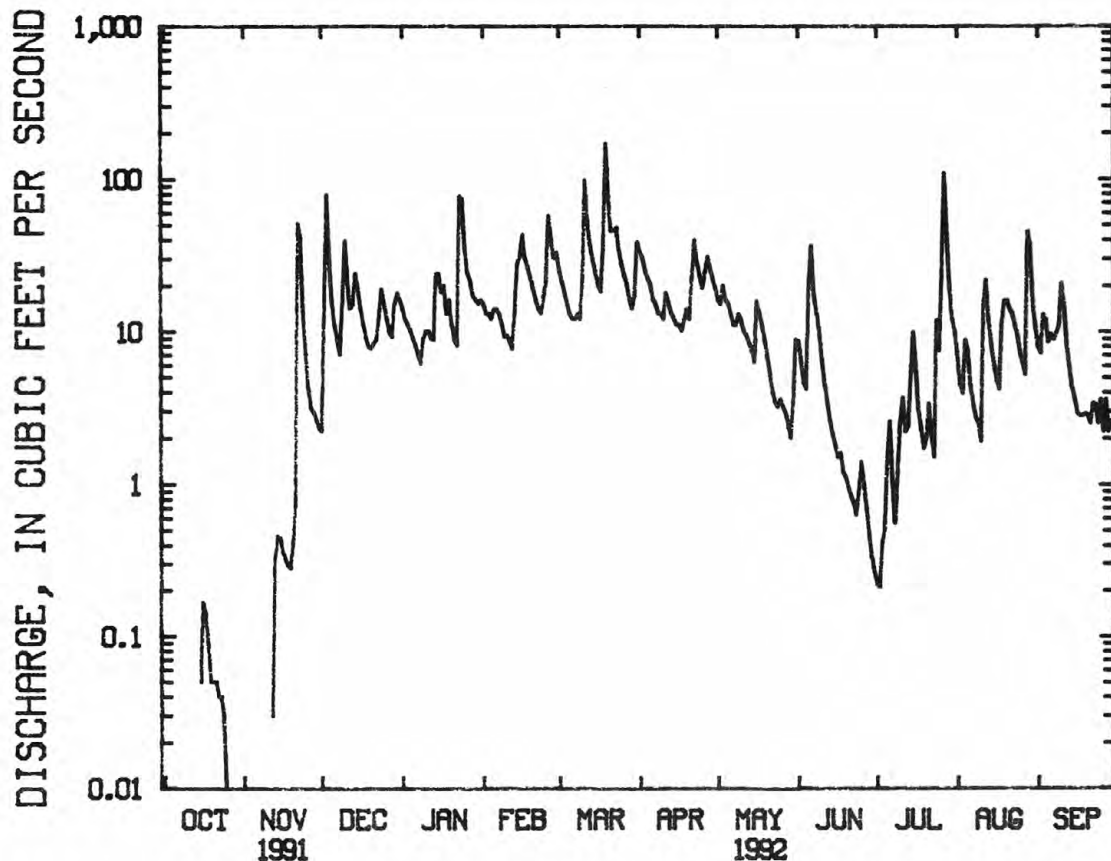
a Many days (June to November).

b Many days in October and November.

c At times most years.

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

f From floodmarks.



MONONGAHELA RIVER BASIN

03065000 DRY FORK AT HENDRICKS, WV

LOCATION.--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.

DRAINAGE AREA.--345 mi².

PERIOD OF RECORD.--October 1940 to current year. Published as Dry Fork River, 1949-52.

GAGE.--Water-stage recorder. Datum of gage is 1,698.76 ft above National Geodetic Vertical Datum, adjustment of 1912. Prior to Dec. 21, 1941, nonrecording gage at same site and datum.

REMARKS.--Records good except those for periods of estimated daily discharges (ice effect, doubtful gage-height record), 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 7,800 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage Height (ft)	Date	Time	Discharge (ft ³ /s)	Gage Height (ft)
Dec. 03	0030	*14,100	*8.61	July 27	1830	12,000	8.00

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	49	48	636	785	e440	1710	1460	788	269	154	1100	142
2	45	46	3500	692	418	1400	1220	665	264	270	651	114
3	42	44	e9090	629	401	1190	973	1780	237	287	600	99
4	41	43	e3470	1180	428	994	820	1800	201	594	541	115
5	43	41	e1780	1580	720	832	726	1260	366	388	466	107
6	110	39	1220	1260	659	723	668	932	e703	615	342	138
7	118	38	905	957	e550	708	659	730	473	615	273	153
8	93	38	798	767	e460	1500	709	686	501	386	234	139
9	56	39	838	732	e400	2090	752	1000	533	447	422	118
10	50	37	1890	919	e350	1610	783	990	461	522	367	104
11	49	53	1390	800	e330	3050	783	852	381	416	255	97
12	130	94	1030	676	e310	2290	754	729	307	619	364	88
13	151	98	1050	635	337	1600	659	652	269	e512	284	73
14	133	81	1480	1100	428	1180	570	796	225	e385	419	63
15	140	87	1460	1230	865	965	513	1270	318	299	382	57
16	225	104	1060	e910	4130	794	489	1480	351	286	292	52
17	163	149	817	e750	2690	696	533	1000	242	218	430	47
18	133	136	684	e595	2350	1220	1040	773	192	239	380	44
19	107	118	517	e460	2670	e5120	795	796	308	257	280	87
20	93	112	e425	e400	2520	e3470	694	631	298	182	230	92
21	83	110	e435	e410	1700	2090	937	518	243	148	193	70
22	78	848	e440	e435	1370	1440	4160	425	199	132	165	60
23	73	2130	1170	e600	1270	1310	2350	365	167	643	148	145
24	66	1070	e3560	2280	2140	970	1480	319	152	776	130	110
25	63	655	1920	1550	2530	880	1210	302	135	801	114	73
26	63	484	1210	1170	4870	1040	1110	272	132	581	100	62
27	61	374	893	905	2960	1570	1200	264	133	e5380	97	88
28	58	337	710	732	1810	1400	1170	238	125	e5610	186	119
29	54	306	1210	600	2190	1180	1020	210	104	1950	554	85
30	52	277	1310	e520	---	1010	854	209	89	1020	298	63
31	50	---	966	e470	---	1620	---	256	---	789	189	---
TOTAL	2672	8036	47864	26729	42296	47652	31091	22988	8378	25521	10486	2804
MEAN	86.2	268	1544	862	1458	1537	1036	742	279	823	338	93.5
MAX	225	2130	9090	2280	4870	5120	4160	1800	703	5610	1100	153
MIN	41	37	425	400	310	696	489	209	89	132	97	44
CFSM	.25	.78	4.48	2.50	4.23	4.46	3.00	2.15	.81	2.39	.98	.27
IN.	.29	.87	5.16	2.88	4.56	5.14	3.35	2.48	.90	2.75	1.13	.30

e Estimated

MONONGAHELA RIVER BASIN

03065000 DRY FORK AT HENDRICKS, WV--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	379	668	961	1005	1201	1509	1195	862	539	362	340	236
MAX	1704	4165	2224	2230	2688	3736	2914	1906	1737	1071	1266	976
(WY)	1977	1986	1973	1952	1956	1963	1958	1989	1974	1985	1956	1950
MIN	13.8	35.0	244	174	227	588	373	236	67.3	39.3	23.7	11.6
(WY)	1954	1954	1944	1977	1978	1990	1946	1970	1991	1987	1957	1946

SUMMARY STATISTICS

FOR 1991 CALENDAR YEAR

FOR 1992 WATER YEAR

WATER YEARS 1941 - 1992

ANNUAL TOTAL	228439	276517	770
ANNUAL MEAN	626	756	1142
HIGHEST ANNUAL MEAN			510
LOWEST ANNUAL MEAN			1886
HIGHEST DAILY MEAN	e9090	Dec 3	e9090
LOWEST DAILY MEAN	28	Jul 1	37
ANNUAL SEVEN-DAY MINIMUM	35	Jun 11	39
INSTANTANEOUS PEAK FLOW			14100
INSTANTANEOUS PEAK STAGE			8.61
INSTANTANEOUS LOW FLOW			37
ANNUAL RUNOFF (CFSM)	1.81		2.19
ANNUAL RUNOFF (INCHES)	24.63		29.82
10 PERCENT EXCEEDS	1650		1610
50 PERCENT EXCEEDS	299		471
90 PERCENT EXCEEDS	49		72

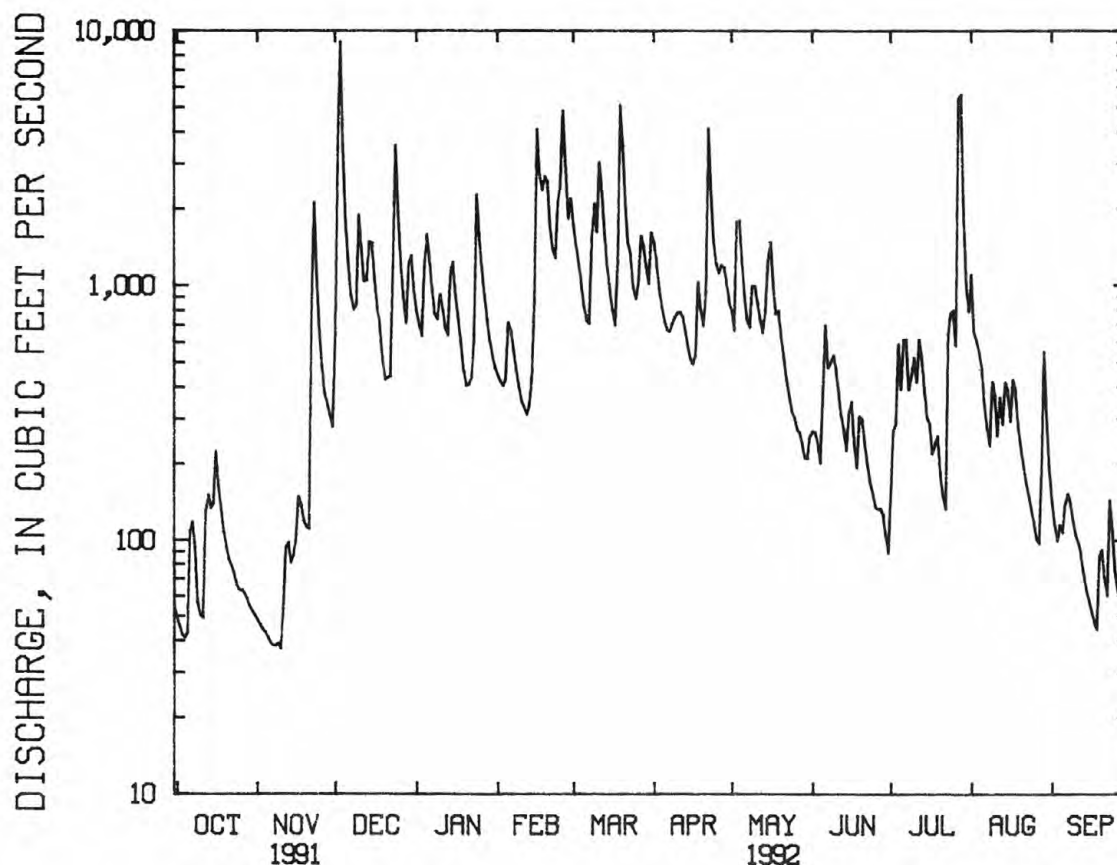
a From rating curve extended above 47,000 ft³/s on basis of slope-area measurement of peak flow.

b From floodmarks.

c Nov. 7, 8, 10.

d Sept. 10, 11, 1965.

e Estimated.



MONONGAHELA RIVER BASIN

03065050 BLACKWATER RIVER AT CANAAN VALLEY STATE PARK, WV

LOCATION.--Lat 39°02'22", long 79°27'20", Tucker County, Hydrologic Unit 05020004, on right bank 0.6 mi east of West Virginia Route 32, 2.4 mi southwest of Cortland, 2 mi upstream from Freeland Run, and at mile 30.9.

DRAINAGE AREA.--9.48 mi².

PERIOD OF RECORD.--January 1992 to current year.

GAGE.--Water-stage recorder. Datum of gage is 3,210 ft above National Geodetic Vertical Datum of 1929.

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

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 180 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage Height (ft)	Date	Time	Discharge (ft ³ /s)	Gage Height (ft)
Feb. 26	0900	200	2.69	July 27	2300	*216	*2.77

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	e11	58	42	20	9.3	1.1	32	3.0
2	---	---	---	---	e10	38	36	16	7.7	2.3	16	2.6
3	---	---	---	---	e9.8	33	32	41	5.9	5.6	13	3.3
4	---	---	---	---	e13	31	27	26	5.4	6.8	13	4.3
5	---	---	---	---	e21	27	26	22	8.8	3.0	11	3.1
6	---	---	---	---	e15	24	25	19	7.8	8.9	8.6	3.0
7	---	---	---	---	e11	27	25	16	6.6	5.8	6.8	4.2
8	---	---	---	---	e8.5	55	25	21	23	2.5	6.2	3.4
9	---	---	---	---	e7.7	59	28	28	11	2.8	26	2.4
10	---	---	---	---	e7.0	37	29	24	7.3	4.1	15	2.0
11	---	---	---	---	e6.4	93	35	18	5.7	3.5	12	2.3
12	---	---	---	---	e6.1	e67	29	15	4.9	22	18	1.8
13	---	---	---	---	e9.0	e45	23	12	4.1	24	15	1.4
14	---	---	---	---	e17	e35	20	11	4.1	12	41	1.3
15	---	---	---	---	31	27	19	45	5.1	6.4	18	1.0
16	---	---	---	e12	97	24	18	39	3.9	5.2	14	.99
17	---	---	---	e10	75	24	24	22	2.7	3.6	12	1.0
18	---	---	---	e9.3	76	46	49	20	2.8	3.1	12	1.0
19	---	---	---	e8.5	91	145	30	23	5.1	2.4	9.3	3.3
20	---	---	---	e9.0	61	79	25	16	3.6	1.6	8.5	3.0
21	---	---	---	e11	41	43	41	11	2.7	1.2	7.2	2.1
22	---	---	---	17	37	35	111	8.7	2.5	1.0	5.7	2.2
23	---	---	---	26	38	34	39	7.0	1.8	3.6	5.1	4.9
24	---	---	---	45	68	30	30	6.4	1.6	6.3	4.2	3.1
25	---	---	---	36	75	27	29	6.5	1.7	6.8	3.7	e2.1
26	---	---	---	27	157	49	33	6.4	2.2	7.8	3.3	e2.2
27	---	---	---	23	90	55	33	6.1	1.8	101	3.3	e2.1
28	---	---	---	e17	43	39	28	4.9	.95	129	5.9	e2.3
29	---	---	---	e15	69	31	23	4.4	.63	25	13	e2.2
30	---	---	---	e13	---	32	21	5.5	.53	16	6.5	e1.9
31	---	---	---	e12	---	56	---	9.5	---	19	4.0	---
TOTAL	---	---	---	---	1201.5	1405	955	530.4	151.21	443.4	369.3	73.49
MEAN	---	---	---	---	41.4	45.3	31.8	17.1	5.04	14.3	11.9	2.45
MAX	---	---	---	---	157	145	111	45	23	129	41	4.9
MIN	---	---	---	---	6.1	24	18	4.4	.53	1.0	3.3	.99
CFSM	---	---	---	---	4.37	4.78	3.36	1.80	.53	1.51	1.26	.26
IN.	---	---	---	---	4.71	5.51	3.75	2.08	.59	1.74	1.45	.29

e Estimated

MONONGAHELA RIVER BASIN

03065050 BLACKWATER RIVER AT CANAAN VALLEY STATE PARK, WV--Continued

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

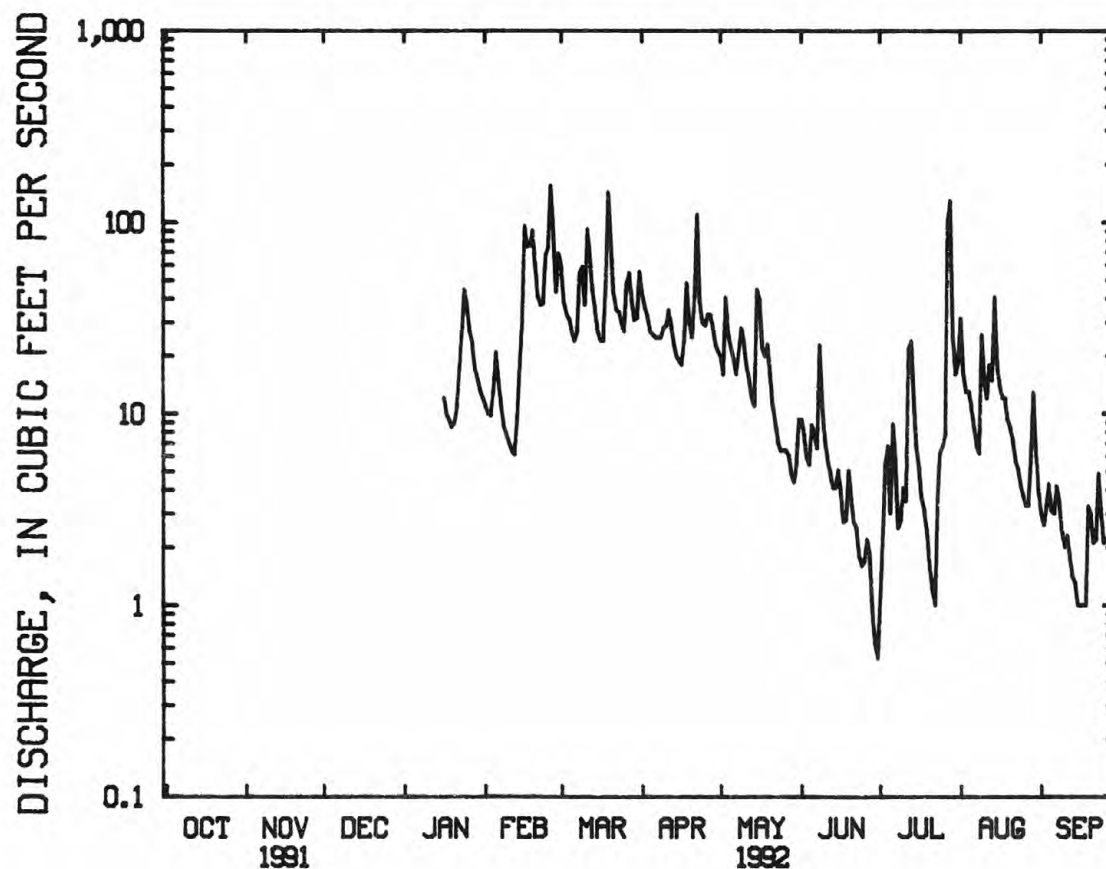
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	---	---	---	---	41.4	45.3	31.8	17.1	5.04	14.3	11.9	2.45
MAX	---	---	---	---	157	145	111	45	23	129	41	4.9
(WY)	---	---	---	---	1992	1992	1992	1992	1992	1992	1992	1992
MIN	---	---	---	---	6.1	24	18	4.4	.53	1.0	3.3	.99
(WY)	---	---	---	---	1992	1992	1992	1992	1992	1992	1992	1992

SUMMARY STATISTICS

FOR 1992 WATER YEAR

HIGHEST DAILY MEAN	157	Feb 26
LOWEST DAILY MEAN	.53	Jun 30
INSTANTANEOUS PEAK FLOW	216	Jul 27
INSTANTANEOUS PEAK STAGE	2.77	Jul 27
INSTANTANEOUS LOW FLOW	.48	(a)

a June 29 to July 1.



MONONGAHELA RIVER BASIN

03065200 BLACKWATER RIVER AT CORTLAND, WV

LOCATION.--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.

DRAINAGE AREA.--18.5 mi².

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

GAGE.--Water-stage recorder. Datum of gage is 3,150 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for periods of estimated daily discharges, 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 3	1100	*490	*18.56	No other peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e2.6	3.2	51	e35	e28	100	88	33	16	3.6	64	6.8
2	e2.5	3.2	146	e32	e26	78	67	28	15	5.0	31	5.8
3	e2.3	2.9	422	42	e24	61	53	69	12	8.2	23	6.2
4	e2.3	3.0	225	92	e40	54	48	52	10	12	22	7.4
5	e4.0	3.0	102	103	62	46	45	37	26	7.5	20	6.8
6	e7.4	4.0	61	73	41	41	43	31	30	11	15	5.7
7	e6.2	3.2	51	46	28	50	41	27	19	11	12	6.2
8	e5.0	2.9	51	37	20	95	39	42	35	6.1	11	6.1
9	e4.5	3.1	60	48	e18	118	42	63	28	7.5	37	5.8
10	e4.7	3.4	104	58	e17	79	47	52	17	7.8	34	5.2
11	e6.0	4.5	72	39	e16	142	61	40	14	7.9	19	5.2
12	e8.5	4.7	47	33	e18	104	51	32	12	33	31	4.8
13	e10	5.0	61	37	23	70	38	27	10	49	22	4.0
14	e9.1	4.9	101	72	37	54	31	24	9.4	24	72	3.5
15	e8.6	5.1	71	e65	69	47	28	69	11	13	42	3.5
16	e11	5.4	50	e40	176	40	26	101	9.3	9.9	25	3.3
17	e9.8	7.5	39	e30	142	47	36	48	7.8	7.9	23	3.1
18	e7.0	7.6	e32	e27	144	90	87	45	7.3	7.3	22	3.3
19	e6.4	6.8	e28	e25	172	189	61	54	9.2	6.2	17	4.3
20	e5.6	6.4	e24	e27	139	180	44	36	8.4	5.3	15	5.5
21	e5.0	6.9	e25	e30	92	95	77	25	6.8	4.7	13	4.8
22	e4.7	53	27	36	81	69	183	21	6.2	4.4	11	4.5
23	e4.4	106	76	63	75	59	108	17	5.7	5.7	10	7.1
24	e4.2	61	161	153	108	50	62	16	5.1	10	8.8	7.4
25	e4.1	29	98	e100	135	51	55	16	4.8	13	7.9	4.9
26	e3.8	21	e45	e75	223	101	61	15	4.9	11	7.3	5.0
27	e3.5	22	e35	e55	173	126	61	15	4.8	100	6.5	5.0
28	e3.8	16	e33	e45	95	82	50	12	4.1	175	10	5.4
29	e3.6	16	92	e37	134	61	40	11	3.7	91	19	5.4
30	3.3	15	88	e33	---	59	34	11	3.4	29	13	4.2
31	3.3	---	52	e30	---	103	---	15	---	32	8.6	---
TOTAL	167.2	435.7	2530	1618	2356	2541	1707	1084	355.9	719.0	672.1	156.2
MEAN	5.39	14.5	81.6	52.2	81.2	82.0	56.9	35.0	11.9	23.2	21.7	5.21
MAX	11	106	422	153	223	189	183	101	35	175	72	7.4
MIN	2.3	2.9	24	25	16	40	26	11	3.4	3.6	6.5	3.1
CFSM	.29	.79	4.41	2.82	4.39	4.43	3.08	1.89	.64	1.25	1.17	.28
IN.	.34	.88	5.09	3.25	4.74	5.11	3.43	2.18	.72	1.45	1.35	.31

e Estimated

MONONGAHELA RIVER BASIN

03065200 BLACKWATER RIVER AT CORTLAND, WV--Continued

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

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	5.39	14.5	81.6	52.2	81.2	82.0	56.9	35.0	11.9	23.2	21.7	5.21
MAX	11	106	422	153	223	189	183	101	35	175	72	7.4
(WY)	1992	1992	1992	1992	1992	1992	1992	1992	1992	1992	1992	1992
MIN	2.3	2.9	24	25	16	40	26	11	3.4	3.6	6.5	3.1
(WY)	1992	1992	1992	1992	1992	1992	1992	1992	1992	1992	1992	1992

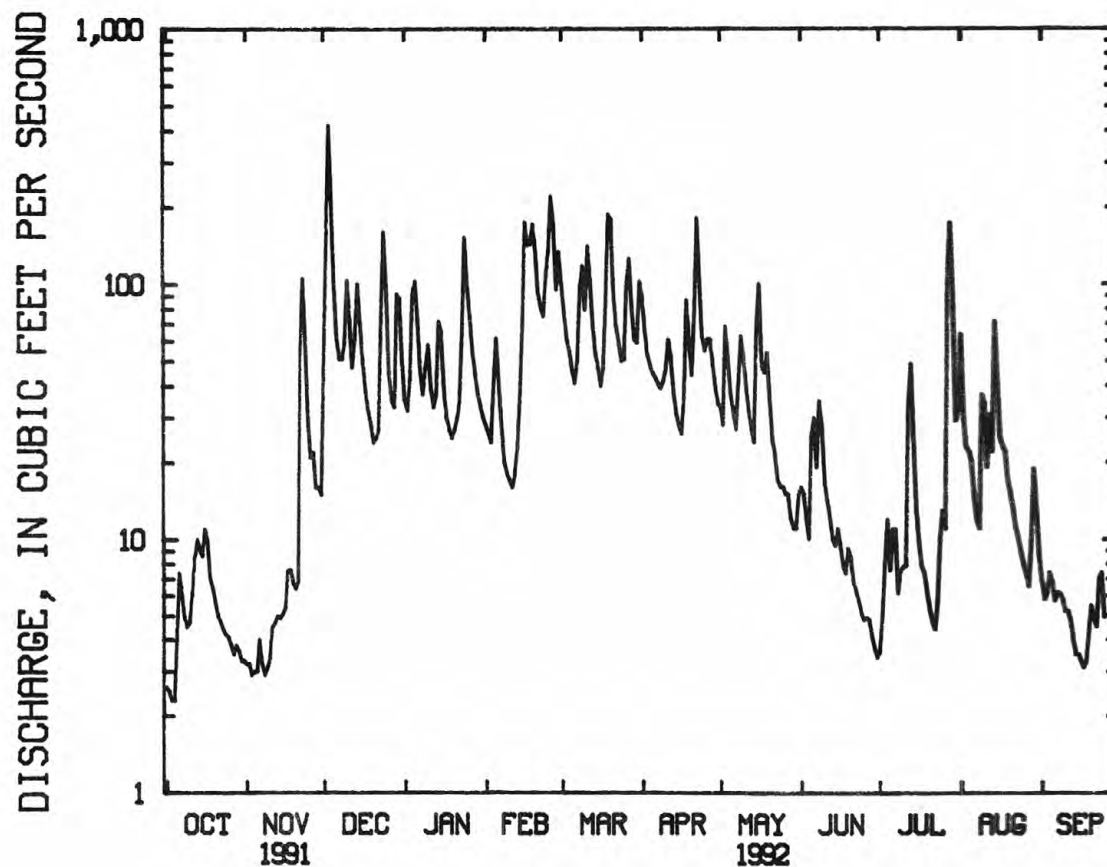
SUMMARY STATISTICS

FOR 1992 WATER YEAR

ANNUAL TOTAL	14342.1	
ANNUAL MEAN	39.2	
HIGHEST DAILY MEAN	422	Dec 3
LOWEST DAILY MEAN	e2.3	(a)
ANNUAL SEVEN-DAY MINIMUM	3.1	Oct 30
INSTANTANEOUS PEAK FLOW	490	Dec 3
INSTANTANEOUS PEAK STAGE	18.56	Dec 3
INSTANTANEOUS LOW FLOW	1.9	Nov 8
ANNUAL RUNOFF (CFSM)	2.12	
ANNUAL RUNOFF (INCHES)	28.84	
10 PERCENT EXCEEDS	96	
50 PERCENT EXCEEDS	25	
90 PERCENT EXCEEDS	4.4	

a Oct. 3, 4.

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 National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for periods of estimated daily discharges, 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)
Dec, 3	2000	*1,080	*5.17	No other peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	8.3	76	e100	e77	293	228	117	55	13	126	19
2	---	8.4	265	e94	e74	240	191	97	49	14	83	17
3	---	8.3	904	e120	e90	183	162	179	38	17	55	16
4	---	7.9	794	301	141	156	147	157	31	27	53	19
5	---	7.4	298	352	225	136	145	120	98	19	47	17
6	---	7.7	177	239	e125	120	139	103	199	28	34	16
7	---	8.3	147	167	e95	136	124	90	93	26	27	15
8	---	8.2	153	135	e70	252	113	131	167	18	25	16
9	---	7.8	165	144	e62	280	108	246	122	61	48	15
10	---	8.4	295	174	e55	203	119	191	80	66	68	15
11	---	12	204	133	e50	362	143	148	59	71	40	18
12	---	13	145	112	e47	284	144	119	47	120	76	15
13	---	13	174	116	e70	211	112	102	39	152	67	13
14	---	12	291	231	143	168	93	91	34	79	174	12
15	---	12	216	e130	226	152	85	176	36	45	115	11
16	---	12	150	e100	709	133	79	293	32	33	66	11
17	---	15	e110	e85	619	140	81	165	26	26	76	11
18	---	16	e90	e77	509	269	218	130	25	22	67	10
19	---	14	e80	e73	515	550	220	146	33	20	48	13
20	---	13	e74	e78	425	554	149	117	33	17	38	13
21	---	13	e77	e90	276	299	179	87	24	15	31	13
22	---	83	e90	e110	245	217	522	71	21	15	27	13
23	---	214	176	178	217	199	325	59	18	17	24	18
24	---	138	434	412	278	166	193	54	17	109	22	18
25	---	71	e180	315	317	169	194	57	18	110	20	15
26	---	46	e125	e220	582	281	209	50	21	51	19	16
27	---	52	e95	e150	542	373	200	49	17	226	19	17
28	---	33	e100	e120	288	260	169	40	15	388	42	16
29	---	32	269	e95	384	194	142	34	13	216	93	15
30	---	29	255	e85	---	171	120	41	13	93	43	13
31	---	---	166	e80	---	254	---	55	---	73	24	---
TOTAL	---	923.7	6775	4816	7456	7405	5053	3515	1473	2187	1697	446
MEAN	---	30.8	219	155	257	239	168	113	49.1	70.5	54.7	14.9
MAX	---	214	904	412	709	554	522	293	199	388	174	19
MIN	---	7.4	74	73	47	120	79	34	13	13	19	10
CFSM	---	.56	3.97	2.82	4.67	4.34	3.06	2.06	.89	1.28	1.00	.27
IN.	---	.62	4.58	3.26	5.04	5.01	3.42	2.38	1.00	1.48	1.15	.30

e Estimated

MONONGAHELA RIVER BASIN

03065400 BLACKWATER RIVER NEAR DAVIS, WV--Continued

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

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	---	30.8	219	155	257	239	168	113	49.1	70.5	54.7	14.9
MAX	---	214	904	412	709	554	522	293	199	388	174	19
(WY)	---	1992	1992	1992	1992	1992	1992	1992	1992	1992	1992	1992
MIN	---	7.4	74	73	47	120	79	34	13	13	19	10
(WY)	---	1992	1992	1992	1992	1992	1992	1992	1992	1992	1992	1992

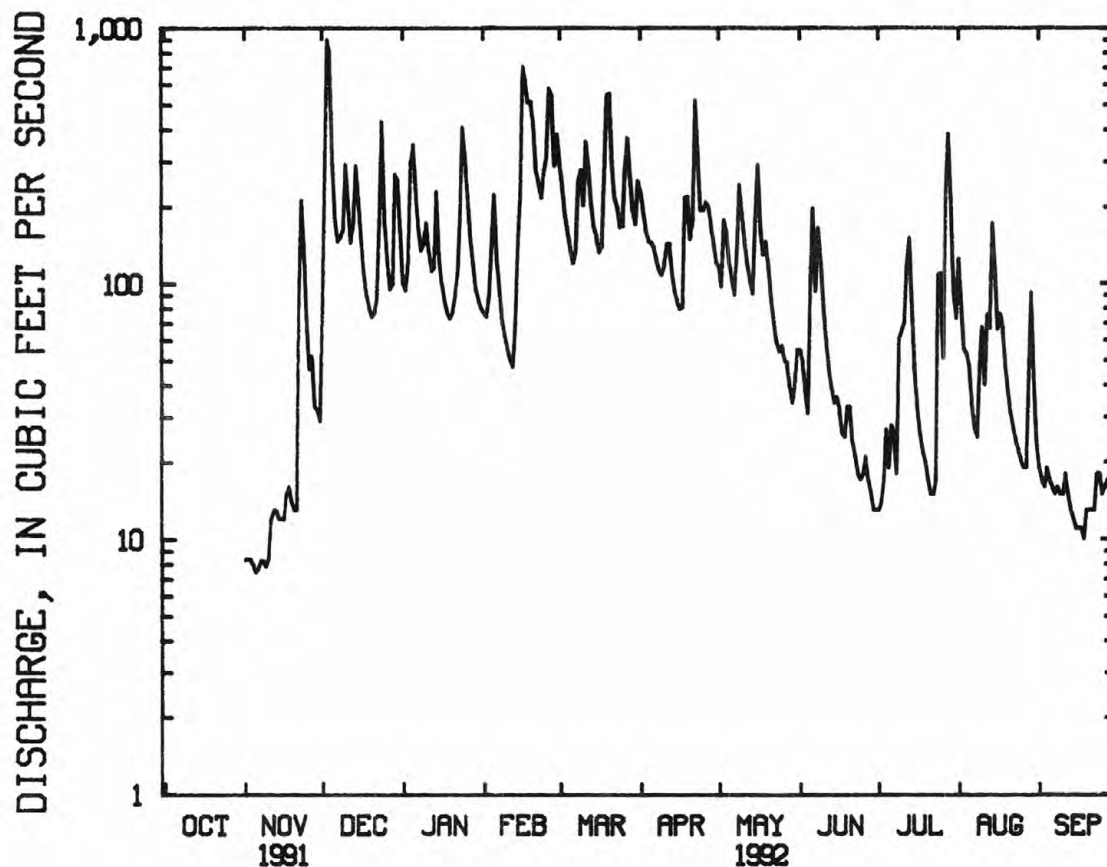
SUMMARY STATISTICS

FOR 1992 WATER YEAR

HIGHEST DAILY MEAN
 LOWEST DAILY MEAN
 INSTANTANEOUS PEAK FLOW
 INSTANTANEOUS PEAK STAGE
 INSTANTANEOUS LOW FLOW

904 Dec 3
 7.4 Nov 5
 1080 Dec 3
 5.17 Dec 3
 7.3 (a)

a Nov. 5, 10.



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 National Geodetic Vertical Datum of 1929 (levels by West Virginia Power and Transmission Co.). 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 (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. 03	1000	*1,640	*6.31	No other peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.4	9.4	121	e150	e145	451	361	170	100	24	177	37
2	7.8	9.6	581	e145	e140	372	303	142	89	21	124	31
3	7.2	9.5	1570	195	e135	283	254	292	66	39	91	30
4	7.1	9.1	1050	493	e150	236	226	230	56	51	90	34
5	11	8.4	426	602	302	199	224	173	156	34	79	32
6	24	8.4	262	373	213	176	219	151	309	53	60	30
7	19	9.6	214	255	e140	222	197	131	139	45	50	31
8	16	10	243	200	e115	446	177	200	239	30	45	29
9	14	9.2	299	224	e105	436	167	418	178	226	74	27
10	12	10	540	262	e95	310	175	318	116	209	93	31
11	17	18	325	194	e90	599	219	229	89	327	71	58
12	31	20	222	165	e85	431	213	177	73	313	131	37
13	33	18	360	175	e105	321	164	153	61	270	117	27
14	29	18	505	414	168	258	136	138	56	141	252	22
15	26	20	349	e320	371	228	125	287	58	88	159	20
16	35	24	e200	e155	985	196	116	448	55	86	97	18
17	30	30	e160	e135	656	215	122	246	45	63	110	17
18	23	26	e140	e125	704	486	289	186	42	53	114	16
19	19	22	e120	e115	816	1060	306	202	62	44	79	26
20	17	20	e115	e120	657	831	200	165	70	37	64	26
21	15	24	e110	e145	428	454	275	126	47	31	53	23
22	14	239	119	e170	384	337	769	105	38	30	46	22
23	14	392	329	291	349	303	442	91	32	37	42	35
24	13	192	687	631	486	257	271	85	30	441	37	32
25	13	97	e300	438	519	271	276	94	37	348	33	24
26	12	67	e170	e330	1130	466	316	82	43	148	30	28
27	11	56	e150	e275	792	593	313	79	30	542	44	34
28	12	56	e150	e230	444	403	258	67	24	637	113	32
29	11	54	469	e200	630	304	207	58	20	324	196	25
30	9.7	50	407	e180	---	269	174	78	24	154	84	21
31	9.5	---	256	e165	---	439	---	101	---	128	48	---
TOTAL	520.7	1536.2	10949	7872	11339	11852	7494	5422	2384	4974	2803	855
MEAN	16.8	51.2	353	254	391	382	250	175	79.5	160	90.4	28.5
MAX	35	392	1570	631	1130	1060	769	448	309	637	252	58
MIN	7.1	8.4	110	115	85	176	116	58	20	21	30	16
CFSM	.19	.59	4.10	2.95	4.54	4.44	2.90	2.03	.92	1.86	1.05	.33
IN.	.22	.66	4.73	3.40	4.89	5.11	3.23	2.34	1.03	2.15	1.21	.37

e Estimated

MONONGAHELA RIVER BASIN

03066000 BLACKWATER RIVER AT DAVIS, WV--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1921 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	111	168	248	266	313	383	293	213	144	98.7	98.2	68.5
MAX	510	990	615	634	732	1125	766	512	507	341	478	286
(WY)	1977	1986	1973	1952	1956	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 1991 CALENDAR YEAR

FOR 1992 WATER YEAR

WATER YEARS 1921 - 1992

ANNUAL TOTAL	56572.5		68000.9									
ANNUAL MEAN	155		186						200			
HIGHEST ANNUAL MEAN									273			1986
LOWEST ANNUAL MEAN									125			1959
HIGHEST DAILY MEAN	1570	Dec 3		1570	Dec 3				9470	Nov 5		1985
LOWEST DAILY MEAN	7.1	Oct 4		7.1	Oct 4				1.6	Sep 11		1959
ANNUAL SEVEN-DAY MINIMUM	8.6	Sep 28		9.1	Oct 31				2.4	Oct 1		1953
INSTANTANEOUS PEAK FLOW				1640	Dec 3				a12500	Nov 5		1985
INSTANTANEOUS PEAK STAGE				6.31	Dec 3				b17.67	Nov 5		1985
INSTANTANEOUS LOW FLOW				6.5	(c)				d1.5		(f)	
ANNUAL RUNOFF (CFSM)	1.80			2.16					2.32			
ANNUAL RUNOFF (INCHES)	24.41			29.35					31.47			
10 PERCENT EXCEEDS	421			440					470			
50 PERCENT EXCEEDS	59			125					110			
90 PERCENT EXCEEDS	11			18					19			

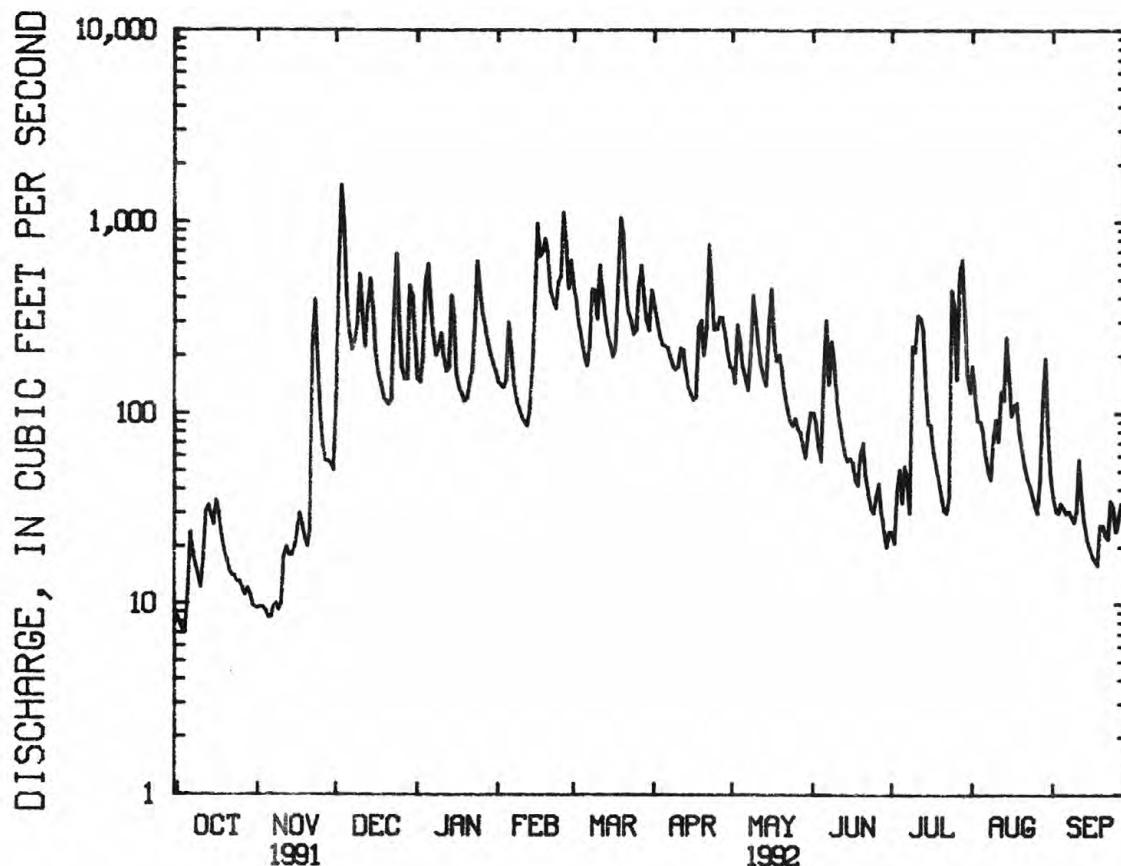
a From rating curve extended above 7,000 ft³/s.

b From floodmarks.

c Oct. 4, 5.

d Caused by filling small water-supply pool about 1.0 mi upstream.

f Sept. 11, 12, 1959.



MONONGAHELA RIVER BASIN

03069000 SHAVERS FORK AT PARSONS, WV

LOCATION.--Lat 39°05'45", long 78°40'40", Tucker County, Hydrologic Unit 05020004, on right bank at Parsons, 0.7 mi upstream from confluence with Black Fork.

DRAINAGE AREA.--214 mi².

PERIOD OF RECORD.--October 1910 to September 1926, October 1940 to current year. Monthly discharge only for some periods, published in WSP 1305.

REVISED RECORDS.--WSP 503: 1922. WSP 923: Drainage area: WSP 1335: 1911-12, 1915-17, 1918(M), 1921-22(M), 1926(M). WSP 1705: 1955.

GAGE.--Water-stage recorder. Datum of gage is 1,634.87 ft above National Geodetic Vertical Datum of 1929. Prior to Aug. 25, 1923, nonrecording gage on old highway bridge 800 ft downstream and Aug. 25, 1923, to Sept. 30, 1926, nonrecording gage on railroad bridge 760 ft downstream at datum 3.0 ft lower. Oct. 4, 1940, to Apr. 4, 1942, nonrecording gage at present site and datum.

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

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of July 10, 1888, and July 17, 1907, reached a stage of approximately 12.5 ft at site and datum of former gage, discharge, 25,000 ft³/s, from rating curve extended above 8,000 ft³/s.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 5,300 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage Height (ft)	Date	Time	Discharge (ft ³ /s)	Gage Height (ft)
Dec. 03	0530	*12,400	*10.18	July 27	2045	9,780	8.95
Apr. 22	0700	6,250	6.91				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	65	61	1060	606	6290	1030	1330	601	875	385	617	131
2	59	60	2070	466	6280	601	915	518	376	646	598	97
3	54	55	7350	453	279	742	702	1000	260	471	461	60
4	53	52	2580	448	303	758	571	1570	223	600	391	60
5	57	50	1290	664	406	638	480	931	230	593	332	69
6	83	48	872	905	390	562	432	609	559	632	273	66
7	85	42	669	634	6300	570	424	545	394	622	232	72
8	78	43	566	501	6230	1260	497	460	555	515	203	69
9	82	45	825	468	6200	1620	652	477	649	467	206	65
10	53	46	1940	641	6175	1090	959	469	520	411	203	77
11	57	54	1250	583	6165	2110	863	462	433	385	220	68
12	83	256	813	469	6160	1500	716	389	343	397	219	72
13	187	174	751	437	6220	905	605	461	390	316	213	63
14	172	135	1040	663	434	765	512	807	257	333	227	55
15	161	125	1110	1040	621	643	444	1200	203	263	189	45
16	335	174	750	768	2520	592	405	1210	301	250	173	40
17	377	193	561	6400	1700	473	451	713	260	230	148	37
18	258	206	6400	6270	1210	693	874	526	271	236	134	35
19	203	185	6300	6240	1290	3450	675	498	609	196	122	46
20	173	169	6240	6255	1420	2530	513	536	674	155	109	74
21	153	167	6250	6270	980	1280	502	440	436	159	91	65
22	139	175	6265	6315	807	931	3550	356	335	139	60	62
23	124	2090	620	425	777	959	1420	337	303	333	72	60
24	111	678	2780	1330	1300	709	695	280	240	240	65	60
25	100	624	1910	909	1910	584	723	285	222	690	60	60
26	82	456	706	617	3700	593	706	267	375	488	55	60
27	86	363	594	476	2010	777	907	280	240	460	48	65
28	80	309	494	6420	1170	750	1010	280	240	390	56	60
29	75	296	600	6380	1230	624	828	280	187	190	397	65
30	69	273	1210	6390	---	588	600	109	109	758	330	64
31	65	---	814	6315	---	1220	---	232	---	511	103	---
TOTAL	3747	8804	37173	16889	26677	31717	24409	18077	10581	33109	7622	2054
MEAN	121	287	1199	545	820	1023	814	583	353	715	237	65
MAX	377	2090	7350	1330	3700	9450	9550	1000	609	460	917	101
MIN	53	42	240	240	160	433	405	1	109	109	48	33
CFSM	.56	1.34	5.60	2.59	4.30	4.78	6.00	2.72	1.09	1.09	1.09	1.09
IN.	.85	1.50	6.46	2.64	4.64	5.51	4.24	3.14	1.04	1.04	1.04	1.04

6 Estimated

MONONGAHELA RIVER BASIN

03069000 SHAVERS FORK AT PARSONS--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1911-1926, 1941-1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	309	477	656	730	787	1030	840	610	405	330	285	213
MAX	1340	2198	1527	1970	2133	2421	2098	1656	1209	1460	1273	850
(WY)	1912	1986	1973	1911	1918	1912	1958	1924	1981	1912	1942	1971
MIN	8.12	34.6	195	112	159	187	213	192	66.0	61.7	31.1	12.2
(WY)	1954	1954	1961	1977	1978	1915	1921	1982	1965	1968	1957	1946

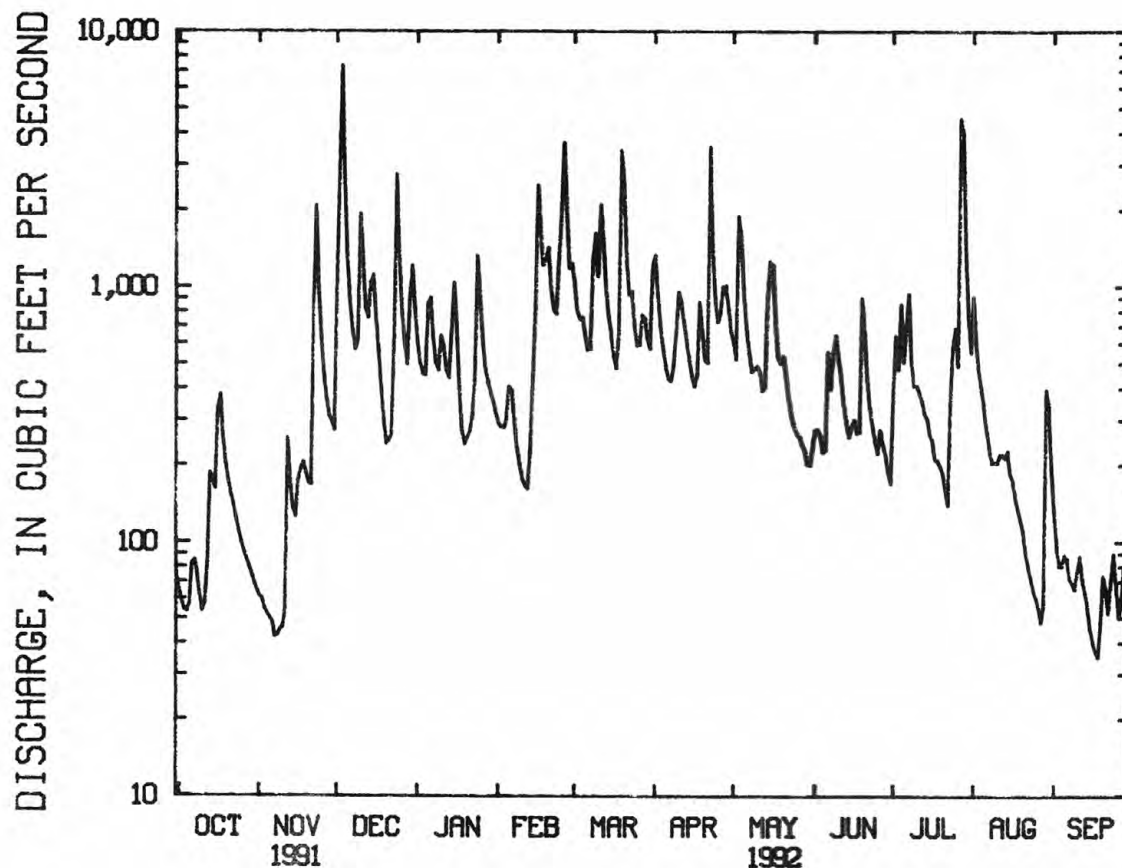
SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1911 - 1926 1941 - 1992	
ANNUAL TOTAL	184455		209121		555	
ANNUAL MEAN	505		571		934	
HIGHEST ANNUAL MEAN					366	
LOWEST ANNUAL MEAN					21000	
HIGHEST DAILY MEAN	7350	Dec 3	7350	Dec 3	3.0	Nov 5 1985
LOWEST DAILY MEAN	30	Jun 15	35	Sep 18	3.4	Oct 7 1914
ANNUAL SEVEN-DAY MINIMUM	33	Jun 11	46	Sep 13	3.4	Oct 6 1953
INSTANTANEOUS PEAK FLOW			12400	Dec 3	a43000	Nov 5 1985
INSTANTANEOUS PEAK STAGE			10.18	Dec 3	b19.86	Nov 5 1985
INSTANTANEOUS LOW FLOW			34	(c)	d1.0	Oct 7 1914
ANNUAL RUNOFF (CFSM)	2.36		2.67		2.59	
ANNUAL RUNOFF (INCHES)	32.06		36.35		35.24	
10 PERCENT EXCEEDS	1210		1210		1260	
50 PERCENT EXCEEDS	273		392		310	
90 PERCENT EXCEEDS	61		65		70	

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

b From floodmarks.

c Sept. 17, 18.

d Observed, very doubtful.



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 National Geodetic Vertical Datum, 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 fair. 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. 3	0500	*30,600	*12.93	July 27	2100	26,900	12.31

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	130	121	1850	1710	e900	3470	3500	1710	677	548	2310	315
2	120	119	7790	1460	866	2780	2660	1470	669	977	1480	255
3	112	113	21000	1350	810	2370	2100	4220	559	842	1210	224
4	112	109	7810	2080	858	2130	1770	3850	461	1530	1080	236
5	113	105	3820	3190	1400	1780	1580	2540	651	1010	914	233
6	238	101	2480	2790	1330	1540	1460	1920	1710	1400	688	251
7	222	95	1890	2000	1160	1580	1480	1560	1140	1690	560	261
8	171	96	1710	1580	1030	3550	1540	1440	1370	1020	473	243
9	141	99	1860	1450	813	4540	1350	2040	1540	1040	661	218
10	123	100	4940	1950	639	3280	1570	2000	1210	1380	669	215
11	127	121	3240	1720	e570	6010	1480	1710	992	1300	534	284
12	270	336	2220	1400	e540	4580	1880	1440	753	1510	742	231
13	363	281	2470	1310	e640	3170	1580	1320	601	1430	653	184
14	332	222	3540	1990	1010	2360	1360	1900	512	1060	941	158
15	318	223	3240	2930	1920	1970	1220	2800	631	680	771	138
16	679	289	2220	2030	6570	1620	1120	3420	798	633	581	126
17	611	373	1690	e1400	5900	1460	1160	2120	531	489	641	117
18	424	359	1410	e1100	4490	2320	2410	1650	492	462	641	110
19	329	319	1060	e850	5220	10200	1970	1660	1290	474	490	163
20	279	292	e800	e750	5080	7700	1590	1480	1170	373	404	212
21	243	289	e850	e850	3430	4140	1670	1210	789	318	343	170
22	222	2140	e900	975	2770	2970	8820	988	571	284	297	157
23	203	5410	1860	1150	2640	2820	4290	819	470	961	267	274
24	188	2630	6930	3650	3860	2110	2770	699	397	1990	240	272
25	175	1600	3890	2780	5370	1900	2260	676	357	2220	215	203
26	166	1120	2390	2030	9690	2310	2400	619	431	1350	195	159
27	157	839	1780	1550	6430	3370	2840	582	379	12000	184	178
28	149	736	1430	e1300	3770	2840	2590	528	340	12200	371	236
29	142	679	2630	e1200	4340	2270	2210	451	290	3960	1330	200
30	134	614	3300	e1100	---	2030	1860	466	243	2120	810	163
31	127	---	2250	e1000	---	3650	---	610	---	1530	447	---
TOTAL	7120	19930	105250	52625	84046	98820	66490	49898	22024	58781	21142	6186
MEAN	230	664	3395	1698	2898	3188	2216	1610	734	1896	682	206
MAX	679	5410	21000	3650	9690	10200	8820	4220	1710	12200	2310	315
MIN	112	95	800	750	540	1460	1120	451	243	284	184	110
CFSM	.32	.93	4.73	2.36	4.04	4.44	3.09	2.24	1.02	2.64	.95	.29
IN.	.37	1.03	5.45	2.73	4.35	5.12	3.44	2.59	1.14	3.05	1.10	.32

e Estimated

MONONGAHELA RIVER BASIN

03069500 CHEAT RIVER NEAR PARSONS, WV--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1913 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	923	1405	2097	2307	2563	3191	2540	1938	1255	901	845	575
MAX	3882	7540	4969	4859	5609	8028	6272	4763	4013	2542	3203	2452
(WY)	1977	1986	1973	1952	1939	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

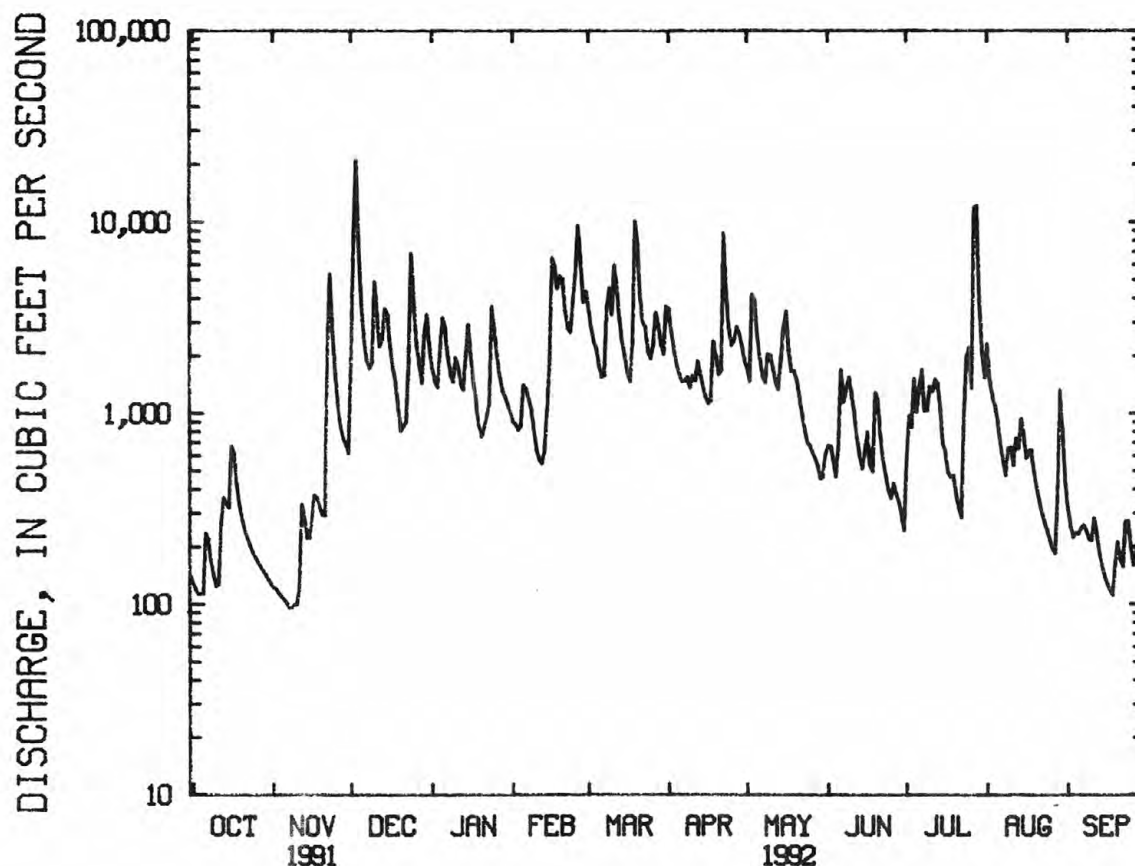
SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1913 - 1992	
ANNUAL TOTAL	530348		592312			
ANNUAL MEAN	1453		1618		1706	
HIGHEST ANNUAL MEAN					2311	
LOWEST ANNUAL MEAN					1111	
HIGHEST DAILY MEAN	21000		21000		70000	
LOWEST DAILY MEAN	78		95		10	
ANNUAL SEVEN-DAY MINIMUM	93		101		11	
INSTANTANEOUS PEAK FLOW			30600		a170000	
INSTANTANEOUS PEAK STAGE			12.93		b24.30	
INSTANTANEOUS LOW FLOW			94		d9.0	
ANNUAL RUNOFF (CFSM)	2.02		2.25		2.38	
ANNUAL RUNOFF (INCHES)	27.48		30.69		32.28	
10 PERCENT EXCEEDS	3650		3510		3920	
50 PERCENT EXCEEDS	675		1100		960	
90 PERCENT EXCEEDS	128		174		182	

a From rating curve extended above 55,000 ft³/s.

b From floodmarks.

c Nov. 7, 8.

d 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 National Geodetic Vertical Datum of 1929. 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 fair except those for periods of estimated daily discharges (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 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. 3	0900	*31,400	*15.69	July 28	0200	27,200	14.67

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	154	137	839	2940	e1400	5160	5320	2490	800	369	2570	485
2	139	131	5430	2360	1300	4190	4310	2130	823	752	2210	368
3	130	125	24100	2060	1140	3550	3480	3920	766	1110	1490	316
4	129	118	10100	2360	1260	3180	2860	5610	651	1370	1400	280
5	125	111	5450	3690	1930	2710	2450	3970	657	1390	1220	284
6	129	110	3750	3900	2310	2290	2150	3000	1950	1180	926	284
7	237	107	2870	2960	1910	2090	2060	2320	1870	2200	735	295
8	233	105	2380	2290	1640	3870	2170	1900	2180	1410	617	305
9	185	99	2650	1970	1350	5830	2290	2410	3270	1750	594	290
10	156	103	6690	2620	864	4890	2600	2850	2000	2190	857	276
11	141	116	5250	2660	e760	7780	2790	2580	1520	3610	953	337
12	145	124	3610	2190	e720	6590	2700	2150	1100	2450	1250	364
13	300	357	3170	1920	e900	4800	2250	1850	875	2690	951	283
14	392	287	5440	2390	1800	3720	1910	2370	725	1830	1050	232
15	367	238	5160	4300	3250	3090	1690	2890	683	1340	1100	202
16	566	249	3770	3390	10100	2560	1500	4770	1050	2070	814	180
17	785	328	2780	e2000	8030	2230	1390	3300	828	1200	659	165
18	613	414	2210	e1550	5870	2770	2590	2500	677	815	833	154
19	438	391	1660	e1150	6540	11400	2730	2260	1000	749	679	163
20	346	343	1130	e1000	6370	10200	2250	2060	1590	615	551	212
21	296	327	1220	e1200	4910	6020	1970	1660	1120	509	467	258
22	261	1020	1360	1400	4030	4500	7760	1290	799	421	395	217
23	240	6280	1570	1770	3720	4600	6040	1060	652	388	350	213
24	222	4050	8570	5840	4430	3710	4210	923	571	3440	314	325
25	207	2430	5820	4810	6690	3090	3390	852	524	4400	282	307
26	191	1600	3830	3450	13000	3150	3250	798	493	2590	253	245
27	181	1140	2830	2460	8740	4520	4080	736	532	8990	238	208
28	173	917	2230	2190	5500	4440	4190	685	445	17900	341	220
29	163	831	3150	e1850	5320	3670	3530	607	395	6460	1100	271
30	152	759	5100	e1700	---	3170	2870	593	335	3470	1440	230
31	144	---	3960	e1550	---	4480	---	664	---	2210	740	---
TOTAL	7940	23347	138079	77920	115784	138250	92780	67198	30881	81868	27379	7969
MEAN	256	778	4454	2514	3993	4460	3093	2168	1029	2641	883	266
MAX	785	6280	24100	5840	13000	11400	7760	5610	3270	17900	2570	485
MIN	125	99	839	1000	720	2090	1390	593	335	369	238	154
CFSM	.27	.83	4.75	2.68	4.26	4.76	3.30	2.31	1.10	2.82	.94	.28
IN.	.32	.93	5.48	3.09	4.60	5.49	3.68	2.67	1.23	3.25	1.09	.32

e Estimated

MONONGAHELA RIVER BASIN

03070000 CHEAT RIVER AT ROWLESBURG, WV--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1924 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1142	1922	2888	3068	3548	4275	3521	2672	1663	1176	1110	716
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 1991 CALENDAR YEAR

FOR 1992 WATER YEAR

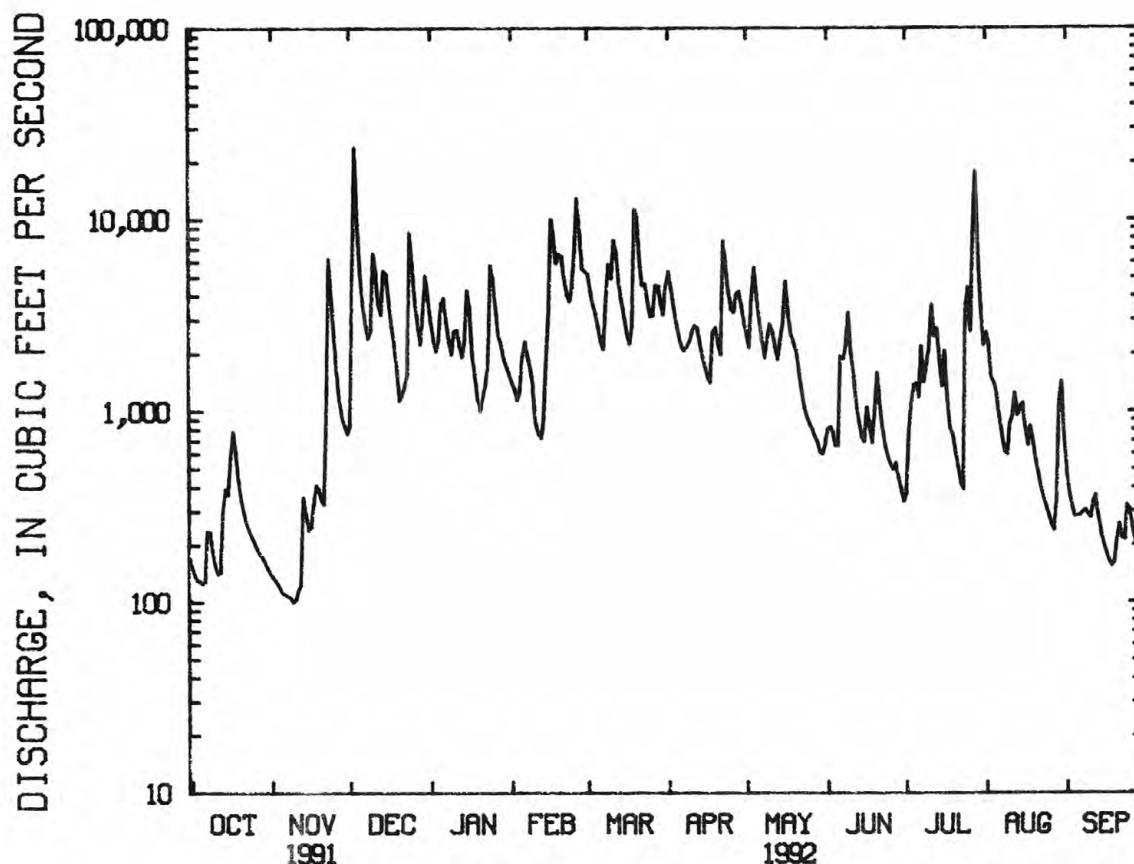
WATER YEARS 1924 - 1992

ANNUAL TOTAL	712685			809395								
ANNUAL MEAN	1953			2211								
HIGHEST ANNUAL MEAN									2303			
LOWEST ANNUAL MEAN									3164			1986
HIGHEST DAILY MEAN	24100	Dec 3		24100	Dec 3				94000	Nov 5	1985	
LOWEST DAILY MEAN	97	Jun 15		99	Nov 9				11	Oct 15	1930	
ANNUAL SEVEN-DAY MINIMUM	107	Nov 5		107	Nov 5				12	Oct 10	1930	
INSTANTANEOUS PEAK FLOW				31400	Dec 3				a190000	Nov 5	1985	
INSTANTANEOUS PEAK STAGE				15.69	Dec 3				b36.90	Nov 5	1985	
INSTANTANEOUS LOW FLOW				98	(c)				10	Oct 15	1930	
ANNUAL RUNOFF (CFSM)	2.08			2.36					2.46			
ANNUAL RUNOFF (INCHES)	28.29			32.13					33.40			
10 PERCENT EXCEEDS	5400			5120					5320			
50 PERCENT EXCEEDS	816			1510					1320			
90 PERCENT EXCEEDS	150			213					223			

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

b From floodmarks.

c Nov. 9, 10.



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 National Geodetic Vertical Datum of 1929, 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, doubtful gage-height record), 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)
Mar. 19	1100	4,910	10.46	July 27	1000	*4,970	*10.50

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e9.0	e5.0	92	391	e245	690	869	336	233	39	256	116
2	e8.0	e4.8	259	336	e215	571	733	290	203	50	184	94
3	e7.5	e4.6	2720	307	240	467	604	551	162	46	146	171
4	e7.2	e4.5	1180	285	263	395	534	446	139	41	180	177
5	e7.0	e4.3	590	253	376	338	457	398	267	55	170	116
6	e8.5	e4.2	419	224	338	297	388	351	261	157	117	94
7	e15	e4.0	337	198	328	302	351	287	200	120	90	79
8	e12	e6.6	286	180	299	349	320	261	172	75	83	84
9	e10	e10	315	226	225	373	294	417	202	67	180	136
10	e8.0	e14	923	309	e160	454	279	565	153	104	143	238
11	e7.5	e20	577	297	e140	1810	400	508	117	254	674	450
12	e7.0	27	419	262	e130	1140	375	433	94	141	774	229
13	e12	32	439	259	e180	788	328	376	78	136	388	159
14	e18	21	707	570	476	615	303	322	72	116	273	122
15	e30	16	598	680	782	523	278	256	69	121	258	100
16	39	14	444	487	1980	431	255	231	64	127	203	83
17	33	20	354	e330	1310	404	253	190	50	93	165	70
18	19	20	296	e250	1180	601	321	182	43	76	e125	61
19	12	18	203	e185	1320	4030	351	172	43	71	e100	76
20	9.2	22	158	e160	1170	2050	329	137	43	67	e85	65
21	8.3	25	e165	e185	796	1160	384	116	45	62	e75	69
22	e7.8	1200	e190	213	642	895	710	101	41	66	e65	116
23	e7.4	1170	363	868	556	970	550	91	36	56	e55	156
24	e7.1	398	712	1850	642	721	463	87	37	163	e50	108
25	e6.8	225	493	913	786	701	424	107	66	241	e45	80
26	e6.5	151	379	639	1320	780	506	93	77	184	41	74
27	e6.2	107	308	465	1010	1010	588	83	79	2800	38	115
28	e6.0	105	263	405	718	881	521	74	65	1290	279	156
29	e5.7	104	418	351	892	680	431	71	45	582	541	111
30	e5.4	89	577	312	---	622	382	97	36	388	261	87
31	e5.2	---	475	e270	---	1040	---	247	---	282	165	---
TOTAL	351.3	3846.0	15659	12660	18719	26088	12981	7876	3192	8070	6209	3792
MEAN	11.3	128	505	408	645	842	433	254	106	260	200	126
MAX	39	1200	2720	1850	1980	4030	869	565	267	2800	774	450
MIN	5.2	4.0	92	160	130	297	253	71	36	39	38	61
CFSM	.06	.64	2.53	2.04	3.23	4.21	2.16	1.27	.53	1.30	1.00	.63
IN.	.07	.72	2.91	2.35	3.48	4.85	2.41	1.46	.59	1.50	1.15	.71

e Estimated

MONONGAHELA RIVER BASIN

03070500 BIG SANDY CREEK AT ROCKVILLE, WV--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1909-1918, 1921-1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	175	331	559	634	695	795	634	482	287	178	136	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

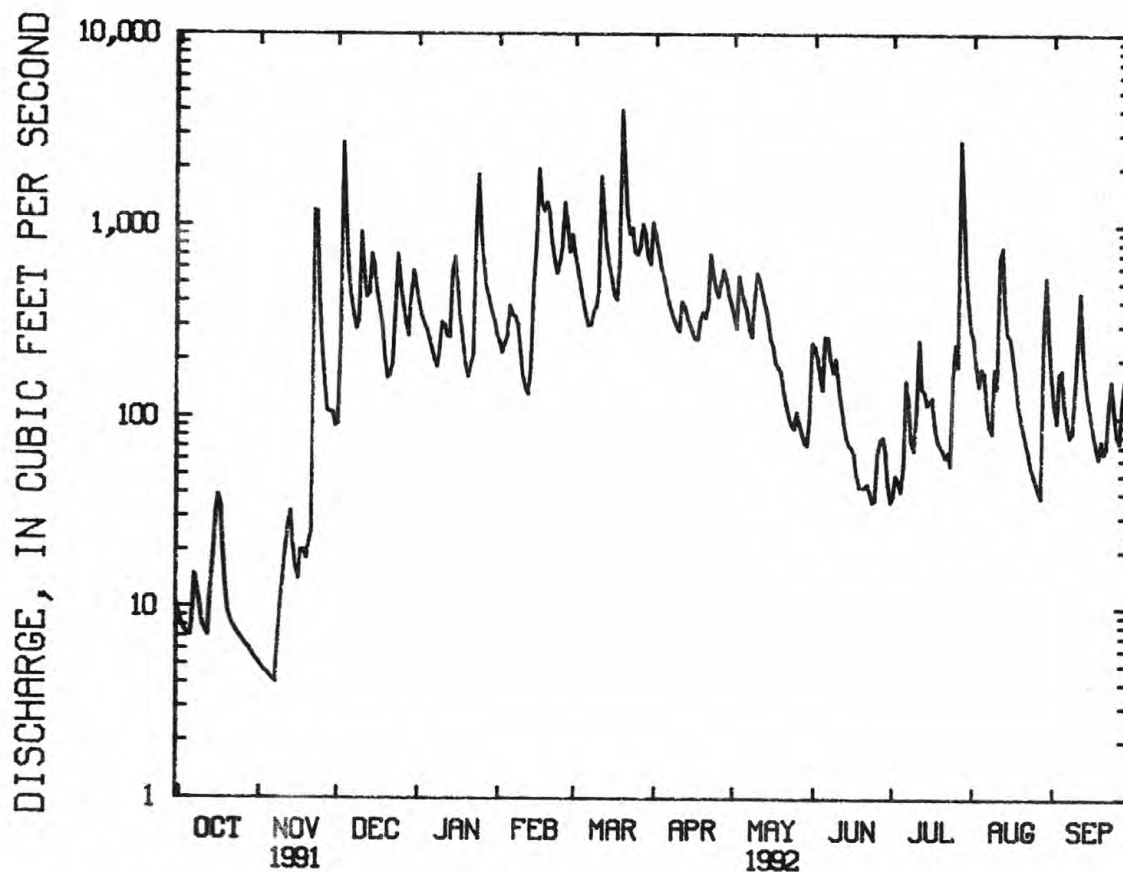
SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1909 - 1918 1921 - 1992	
ANNUAL TOTAL	123439.2		119443.3			
ANNUAL MEAN	338		326		417	
HIGHEST ANNUAL MEAN					671	1912
LOWEST ANNUAL MEAN					240	1954
HIGHEST DAILY MEAN	4350	Apr 14	4030	Mar 19	15700	Jan 13 1911
LOWEST DAILY MEAN	e4.0	Nov 7	e4.0	Nov 7	.10	Oct 21 1953
ANNUAL SEVEN-DAY MINIMUM	4.5	Nov 1	4.5	Nov 1	.10	Oct 21 1953
INSTANTANEOUS PEAK FLOW			4970	Jul 27	a21300	Jul 24 1912
INSTANTANEOUS PEAK STAGE			10.50	Jul 27	b18.00	Jul 24 1912
INSTANTANEOUS LOW FLOW			UNKNOWN		.10	(c)
ANNUAL RUNOFF (CFSM)	1.69		1.63		2.09	
ANNUAL RUNOFF (INCHES)	22.96		22.22		28.34	
10 PERCENT EXCEEDS	967		725		971	
50 PERCENT EXCEEDS	89		203		210	
90 PERCENT EXCEEDS	9.3		15		20	

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

b Observed.

c Oct. 21-27, 1953.

e Estimated.



MONONGAHELA RIVER BASIN

03071600 CHEAT RIVER AT LAKE LYNN, PA

LOCATION.--Lat 39°43'15", long 79°51'20", Fayette County, Hydrologic Unit 05020004, at the Lake Lynn hydro-electric plant of the West Penn Power Company at Lake Lynn, 3.0 mi upstream from mouth.

DRAINAGE AREA.--1,411 mi².

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: October 1948 to September 1957, October 1958 to September 1992, discontinued (partial record).

REMARKS.--Values published are once-daily readings.

COOPERATION.--Records were furnished by the West Penn Power Company.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES (Water years 1949-57): Maximum, 29.5°C, July 30, 1949, July 28, 1952, and Aug. 6, 1955; minimum, 0.5°C several days during 1951, 1952, 1954, 1955, 1957.

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY INSTANTANEOUS VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21.0	15.5	---	---	---	---	6.5	15.5	19.0	24.5	---	---
2	21.0	---	10.0	2.0	---	5.0	6.5	---	19.0	26.5	---	---
3	21.0	---	---	2.0	.5	5.0	6.5	---	19.0	---	23.5	---
4	22.0	14.5	---	---	.5	4.5	---	14.5	20.0	---	23.5	---
5	---	14.5	---	---	1.0	5.5	---	14.5	20.0	---	23.5	---
6	---	14.0	---	---	1.0	8.0	5.5	14.5	---	---	23.5	---
7	20.0	14.0	---	---	---	---	---	15.0	---	24.5	25.5	24.5
8	20.0	---	---	---	---	---	6.5	14.0	21.0	24.5	---	24.5
9	19.0	---	8.0	---	---	9.0	7.0	---	20.0	25.5	---	---
10	19.0	---	8.0	---	1.0	10.0	9.0	---	20.0	25.5	26.0	25.0
11	---	---	6.5	---	1.0	9.5	---	15.5	20.0	---	26.5	---
12	---	12.0	6.5	---	1.0	9.0	---	15.5	---	---	24.5	---
13	---	11.5	8.0	---	1.0	---	10.0	16.0	---	26.0	24.5	---
14	18.0	11.0	---	---	1.0	---	10.5	18.0	---	---	25.5	24.0
15	16.5	---	---	---	---	---	12.0	17.0	23.5	26.5	---	23.5
16	---	---	5.0	---	---	3.5	12.0	---	23.5	---	---	---
17	16.5	---	5.5	2.0	---	3.5	---	---	23.5	26.5	---	---
18	16.5	10.0	5.5	---	2.0	3.5	---	21.0	---	---	---	---
19	---	11.0	5.5	---	3.0	2.0	---	19.5	24.5	---	---	---
20	---	---	5.0	---	---	3.5	15.5	20.0	---	---	---	---
21	15.5	12.0	---	---	4.5	---	15.5	20.0	---	---	---	---
22	15.5	---	---	---	---	---	15.5	20.0	22.0	---	---	---
23	15.5	---	3.5	---	---	4.0	15.5	---	22.0	---	---	---
24	18.0	---	3.5	---	5.5	4.0	15.5	---	22.0	---	---	---
25	18.0	10.0	---	---	5.5	4.5	---	---	22.0	---	---	---
26	---	---	1.0	---	5.0	4.5	---	20.0	23.5	---	---	---
27	---	10.0	1.5	.0	5.5	4.5	14.5	---	---	---	---	---
28	18.0	---	---	.0	6.0	---	---	19.0	---	---	---	---
29	15.5	10.0	---	.0	---	---	13.5	19.0	---	---	---	---
30	---	---	2.0	.0	---	6.5	14.5	---	---	23.5	---	---
31	15.5	---	2.0	.0	---	6.5	---	---	---	25.5	---	---

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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 National Geodetic Vertical Datum of 1929. 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. 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, 131,000 ft³/s, Mar. 20, gage height, 23.32 ft.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9810	8010	9620	30300	32000	82800	89100	47400	12200	9430	94000	30100
2	9260	9560	9050	26900	25100	70900	93200	46700	15700	8970	81500	28000
3	8730	9740	54800	26700	22100	61000	86500	40700	15000	12100	57400	25900
4	9920	7760	92400	25000	22200	52100	73300	46700	11600	12400	51100	25100
5	9840	9140	52300	19100	23700	39500	59500	50800	13700	e10000	44500	25000
6	10100	9250	37600	25700	20700	41500	54200	47400	12100	10500	44900	26100
7	9340	7710	39000	23800	21500	37900	44000	43000	13000	14500	33000	22700
8	9310	7020	29000	24700	21100	37900	40600	36500	13300	12100	31400	26400
9	9530	6930	27500	26200	19400	41800	36400	36700	11900	14400	36400	24900
10	8980	6560	29800	24400	13500	47500	38300	31000	17100	14800	38700	25900
11	9180	8510	39000	24800	16300	55000	35900	35500	12500	16600	34900	22400
12	7220	10200	35400	20900	13300	80500	34500	29400	11200	18600	37200	25500
13	9400	10200	31000	24700	16000	70900	35300	26700	13100	19000	37300	20100
14	9380	8660	39900	27600	19600	66500	38500	24600	8940	23900	25300	21200
15	8040	9070	45700	31100	22200	58200	34500	25800	7440	34900	21600	19900
16	9600	8270	38900	35800	35400	46800	39200	28000	9060	42600	22700	18500
17	9290	7790	32100	35100	49000	49500	42500	23100	11500	57900	22000	20000
18	9600	8210	26500	27800	53300	43200	53500	25400	10500	36700	22400	15300
19	8470	8590	25300	27100	56900	83300	79800	22000	10900	38000	20100	24300
20	8810	8870	20300	21200	62300	125000	80700	25100	8590	41000	18600	17200
21	8400	8400	18800	23900	69600	87800	72100	21800	8700	44600	15200	15900
22	9280	9120	17400	24100	67000	66800	79600	21800	e8300	53400	13000	42100
23	8830	33400	14000	29800	58700	65900	80900	19500	9570	43400	12400	99700
24	8680	26100	26800	68600	59100	60600	73800	18000	13100	43100	11800	81000
25	8780	12600	28000	73800	66800	53800	70500	14500	10600	48700	12900	50400
26	9840	14100	26600	55800	73100	47300	67000	16200	8560	49100	11400	45300
27	7550	16700	27400	53800	78800	53700	58800	16700	10400	64900	11500	37600
28	6270	14900	23800	46000	77500	75400	59900	11300	9510	92100	30600	33800
29	7760	10400	25600	42900	77000	78400	57100	11500	8700	72100	53500	32400
30	7240	11900	24600	36900	---	73700	53900	15600	9940	77300	43200	28400
31	6810	---	35300	34100	---	80000	---	13000	---	74300	34800	---
TOTAL	273250	327670	983470	1018600	1193200	1935200	1763100	872400	336710	1111400	1025300	931100
MEAN	8815	10920	31720	32860	41140	62430	58770	28140	11220	35850	33070	31040
MAX	10100	33400	92400	73800	78800	125000	93200	50800	17100	92100	94000	99700
MIN	6270	6560	9050	19100	13300	37900	34500	11300	7440	8970	11400	15300

e Estimated

OHIO RIVER MAIN STEM

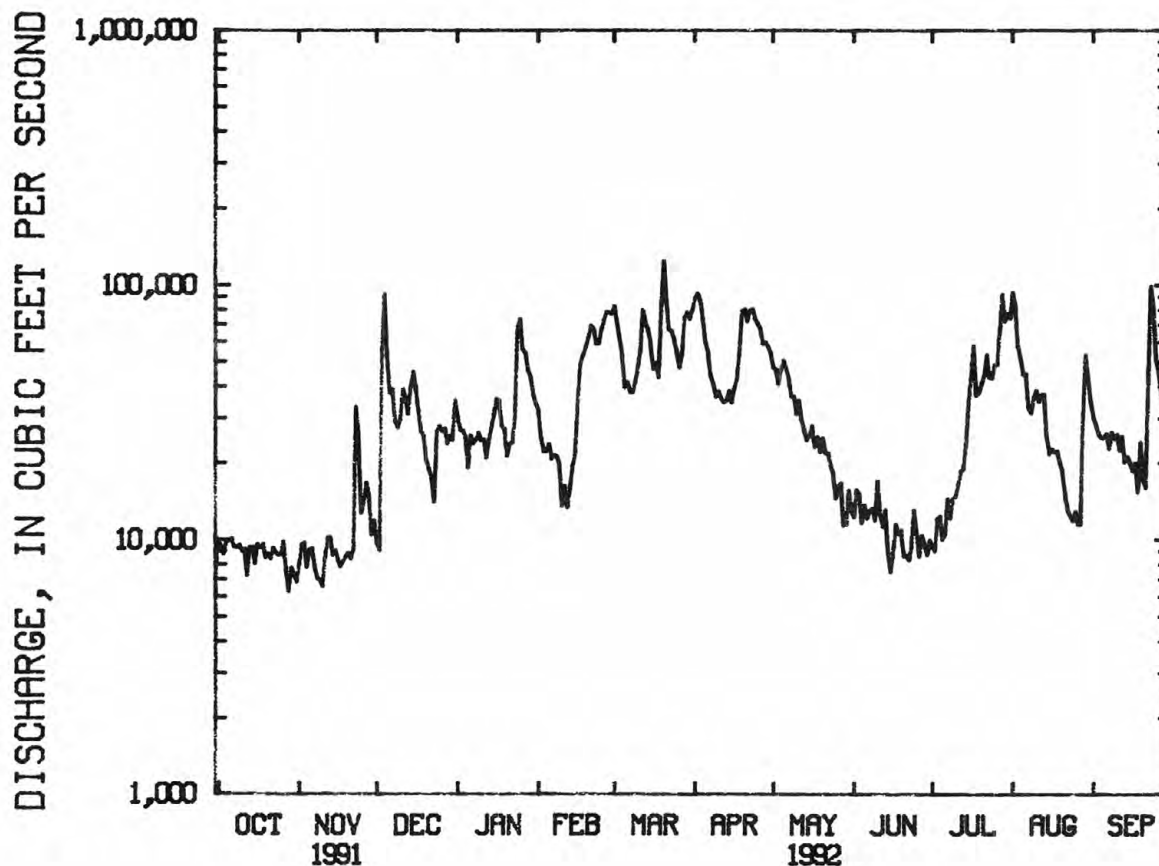
03111534 OHIO RIVER AT MARTINS FERRY, OH-Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1978 - 1992, BY WATER YEAR (WY) [REGULATED, UNADJUSTED]

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	23150	38150	55740	47710	65670	67610	66070	45890	34090	25830	19020	19000
MAX	58930	114900	99850	105800	107300	103000	98000	94750	86840	49950	55930	40140
(WY)	1991	1986	1991	1991	1990	1979	1984	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 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1978 - 1992	
ANNUAL TOTAL	12911500		11771400			
ANNUAL MEAN	35370		32160			
HIGHEST ANNUAL MEAN					42180	
LOWEST ANNUAL MEAN					50990	1984
HIGHEST DAILY MEAN	331000	Jan 1	125000	Mar 20	30500	1988
LOWEST DAILY MEAN	6270	Oct 28	6270	Oct 28	331000	Jan 1 1991
ANNUAL SEVEN-DAY MINIMUM	7600	Oct 27	7600	Oct 27	4000	Sep 10 1983
INSTANTANEOUS PEAK FLOW			131000	Mar 20	4440	Aug 12 1988
INSTANTANEOUS PEAK STAGE			23.32	Mar 20	466000	Mar 19 1936
10 PERCENT EXCEEDS	88400		69900		55.20	Mar 19 1936
50 PERCENT EXCEEDS	14100		25600		88800	
90 PERCENT EXCEEDS	8420		8980		31000	
					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 National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair except those for periods of estimated daily discharges (ice effect, sluggish intakes), 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)
Dec. 3	0830	*7,730	*7.07	No other peaks greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.3	5.9	39	243	307	447	581	216	108	22	407	107
2	8.1	5.0	106	209	235	396	549	222	83	18	225	81
3	7.2	4.9	4800	189	239	346	486	776	63	16	144	74
4	5.8	4.9	1690	169	270	303	441	637	51	15	111	66
5	4.7	4.9	667	150	288	264	389	474	50	29	90	122
6	4.1	5.8	308	131	259	266	330	379	49	63	73	112
7	3.5	6.3	171	115	261	309	294	305	44	75	61	72
8	3.1	6.9	126	102	237	329	276	283	43	42	54	64
9	3.1	6.2	109	113	188	335	248	597	37	30	56	549
10	3.9	6.4	134	134	131	354	229	883	33	25	76	199
11	6.6	11	150	139	e115	566	226	685	30	21	115	138
12	6.3	11	120	130	130	618	227	518	27	20	275	98
13	5.9	13	120	126	167	563	200	412	24	46	139	72
14	5.6	13	1410	167	199	490	177	336	22	63	83	58
15	7.1	14	933	343	236	443	169	267	20	65	69	50
16	6.2	15	450	271	651	376	161	223	19	102	66	42
17	5.4	13	291	e220	628	377	193	189	18	109	56	35
18	4.2	12	219	e160	503	609	216	184	28	67	47	33
19	4.2	12	146	137	550	4570	236	170	24	59	41	35
20	4.2	13	102	e120	650	2530	220	138	20	51	34	34
21	4.2	13	131	e110	537	1550	230	112	19	53	29	33
22	4.5	102	126	160	443	1170	270	95	18	68	26	252
23	4.9	308	162	942	385	1560	246	84	17	115	23	424
24	6.1	134	298	2420	412	1050	243	91	27	238	21	190
25	6.9	67	245	1120	431	e690	256	93	26	368	20	113
26	7.6	43	185	694	391	e530	289	86	36	446	22	84
27	7.0	30	151	445	357	e440	287	75	40	2040	20	79
28	6.9	36	131	417	326	e350	263	69	34	677	553	83
29	6.9	39	190	323	452	e310	233	64	28	344	1170	73
30	6.4	43	299	276	---	384	227	85	23	1300	339	60
31	5.9	---	297	290	---	566	---	120	---	800	170	---
TOTAL	175.8	999.2	14306	10565	9978	23091	8392	8868	1061	7387	4615	3433
MEAN	5.67	33.3	461	341	344	745	280	286	35.4	238	149	114
MAX	9.3	308	4800	2420	651	4570	581	883	108	2040	1170	549
MIN	3.1	4.9	39	102	115	264	161	64	17	15	20	33

e Estimated

WHEELING CREEK BASIN

03112000 WHEELING CREEK AT ELM GROVE, WV--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	82.6	201	388	480	610	702	595	408	220	150	106	87.8
MAX	627	2085	1369	1017	1249	1670	1336	1107	1004	885	1424	1012
(WY)	1991	1986	1991	1979	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 1991 CALENDAR YEAR

FOR 1992 WATER YEAR

WATER YEARS 1941 - 1992

ANNUAL TOTAL	119393.1			92871.0								
ANNUAL MEAN	327			254								
HIGHEST ANNUAL MEAN										334		
LOWEST ANNUAL MEAN										580		1943
HIGHEST DAILY MEAN										112		1954
LOWEST DAILY MEAN	4800	Dec 3		4800	Dec 3					13100	Dec 30	1942
ANNUAL SEVEN-DAY MINIMUM	1.2	Sep 9		3.1	(a)					.10	(b)	
INSTANTANEOUS PEAK FLOW	3.1	Aug 11		4.0	Oct 4					.24	Sep 21	1964
INSTANTANEOUS PEAK STAGE				7730	Dec 3				c22100		Dec 30	1942
INSTANTANEOUS LOW FLOW				7.07	Dec 3					13.67	Dec 30	1942
10 PERCENT EXCEEDS	931			3.1	(d)					.10	(f)	
50 PERCENT EXCEEDS	55			551						824		
90 PERCENT EXCEEDS	4.2			126						131		
				7.1						8.7		

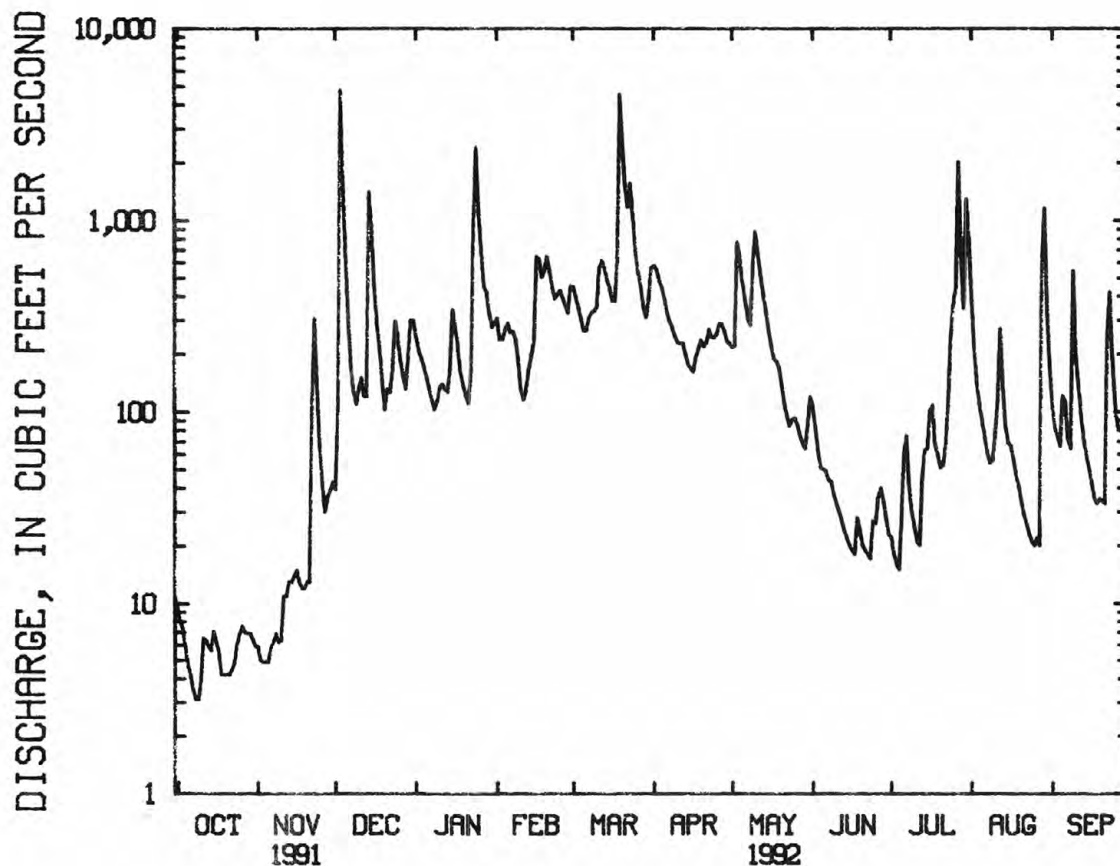
a Oct. 8, 9.

b Sept. 26, 27, 1964.

c From rating curve extended above 15,000 ft³/s on basis of slope-area measurements at gage heights 13.2 ft and 13.67 ft.

d Oct. 7-10.

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



OHIO RIVER MAIN STEM

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

LOCATION.--Lat 40°00'54", long 80°44'20", Marshall County, Hydrologic Unit 05030106, at Bellaire Toll Bridge, at Benwood, and at mile 94.3.

DRAINAGE AREA.--Approximately 25,070 mi².

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

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

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 (MG/L) (00301)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)
OCT 25...	1215	8940	578	7.5	18.5	4.3	749	8.3	90	30
DEC 17...	1120	E32000	309	7.3	7.0	11	741	12.7	108	150
MAR 05...	1245	37800	259	7.2	7.0	5.5	747	13.9	117	93
JUN 24...	1030	11100	458	7.1	24.0	2.5	737	6.4	79	K63
AUG 27...	1150	8750	320	7.2	26.5	4.4	745	6.8	87	370

DATE	STREP- TOCOCCHI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	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)
OCT 25...	K6	170	47	12	42	3.4	56	0	46	160
DEC 17...	92	100	30	7.0	17	2.1	37	0	30	84
MAR 05...	K6	82	23	5.9	13	1.4	30	0	25	65
JUN 24...	55	150	41	11	28	2.7	44	0	36	130
AUG 27...	K12	110	32	8.0	16	2.4	41	0	34	83

DATE	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, 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 TOTAL (MG/L AS N) (00610)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)
OCT 25...	40	0.40	2.3	331	342	1.57	0.030	1.60	0.210	0.210
DEC 17...	20	0.20	4.7	208	188	1.07	0.030	1.10	0.190	0.180
MAR 05...	23	0.20	4.5	142	156	1.09	0.010	1.10	0.100	0.110
JUN 24...	28	0.30	1.1	271	269	0.960	0.040	1.00	0.160	0.170
AUG 27...	21	0.30	4.0	197	191	0.860	0.020	0.880	0.090	0.080

E: Estimated.

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 1991 TO SEPTEMBER 1992

DATE	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)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)
OCT 25...	0.29	0.50	0.080	0.060	0.020	10	46	<3	11	14
DEC 17...	0.21	0.40	0.050	<0.010	0.030	--	--	--	--	--
MAR 05...	0.10	0.20	0.040	0.040	<0.010	30	37	<3	48	7
JUN 24...	0.24	0.40	0.040	0.020	0.020	10	50	<3	5	11
AUG 27...	0.21	0.30	0.030	0.030	0.020	10	42	<3	7	8

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)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. Z FINER THAN .062 MM (70331)
OCT 25...	19	<10	3	<1	<1.0	320	<6	7	169	98
DEC 17...	--	--	--	--	--	--	--	18	--	99
MAR 05...	160	<10	5	<1	<1.0	120	<6	18	1840	96
JUN 24...	72	<10	2	<1	<1.0	260	<6	10	300	96
AUG 27...	8	<10	2	<1	<1.0	160	<6	5	118	98

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 National Geodetic Vertical Datum, adjustment of 1912. Prior to July 11, 1947, nonrecording gage at same site and datum.

REMARKS.--Records good except those for period of estimated daily discharges (ice effect), which is fair.

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)
Dec. 3	1400	*9,920	*13.77	Mar. 19	1300	9,160	13.13

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.4	3.3	50	601	602	1050	1520	312	63	38	114	178
2	8.4	2.6	121	421	475	739	1080	297	123	22	77	114
3	7.6	2.4	7050	330	384	557	800	2930	94	20	60	79
4	7.6	2.3	2830	317	352	435	626	2060	70	17	48	61
5	7.6	2.5	778	310	320	350	507	934	56	23	169	56
6	8.4	2.7	396	263	272	382	390	626	58	22	190	50
7	9.5	2.7	267	219	239	1060	321	437	81	30	109	48
8	6.7	2.5	200	185	216	2040	285	357	117	32	68	58
9	5.5	2.1	173	178	189	1690	281	322	196	59	50	54
10	9.7	2.3	787	315	152	1040	304	283	381	56	35	70
11	19	2.3	1090	364	130	5300	625	232	208	235	83	100
12	15	1.5	479	308	118	3110	684	199	125	178	538	77
13	13	2.4	360	266	129	1520	473	164	84	83	490	55
14	11	3.4	1260	420	269	1040	369	139	84	145	198	42
15	8.4	5.3	1400	1130	658	791	322	115	74	259	115	35
16	7.7	21	678	776	1190	614	286	136	57	227	247	32
17	6.9	13	391	474	1060	495	290	109	47	137	412	26
18	6.4	11	266	e330	786	584	613	93	38	76	203	22
19	6.1	13	192	e230	685	7550	587	84	44	68	128	21
20	16	12	141	e195	583	4140	558	75	36	60	89	18
21	17	12	113	e170	490	1570	467	72	32	40	67	18
22	13	514	119	199	418	1100	650	77	30	30	53	25
23	11	2380	334	2220	359	2060	823	55	25	25	43	56
24	8.1	687	1810	6430	391	1420	537	50	25	40	35	93
25	5.4	280	1090	1800	620	898	431	41	20	267	31	94
26	5.3	163	561	935	1060	679	371	35	19	847	27	72
27	4.5	106	357	570	1840	576	363	33	18	1240	24	56
28	5.1	76	267	482	989	482	339	32	17	1280	503	56
29	5.6	62	469	406	933	385	340	33	16	543	2200	53
30	4.3	54	1450	374	---	367	324	42	16	264	789	47
31	3.9	---	952	514	---	1440	---	43	---	174	305	---
TOTAL	273.1	4444.3	26431	21732	15909	45464	15566	10417	2254	6537	7500	1766
MEAN	8.81	148	853	701	549	1467	519	336	75.1	211	242	58.9
MAX	19	2380	7050	6430	1840	7550	1520	2930	381	1280	2200	178
MIN	3.9	1.5	50	170	118	350	281	32	16	17	24	18
CFSM	.02	.32	1.86	1.53	1.20	3.20	1.13	.73	.16	.46	.53	.13
IN.	.02	.36	2.15	1.77	1.29	3.69	1.26	.85	.18	.53	.61	.14

e Estimated

MIDDLE ISLAND CREEK BASIN

03114500 MIDDLE ISLAND CREEK AT LITTLE, WV--Continued

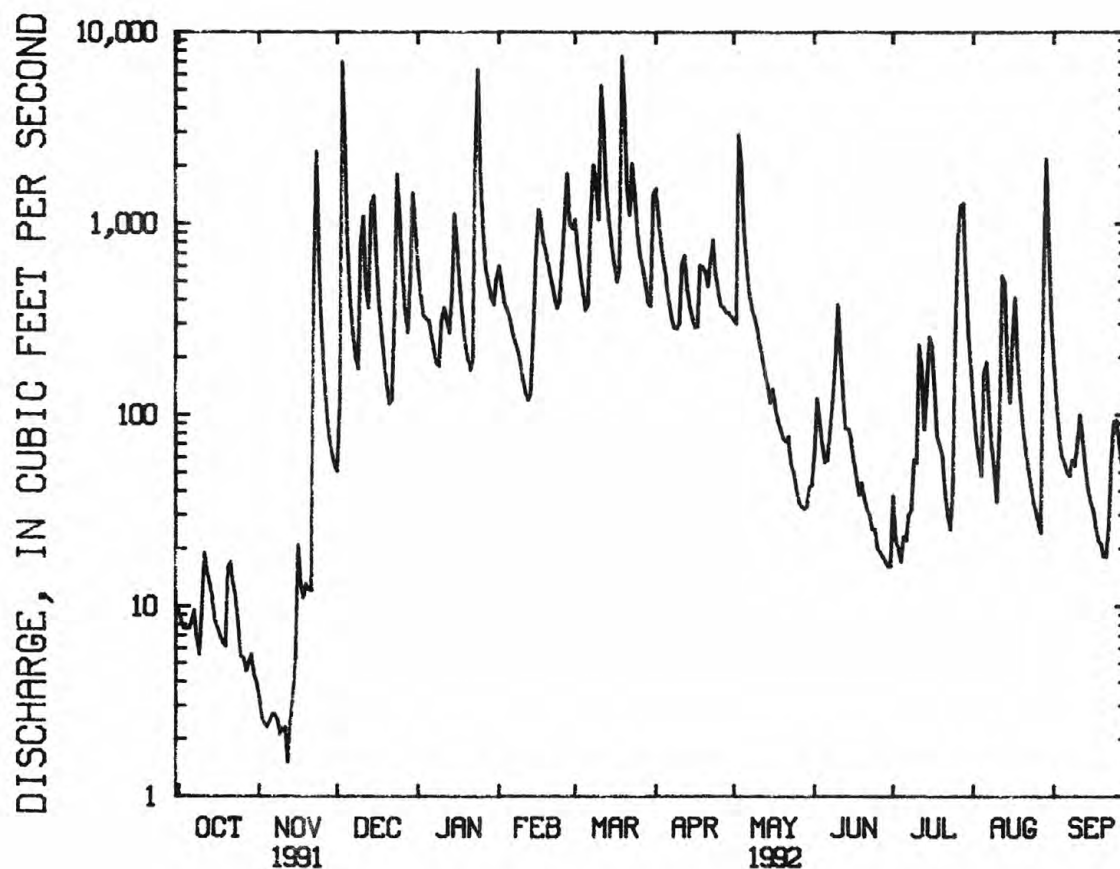
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1916, 1929-1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	182	412	858	1056	1189	1291	1009	712	404	214	234	170
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 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS		1916
					1929 - 1992		
ANNUAL TOTAL	221657.6		158293.4		642		
ANNUAL MEAN	607		432		1052		1979
HIGHEST ANNUAL MEAN					247		1931
LOWEST ANNUAL MEAN					22000		Nov 5 1985
HIGHEST DAILY MEAN	7570		7550		.00		(a)
LOWEST DAILY MEAN	1.5		1.5		.00		Sep 1 1930
ANNUAL SEVEN-DAY MINIMUM	2.3		2.3		25000		Jun 26 1950
INSTANTANEOUS PEAK FLOW			9920		b28.00		Jun 26 1950
INSTANTANEOUS PEAK STAGE			13.77		.00		(a)
INSTANTANEOUS LOW FLOW			.90		1.40		
ANNUAL RUNOFF (CFSM)	1.33		.94		19.04		
ANNUAL RUNOFF (INCHES)	18.00		12.86		1540		
10 PERCENT EXCEEDS	1720		1060		198		
50 PERCENT EXCEEDS	62		173		11		
90 PERCENT EXCEEDS	4.2		9.5				

a Many days in 1922, 1929, 1930.

b From floodmarks.



OHIO RIVER MAIN STEM

03150800 OHIO RIVER NEAR MARIETTA, OH

LOCATION.--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.--35,600 mi², approximately.

PERIOD OF RECORD.--October 1968 to current year (gage heights only).

GAGE.--Water-stage recorder. Datum of gage is 567.12 ft, Sandy Hook datum.

REMARKS.--U.S. Army Corps of Engineers satellite telemeter at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 38.52 ft, Feb. 27, 1979; minimum, 10.83 ft, Oct. 6, 1968.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 23.76 ft, Mar. 20; minimum, 15.04 ft, Aug. 25.

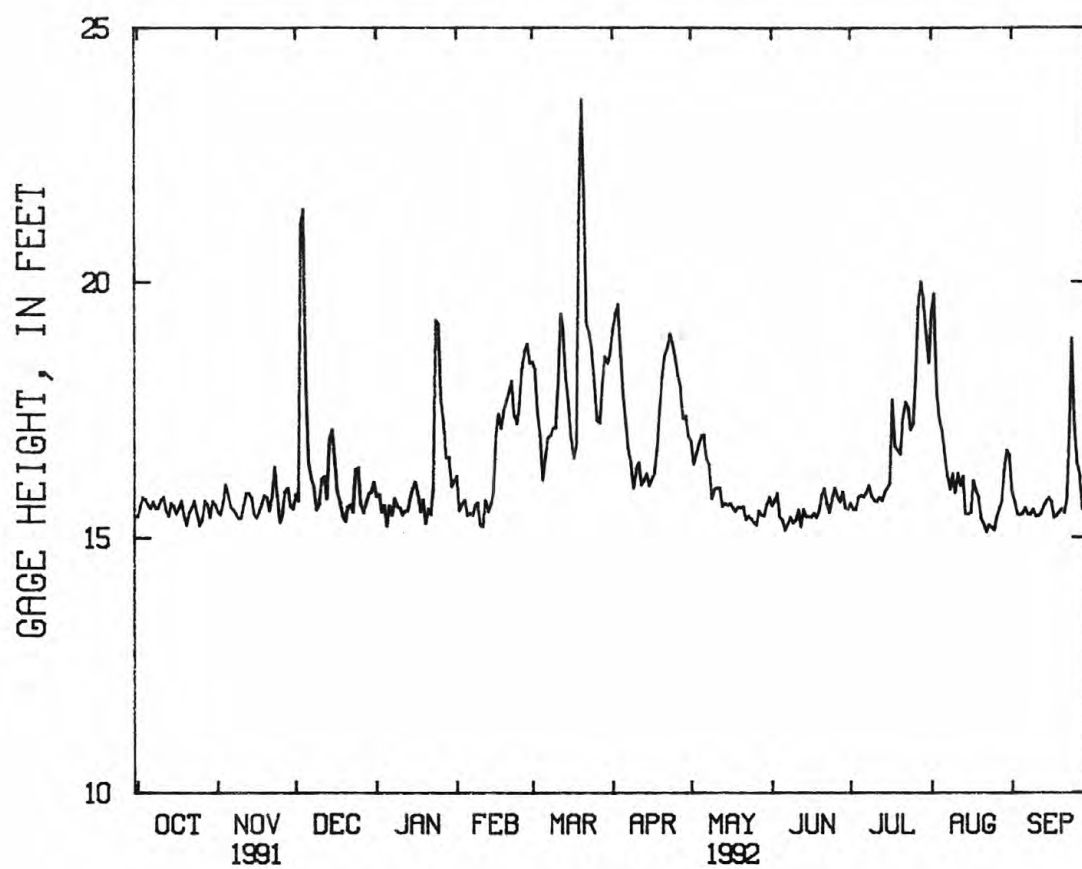
GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15.41	15.51	15.86	15.81	16.22	18.45	19.06	16.87	15.61	15.67	19.35	15.89
2	15.60	15.45	15.72	15.86	15.53	18.29	19.39	16.43	15.72	15.54	19.77	15.67
3	15.79	15.66	21.14	15.50	15.67	17.44	19.58	16.64	15.86	15.54	17.85	15.44
4	15.75	16.05	21.45	15.64	15.74	16.99	18.71	16.84	15.39	15.78	17.29	15.43
5	15.63	15.84	17.99	15.21	15.43	16.11	17.82	17.00	15.32	15.83	17.06	15.47
6	15.57	15.60	16.43	15.63	15.48	16.55	17.28	17.02	15.12	15.78	16.63	15.58
7	15.71	15.55	16.14	15.44	15.43	16.96	16.73	16.52	15.25	15.87	16.18	15.44
8	15.57	15.47	15.96	15.78	15.64	17.02	16.44	16.40	15.39	16.02	15.93	15.44
9	15.58	15.37	15.54	15.61	15.69	17.16	15.97	15.75	15.27	15.80	16.24	15.55
10	15.73	15.38	15.67	15.58	15.23	17.16	16.35	15.94	15.34	15.71	15.86	15.40
11	15.80	15.64	16.16	15.44	15.20	18.01	16.48	15.98	15.54	15.69	16.25	15.43
12	15.54	15.88	16.21	15.53	15.73	19.41	16.03	15.97	15.19	15.78	16.01	15.46
13	15.41	15.87	15.76	15.52	15.51	19.05	16.13	15.59	15.55	15.71	16.20	15.60
14	15.68	15.78	16.95	15.78	15.65	18.13	16.25	15.67	15.39	15.88	15.45	15.70
15	15.62	15.47	17.13	15.97	15.91	17.65	16.01	15.62	15.41	15.97	15.45	15.78
16	15.46	15.38	16.53	16.11	17.02	16.93	16.15	15.67	15.38	16.06	15.49	15.69
17	15.58	15.50	15.88	15.86	17.44	16.55	16.27	15.57	15.47	17.71	16.11	15.37
18	15.73	15.66	15.68	15.51	17.14	16.84	16.71	15.50	15.37	16.77	15.91	15.43
19	15.42	15.84	15.41	15.75	17.49	21.37	17.47	15.60	15.52	16.69	15.78	15.50
20	15.23	15.79	15.31	15.27	17.70	23.61	18.16	15.57	15.83	16.61	15.36	15.56
21	15.49	15.53	15.61	15.57	17.86	21.77	18.58	15.61	15.96	17.34	15.24	15.47
22	15.59	15.82	15.65	15.45	18.08	19.18	18.73	15.33	15.65	17.65	15.09	15.77
23	15.73	16.40	15.50	15.95	17.39	18.99	19.00	15.41	15.48	17.52	15.24	17.07
24	15.48	15.83	16.36	19.28	17.23	18.64	18.79	15.35	15.75	17.09	15.18	18.91
25	15.23	15.29	16.38	19.18	17.60	18.03	18.51	15.28	15.97	17.23	15.13	17.19
26	15.34	15.47	15.64	17.70	18.31	17.29	18.16	15.22	15.79	18.12	15.39	16.42
27	15.73	15.91	15.48	17.26	18.66	17.24	17.92	15.52	15.68	19.51	15.57	16.19
28	15.64	15.99	15.69	16.56	18.81	18.00	17.33	15.43	15.89	20.00	15.70	15.54
29	15.39	15.61	15.87	16.59	18.42	18.55	17.39	15.41	15.57	19.61	16.29	15.70
30	15.72	15.56	15.90	16.00	---	18.42	16.97	15.64	15.54	18.99	16.71	15.46
31	15.64	---	16.10	16.12	---	18.59	---	15.79	---	18.40	16.59	---
MEAN	15.57	15.67	16.36	16.08	16.66	18.21	17.48	15.88	15.54	16.83	16.20	15.82
MAX	15.80	16.40	21.45	19.28	18.81	23.61	19.58	17.02	15.97	20.00	19.77	18.91
MIN	15.23	15.29	15.31	15.21	15.20	16.11	15.97	15.22	15.12	15.54	15.09	15.37

WTR YR 1992 MEAN 16.36 MAX 23.61 MIN 15.09

OHIO RIVER MAIN STEM

03150800 OHIO RIVER NEAR MARIETTA, OH--Continued



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 National Geodetic Vertical Datum of 1929.

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. 3	0300	*7,060	*12.54	July 27	2000	5,840	11.65
May 3	0830	2,570	8.75	Aug. 16	0230	2,210	8.35

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.7	7.1	185	315	199	412	592	182	70	364	495	50
2	5.0	6.8	1250	250	164	327	445	152	61	381	284	37
3	4.7	6.4	3370	205	153	251	343	1640	50	156	184	30
4	5.1	6.1	907	172	152	195	284	804	44	259	204	27
5	6.1	5.8	427	141	165	159	224	434	70	138	140	25
6	38	5.5	282	120	172	137	176	287	145	649	98	147
7	42	5.2	201	103	164	218	156	203	120	365	72	86
8	25	5.2	159	89	145	757	140	165	183	193	54	78
9	17	5.0	157	93	116	619	142	138	170	125	43	60
10	14	6.0	872	114	e85	451	167	112	140	106	35	48
11	12	13	531	116	e60	1480	173	92	103	78	36	81
12	60	26	323	111	e50	776	177	77	95	56	93	57
13	67	28	282	120	105	494	160	66	66	50	52	40
14	47	27	539	181	556	361	152	89	61	54	59	31
15	55	27	605	235	575	299	146	149	73	40	835	25
16	172	31	374	211	904	240	129	328	70	34	1300	21
17	91	35	258	e170	647	217	124	224	53	28	456	17
18	56	35	185	e120	445	265	183	167	49	26	282	15
19	38	32	130	e90	337	916	190	173	87	30	179	17
20	29	29	99	e70	282	797	192	182	74	30	133	29
21	23	29	114	e60	234	492	300	141	53	23	94	20
22	18	790	129	116	204	384	773	104	41	37	71	17
23	16	965	390	298	186	574	480	79	32	96	58	33
24	14	346	1440	735	211	435	334	65	27	206	45	32
25	12	187	649	464	247	324	267	74	44	228	35	21
26	12	122	372	325	1410	267	293	60	43	350	28	16
27	11	90	257	235	783	252	304	50	32	2450	24	17
28	10	74	202	216	457	234	287	41	25	1850	93	26
29	9.5	61	323	228	477	230	244	35	20	518	221	21
30	8.7	54	439	224	---	235	208	50	16	247	106	15
31	7.8	---	396	216	---	533	---	75	---	284	70	---
TOTAL	931.6	3060.1	15847	6143	9685	13331	7785	6438	2117	9451	5879	1139
MEAN	30.1	102	511	198	334	430	259	208	70.6	305	190	38.0
MAX	172	965	3370	735	1410	1480	773	1640	183	2450	1300	147
MIN	4.7	5.0	99	60	50	137	124	35	16	23	24	15
CFSM	.27	.91	4.56	1.77	2.98	3.84	2.32	1.85	.63	2.72	1.69	.34
IN.	.31	1.02	5.26	2.04	3.22	4.43	2.59	2.14	.70	3.14	1.95	.38

e Estimated

LITTLE KANAWHA RIVER BASIN

03151400 LITTLE KANAWHA RIVER NEAR WILDCAT, WV--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1974-1983, 1986-1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	106	219	335	337	380	392	343	241	148	137	69.7	50.5
MAX	426	841	717	660	668	547	600	573	551	305	218	174
(WY)	1977	1986	1979	1979	1986	1991	1980	1989	1981	1992	1989	1979
MIN	12.8	76.2	148	74.5	61.8	132	150	33.7	5.03	4.31	4.55	3.34
(WY)	1989	1979	1989	1977	1978	1987	1982	1991	1991	1988	1988	1983

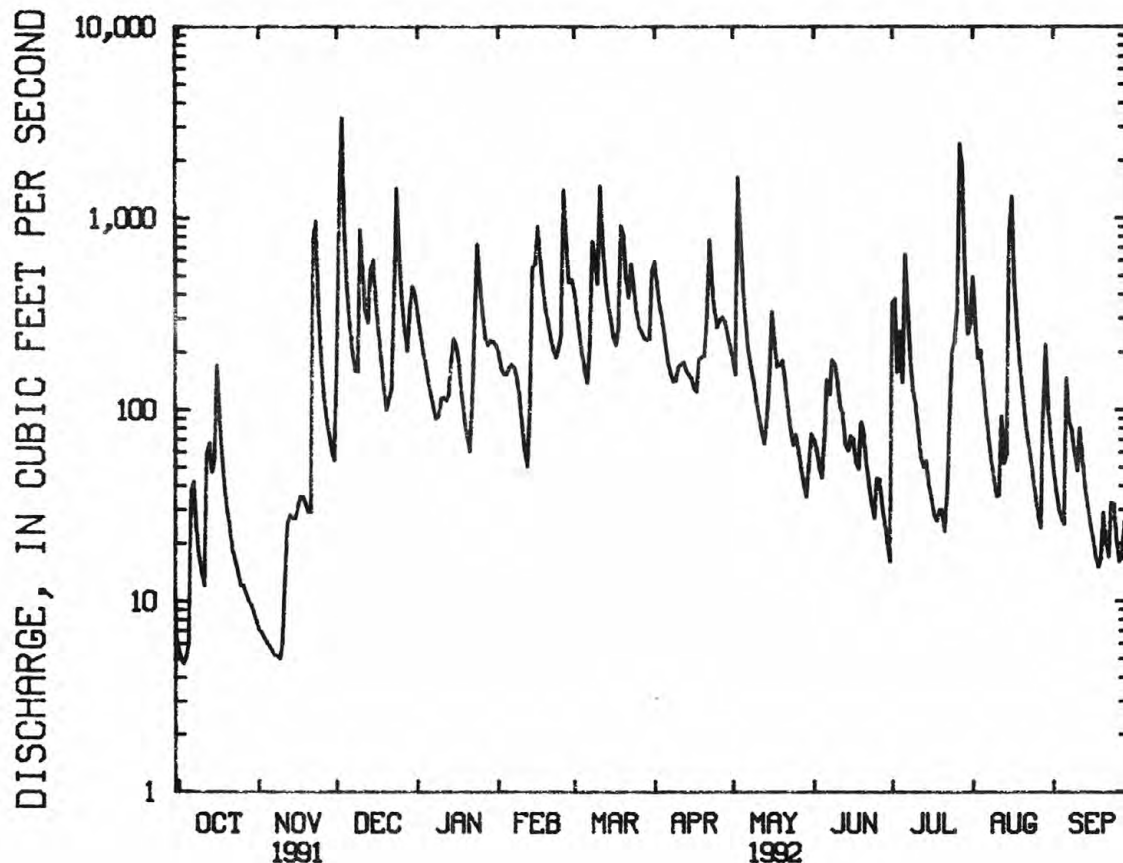
SUMMARY STATISTICS

FOR 1991 CALENDAR YEAR

FOR 1992 WATER YEAR

WATER YEARS 1974 - 1983
1986 - 1992

ANNUAL TOTAL	70312.1	81806.7	227
ANNUAL MEAN	193	224	306
HIGHEST ANNUAL MEAN			142
LOWEST ANNUAL MEAN			5720
HIGHEST DAILY MEAN	3370	Dec 3	Nov 5 1985
LOWEST DAILY MEAN	1.2	Jul 1	Aug 17 1987
ANNUAL SEVEN-DAY MINIMUM	2.1	Jun 11	Aug 15 1987
INSTANTANEOUS PEAK FLOW			10500
INSTANTANEOUS PEAK STAGE			14.81
INSTANTANEOUS LOW FLOW			.11
ANNUAL RUNOFF (CFSM)	1.72	2.00	2.03
ANNUAL RUNOFF (INCHES)	23.35	27.17	27.53
10 PERCENT EXCEEDS	560	502	550
50 PERCENT EXCEEDS	42	129	115
90 PERCENT EXCEEDS	4.9	18	10



LITTLE KANAWHA RIVER BASIN

03151520 LITTLE KANAWHA RIVER BELOW BURNSVILLE DAM, WV

LOCATION.--Lat 38°50'41", long 80°37'45", Braxton County, Hydrologic Unit 05030203, on right bank 2600 ft downstream from Burnsville Dam, 1.6 mi southeast of Burnsville, and at mile 123.7.

DRAINAGE AREA.--163 mi².

PERIOD OF RECORD.--July 1976 to September 1982, October 1986 to current year. October 1982 to September 1986 (gage height, discharge measurements, and annual maximum discharge only).

GAGE.--Water-stage recorder. Datum of gage is 750.00 ft above National Geodetic Vertical Datum of 1929 (U.S. Army Corps of Engineers Bench Mark). Prior to Oct. 1, 1983, at datum 50.0 ft lower.

REMARKS.--No estimated daily discharges. Records good. Flow regulated since March 1979 by Burnsville Lake. U.S. Army Corps of Engineers satellite telemeter at station.

PEAK DISCHARGE FOR CURRENT YEAR.--Maximum discharge, 2,200 ft³/s, Dec. 6, gage height, 7.95 ft.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19	83	440	444	251	895	19	303	236	25	1280	71
2	19	83	632	271	229	785	20	183	110	251	572	52
3	19	82	701	230	202	380	20	730	101	430	540	52
4	19	95	2090	218	232	259	157	1510	52	366	470	32
5	19	114	2050	172	230	236	250	1510	93	236	295	21
6	19	168	2070	150	210	181	242	879	147	354	94	21
7	19	212	1540	149	210	200	200	360	199	509	24	81
8	19	198	650	76	202	729	161	202	322	438	24	113
9	19	159	187	66	145	992	150	182	406	300	24	140
10	19	134	669	132	104	837	179	144	255	112	24	110
11	20	126	1040	172	94	1010	252	105	214	64	26	83
12	19	117	559	170	95	1170	244	105	145	64	120	83
13	19	109	378	149	96	1160	214	106	74	64	167	49
14	19	108	450	154	294	785	213	100	52	64	129	24
15	20	110	838	231	398	497	210	112	52	64	297	24
16	19	127	623	333	416	439	157	157	52	64	749	24
17	19	178	252	256	431	324	190	357	52	36	1080	24
18	70	154	210	166	637	255	217	392	52	19	1060	24
19	162	98	206	136	500	759	283	257	129	19	839	24
20	159	98	119	96	308	1070	300	211	141	19	214	24
21	164	112	93	96	270	937	255	211	88	13	143	24
22	179	271	124	218	261	600	413	144	54	10	62	24
23	182	477	360	427	240	564	499	77	54	39	78	24
24	181	562	945	892	269	568	499	38	38	98	78	24
25	169	552	1120	845	388	536	493	34	66	306	64	24
26	162	540	1070	478	826	423	492	54	111	423	40	24
27	136	524	692	257	1090	346	491	54	58	283	40	24
28	91	507	257	240	1070	260	486	46	24	950	85	24
29	85	495	444	308	888	267	495	52	24	1700	135	24
30	94	477	594	296	---	227	492	55	24	1650	274	24
31	92	---	496	250	---	57	---	214	---	1650	237	---
TOTAL	2251	7070	21899	8078	10586	17748	8293	8884	3425	10620	9264	1316
MEAN	72.6	236	706	261	365	573	276	287	114	343	299	43.9
MAX	182	562	2090	892	1090	1170	499	1510	406	1700	1280	140
MIN	19	82	93	66	94	57	19	34	24	10	24	21

LITTLE KANAWHA RIVER BASIN

03151520 LITTLE KANAWHA RIVER BELOW BURNSVILLE DAM, WV--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1976 - 1978, BY WATER YEAR (WY) [UNREGULATED]

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	345	185	368	375	343	502	344	235	114	198	90.2	42.8
MAX	520	196	421	640	532	590	346	362	191	356	171	53.5
(WY)	1977	1978	1978	1978	1977	1978	1977	1978	1978	1978	1978	1978
MIN	170	174	316	109	154	413	342	108	36.8	40.0	27.5	33.9
(WY)	1978	1977	1977	1977	1978	1977	1978	1977	1977	1977	1976	1977

SUMMARY STATISTICS

WATER YEARS 1976 - 1978

ANNUAL MEAN	265
HIGHEST ANNUAL MEAN	306
LOWEST ANNUAL MEAN	223
HIGHEST DAILY MEAN	2200
LOWEST DAILY MEAN	3.6
ANNUAL SEVEN-DAY MINIMUM	4.6
INSTANTANEOUS PEAK FLOW	2530
INSTANTANEOUS PEAK STAGE	a58.51
INSTANTANEOUS LOW FLOW	3.6
10 PERCENT EXCEEDS	617
50 PERCENT EXCEEDS	110
90 PERCENT EXCEEDS	17

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1979-1982, 1987-1992, BY WATER YEAR (WY) [REGULATED, UNADJUSTED]

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	183	314	436	438	481	511	321	362	220	148	113	74.1
MAX	571	588	875	886	708	793	590	977	807	343	299	223
(WY)	1980	1987	1979	1979	1989	1991	1987	1989	1981	1992	1992	1979
MIN	30.6	97.4	124	164	263	127	180	12.4	19.7	19.0	19.0	18.6
(WY)	1979	1979	1990	1981	1980	1987	1982	1982	1991	1988	1991	1987

SUMMARY STATISTICS

FOR 1991 CALENDAR YEAR

FOR 1992 WATER YEAR

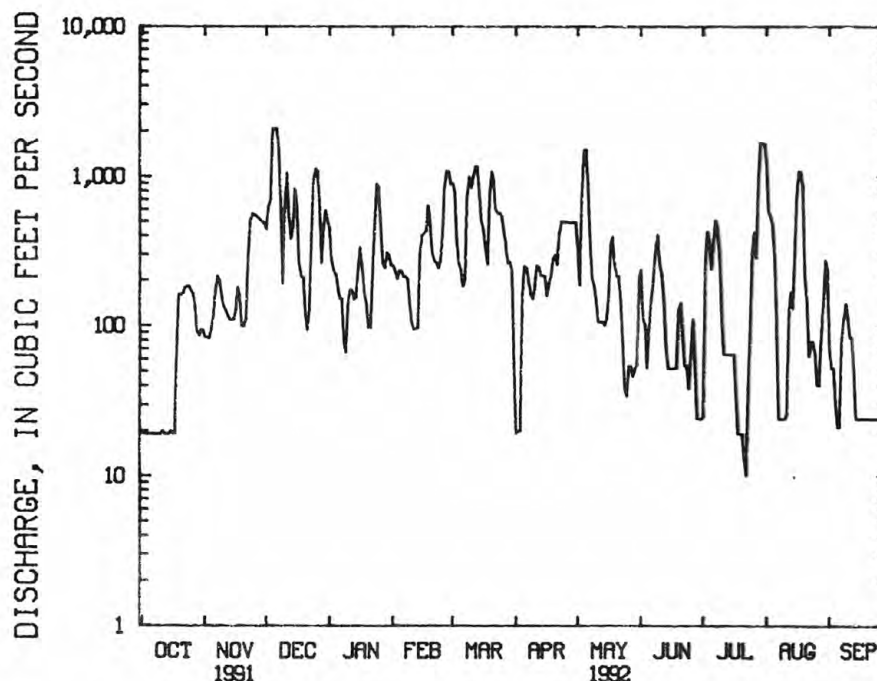
WATER YEARS 1979 - 1982
1987 - 1992

ANNUAL TOTAL	102981	109434	
ANNUAL MEAN	282	299	299
HIGHEST ANNUAL MEAN			373
LOWEST ANNUAL MEAN			183
HIGHEST DAILY MEAN	2090	Dec 4	2200
LOWEST DAILY MEAN	18	May 22	10
ANNUAL SEVEN-DAY MINIMUM	18	May 22	19
INSTANTANEOUS PEAK FLOW			2200
INSTANTANEOUS PEAK STAGE			7.95
INSTANTANEOUS LOW FLOW			5.1
10 PERCENT EXCEEDS	878	767	846
50 PERCENT EXCEEDS	91	180	150
90 PERCENT EXCEEDS	19	24	19

a Datum then in use was 700.00 ft.

b May 25, 26, 1977.

c Datum 750.00 ft. Backwater from downstream tributaries.



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 National Geodetic Vertical Datum of 1929. 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 National Geodetic Vertical Datum of 1929. Prior to May 25, 1971, auxiliary nonrecording gage at same site and datum.

REMARKS.--Records good except those for periods of estimated daily discharges, Feb. 18, 19, and May 5, 6 (doubtful gage-height records), which are fair, and Jan. 25 to Feb. 1 (missing gage-height records), 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. 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, 7,790 ft³/s, July 27, gage height, 21.25 ft.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23	100	569	816	e490	1370	851	668	674	56	2040	208
2	22	93	1650	635	460	1310	623	391	367	94	967	141
3	22	88	5340	436	394	833	456	3590	262	594	805	145
4	23	86	3080	424	396	489	409	2610	201	526	1500	107
5	24	105	2470	358	416	456	522	e2010	361	427	831	87
6	26	126	2230	288	358	393	467	e1520	632	735	392	167
7	25	207	2040	267	347	524	418	786	585	745	152	126
8	25	220	1100	240	341	2440	361	441	1780	683	99	170
9	25	184	454	144	286	1880	345	360	1050	467	81	175
10	24	162	1400	217	201	1630	469	320	613	306	73	218
11	25	149	1580	323	187	3980	643	229	406	121	75	130
12	31	145	1090	323	193	2300	579	199	331	97	598	125
13	37	142	808	315	219	1790	441	186	199	96	381	113
14	41	132	1630	614	833	1440	414	215	119	100	339	69
15	43	128	1260	675	1010	953	404	200	104	104	963	46
16	106	131	1250	599	1820	763	359	364	97	109	2130	42
17	92	157	566	573	1190	664	359	404	116	97	1700	39
18	59	185	357	356	e940	587	824	592	105	72	1430	37
19	122	132	374	309	e860	2300	609	759	166	57	1300	40
20	182	115	258	275	630	2120	569	525	249	59	515	44
21	178	121	205	238	490	1590	885	413	167	56	317	41
22	186	2310	260	263	487	1220	2130	323	105	72	159	40
23	198	2880	926	2070	432	1590	1190	199	78	102	120	44
24	196	935	2510	2920	520	1190	942	129	76	1510	119	42
25	194	717	1790	e1700	793	1010	835	111	87	817	111	40
26	179	635	1460	e900	4270	812	795	104	151	1190	87	37
27	175	589	1210	e560	2300	689	767	108	152	4500	67	42
28	131	562	527	e470	1650	602	911	100	74	4120	996	42
29	95	539	1200	e600	1710	496	874	86	47	2370	1390	38
30	94	525	1420	e560	---	552	799	222	43	1950	466	36
31	103	---	1100	e490	---	1270	---	1070	---	1900	568	---
TOTAL	2706	12610	42114	18958	24223	39253	20250	19234	9397	24132	20771	2631
MEAN	87.3	420	1359	612	835	1266	675	620	313	778	670	87.7
MAX	198	2880	5340	2920	4270	3980	2130	3590	1780	4500	2130	218
MIN	22	86	205	144	187	393	345	86	43	56	67	36

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 MEAN	.00
ANNUAL SEVEN-DAY MINIMUM	.00
INSTANTANEOUS PEAK FLOW	21500
INSTANTANEOUS PEAK STAGE	b34.50
INSTANTANEOUS LOW FLOW	.00
10 PERCENT EXCEEDS	1440
50 PERCENT EXCEEDS	214
90 PERCENT EXCEEDS	14

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1968-1983, 1985-1992, BY WATER YEAR (WY) [REGULATED, UNADJUSTED]

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	292	652	995	962	1069	1034	888	669	391	293	214	149
MAX	1173	2627	2507	2087	2089	1786	1989	1672	1879	778	670	867
(WY)	1977	1986	1979	1979	1972	1989	1973	1989	1981	1992	1992	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 1991 CALENDAR YEAR

FOR 1992 WATER YEAR

WATER YEARS 1968 - 1983
1985 - 1992

ANNUAL TOTAL	221258	236279	
ANNUAL MEAN	606	646	
HIGHEST ANNUAL MEAN			632
LOWEST ANNUAL MEAN			887
HIGHEST DAILY MEAN	5340	Dec 3	5340
LOWEST DAILY MEAN	19	(d)	22
ANNUAL SEVEN-DAY MINIMUM	19	Aug 28	24
INSTANTANEOUS PEAK FLOW			7790
INSTANTANEOUS PEAK STAGE			21.25
INSTANTANEOUS LOW FLOW			20
10 PERCENT EXCEEDS	1990		1660
50 PERCENT EXCEEDS	170		386
90 PERCENT EXCEEDS	25		58

a No flow Sept. 3-9, 11-20, 28, Oct. 1-4, 18-23, 1930, Sept. 25 to Oct. 4, 1932.

b Backwater.

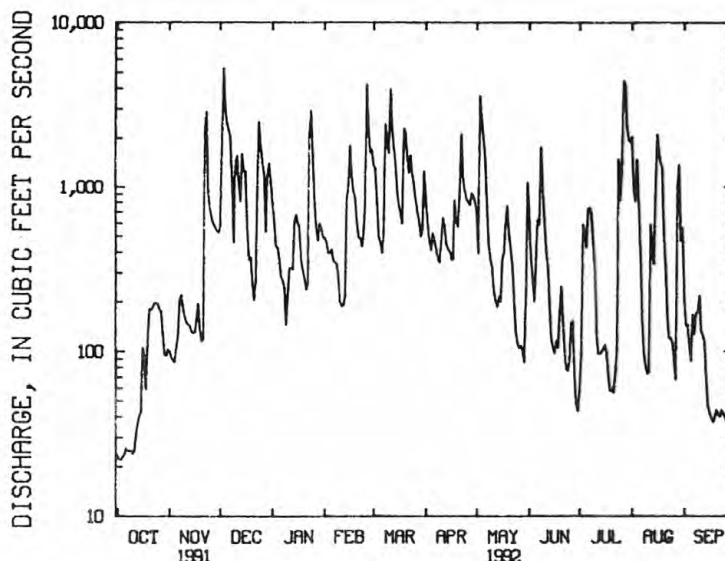
c No flow at times in September and October 1930 and 1932.

d Aug. 28 to Sept. 1, 3.

f Oct. 2, 3.

g From rating curve extended above 18,000 ft³/s.

h From floodmark.



LITTLE KANAWHA RIVER BASIN

03153500 LITTLE KANAWHA RIVER AT GRANTSVILLE, WV

LOCATION.--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.--913 mi².

PERIOD OF RECORD.--October 1928 to September 1978. Monthly discharge only October to December 1928, published in WSP 1305. October 1978 to current year (gage heights, discharge measurements, and annual maximum discharge only).

REVISED RECORDS.--WSP 1275: 1929(M), 1932-36.

GAGE.--Water-stage recorder. Datum of gage is 652.83 ft above National Geodetic Vertical Datum, adjustment of 1912. Prior to Nov. 21, 1934, nonrecording gage at same site and datum.

REMARKS.--Records for winter periods not adjusted for ice effect. U.S. Army Corps of Engineers satellite telemeter and National Weather Service Hydrologger at station. Flow partially regulated since 1968 by five floodwater detention reservoirs affecting 49.5 mi². Flow regulated since March 1979 by Burnsville Lake.

AVERAGE DISCHARGE.--50 years (water years 1929-1978), 1,328 ft³/s, 19.75 in/yr, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 35,100 ft³/s, Mar. 7, 1967, gage height, 43.9 ft, from floodmarks; no flow Sept. 10 to Nov. 16, 1930.

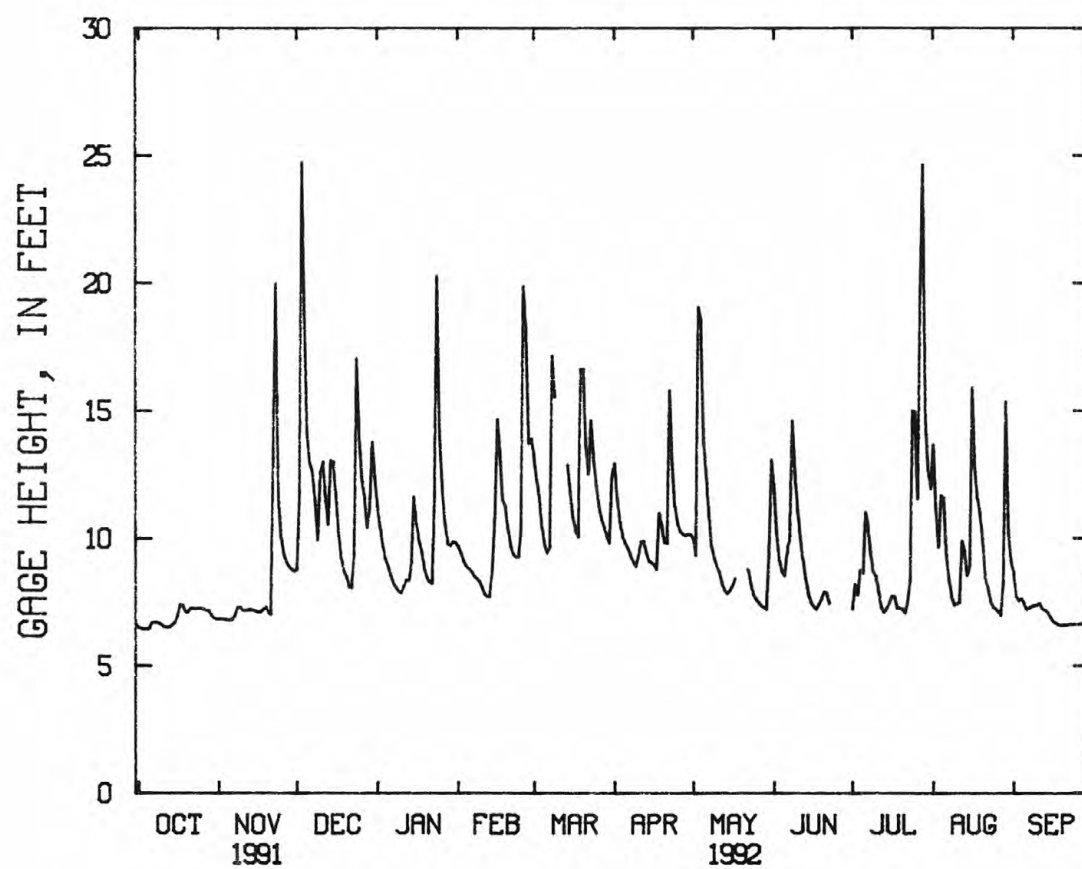
EXTREMES FOR CURRENT YEAR.--Maximum discharge, 15,700 ft³/s, July 28, gage height, 27.45 ft; minimum gage height, 6.40 ft, Oct. 5.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.47	6.84	8.79	11.24	9.67	13.12	12.92	9.95	11.97	7.20	13.67	8.59
2	6.44	6.84	11.72	10.39	9.41	12.26	11.56	9.30	10.17	8.18	11.17	7.70
3	6.42	6.81	24.76	9.66	9.09	11.55	10.62	19.07	9.09	7.75	9.62	7.51
4	6.41	6.79	18.88	9.15	8.89	10.42	10.04	18.50	8.67	8.73	11.69	7.64
5	6.46	6.77	14.12	8.88	8.79	9.71	9.77	13.85	8.50	8.61	11.56	7.43
6	6.68	6.81	12.88	8.54	8.69	9.42	9.58	12.49	9.40	11.03	9.33	7.17
7	6.70	6.95	12.55	8.24	8.50	9.62	9.30	10.96	10.07	10.47	8.38	7.26
8	6.70	7.27	11.48	8.06	8.40	17.16	9.07	9.64	14.61	9.47	7.65	7.33
9	6.65	7.32	9.92	7.91	8.30	15.54	8.86	9.18	12.56	8.67	7.36	7.35
10	6.56	7.18	12.60	7.84	8.07	---	9.30	8.88	11.09	8.48	7.43	7.39
11	6.51	7.16	12.98	8.12	7.80	---	9.86	8.64	10.02	7.89	7.49	7.44
12	6.50	7.18	11.66	8.36	7.71	---	9.90	8.20	9.14	7.26	9.92	7.21
13	6.51	7.21	10.52	8.36	7.69	---	9.43	7.94	8.39	7.07	9.48	7.16
14	6.61	7.17	13.07	9.08	8.83	12.84	9.08	7.79	7.83	7.23	8.52	7.06
15	6.69	7.13	12.96	11.64	10.85	11.83	9.03	7.94	7.47	7.47	8.93	6.89
16	6.95	7.09	11.69	10.56	14.67	10.82	8.95	8.13	7.31	7.71	15.91	6.72
17	7.40	7.10	10.24	9.87	13.40	10.28	8.75	8.40	7.20	7.71	12.76	6.65
18	7.36	7.20	9.19	9.48	11.45	10.02	11.00	---	7.38	7.25	11.57	6.58
19	7.10	7.32	8.69	8.80	11.23	16.62	10.43	---	7.62	7.25	10.94	6.56
20	7.09	7.07	8.46	8.42	10.35	16.62	9.81	---	7.88	7.20	9.99	6.56
21	7.26	7.00	8.09	8.27	9.66	13.65	9.78	---	7.82	7.05	8.43	6.58
22	7.25	13.13	8.05	8.20	9.35	12.48	15.81	8.76	7.43	7.51	8.02	6.60
23	7.23	19.98	9.38	11.60	9.25	14.63	13.04	8.22	---	8.33	7.51	6.62
24	7.24	11.65	17.04	20.29	9.26	13.10	11.20	7.77	---	15.02	7.28	6.63
25	7.25	9.97	13.96	14.10	10.33	12.04	10.55	7.59	---	14.91	7.20	6.61
26	7.22	9.36	12.24	11.95	19.91	11.22	10.24	7.46	---	11.49	7.10	6.61
27	7.16	9.05	11.48	10.54	18.28	10.68	10.14	7.33	---	19.72	6.95	6.63
28	7.15	8.87	10.40	9.76	13.66	10.38	10.07	7.26	---	24.67	8.20	6.68
29	6.97	8.76	11.18	9.70	13.88	10.05	10.14	7.19	---	14.59	15.37	6.66
30	6.85	8.69	13.77	9.86	---	9.77	10.12	9.26	---	12.59	10.24	6.66
31	6.81	---	12.39	9.82	---	12.46	---	13.08	---	11.92	9.08	---
MEAN	6.86	8.26	12.10	9.89	10.53	---	10.28	---	---	10.01	9.64	7.02
MAX	7.40	19.98	24.76	20.29	19.91	---	15.81	---	---	24.67	15.91	8.59
MIN	6.41	6.77	8.05	7.84	7.69	---	8.75	---	---	7.05	6.95	6.56

LITTLE KANAWHA RIVER BASIN

03153500 LITTLE KANAWHA RIVER AT GRANTSVILLE, WV--Continued



LITTLE KANAWHA RIVER BASIN

03154000 WEST FORK LITTLE KANAWHA RIVER AT ROCKSDALE, WV

LOCATION.--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 Rocksdales, 9.0 mi southwest of Grantsville, and at mile 14.1.

DRAINAGE AREA.--205 mi².

PERIOD OF RECORD.--October 1928 to September 1931, October 1937 to September 1975 (monthly discharge only for some periods, published in WSP 1305), October 1975 to current year (gage heights, occasional discharge measurements, and annual maximum discharge only).

REVISED RECORDS.--WSP 953: 1929-31, 1938(M), 1939. WSP 1275: 1950.

GAGE.--Water-stage recorder. Datum of gage is 657.85 ft above National Geodetic Vertical Datum, adjustment of 1912. Prior to June 16, 1966, nonrecording gage, crest-stage gage Nov. 4, 1946, to June 15, 1966, on bridge 800 ft upstream at same datum.

REMARKS.--Records for winter periods not adjusted for ice effect. U.S. Army Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--41 years (water years 1929-31, 1938-75), 258 ft³/s, 17.09 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 20,200 ft³/s, Apr. 16, 1939, gage height, 30.3 ft, from floodmarks, site then in use, from rating curve extended above 13,000 ft³/s; no flow at times during 1930, 1931, 1954, 1957, 1959, 1960.

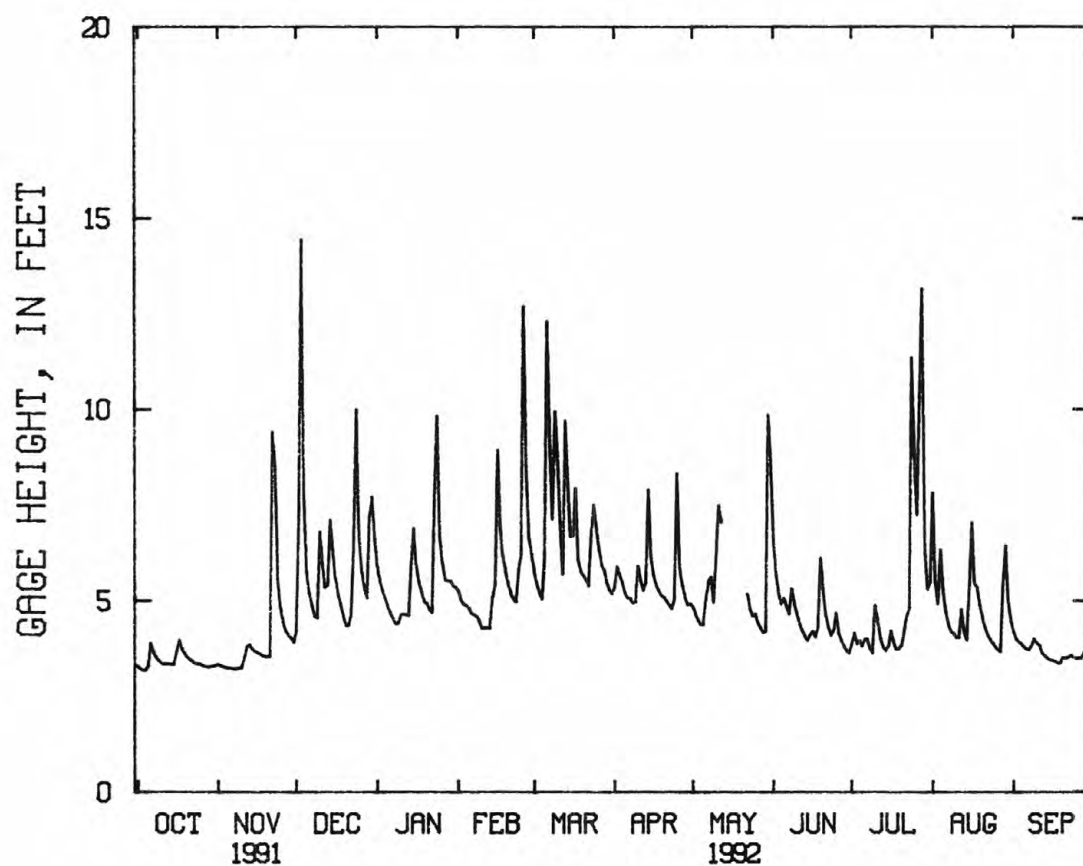
EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,210 ft³/s, July 28, gage height, 17.62 ft; minimum gage height, 3.15 ft, Oct. 3.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.27	3.33	4.20	5.89	5.25	5.73	5.34	4.83	6.63	3.86	7.83	4.17
2	3.21	3.29	7.36	5.49	5.01	5.42	5.89	4.65	5.68	4.15	5.47	3.98
3	3.17	3.27	14.45	5.24	4.90	5.18	5.66	4.48	5.15	3.85	4.90	3.90
4	3.17	3.23	7.80	5.04	4.86	5.02	5.44	4.36	4.89	3.95	6.35	3.86
5	3.28	3.23	5.74	4.83	4.79	6.11	5.18	4.37	5.06	3.80	5.26	3.78
6	3.88	3.22	5.18	4.66	4.66	12.33	5.06	5.00	4.84	3.98	4.69	3.73
7	3.66	3.21	4.84	4.52	4.62	9.29	5.05	5.51	4.63	4.00	4.39	3.71
8	3.52	3.21	4.58	4.39	4.57	7.11	4.93	5.63	5.31	3.76	4.17	3.82
9	3.43	3.23	4.53	4.42	4.44	9.97	4.95	4.93	4.88	3.62	4.13	4.00
10	3.36	3.24	6.82	4.62	4.26	8.75	5.91	6.11	4.60	4.89	4.02	3.87
11	3.34	3.49	5.97	4.65	4.29	6.91	5.50	7.51	4.37	4.48	4.02	3.82
12	3.35	3.79	5.33	4.63	4.28	5.68	5.26	7.05	4.20	4.01	4.77	3.63
13	3.34	3.85	5.42	4.61	4.27	9.72	5.48	---	4.06	3.79	4.18	3.55
14	3.33	3.74	7.13	5.98	5.08	8.17	7.92	---	3.94	3.69	3.95	3.48
15	3.33	3.68	6.33	6.90	5.42	6.66	6.20	---	4.11	3.81	5.31	3.44
16	3.67	3.64	5.57	5.93	8.96	6.72	5.67	---	4.19	4.21	7.06	3.42
17	3.97	3.60	5.14	5.46	6.97	7.96	5.40	---	4.04	3.90	5.42	3.40
18	3.74	3.56	4.86	5.22	6.16	6.04	5.25	---	4.29	3.72	5.35	3.36
19	3.62	3.53	4.57	4.96	5.75	5.74	5.12	---	6.14	3.75	4.89	3.36
20	3.52	3.53	4.33	4.92	5.43	5.65	5.08	---	5.29	3.83	4.55	3.51
21	3.46	3.53	4.36	4.76	5.19	5.54	4.97	---	4.61	4.22	4.29	3.49
22	3.41	9.41	4.64	4.68	5.03	5.38	4.87	5.16	4.28	4.60	4.10	3.52
23	3.36	8.52	6.56	7.71	4.95	6.72	4.78	4.77	4.08	4.80	3.97	3.57
24	3.34	5.52	10.01	9.84	5.82	7.51	5.06	4.58	4.21	11.36	3.87	3.51
25	3.33	4.79	6.72	6.73	6.24	6.92	8.34	4.64	4.67	8.92	3.78	3.48
26	3.29	4.42	5.76	5.97	12.72	6.36	5.94	4.41	4.14	7.22	3.71	3.49
27	3.27	4.19	5.30	5.53	8.34	5.93	5.40	4.27	3.94	10.40	3.65	3.50
28	3.25	4.09	5.06	5.52	6.61	5.77	5.09	4.15	3.80	13.17	5.43	3.63
29	3.28	4.01	7.23	5.51	6.21	5.46	4.87	4.19	3.69	6.38	6.44	3.68
30	3.29	3.89	7.72	5.38	---	5.28	4.92	9.87	3.61	5.28	4.94	3.59
31	3.31	---	6.65	5.35	---	5.17	---	8.64	---	5.47	4.45	---
MEAN	3.41	4.04	6.13	5.46	5.69	6.78	5.48	---	4.58	5.19	4.82	3.64
MAX	3.97	9.41	14.45	9.84	12.72	12.33	8.34	---	6.63	13.17	7.83	4.17
MIN	3.17	3.21	4.20	4.39	4.26	5.02	4.78	---	3.61	3.62	3.65	3.36

LITTLE KANAWHA RIVER BASIN

03154000 WEST FORK LITTLE KANAWHA RIVER AT ROCKSDALE, WV--Continued



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 National Geodetic Vertical Datum of 1929. 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 National Geodetic Vertical Datum of 1929.

REMARKS.--Water discharge records good except those for period of sluggish intakes, May 4 to July 24, which is fair, and those for periods of estimated daily discharges, May 13-17, 24-29, June 13-18, 21-23, June 27 to July 1, July 13, 14, 22, 23, 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. 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, 20,300 ft³/s, Dec. 4, gage height, 24.29 ft.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	75	129	810	3020	1780	5450	5540	1710	4600	e190	3540	963
2	67	110	1690	2070	1580	3880	4320	1550	2750	257	3360	787
3	62	108	14700	1640	1330	3130	3220	4940	1760	676	1810	502
4	54	111	17000	1280	1170	2340	2460	12500	1280	505	2340	353
5	53	107	6580	1130	1080	1680	2060	6620	1100	688	3240	340
6	55	102	3740	990	1030	2190	1870	4090	1100	840	1920	325
7	62	99	2970	843	951	4270	1600	3080	1520	1850	1110	269
8	104	101	2620	723	865	10800	1430	2220	2050	1410	774	249
9	108	118	1710	680	817	10500	1320	1850	4230	1070	537	437
10	99	191	2410	706	732	6310	1550	1580	2800	906	407	421
11	93	245	4450	701	621	11000	1960	1320	1890	914	362	354
12	84	252	3050	765	523	13000	2030	1100	1340	788	454	316
13	75	265	2160	828	531	6950	1790	e800	e800	e400	1280	285
14	67	262	3160	1000	1010	4580	1440	e620	e540	e260	1070	232
15	67	249	4810	3020	1940	3500	1290	e560	e400	335	749	212
16	72	229	3080	2850	4690	2560	1240	e680	e330	395	2470	187
17	94	212	2350	1830	6540	2040	1160	e800	e300	502	4570	154
18	167	201	1400	1460	3930	1950	1300	1060	e370	563	2730	125
19	252	197	1030	1000	2940	8260	2650	2110	509	466	2200	109
20	207	219	802	835	2650	11200	2000	4050	1020	379	1880	100
21	156	249	717	796	1930	6990	1680	2680	e700	358	1470	93
22	154	2560	681	819	1560	4800	3170	1720	e500	e300	925	194
23	191	12200	1340	2110	1380	6590	6040	e1000	e300	e380	703	249
24	189	6650	7220	12600	1830	6090	3350	e600	442	2470	535	188
25	192	2070	7230	9020	2480	3920	2440	e500	554	11400	404	149
26	197	1330	3830	4390	7950	2980	2080	e430	725	3910	351	124
27	196	1060	2590	2820	14900	2570	1930	e370	e540	7570	315	126
28	195	938	2040	2080	7030	2280	1970	e330	e400	15100	609	152
29	184	855	2630	1890	5220	2050	1920	e310	e290	11800	3350	147
30	176	799	5270	1920	---	1810	1900	2350	e200	3940	3720	137
31	155	---	4670	1900	---	3230	---	4570	---	2610	1410	---
TOTAL	3902	32218	118740	67716	80990	158900	68710	68100	35340	73232	50595	8279
MEAN	126	1074	3830	2184	2793	5126	2290	2197	1178	2362	1632	276
MAX	252	12200	17000	12600	14900	13000	6040	12500	4600	15100	4570	963
MIN	53	99	681	680	523	1680	1160	310	200	190	315	93

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	1950
LOWEST ANNUAL MEAN	1068	1966
HIGHEST DAILY MEAN	48600	Mar 8 1967
LOWEST DAILY MEAN	.90	Jul 15 1959
ANNUAL SEVEN-DAY MINIMUM	1.3	Aug 30 1965
INSTANTANEOUS PEAK FLOW	a50700	Mar 7 1967
INSTANTANEOUS PEAK STAGE	b39.14	Mar 7 1967
INSTANTANEOUS LOW FLOW	c.60	Jul 14 1959
10 PERCENT EXCEEDS	5440	
50 PERCENT EXCEEDS	694	
90 PERCENT EXCEEDS	56	

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1968 - 1992, BY WATER YEAR (WY) [REGULATED, UNADJUSTED]

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	837	1981	3323	3350	4042	3816	3359	2440	1220	892	737	517
MAX	3933	8281	9517	7491	7637	6941	7210	6133	5710	2450	1936	2941
(WY)	1977	1986	1979	1979	1989	1991	1972	1989	1981	1990	1978	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 1991 CALENDAR YEAR

FOR 1992 WATER YEAR

WATER YEARS 1968 - 1992

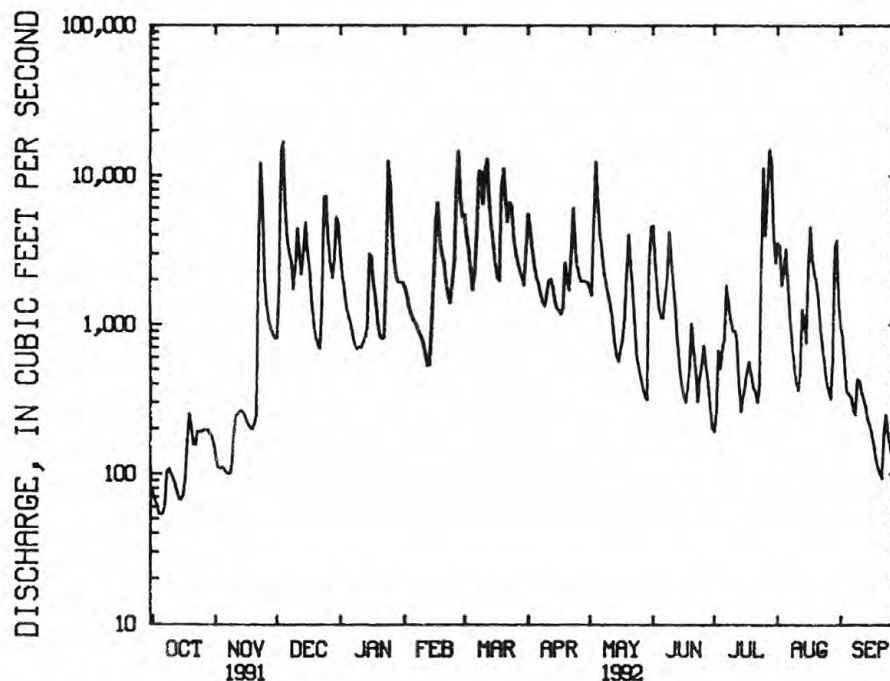
ANNUAL TOTAL	834642		766722	
ANNUAL MEAN	2287		2095	
HIGHEST ANNUAL MEAN				2201
LOWEST ANNUAL MEAN				3246
HIGHEST DAILY MEAN	24200	Jan 1	17000	Dec 4
LOWEST DAILY MEAN	25	Sep 3	53	Oct 5
ANNUAL SEVEN-DAY MINIMUM	32	Sep 1	61	Oct 1
INSTANTANEOUS PEAK FLOW			20300	Dec 4
INSTANTANEOUS PEAK STAGE			24.29	Dec 4
INSTANTANEOUS LOW FLOW			49	Oct 5
10 PERCENT EXCEEDS	6610		4850	
50 PERCENT EXCEEDS	362		1100	
90 PERCENT EXCEEDS	62		153	

a From rating curve extended above 39,000 ft³/s.

b Backwater.

c Filling pool above old lock 3.

d 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 current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

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 (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	COLI-FORM, FECAL, UM-MF (COLS./100 ML) (31625)	
OCT 24...	1500	189	220	7.2	15.0	7.6	749	8.7	88	23	
DEC 18...	1200	1360	106	7.1	3.0	14	754	12.4	93	160	
MAY 28...	1250	474	128	7.0	17.0	6.5	747	7.8	82	39	
JUL 02...	1315	236	126	7.0	25.5	19	741	6.0	76	K28	
SEP 08...	1300	236	128	7.3	25.0	12	746	7.7	95	93	
DATE		STREP-TOCOCCHI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	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)
OCT 24...	K12	70	20	4.9	13	2.6	50	0	41	30	
DEC 18...	83	38	11	2.6	4.2	1.3	24	0	20	18	
MAY 28...	K7	49	14	3.3	5.0	1.4	38	0	31	18	
JUL 02...	K24	46	13	3.2	5.3	1.9	35	0	29	16	
SEP 08...	K21	48	14	3.1	4.9	1.8	40	0	33	17	
DATE		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, 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 TOTAL (MG/L AS N) (00610)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)
OCT 24...	25	<0.10	1.4	118	122	--	<0.010	<0.050	0.010	0.020	
DEC 18...	5.4	<0.10	6.0	76	62	--	<0.010	0.340	0.020	0.020	
MAY 28...	5.4	<0.10	5.4	69	74	0.520	0.010	0.530	0.070	0.080	
JUL 02...	6.3	<0.10	4.7	77	69	--	<0.010	0.210	0.020	0.070	
SEP 08...	5.6	<0.10	5.3	77	72	--	<0.010	0.095	0.020	0.020	

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 1991 TO SEPTEMBER 1992

DATE	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)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)
OCT 24...	0.19	0.20	0.020	<0.010	<0.010	60	63	<3	100	<4
DEC 18...	--	<0.20	0.020	<0.010	0.010	--	--	--	--	--
MAY 28...	--	<0.20	0.030	0.030	0.010	20	42	<3	94	<4
JUL 02...	0.28	0.30	0.030	<0.010	<0.010	60	48	<3	110	<4
SEP 08...	0.18	0.20	<0.010	<0.010	<0.010	30	43	<3	99	<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)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
OCT 24...	66	<10	1	<1	<1.0	150	<6	10	5.1	74
DEC 18...	--	--	--	--	--	--	--	17	62	99
MAY 28...	78	<10	<1	<1	<1.0	86	<6	16	20	98
JUL 02...	110	<10	<1	<1	<1.0	85	<6	30	19	99
SEP 08...	99	<10	<1	<1	<1.0	83	<6	17	11	98

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 current year. Monthly discharge only for some periods, published in WSP 1305. Prior to October 1965, published as "at Cisco."

REVISED RECORDS.--WSP 893: 1939. WSP 1113: 1947.

GAGE.--Water-stage recorder. Datum of gage is 607.92 ft above National Geodetic Vertical Datum, 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.

EXTREMES 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)
Dec. 3	1700	*7,800	*15.68	No peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	5.6	107	516	440	999	1310	224	307	29	118	150
2	13	5.5	373	380	378	642	885	207	187	27	97	110
3	9.7	5.5	6190	310	317	488	653	1050	128	25	80	100
4	13	5.3	2400	275	297	388	529	1340	100	24	76	91
5	16	5.3	660	241	294	322	450	660	109	22	149	72
6	47	5.6	360	205	269	472	364	456	189	27	140	54
7	42	5.8	256	176	244	1550	303	337	213	109	91	44
8	46	5.9	201	152	232	3180	280	283	750	95	64	40
9	39	5.5	224	154	216	1960	280	332	963	67	47	38
10	30	6.3	1800	223	195	1200	331	400	591	46	39	40
11	24	14	1010	267	160	3680	431	352	270	36	42	52
12	21	33	463	242	155	2370	507	273	235	25	639	50
13	20	39	343	219	153	1300	377	224	193	45	332	38
14	19	39	1020	530	206	870	307	188	137	283	158	29
15	19	38	1210	1330	421	686	287	156	117	228	102	25
16	24	35	563	683	629	569	265	126	106	155	77	22
17	30	31	350	e380	688	487	243	106	89	111	87	19
18	29	28	255	e320	592	472	238	162	72	83	91	17
19	30	25	194	e270	549	4150	316	675	100	56	73	15
20	26	23	139	e220	528	3420	378	519	87	40	57	13
21	21	24	138	e190	473	1460	310	294	75	35	44	12
22	18	1910	233	e190	428	1050	347	150	54	34	36	24
23	17	2410	812	1630	406	2300	418	106	43	42	30	67
24	15	580	2410	4260	420	1380	337	89	37	71	27	74
25	11	285	951	1480	710	821	295	85	34	146	24	65
26	7.7	183	505	793	1460	626	273	75	31	130	21	50
27	6.3	120	347	555	1800	543	265	58	38	1270	20	44
28	6.7	93	269	475	881	474	295	47	32	1690	179	52
29	6.6	82	868	453	1050	406	256	43	28	482	1270	50
30	7.1	77	1450	435	---	376	238	356	27	223	478	43
31	6.3	---	796	435	---	1010	---	458	---	146	254	---
TOTAL	637.4	6125.3	26897	17989	14591	39651	11768	9831	5342	5802	4942	1500
MEAN	20.6	204	868	580	503	1279	392	317	178	187	159	50.0
MAX	47	2410	6190	4260	1800	4150	1310	1340	963	1690	1270	150
MIN	6.3	5.3	107	152	153	322	238	43	27	22	20	12
CFSM	.05	.45	1.92	1.28	1.11	2.83	.87	.70	.39	.41	.35	.11
IN.	.05	.50	2.21	1.48	1.20	3.26	.97	.81	.44	.48	.41	.12

e Estimated

LITTLE KANAWHA RIVER BASIN

03155500 HUGHES RIVER AT CISCO, WV--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1929-1931, 1939-1992, BY WATER YEAR (WY)

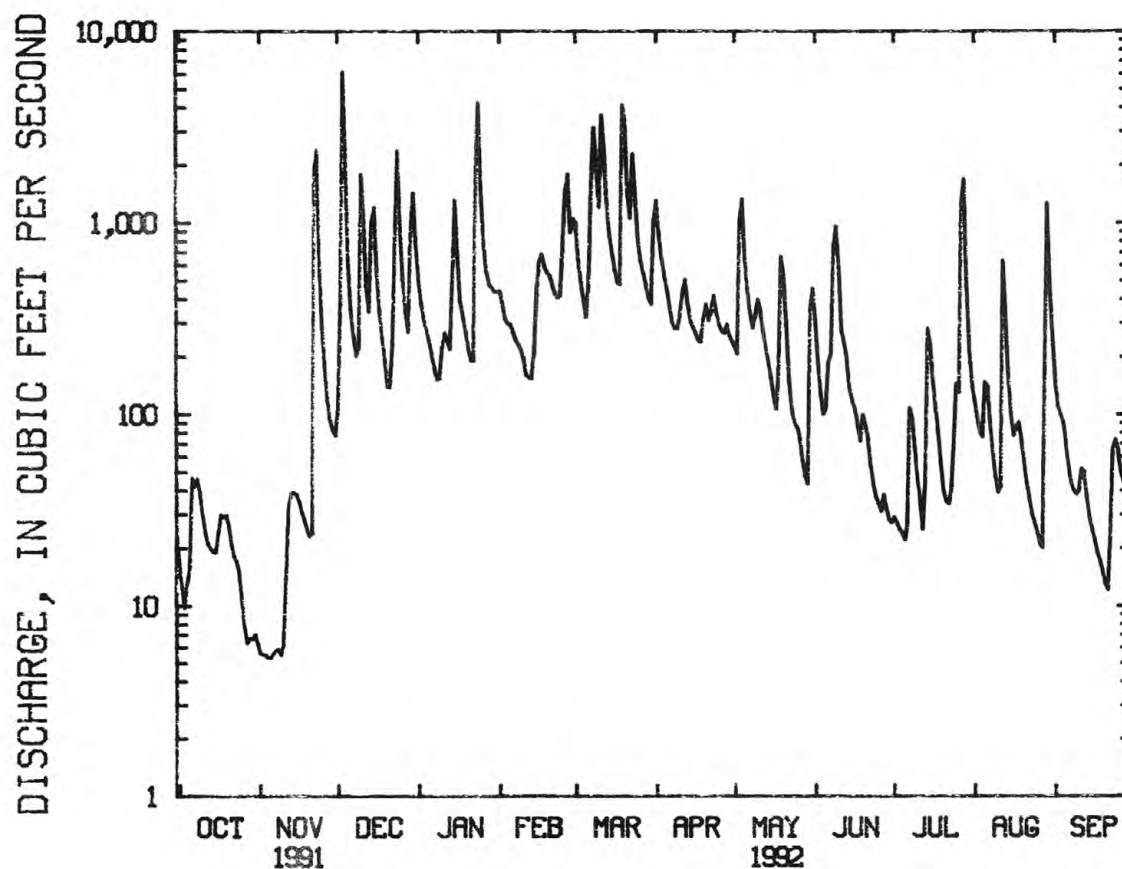
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	165	391	779	887	1104	1152	931	636	335	230	201	124
MAX	1346	2196	2775	2581	2097	3485	2659	2350	1794	2249	713	1035
(WY)	1977	1986	1979	1950	1955	1963	1948	1967	1950	1958	1989	1971
MIN	.000	.000	1.13	19.8	121	293	117	61.1	5.72	1.01	.12	.010
(WY)	1931	1931	1931	1931	1941	1987	1971	1930	1930	1930	1930	1930

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR	FOR 1992 WATER YEAR	WATER YEARS 1929 - 1931 1939 - 1992
ANNUAL TOTAL	219504.9	145075.7	
ANNUAL MEAN	601	396	575
HIGHEST ANNUAL MEAN			943
LOWEST ANNUAL MEAN			260
HIGHEST DAILY MEAN	9090 Mar 23	6190 Dec 3	26400 Apr 13 1948
LOWEST DAILY MEAN	3.1 Sep 1	5.3 (a)	.00 (b)
ANNUAL SEVEN-DAY MINIMUM	3.5 Aug 29	5.5 Nov 1	.00 Sep 4 1930
INSTANTANEOUS PEAK FLOW		7800 Dec 3	31700 Jun 26 1950
INSTANTANEOUS PEAK STAGE		15.68 Dec 3	32.69 Jun 26 1950
INSTANTANEOUS LOW FLOW		5.2 (c)	.00 (b)
ANNUAL RUNOFF (CFSM)	1.33	.88	1.27
ANNUAL RUNOFF (INCHES)	18.07	11.94	17.30
10 PERCENT EXCEEDS	1600	1010	1440
50 PERCENT EXCEEDS	95	190	177
90 PERCENT EXCEEDS	8.1	21	11

a Nov. 4, 5.

b July 26, Aug. 2-6, Sept. 4 to Dec. 5, 1930.

c Nov. 1, 4, 5, 9.



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 National Geodetic Vertical Datum of 1929.

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.--Records good except those for periods of no gage-height record, Dec. 1-3 and Dec. 8 to Jan. 7, which are fair. 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, 100,000 ft³/s, June 5, gage height, 17.47 ft, from rating curve extended as explained above; minimum, 1,090 ft³/s, Oct. 4, 7, 8, gage height, 2.51 ft; minimum daily, 1,190 ft³/s, Oct. 3, 7.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1330	1470	e3600	e7200	2900	9310	7380	5450	8810	5620	3130	3870
2	1270	1600	e5000	e6600	1890	7450	4740	4440	8610	4330	2510	2910
3	1190	1290	e8000	e8400	1830	7070	5750	4140	7090	3940	1900	2660
4	1210	1360	12300	e23000	3380	5800	6330	3430	8930	3950	2760	2650
5	1240	1700	6340	e17000	2740	5270	2650	6670	61300	4120	2700	2850
6	1200	1660	1870	e13000	2830	5430	2660	5160	51900	4660	2620	5620
7	1190	1480	1720	e10000	2630	7190	6050	4690	21900	4150	2110	3170
8	1240	1270	e1900	8350	2970	9160	6040	7320	15300	3890	2170	3440
9	1490	1540	e3500	7500	1670	4660	7510	9420	16600	3740	2320	2800
10	1310	1470	e2900	4170	1680	9690	6100	10900	16600	3690	2190	3690
11	1510	7460	e5600	5330	2770	13000	7050	8170	14700	3710	2630	3510
12	1590	5130	e4300	3400	1750	11100	2890	8040	13400	3690	2470	3400
13	1620	4320	e3600	2830	3050	9750	2680	8280	13200	2760	4340	1960
14	1440	4540	e1700	4220	3370	8330	7110	6780	9950	3350	4000	1970
15	1630	4880	e1700	3190	2900	7760	6010	7760	9170	3330	3220	2740
16	1500	2300	e1800	3870	3640	5690	2440	11300	9980	3320	1680	2580
17	1530	1410	e1600	3970	3530	5580	2640	9750	12600	3360	1540	2200
18	1560	1330	e1550	2810	3930	4790	3530	7940	9140	3180	3330	2180
19	1590	1550	e1500	1710	4780	6290	4390	8830	8720	2420	2390	2120
20	1680	1580	e1400	1660	5080	5310	2940	7580	8590	2730	2660	1990
21	1460	1710	e1550	3050	3800	5510	12300	6300	7960	3670	2640	1740
22	1500	2470	e1500	2650	3070	4030	61800	5940	6330	3160	2640	1970
23	1480	4860	e5400	2850	1910	2920	25700	5840	6460	3290	2640	2060
24	1360	4450	e3100	4210	2390	5070	15500	4760	6230	4200	2190	1930
25	1460	4230	e3000	5360	4610	6070	12500	4830	5550	4430	2060	1990
26	1440	2910	e4000	2520	20900	5100	11000	4570	5510	3980	2580	1800
27	1390	2680	e3500	3440	21700	8230	8450	4850	5910	3610	3680	1540
28	1290	2820	e8600	4250	14000	7860	7080	4620	5270	3880	6550	1480
29	1350	1490	e7000	4280	11500	5150	7440	5910	4740	3900	3150	2390
30	1260	1820	e7200	4690	---	5390	6660	8970	5210	3460	2200	2790
31	1530	---	e7800	3310	---	5240	---	8440	---	3370	3050	---
TOTAL	43840	78780	124530	178820	143200	209200	265320	211080	385660	114890	86050	78000
MEAN	1414	2626	4017	5768	4938	6748	8844	6809	12860	3706	2776	2600
MAX	1680	7460	12300	23000	21700	13000	61800	11300	61300	5620	6550	5620
MIN	1190	1270	1400	1660	1670	2920	2440	3430	4740	2420	1540	1480
(-)	+70	-365	+345	-72	+43	-33	+17	+33	-27	-5	+41	-3
MEAN+	1484	2261	4362	5696	4981	6715	8861	6842	12830	3701	2817	2597
CFSM+	.39	.60	1.16	1.51	1.32	1.78	2.35	1.82	3.40	.98	.75	.69
IN.+	.45	.67	1.34	1.74	1.43	2.06	2.62	2.09	3.80	1.13	.86	.77

CAL YR 1991 TOTAL 1920670 MEAN 5262 MAX 28100 MIN 1190 MEAN+ 5268 CFSM+ 1.40 IN.+ 18.98
WTR YR 1992 TOTAL 1919370 MEAN 5244 MAX 61800 MIN 1190 MEAN+ 5249 CFSM+ 1.39 IN.+ 18.97

-- Change in contents, equivalent in cubic feet per second, in Claytor Reservoir; provided by Appalachian Power Company.

+ Adjusted for change in contents.

e Estimated.

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 - 1992, BY WATER YEAR (WY) [REGULATED, UNADJUSTED]

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	3308	3752	4712	5648	7279	8177	7460	5930	4465	3340	3181	2936
MAX	9882	12450	10910	12660	15810	16130	20890	11270	12860	9784	16410	11500
(WY)	1990	1978	1949	1946	1957	1955	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 1991 CALENDAR YEAR

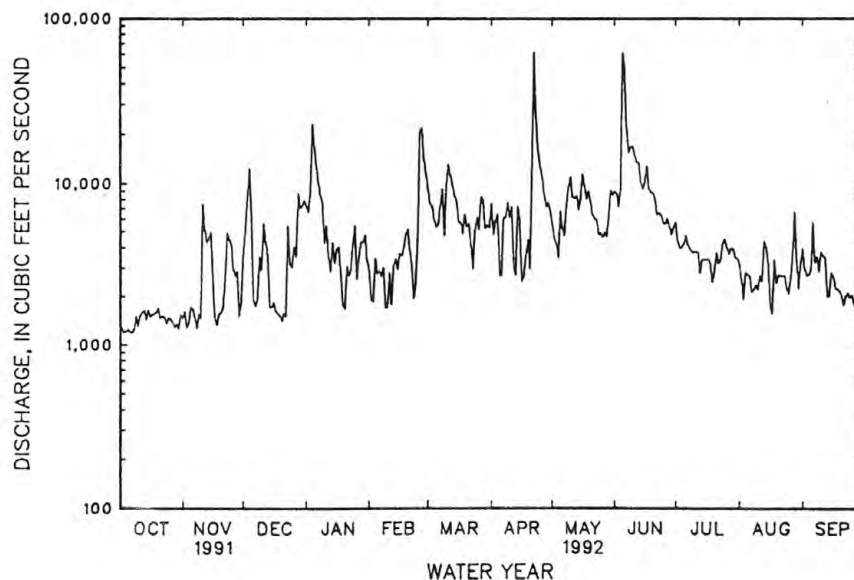
FOR 1992 WATER YEAR

WATER YEARS 1939 - 1992

ANNUAL TOTAL	1920670	1919370	
ANNUAL MEAN	5262	5244	5003
HIGHEST ANNUAL MEAN			7424
LOWEST ANNUAL MEAN			2626
HIGHEST DAILY MEAN	28100	Mar 30	61800
LOWEST DAILY MEAN	1190	aOct 3	1190
ANNUAL SEVEN-DAY MINIMUM	1220	Oct 2	1220
INSTANTANEOUS PEAK FLOW			100000
INSTANTANEOUS PEAK STAGE			17.47
INSTANTANEOUS LOW FLOW			1090
ANNUAL RUNOFF (CFSM)	1.40	1.39	1.33
ANNUAL RUNOFF (INCHES)	18.96	18.95	18.03
10 PERCENT EXCEEDS	10200	9210	9520
50 PERCENT EXCEEDS	4500	3680	3700
90 PERCENT EXCEEDS	1480	1520	1560

a Also Oct. 7, 1991.

b Also Oct. 7, 8, 1991.



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 1991 TO SEPTEMBER 1992

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 (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)
NOV 13...	1015	4240	130	6.9	5.0	9.0	728	2.0	10.6	96	--
JAN 22...	1015	3170	160	7.4	4.5	3.0	725	3.8	12.5	98	750
MAR 10...	1000	11200	138	6.5	9.0	12.0	714	7.0	10.0	99	40
MAY 27...	1015	5620	138	7.4	19.0	15.5	722	1.9	9.8	104	50
SEP 02...	1015	3150	90	6.9	25.5	22.5	728	3.5	7.8	94	46

DATE	STREP- TOCOCCHI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	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)	ALKA- LINITY LAB (MG/L AS CACO3) (90410)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)
NOV 13...	73	52	12	5.4	4.8	2.0	60	0	49	50	11
JAN 22...	10	66	16	6.4	4.4	1.8	65	0	53	58	13
MAR 10...	59	52	13	4.8	3.5	4.4	56	0	46	50	9.7
MAY 27...	140	64	16	5.8	3.0	1.4	66	0	54	52	9.9
SEP 02...	--	65	15	6.6	4.2	1.7	61	0	50	55	12

DATE	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)	NITRO- GEN, NITRITE TOTAL (MG/L AS N) (00615)	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)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)
NOV 13...	4.4	0.10	5.4	75	76	<0.010	<0.010	--	0.310	0.340	0.050
JAN 22...	5.7	0.20	7.9	80	91	<0.010	<0.010	--	0.830	0.850	0.080
MAR 10...	4.7	<0.10	6.3	78	78	<0.010	0.020	0.740	0.750	0.760	0.040
MAY 27...	4.0	<0.10	6.5	83	82	<0.010	<0.010	--	0.650	0.640	0.020
SEP 02...	4.8	<0.10	7.0	87	84	<0.010	<0.010	--	0.510	0.520	0.040

< Actual value is known to be less than the value shown.

KANAWHA RIVER BASIN

03176500 NEW RIVER AT GLEN LYN, VA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	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 TOTAL (MG/L AS P) (70507)	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)
NOV 13...	0.050	0.50	0.050	0.020	0.010	<0.010	20	34	<3	25
JAN 22...	0.070	0.30	0.060	0.060	0.040	0.030	--	--	--	--
MAR 10...	0.040	0.30	0.050	0.010	0.010	0.010	20	29	<3	40
MAY 27...	0.020	0.30	0.030	0.020	0.020	0.010	10	33	<3	31
SEP 02...	0.050	<0.20	0.050	0.040	0.030	0.030	<10	33	<3	23

DATE	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)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
NOV 13...	<4	3	<10	1	<1	<1.0	63	<6	13	75
JAN 22...	--	--	--	--	--	--	--	--	6	91
MAR 10...	14	3	<10	<1	<1	<1.0	56	<6	25	76
MAY 27...	<4	5	<10	2	<1	<1.0	60	<6	12	57
SEP 02...	<4	4	<10	<1	<1	<1.0	68	<6	5	89

< 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 National Geodetic Vertical Datum of 1929 (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. 26	0700	6,120	10.10	June 5	0630	*11,900	*12.66

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	27	23	512	697	327	1110	654	456	871	294	113	130
2	26	25	2430	540	281	882	678	404	661	417	105	103
3	26	24	3220	472	252	713	642	379	513	284	91	87
4	25	23	2090	2470	240	593	623	347	1540	240	89	78
5	24	22	865	2530	233	498	630	319	9980	210	79	97
6	23	23	486	1300	217	479	978	362	4230	224	66	132
7	21	24	342	859	205	902	1290	436	1850	205	61	109
8	21	24	264	630	196	1490	1230	583	1080	170	59	87
9	21	27	227	507	177	1340	957	983	990	140	220	78
10	21	83	585	437	e140	1270	765	1030	1220	124	180	75
11	23	239	765	372	e130	3970	900	847	977	109	123	72
12	24	147	508	317	e140	2760	919	694	781	96	111	66
13	23	83	374	293	149	1520	707	1140	611	85	120	58
14	24	62	485	327	173	1050	586	1820	493	78	165	51
15	26	52	674	348	258	845	510	1530	476	93	195	47
16	29	49	530	306	491	696	454	2090	507	96	188	45
17	33	46	387	e250	472	591	532	1620	520	93	176	42
18	39	43	309	e210	415	694	756	1010	380	78	189	41
19	30	40	232	e190	377	1370	748	939	323	71	151	42
20	26	39	180	e170	334	1300	632	924	280	69	110	53
21	23	42	197	e180	286	1050	1370	754	237	62	90	62
22	24	262	204	e190	257	892	2980	604	208	71	78	50
23	25	466	227	272	249	1250	1790	489	187	102	70	47
24	24	260	689	685	545	1170	1130	408	175	113	64	50
25	23	151	809	689	1000	918	921	365	191	122	59	45
26	25	106	562	565	5530	812	742	341	210	123	59	42
27	23	80	415	458	3320	762	620	314	297	106	99	42
28	23	69	463	403	1670	681	607	279	223	336	763	52
29	24	62	1580	380	1310	606	552	591	197	324	669	62
30	23	58	1280	356	---	576	499	1740	282	165	307	52
31	23	---	948	346	---	630	---	1220	---	117	178	---
TOTAL	772	2654	22839	17749	19374	33420	26402	25018	30490	4817	5027	1997
MEAN	24.9	88.5	737	573	668	1078	880	807	1016	155	162	66.6
MAX	39	466	3220	2530	5530	3970	2980	2090	9980	417	763	132
MIN	21	22	180	170	130	479	454	279	175	62	59	41
CFSM	.06	.22	1.87	1.45	1.70	2.74	2.23	2.05	2.58	.39	.41	.17
IN.	.07	.25	2.16	1.68	1.83	3.16	2.49	2.36	2.88	.45	.47	.19

e Estimated

KANAWHA RIVER BASIN

03179000 BLUESTONE RIVER NEAR PIPESTEM, WV--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1950 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	156	249	496	670	920	1064	827	633	304	147	117	94.1
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 1991 CALENDAR YEAR

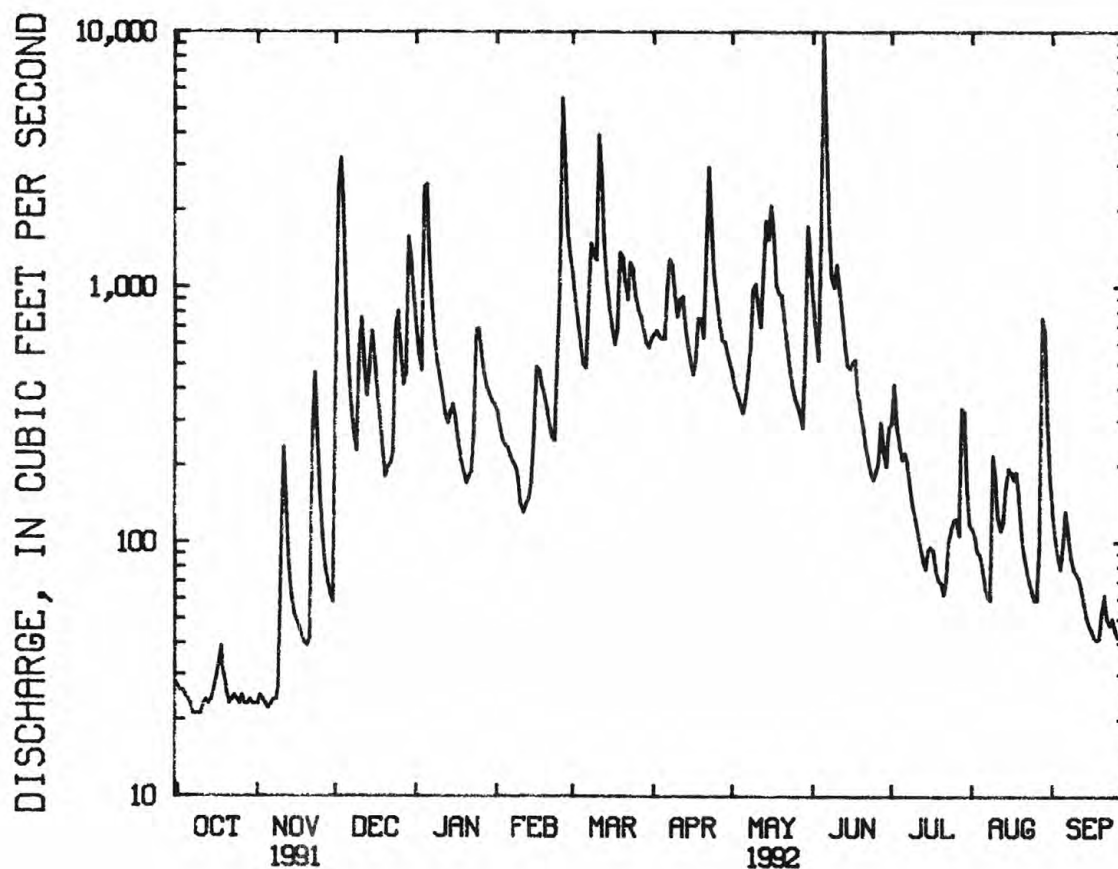
FOR 1992 WATER YEAR

WATER YEARS 1950 - 1992

ANNUAL TOTAL	184152		190559									
ANNUAL MEAN	505		521							471		
HIGHEST ANNUAL MEAN										762		1975
LOWEST ANNUAL MEAN										178		1988
HIGHEST DAILY MEAN	6230	Mar 30	9980	Jun 5						15900	Apr 5	1977
LOWEST DAILY MEAN	21	(a)	21	(a)						7.0	Sep 22	1955
ANNUAL SEVEN-DAY MINIMUM	22	Oct 5	22	Oct 5						8.5	Sep 18	1955
INSTANTANEOUS PEAK FLOW			11900	Jun 5						19300	Apr 5	1977
INSTANTANEOUS PEAK STAGE			12.66	Jun 5						15.82	Apr 5	1977
INSTANTANEOUS LOW FLOW			20	Oct 26						7.0	(b)	
ANNUAL RUNOFF (CFSM)	1.28		1.32							1.19		
ANNUAL RUNOFF (INCHES)	17.39		17.99							16.23		
10 PERCENT EXCEEDS	1280		1220							1110		
50 PERCENT EXCEEDS	243		280							203		
90 PERCENT EXCEEDS	27		28							37		

a Oct 7-10.

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 current year.

GAGE.--Water-stage recorder. Elevation of gage is 2,750 ft above National Vertical Datum of 1929, from topographic map.

REMARKS.--Records good except those for periods of estimated daily discharges (ice effect), 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. 2	2115	*6,400	*6.00	Apr. 22	0030	2,160	4.24

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.9	1.8	307	159	e73	233	221	84	46	41	55	7.3
2	1.8	2.0	1890	124	e55	209	200	75	44	39	35	6.4
3	1.9	2.0	2350	127	e75	181	165	129	41	38	31	8.2
4	1.8	1.7	710	217	e89	148	134	129	42	49	32	11
5	1.9	1.7	309	292	e97	131	116	132	88	40	26	42
6	2.1	1.8	189	268	e84	117	106	115	138	58	21	73
7	1.8	1.7	130	197	e75	132	117	96	120	51	19	53
8	2.0	1.7	110	145	e55	231	115	110	350	43	18	48
9	1.9	1.7	100	125	e35	211	134	135	337	40	26	43
10	1.7	4.4	177	111	e32	216	154	139	261	37	21	36
11	1.7	17	167	94	e39	619	176	133	197	28	16	47
12	2.8	6.9	140	83	e45	451	162	123	137	25	20	33
13	3.6	3.9	123	82	e47	284	134	177	104	21	16	28
14	3.0	3.2	134	96	e60	202	117	278	83	20	22	24
15	3.1	3.2	127	e75	190	155	102	215	76	18	18	22
16	4.6	3.2	114	e77	458	123	90	217	59	17	16	19
17	4.6	3.3	104	e100	350	110	88	190	50	15	15	17
18	3.4	2.9	88	e112	314	187	98	150	50	19	17	16
19	3.1	2.6	e60	e103	346	863	102	134	62	17	14	16
20	2.8	2.7	e42	e95	373	608	97	118	47	13	11	17
21	2.2	3.7	e38	e84	288	375	389	103	39	11	10	15
22	2.2	135	e38	e82	217	238	1390	90	35	12	9.5	14
23	2.2	131	e68	138	200	184	577	80	30	17	9.2	15
24	2.2	77	191	346	361	136	323	73	28	23	7.8	13
25	2.3	57	168	e238	475	122	220	66	33	30	6.9	11
26	2.7	43	135	e188	849	142	166	60	29	21	6.6	11
27	2.7	33	110	e173	579	192	133	54	27	64	7.4	12
28	2.3	34	114	e145	342	184	114	46	24	93	15	13
29	2.1	29	345	e133	338	163	96	43	22	55	26	11
30	2.1	34	306	e127	---	154	88	50	47	41	14	9.1
31	1.9	---	217	e106	---	199	---	51	---	42	9.2	---
TOTAL	76.4	646.1	9101	4442	6541	7500	6124	3595	2646	1038	570.6	691.0
MEAN	2.46	21.5	294	143	226	242	204	116	88.2	33.5	18.4	23.0
MAX	4.6	135	2350	346	849	863	1390	278	350	93	55	73
MIN	1.7	1.7	38	75	32	110	88	43	22	11	6.6	6.4

e Estimated

KANAWHA RIVER BASIN

03180300 EAST FORK GREENBRIER RIVER AT FRANK, WV--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1988 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	55.5	74.4	167	188	166	228	161	176	53.2	24.6	39.7	19.8
MAX	108	151	294	267	226	350	204	312	106	37.5	146	44.1
(WY)	1990	1990	1992	1990	1992	1991	1992	1989	1989	1989	1989	1989
MIN	2.46	21.5	57.7	143	95.1	149	86.5	43.1	8.59	4.17	2.70	7.12
(WY)	1992	1992	1989	1992	1988	1988	1988	1991	1991	1988	1988	1988

SUMMARY STATISTICS

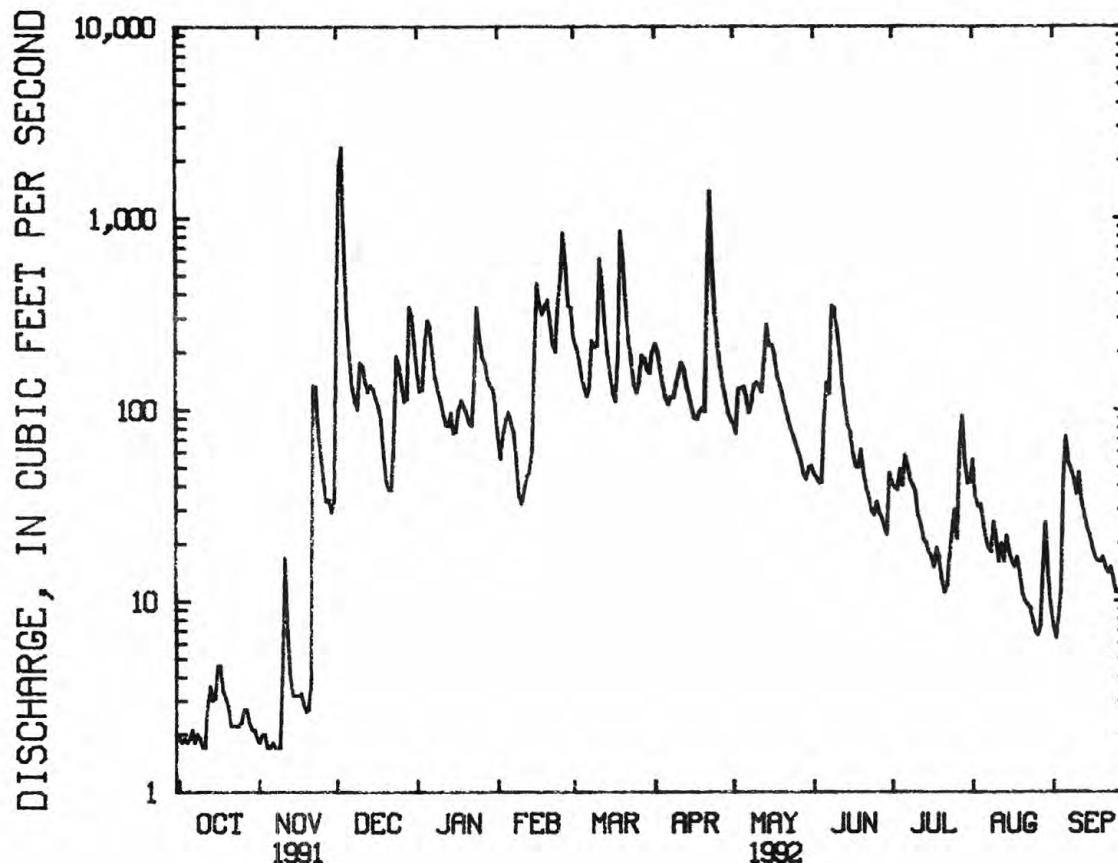
FOR 1991 CALENDAR YEAR

FOR 1992 WATER YEAR

WATER YEARS 1988 - 1992

ANNUAL TOTAL	38559.6		42971.1									
ANNUAL MEAN	106		117							121		
HIGHEST ANNUAL MEAN										127		1990
LOWEST ANNUAL MEAN										112		1991
HIGHEST DAILY MEAN	2370	Mar 23				2350	Dec 3			2370	Mar 23	1991
LOWEST DAILY MEAN	1.7	(a)				1.7	(a)			.79	Aug 18	1988
ANNUAL SEVEN-DAY MINIMUM	1.8	Nov 3				1.8	Nov 3			1.2	Aug 8	1988
INSTANTANEOUS PEAK FLOW						6400	Dec 2			6400	Dec 2	1991
INSTANTANEOUS PEAK STAGE						6.00	Dec 2			6.00	Dec 2	1991
INSTANTANEOUS LOW FLOW						1.2	Nov 6			.30	Dec 23	1989
10 PERCENT EXCEEDS	260					245				263		
50 PERCENT EXCEEDS	34					61				63		
90 PERCENT EXCEEDS	2.8					3.0				5.4		

a Oct. 10, 11, Nov. 4, 5, 7-9.



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 National Geodetic Vertical Datum of 1929.

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. 2	2330	*8,870	*7.93	Apr. 21	2330	3,500	5.50

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	12	803	381	e145	587	510	196	88	145	216	16
2	16	12	2670	314	e125	490	459	170	83	148	139	14
3	15	12	4420	299	e150	416	372	430	75	127	119	15
4	14	11	1540	390	172	353	307	442	79	160	98	20
5	14	10	722	481	e210	301	259	378	154	124	74	48
6	14	9.6	475	472	e170	261	237	303	217	218	57	93
7	15	10	355	396	e140	271	281	239	180	183	49	63
8	14	10	301	314	e100	437	286	252	423	149	43	54
9	13	9.9	272	301	e80	444	324	279	424	142	69	49
10	12	18	428	283	e72	471	359	278	372	125	51	40
11	12	72	410	247	e80	1230	375	261	301	92	37	51
12	23	42	360	218	e90	901	348	246	227	76	37	37
13	24	30	331	216	e110	587	291	339	180	67	31	29
14	20	28	384	296	175	439	252	643	153	61	50	24
15	19	29	398	e210	328	354	220	522	160	52	37	21
16	36	30	348	e250	1090	279	196	454	120	50	31	18
17	30	34	299	292	815	248	188	373	98	42	28	17
18	23	31	240	255	631	424	207	316	135	48	30	16
19	20	31	e170	e230	676	1660	201	285	209	43	24	17
20	19	30	e140	e220	778	1210	193	248	149	35	21	18
21	17	37	e120	e215	599	724	907	214	117	28	19	17
22	16	468	e150	e210	487	518	2360	188	97	28	18	16
23	16	645	259	241	456	404	1050	165	80	49	17	16
24	15	368	731	491	862	311	605	148	73	67	16	16
25	15	235	534	435	1020	279	465	136	95	84	15	14
26	15	169	405	e370	1690	320	372	124	72	68	14	13
27	14	131	319	e320	1120	412	311	112	65	399	14	14
28	14	117	310	e275	650	403	266	93	55	606	31	15
29	14	98	707	e240	775	378	227	88	52	281	67	15
30	12	107	628	e210	---	362	208	101	122	170	27	13
31	12	---	489	e175	---	470	---	98	---	166	18	---
TOTAL	530	2846.5	19718	9247	13796	15944	12636	8121	4655	4033	1497	809
MEAN	17.1	94.9	636	298	476	514	421	262	155	130	48.3	27.0
MAX	36	645	4420	491	1690	1660	2360	643	424	606	216	93
MIN	12	9.6	120	175	72	248	188	88	52	28	14	13
CFSM	.13	.71	4.78	2.24	3.58	3.87	3.17	1.97	1.17	.98	.36	.20
IN.	.15	.80	5.52	2.59	3.86	4.46	3.53	2.27	1.30	1.13	.42	.23

e Estimated

KANAWHA RIVER BASIN

03180500 GREENBRIER RIVER AT DURBIN, WV--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1943 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	110	219	329	354	427	560	428	300	160	96.4	83.7	62.4
MAX	665	1336	796	871	825	1255	1041	687	598	308	496	328
(WY)	1977	1986	1973	1952	1961	1963	1958	1967	1981	1949	1984	1950
MIN	2.06	10.1	46.6	51.7	121	234	142	77.9	21.9	10.9	6.02	1.82
(WY)	1954	1954	1961	1981	1978	1957	1955	1976	1991	1988	1988	1953

SUMMARY STATISTICS

FOR 1991 CALENDAR YEAR

FOR 1992 WATER YEAR

WATER YEARS 1943 - 1992

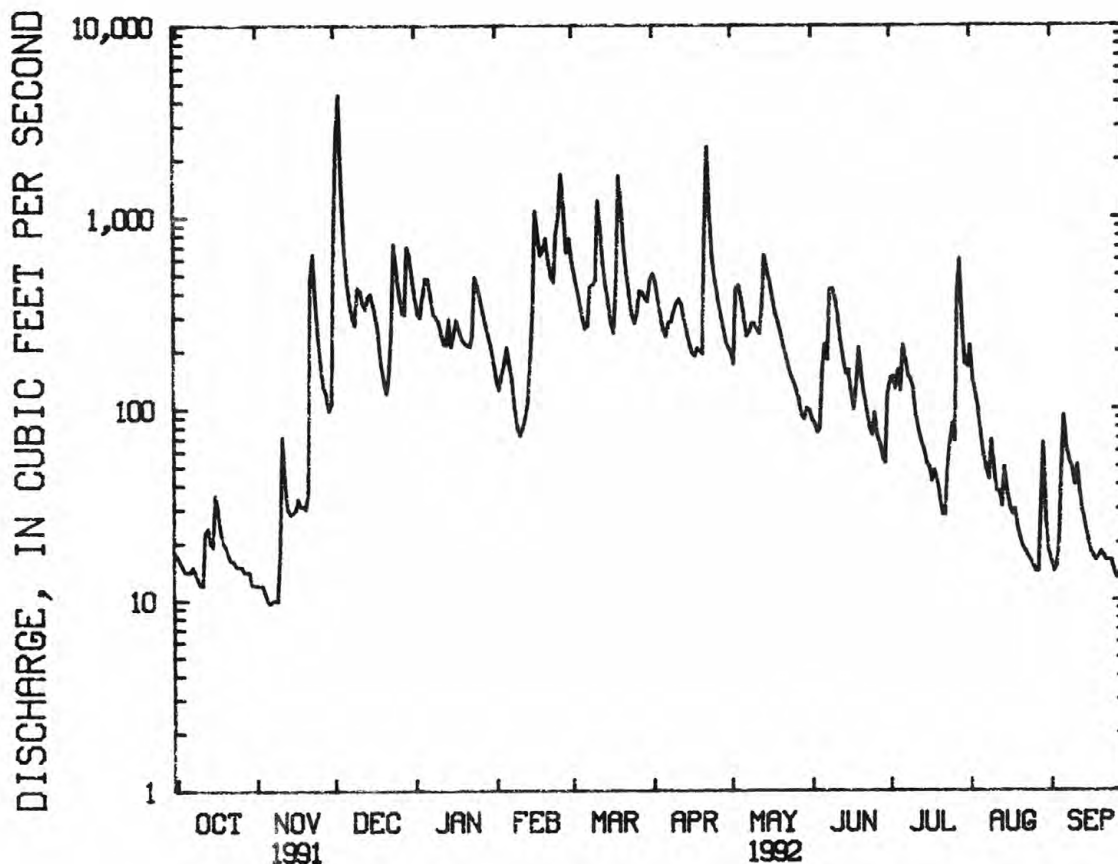
ANNUAL TOTAL	88429.5			93832.5								
ANNUAL MEAN	242			256						260		
HIGHEST ANNUAL MEAN										359		1984
LOWEST ANNUAL MEAN										177		1959
HIGHEST DAILY MEAN	4420	Dec 3		4420	Dec 3				13200	Nov 4		1985
LOWEST DAILY MEAN	9.6	Nov 6		9.6	Nov 6				.50	(a)		
ANNUAL SEVEN-DAY MINIMUM	10	Nov 3		10	Nov 3				.51	Sep 28		1953
INSTANTANEOUS PEAK FLOW				8870	Dec 2				b37100	Nov 4		1985
INSTANTANEOUS PEAK STAGE				7.93	Dec 2				c15.82	Nov 4		1985
INSTANTANEOUS LOW FLOW				8.9	Nov 6				.00	(d)		
ANNUAL RUNOFF (CFSM)	1.82			1.93					1.96			
ANNUAL RUNOFF (INCHES)	24.73			26.24					26.59			
10 PERCENT EXCEEDS	577			519					603			
50 PERCENT EXCEEDS	98			165					137			
90 PERCENT EXCEEDS	15			15					17			

a Sept. 29 to Oct. 4, 1953, and Oct. 2, 3, 1968.

b From rating curve extended above 5,000 ft³/s on basis of slope-area measurement of peak flow.

c From floodmarks.

d 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 National Geodetic Vertical Datum of 1929. 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. 3	0300	*18,600	*12.43	Apr. 22	0400	18,300	12.34

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	35	32	529	1250	e540	2020	1320	574	704	360	420	106
2	34	31	4740	991	e520	1580	1260	512	587	421	370	85
3	30	28	13600	858	e480	1260	1080	681	504	355	267	81
4	29	27	4760	1220	e400	1050	929	1070	468	517	227	86
5	29	26	2020	1360	e420	886	819	930	1200	429	204	114
6	31	26	1230	1270	e440	772	764	788	1850	600	164	181
7	31	26	891	1080	e450	794	804	652	1230	695	135	214
8	32	26	700	868	e400	1060	846	613	1150	471	119	262
9	30	26	624	738	e350	1280	838	864	1300	367	139	308
10	29	50	1070	e640	e280	1470	1120	998	1470	328	181	291
11	30	111	1180	e580	e230	6250	1120	943	1130	277	161	265
12	30	116	967	e510	e220	3560	1050	846	875	216	116	240
13	30	112	819	e470	e240	2190	901	823	677	179	114	174
14	31	74	1160	e420	e300	1540	762	1570	550	153	113	136
15	46	58	1440	e430	1180	1210	693	1980	516	145	119	116
16	53	50	1130	e450	4270	964	608	2060	506	135	128	100
17	50	47	887	e430	2900	807	554	1820	501	120	105	86
18	56	47	730	e370	2060	1030	561	1330	384	120	99	77
19	63	47	550	e330	1950	6280	555	1160	554	118	93	75
20	54	47	442	e290	2060	4230	530	1230	697	110	85	74
21	47	52	431	e250	1690	2480	2710	1100	501	97	76	72
22	44	272	e420	e280	1340	1720	12000	907	393	93	70	69
23	42	1300	437	e330	1170	1410	4120	736	319	94	65	67
24	44	782	1070	e430	2600	1080	2250	610	276	111	61	61
25	42	494	1170	e700	3210	926	1610	533	262	174	58	56
26	40	347	876	e680	6930	1080	1220	478	270	180	56	54
27	38	239	710	e640	4190	2000	991	446	235	162	55	56
28	38	177	663	e540	2370	1780	836	372	186	806	80	56
29	35	165	4440	e500	2290	1460	709	367	170	638	186	54
30	34	136	2940	e520	---	1250	620	527	233	401	227	53
31	34	---	1760	e560	---	1310	---	815	---	451	151	---
TOTAL	1191	4971	54386	19985	45480	56729	44180	28335	19708	9323	4444	3669
MEAN	38.4	166	1754	645	1568	1830	1473	914	657	301	143	122
MAX	63	1300	13600	1360	6930	6280	12000	2060	1850	806	420	308
MIN	29	26	420	250	220	772	530	367	170	93	55	53
CFSM	.07	.31	3.25	1.19	2.90	3.39	2.73	1.69	1.22	.56	.27	.23
IN.	.08	.34	3.75	1.38	3.13	3.91	3.04	1.95	1.36	.64	.31	.25

e Estimated

KANAWHA RIVER BASIN

03182500 GREENBRIER RIVER AT BUCKEYE, WV--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1930 - 1992, BY WATER YEAR (WY)

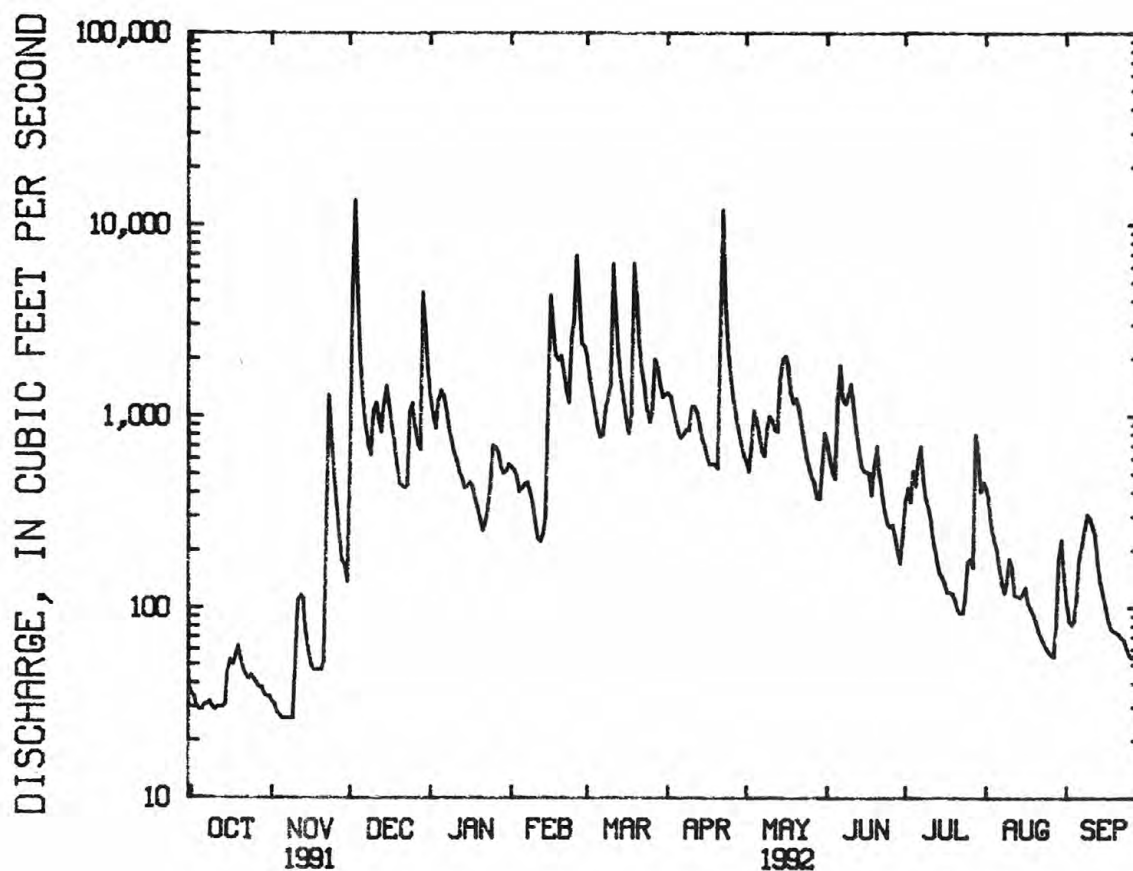
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	360	634	1084	1248	1513	1922	1394	1047	518	339	311	201
MAX	2626	3602	2811	3166	3270	4672	3097	2274	2107	1333	2000	1255
(WY)	1977	1986	1973	1937	1971	1963	1958	1989	1940	1972	1942	1950
MIN	11.8	20.7	115	101	273	764	508	224	67.9	27.8	21.5	13.5
(WY)	1931	1931	1931	1981	1934	1988	1963	1930	1991	1930	1930	1930

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1930 - 1992	
ANNUAL TOTAL	289207		292401		878	
ANNUAL MEAN	792		799		1318	
HIGHEST ANNUAL MEAN					492	
LOWEST ANNUAL MEAN					1973	
HIGHEST DAILY MEAN	13600		13600		44400	
LOWEST DAILY MEAN	26		26		5.2	
ANNUAL SEVEN-DAY MINIMUM	26		26		7.3	
INSTANTANEOUS PEAK FLOW			18600		b82000	
INSTANTANEOUS PEAK STAGE			12.43		c23.20	
INSTANTANEOUS LOW FLOW			24		3.8	
ANNUAL RUNOFF (CFSM)	1.47		1.48		1.63	
ANNUAL RUNOFF (INCHES)	19.92		20.14		22.10	
10 PERCENT EXCEEDS	1970		1700		2070	
50 PERCENT EXCEEDS	280		459		418	
90 PERCENT EXCEEDS	40		47		55	

a Nov. 5-9.

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

c From floodmarks.



KANAWHA RIVER BASIN

03183500 GREENBRIER RIVER AT ALDERSON, WV

LOCATION.--Lat $37^{\circ}43'27''$, long $80^{\circ}38'30''$, 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 National Geodetic Vertical Datum of 1929. Prior to Oct. 15, 1929, nonrecording gage at bridge 400 ft downstream 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 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. 3	1800	24,800	11.45	Apr. 22	1500	*26,900	*12.06
Feb. 26	2130	20,400	10.20				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	107	77	437	3830	1410	4860	2930	1500	3390	655	744	348
2	100	74	1890	2830	1250	3940	2700	1350	2920	774	746	276
3	95	72	18800	2280	1040	3190	2410	1230	2920	847	645	225
4	87	70	13600	3430	1000	2550	2130	1150	2920	1010	525	202
5	84	67	5890	3350	1050	2150	1920	1670	4320	1090	420	189
6	88	68	3500	2910	1160	1880	1860	1530	7200	1500	358	175
7	82	67	2430	2450	1160	1850	1900	1380	5090	1450	324	211
8	75	67	1960	2050	1050	2550	2010	1420	3410	1570	288	312
9	67	67	1640	1730	993	3260	1980	1920	3180	1090	259	307
10	62	99	1740	1520	781	3300	1880	2090	4320	818	251	360
11	65	179	2550	1420	595	11800	2070	2240	3880	666	293	412
12	68	191	2510	1280	573	10800	2010	2020	2880	606	303	394
13	74	191	2120	1140	e600	6340	1850	1880	2200	507	294	357
14	72	211	2040	1050	691	4360	1630	2340	1770	416	264	339
15	73	196	3030	1080	874	3370	1470	3410	1970	367	233	280
16	74	181	3090	1140	7700	2630	1380	4990	1880	334	230	235
17	78	155	2440	1030	8130	2150	1270	4430	1450	320	223	207
18	80	130	1980	878	5290	2210	1200	3400	1320	301	234	189
19	95	121	1690	827	4220	10100	1160	2670	1240	273	227	176
20	109	118	1390	753	3990	11100	1140	2890	1310	242	204	169
21	100	123	1120	641	3720	6640	1450	2900	1540	234	196	159
22	96	191	1030	684	3020	4570	20000	2330	1180	219	179	152
23	106	453	1060	812	2470	3660	11100	1880	958	227	168	152
24	102	1730	1180	1170	3330	2980	6000	1580	813	226	154	145
25	96	1370	1860	1770	7070	2380	4260	1340	739	291	143	136
26	91	900	2060	1750	17700	2650	3300	1190	711	350	135	131
27	88	672	1760	1480	13900	4420	2590	1100	698	313	131	137
28	85	546	1570	1350	7450	4820	2140	1010	665	437	137	142
29	88	437	6580	1260	5110	3850	1830	1020	552	733	159	135
30	83	379	9510	1290	---	3240	1640	2200	490	1210	246	127
31	80	---	5590	1380	---	2940	---	4150	---	748	291	---
TOTAL	2650	9202	108047	50565	107327	136540	91210	66210	67916	19824	9004	6779
MEAN	85.5	307	3485	1631	3701	4405	3040	2136	2264	639	290	226
MAX	109	1730	18800	3830	17700	11800	20000	4990	7200	1570	746	412
MIN	62	67	437	641	573	1850	1140	1010	490	219	131	127
CFSM	.06	.22	2.56	1.20	2.71	3.23	2.23	1.57	1.66	.47	.21	.17
IN.	.07	.25	2.95	1.38	2.93	3.72	2.49	1.81	1.85	.54	.25	.18

e Estimated

KANAWHA RIVER BASIN

03183500 GREENBRIER RIVER AT ALDERSON, WV--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1895 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	751	1263	2272	3017	3494	4492	3099	2347	1328	819	715	425
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 1991 CALENDAR YEAR

FOR 1992 WATER YEAR

WATER YEARS 1895 - 1992

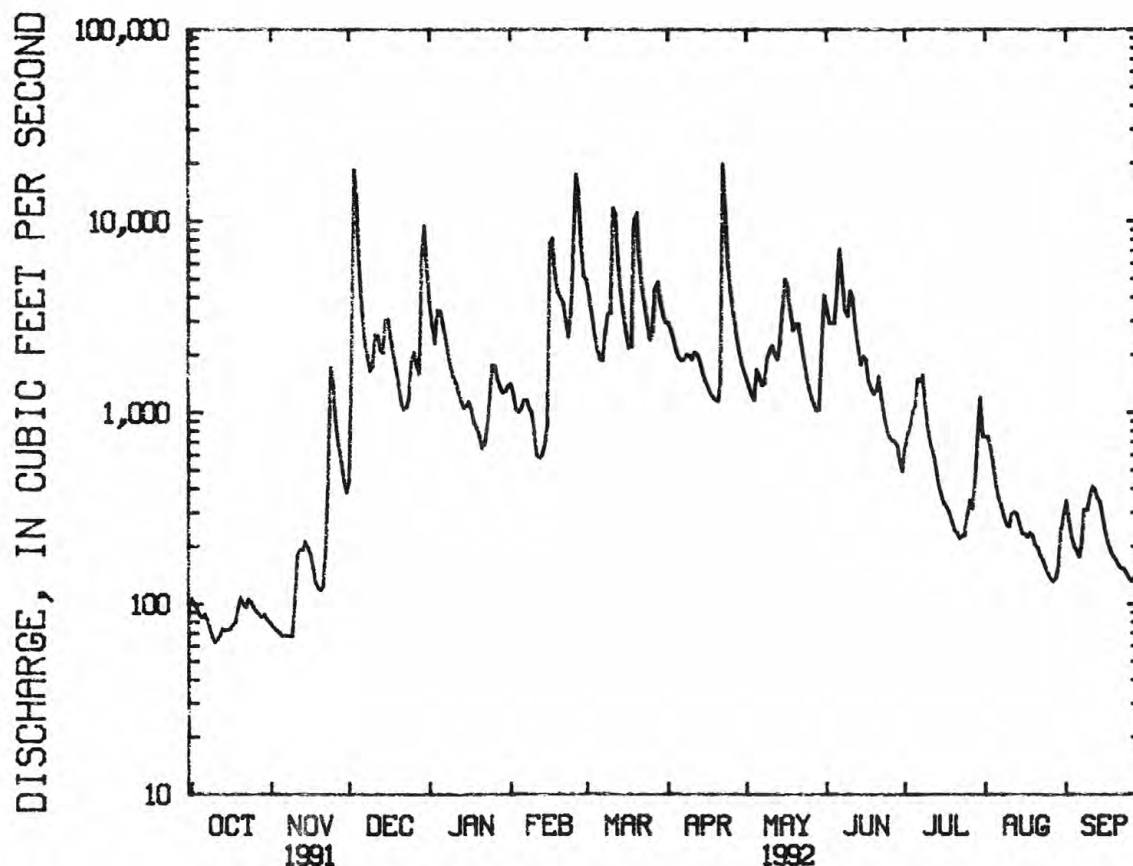
ANNUAL TOTAL	705446		675274									
ANNUAL MEAN	1933		1845							1997		
HIGHEST ANNUAL MEAN										3372		1908
LOWEST ANNUAL MEAN										983		1941
HIGHEST DAILY MEAN	26700	Mar 24	20000	Apr 22					57300	Nov 5	1985	
LOWEST DAILY MEAN	62	Oct 10	62	Oct 10					26	Aug 11	1930	
ANNUAL SEVEN-DAY MINIMUM	68	Nov 3	68	Nov 3					28	Sep 29	1930	
INSTANTANEOUS PEAK FLOW			26900	Apr 22					a90600	Nov 5	1985	
INSTANTANEOUS PEAK STAGE			12.06	Apr 22					b23.95	Nov 5	1985	
INSTANTANEOUS LOW FLOW			61	(c)					24	(d)		
ANNUAL RUNOFF (CFSM)	1.42		1.35						1.46			
ANNUAL RUNOFF (INCHES)	19.24		18.42						19.89			
10 PERCENT EXCEEDS	5600		4170						4760			
50 PERCENT EXCEEDS	703		1140						942			
90 PERCENT EXCEEDS	91		100						148			

a From rating curve extended above 37,000 ft³/s on basis of slope-area measurement of peak flow.

b From floodmarks.

c Oct. 9, 10.

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

REMARKS.--Records good except those for period of estimated daily discharges (no gage-height record), which is 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. 03	2000	25,800	13.54	Apr. 22	2000	*28,500	*14.33

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	111	69	506	4130	1550	5550	3300	1730	4160	565	669	306
2	106	66	1900	3010	1450	4680	3130	1560	3050	738	739	320
3	97	61	17200	2380	1210	3760	2850	1410	2350	845	642	262
4	85	61	16600	3430	1090	3080	2530	1260	2380	987	596	219
5	82	61	6590	3710	1090	2560	2310	1660	6000	1090	466	196
6	85	59	3540	3250	1180	2210	2350	1710	9070	1390	390	199
7	78	59	2320	2780	1230	2360	2390	1600	6590	1310	347	171
8	75	59	1680	2320	1140	3100	2460	1640	4200	1580	319	212
9	70	60	1370	1930	1100	3860	2440	2380	3340	1230	298	303
10	63	94	1380	1680	939	4030	2270	2510	4710	898	271	304
11	60	134	2270	1550	705	12300	2330	2690	4700	715	261	350
12	59	214	2430	1420	611	14300	2370	2480	3390	611	293	386
13	60	222	1920	1250	702	8020	2190	2240	2600	560	303	350
14	61	225	1770	1130	768	5410	1920	2890	2060	463	304	332
15	67	236	2760	1120	870	4060	1720	4220	2230	394	273	303
16	69	222	3060	1170	6790	3240	1600	5670	2420	357	241	255
17	67	205	2310	e1300	9780	2600	1490	5210	1780	333	239	219
18	68	173	1800	e1000	6370	2670	1420	4200	1530	323	231	191
19	71	150	1480	e900	4870	9160	1340	3220	1450	304	235	178
20	77	139	1120	e820	4420	14000	1330	2960	1370	273	221	163
21	95	143	931	e700	4150	8300	2220	3230	1580	247	197	156
22	98	228	784	e800	3470	5580	17200	2740	1340	238	189	148
23	88	383	801	e920	2870	4380	16100	2240	1060	238	174	143
24	94	1300	1040	e1400	3430	3620	7820	1850	882	239	164	137
25	99	1490	1650	e2000	7750	2930	5390	1570	792	242	150	130
26	89	948	2240	e1900	19700	2920	4120	1370	762	343	140	124
27	82	666	1740	e1700	17600	4630	3250	1220	751	365	132	125
28	78	507	1560	1510	9350	5580	2700	1120	712	397	133	128
29	76	407	6350	1410	6200	4560	2280	1160	625	487	139	127
30	73	346	11600	1400	---	3780	1950	2570	546	845	153	120
31	73	---	6450	1480	---	3370	---	5010	---	855	250	---
TOTAL	2456	8987	109152	55500	122385	160600	106770	77320	78430	19462	9159	6557
MEAN	79.2	300	3521	1790	4220	5181	3559	2494	2614	628	295	219
MAX	111	1490	17200	4130	19700	14300	17200	5670	9070	1580	739	386
MIN	59	59	506	700	611	2210	1330	1120	546	238	132	120
CFSM	.05	.19	2.17	1.11	2.61	3.20	2.20	1.54	1.61	.39	.18	.14
IN.	.06	.21	2.51	1.28	2.81	3.69	2.45	1.78	1.80	.45	.21	.15

e Estimated

KANAWHA RIVER BASIN

03184000 GREENBRIER RIVER AT HILLDALE, WV--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1936 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	867	1393	2709	3319	4111	5065	3647	2752	1421	769	740	463
MAX	5112	6109	7866	8825	8236	12910	9535	6673	4713	3372	3800	1982
(WY)	1977	1986	1974	1937	1939	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 1991 CALENDAR YEAR

FOR 1992 WATER YEAR

WATER YEARS 1936 - 1992

ANNUAL TOTAL	813032		756778									
ANNUAL MEAN	2227		2068							2265		
HIGHEST ANNUAL MEAN										3359		1973
LOWEST ANNUAL MEAN										1189		1941
HIGHEST DAILY MEAN	31100	Mar 24				19700	Feb 26			51000	Dec 27	1973
LOWEST DAILY MEAN	59	(a)				59	(a)			39	Sep 19	1946
ANNUAL SEVEN-DAY MINIMUM	60	Nov 3				60	Nov 3			44	Oct 17	1953
INSTANTANEOUS PEAK FLOW						28500	Apr 22			b83800	Nov 6	1985
INSTANTANEOUS PEAK STAGE						14.33	Apr 22			c25.68	Nov 6	1985
INSTANTANEOUS LOW FLOW						59	(d)			39	(f)	
ANNUAL RUNOFF (CFSM)	1.38					1.28				1.40		
ANNUAL RUNOFF (INCHES)	18.68					17.39				19.01		
10 PERCENT EXCEEDS	6430					4700				5420		
50 PERCENT EXCEEDS	744					1190				1060		
90 PERCENT EXCEEDS	88					96				158		

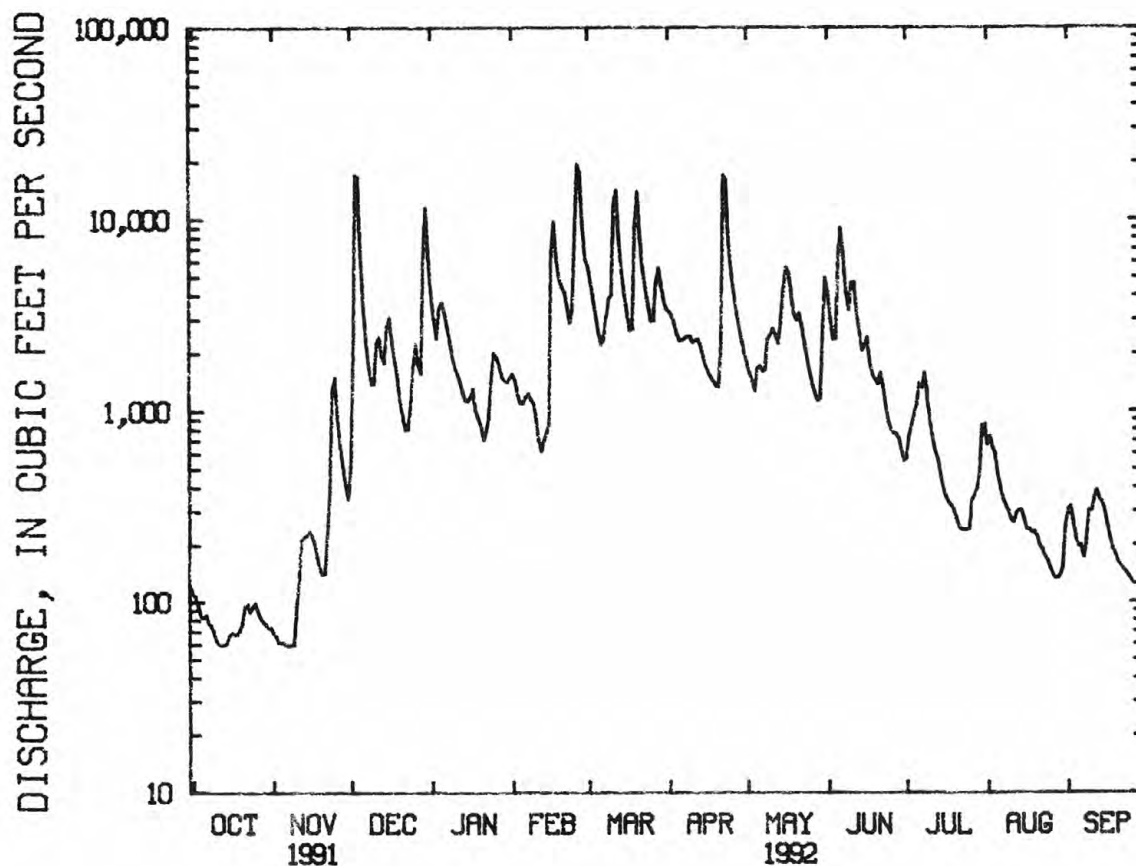
a Oct. 12, Nov. 6-8.

b From rating curve extended above 57,000 ft³/s.

c From floodmarks.

d Oct. 11-14, Nov. 5-9.

f 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 National Geodetic Vertical Datum of 1929. 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, 60,100 ft³/s, Apr. 22, gage height, 8.62 ft.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1130	1480	3230	10700	4620	17400	11300	8850	14100	7000	4140	3750
2	1140	1480	10300	8600	3780	14000	9500	4300	13000	6310	3370	3440
3	1130	1480	27900	7350	3530	10600	8100	7660	10300	5440	3230	3130
4	1140	1310	32300	17400	4160	10100	10200	6090	11700	5580	3380	2650
5	1120	1180	17200	29000	4390	8880	7140	7510	39200	5710	3270	2640
6	1120	1380	11800	22900	4090	7440	6040	7930	53600	6480	2790	4540
7	1120	1500	7770	16600	4060	8890	8600	6040	50500	6150	2530	4590
8	1130	1490	5050	12800	3520	14500	10600	8800	43200	5660	2510	3480
9	1120	1480	4650	9800	2530	12100	10600	12900	36500	5590	2840	3400
10	1330	1890	4210	6640	2900	13500	9660	14800	32500	5060	3160	3320
11	1340	4600	5290	6290	3860	31600	9880	13000	26100	4660	3100	4000
12	1160	6400	6520	5750	3890	33100	8200	11300	19300	4960	3110	3620
13	1300	4200	5250	4600	3650	21700	5900	11200	17100	4200	3680	3040
14	1500	4200	5100	5340	3810	16200	7740	12800	12900	3940	4880	2440
15	1590	3480	5610	4770	3930	12600	8930	14100	13500	4040	4090	2620
16	1780	2600	5370	4710	9470	10200	5900	19300	13000	3990	3190	2610
17	1760	2090	4470	4980	14900	9520	4270	18400	15400	3950	2450	2890
18	1600	1910	3780	4260	11300	8280	5170	15000	11600	3610	2710	2660
19	1490	1870	3390	3440	9920	18200	6560	13000	9680	3380	3350	2400
20	1500	1850	2930	3050	9580	22100	6070	12200	10300	2940	2980	2380
21	1520	1870	2710	2890	8720	15200	12100	10200	9830	3620	2750	2360
22	1530	2540	2580	2920	7130	12100	46400	9060	8160	3870	2760	2340
23	1530	4170	2610	5090	5630	8970	53700	8630	7440	3830	2770	2330
24	1530	5950	3530	5350	5810	10700	44000	7720	6880	4390	2760	2320
25	1530	5870	4990	7310	13900	10300	33900	6670	6630	4530	2910	2190
26	1520	4090	5740	6420	42300	8530	20200	6280	6630	4820	2490	1970
27	1500	3370	4690	5320	46800	12200	13800	6130	7040	4850	3130	1990
28	1500	3220	4580	5680	34100	14500	11400	6510	7170	4570	6240	1980
29	1500	2690	14300	5870	22900	12000	10500	7750	5500	4680	5540	2180
30	1490	2140	21300	5890	---	9950	9600	13900	6000	4650	3090	2360
31	1480	---	12900	6030	---	8230	---	15000	---	4330	3470	---
TOTAL	43130	83780	252050	247750	299180	423590	415960	323030	524760	146790	102670	85620
MEAN	1391	2793	8131	7992	10320	13660	13870	10420	17490	4735	3312	2854
MAX	1780	6400	32300	29000	46800	33100	53700	19300	53600	7000	6240	4590
MIN	1120	1180	2580	2890	2530	7440	4270	4300	5500	2940	2450	1970

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 - 1992, BY WATER YEAR (WY)

	4134	5317	8003	9741	12850	15090	12410	9531	6315	4209	3955	3368
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

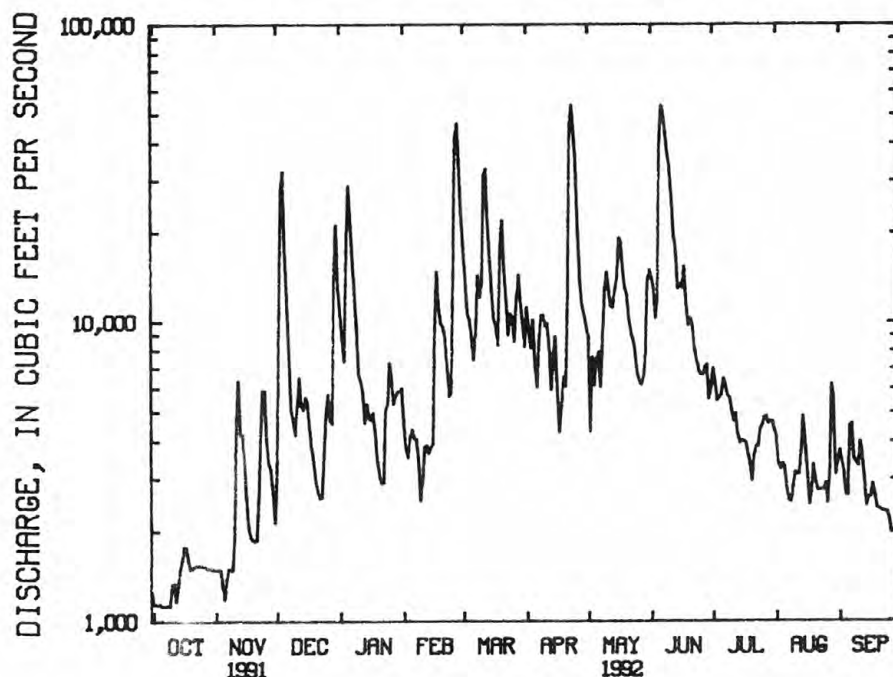
FOR 1991 CALENDAR YEAR

FOR 1992 WATER YEAR

WATER YEARS 1939 - 1992

ANNUAL TOTAL	2879380	2948310	
ANNUAL MEAN	7889	8055	7884
HIGHEST ANNUAL MEAN			11490
LOWEST ANNUAL MEAN			3988
HIGHEST DAILY MEAN	50600	Jan 12	53700
LOWEST DAILY MEAN	1120	(a)	1120
ANNUAL SEVEN-DAY MINIMUM	1130	Oct 3	1130
INSTANTANEOUS PEAK FLOW			60100
INSTANTANEOUS PEAK STAGE			8.62
INSTANTANEOUS LOW FLOW			890
10 PERCENT EXCEEDS	17900		15300
50 PERCENT EXCEEDS	4690		5210
90 PERCENT EXCEEDS	1500		1570

a Oct 5-7, 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.

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 National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for period of estimated daily discharges (missing record), which is fair. Flow regulated by Claytor Lake and Bluestone Lake. National Park Service gage-height telemeter at station.

PEAK DISCHARGE FOR CURRENT YEAR.--Maximum discharge, 68,300 ft³/s, Apr. 23, gage height, 17.12 ft.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1220	1440	2850	12600	5960	20000	10600	10200	15200	6700	4190	3740
2	1170	1440	10700	10200	4050	16400	12300	6220	14000	7010	3910	3720
3	1170	1430	29200	8420	3830	12600	8280	6420	11900	5440	2920	3140
4	1170	1430	39800	12800	3780	10800	10400	8470	9890	5490	3350	3000
5	1160	1200	22500	30600	4820	10600	10000	6150	44100	5530	3240	2440
6	1150	1140	13000	26700	4330	8210	6440	9330	60600	5890	3070	3310
7	1130	1400	10300	18400	4180	9490	8690	6980	57700	6480	2420	5520
8	1130	1460	5720	14700	4160	14800	11800	7830	48500	5580	2380	3430
9	1130	1460	5320	11300	2830	16100	11200	13800	40500	5280	2400	3650
10	1140	1690	6030	8780	2490	13100	11400	15800	35000	5260	3040	3130
11	1420	2480	5810	5860	3340	32400	10000	15600	29600	4480	3040	3650
12	1290	8060	6980	7000	4270	40400	10700	12300	21100	4470	3010	3990
13	1170	4390	6820	5230	3570	25200	6950	12500	18300	4670	3130	3230
14	1360	4430	5810	5070	3750	18900	7020	14400	15300	3480	4360	2610
15	1540	4320	6850	5830	4040	14700	9590	13500	13300	3910	5180	2290
16	1730	e3200	6440	4630	6940	11600	8170	20400	13400	3850	3280	2700
17	1810	e2500	5390	5270	16000	10400	4820	20500	15200	3800	3060	2430
18	1790	e2100	4510	5020	13400	10200	5180	17000	13700	3730	2150	3020
19	1530	1950	3710	3790	10700	17600	6600	13700	10000	3240	3090	2420
20	1480	1910	3420	3110	10300	26500	7260	13600	10700	3160	3300	2380
21	1480	1920	3020	3110	9560	18100	9500	11400	10100	2820	2660	2370
22	1500	2600	2800	2490	8190	14300	45400	9710	8990	3860	2660	2340
23	1510	4250	2760	4880	6540	11600	63000	9190	7580	3580	2650	2300
24	1510	5460	3620	7060	6070	10600	50500	8570	7270	4130	2680	2270
25	1510	7090	5150	7380	11200	12100	39400	7420	6790	4520	2690	2240
26	1500	5130	6390	8350	41300	10100	24000	6680	6730	4520	2880	1980
27	1490	3620	5640	5860	55200	11100	16200	6510	6900	5210	2280	1880
28	1480	3420	4800	6040	40200	15700	12700	6510	7410	5090	5770	1900
29	1460	3220	11200	6360	27100	13500	12500	7510	6310	4740	7980	1860
30	1450	2450	25600	6320	---	11400	10800	13700	5430	4720	3720	2160
31	1450	---	15600	6450	---	9370	---	16500	---	4470	3240	---
TOTAL	43030	88590	287740	269610	322100	477870	461400	348400	571500	145110	103730	85100
MEAN	1388	2953	9282	8697	11110	15420	15380	11240	19050	4681	3346	2837
MAX	1810	8060	39800	30600	55200	40400	63000	20500	60600	7010	7980	5520
MIN	1130	1140	2760	2490	2490	8210	4820	6150	5430	2820	2150	1860

e Estimated

KANAWHA RIVER BASIN

03185400 NEW RIVER AT THURMOND, WV--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1981 - 1992, BY WATER YEAR (WY) [REGULATED, UNADJUSTED]

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	4516	6201	9326	10290	15100	15030	14520	11720	7452	4067	3430	3425
MAX	16510	15260	14530	19370	23470	25010	40500	19650	19050	8029	6602	14310
(WY)	1990	1986	1984	1991	1982	1987	1987	1989	1992	1989	1984	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 1991 CALENDAR YEAR

FOR 1992 WATER YEAR

WATER YEARS 1981 - 1992

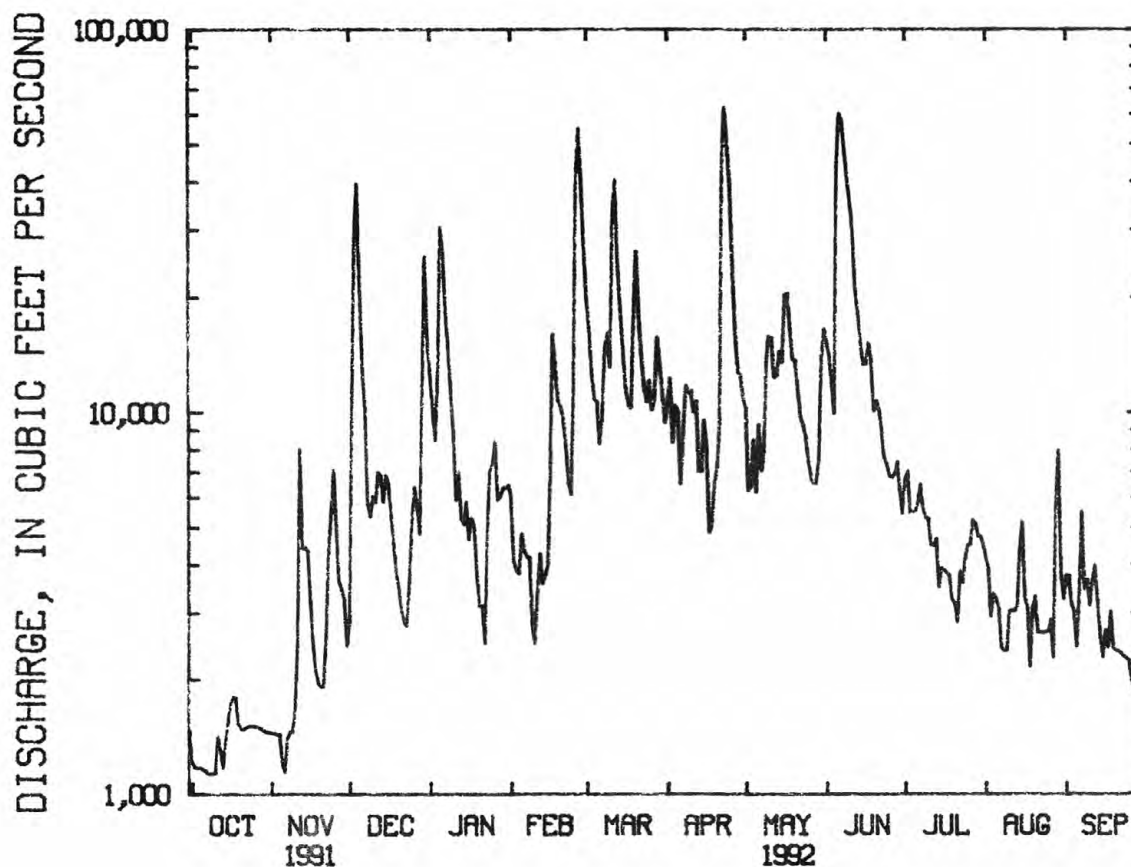
ANNUAL TOTAL	3242330		3204180									
ANNUAL MEAN	8883		8755							8794		
HIGHEST ANNUAL MEAN										11540		1987
LOWEST ANNUAL MEAN										4336		1988
HIGHEST DAILY MEAN	56200	Mar 24		63000	Apr 23					79900	Feb 15	1984
LOWEST DAILY MEAN	1130	(a)		1130	(a)					808	Jul 11	1988
ANNUAL SEVEN-DAY MINIMUM	1140	Oct 4		1140	Oct 4					852	Jul 6	1988
INSTANTANEOUS PEAK FLOW				68300	Apr 23					b89400	Nov 6	1985
INSTANTANEOUS PEAK STAGE				17.12	Apr 23					18.95	Nov 6	1985
INSTANTANEOUS LOW FLOW				1130	(c)					804	(d)	
10 PERCENT EXCEEDS	20900			16600						19100		
50 PERCENT EXCEEDS	5460			5550						5310		
90 PERCENT EXCEEDS	1510			1540						1790		

a Oct. 7-9.

b From rating curve extended above 59,000 ft³/s.

c Oct. 6-10.

d 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 National Geodetic Vertical Datum, 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), 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)
Dec. 2	2100	*15,100	*14.26	Mar. 19	0100	4,790	7.70

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10	13	1440	424	194	689	845	342	251	128	211	54
2	9.6	12	4490	344	157	553	608	285	233	241	144	43
3	8.9	11	4370	322	e140	503	452	845	191	163	130	39
4	8.2	11	1570	456	160	423	364	631	177	258	101	38
5	8.9	10	828	450	224	344	307	465	1310	157	85	39
6	11	10	561	380	204	296	282	355	801	984	67	37
7	10	10	416	305	186	411	389	282	481	559	55	42
8	8.9	9.6	360	252	174	794	489	268	658	320	48	43
9	8.2	9.6	378	259	138	652	690	300	588	233	276	57
10	8.6	16	1050	289	e100	581	769	315	527	226	216	42
11	8.6	172	663	245	e85	1440	589	257	365	164	140	89
12	11	83	471	211	e75	847	455	220	275	124	196	64
13	15	57	469	222	130	619	354	196	211	97	181	42
14	16	50	979	393	347	468	293	199	175	78	291	34
15	22	64	791	424	897	384	274	173	190	75	298	28
16	88	85	540	324	1800	307	241	180	167	77	219	25
17	68	110	400	e250	990	284	242	149	130	58	165	22
18	42	95	307	e180	726	1330	396	155	117	66	141	19
19	33	79	226	e140	780	3070	334	253	353	70	106	28
20	27	69	197	e110	766	1350	292	382	278	48	87	42
21	24	86	e180	e100	536	802	1000	278	184	38	71	30
22	22	1090	200	e140	467	609	1940	218	149	34	59	24
23	19	991	569	391	474	605	861	180	117	76	51	24
24	19	511	1430	1080	1140	443	594	153	99	269	40	25
25	18	327	752	597	955	372	469	145	95	264	34	20
26	17	235	505	443	1770	369	449	127	100	168	29	17
27	17	180	375	326	976	457	401	129	82	792	26	19
28	17	157	321	285	665	409	435	103	64	1180	109	24
29	16	136	1050	250	945	388	377	107	52	485	327	23
30	14	157	807	227	---	417	333	301	62	282	117	18
31	14	---	563	215	---	1180	---	299	---	210	73	---
TOTAL	619.9	4846.2	27258	10034	16201	21396	15524	8292	8482	7924	4093	1051
MEAN	20.0	162	879	324	559	690	517	267	283	256	132	35.0
MAX	88	1090	4490	1080	1800	3070	1940	845	1310	1180	327	89
MIN	8.2	9.6	180	100	75	284	241	103	52	34	26	17
CFSM	.16	1.26	6.87	2.53	4.36	5.39	4.04	2.09	2.21	2.00	1.03	.27
IN.	.18	1.41	7.92	2.92	4.71	6.22	4.51	2.41	2.47	2.30	1.19	.31

e Estimated

KANAWHA RIVER BASIN

03186500 WILLIAMS RIVER AT DYER, WV--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1929 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	173	297	421	448	516	656	496	349	204	188	173	91.9
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 1991 CALENDAR YEAR

FOR 1992 WATER YEAR

WATER YEARS 1929 - 1992

ANNUAL TOTAL	109351.3		125721.1					
ANNUAL MEAN	300		344		334			
HIGHEST ANNUAL MEAN					470		1979	
LOWEST ANNUAL MEAN					187		1941	
HIGHEST DAILY MEAN	4490	Dec 2	4490	Dec 2	10000		Jul 4	1932
LOWEST DAILY MEAN	5.8	Jul 11	8.2	(a)	.50		(b)	
ANNUAL SEVEN-DAY MINIMUM	7.9	Jun 11	9.1	Oct 4	.54		Oct 11	1953
INSTANTANEOUS PEAK FLOW			15100	Dec 2	c22000		Jul 4	1932
INSTANTANEOUS PEAK STAGE			14.26	Dec 2	d18.45		Jul 4	1932
INSTANTANEOUS LOW FLOW			7.8	(f)	.50		(b)	
ANNUAL RUNOFF (CFSM)	2.34		2.68		2.61			
ANNUAL RUNOFF (INCHES)	31.78		36.54		35.42			
10 PERCENT EXCEEDS	787		801		760			
50 PERCENT EXCEEDS	108		217		180			
90 PERCENT EXCEEDS	10		19		21			

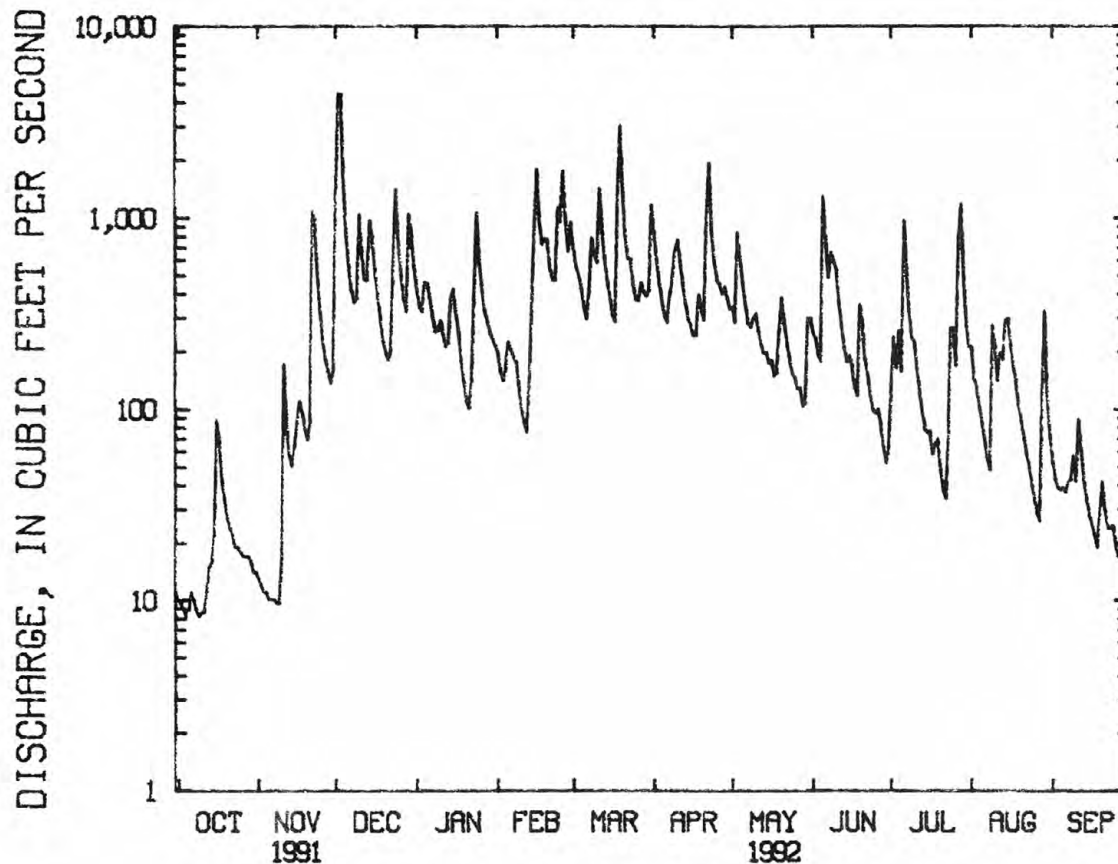
a Oct. 4, 9.

b Oct. 13-16, 21, 1953.

c From rating curve extended above 7,000 ft³/s on basis of slope-area measurements at gage heights 12.33 ft and 18.45 ft.

d From floodmarks.

f Oct. 5, 9.



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 National Geodetic Datum of 1929, from topographic map.

REMARKS.--Records good except those for periods of estimated daily discharges (ice effect), 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. 2	1945	*8,080	*9.80	No other peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.8	8.8	844	278	114	427	562	207	186	48	156	34
2	5.9	8.3	2670	225	99	340	410	176	166	84	99	27
3	5.4	8.1	2950	203	e85	285	297	317	135	70	76	24
4	4.9	7.6	1080	251	95	242	235	289	120	85	65	23
5	4.6	7.3	640	240	119	201	199	232	826	65	55	24
6	6.2	6.9	448	209	112	174	176	188	483	514	42	24
7	5.8	6.7	332	173	103	275	215	160	283	269	35	34
8	4.9	6.8	255	145	97	479	279	149	314	151	30	43
9	5.0	6.5	257	150	83	407	395	160	246	111	292	45
10	5.0	11	684	167	e65	367	423	167	218	144	202	32
11	5.0	109	449	142	e55	876	344	139	169	107	116	63
12	6.7	57	317	123	e45	567	273	120	137	80	95	46
13	9.0	40	302	128	78	417	214	107	109	64	91	30
14	10	35	686	208	181	308	178	121	92	50	121	24
15	14	43	555	232	469	250	160	107	98	52	124	20
16	68	51	384	182	1120	203	144	103	81	55	109	18
17	48	65	276	e130	667	182	145	94	64	42	98	16
18	29	60	206	e100	459	814	208	101	60	69	87	15
19	22	51	156	e75	483	2080	183	170	112	64	67	19
20	18	45	133	e65	487	892	166	228	94	42	51	24
21	16	67	e120	e60	340	574	583	175	68	33	39	20
22	15	775	134	e140	289	430	1250	139	58	32	33	17
23	14	716	414	255	290	413	548	113	48	66	29	17
24	13	357	1080	667	733	292	383	98	42	118	23	15
25	12	227	521	e450	647	239	311	92	44	132	19	13
26	12	163	346	e300	1170	233	292	81	49	119	17	11
27	12	125	252	205	662	278	271	86	40	527	16	13
28	11	106	213	174	444	247	304	69	32	834	55	16
29	10	92	650	154	560	226	260	80	26	360	204	16
30	9.5	100	544	137	---	244	224	270	30	205	76	13
31	9.2	---	380	126	---	753	---	232	---	154	47	---
TOTAL	417.9	3362.0	18278	6094	10151	13715	9632	4770	4430	4746	2569	736
MEAN	13.5	112	590	197	350	442	321	154	148	153	82.9	24.5
MAX	68	775	2950	667	1170	2080	1250	317	826	834	292	63
MIN	4.6	6.5	120	60	45	174	144	69	26	32	16	11
CFSM	.17	1.39	7.33	2.45	4.35	5.50	3.99	1.91	1.84	1.90	1.03	.31
IN.	.19	1.56	8.46	2.82	4.70	6.35	4.46	2.21	2.05	2.20	1.19	.34

e Estimated

KANAWHA RIVER BASIN

03187500 CRANBERRY RIVER NEAR RICHWOOD, WV--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1945-1952, 1964-1982, 1984-1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	132	225	324	312	349	438	321	262	155	123	113	89.2
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	9.83	36.7	63.0	40.3	68.2	245	137	86.1	12.7	10.4	8.56	2.50
(WY)	1948	1947	1966	1977	1978	1976	1946	1991	1966	1991	1946	1946

SUMMARY STATISTICS

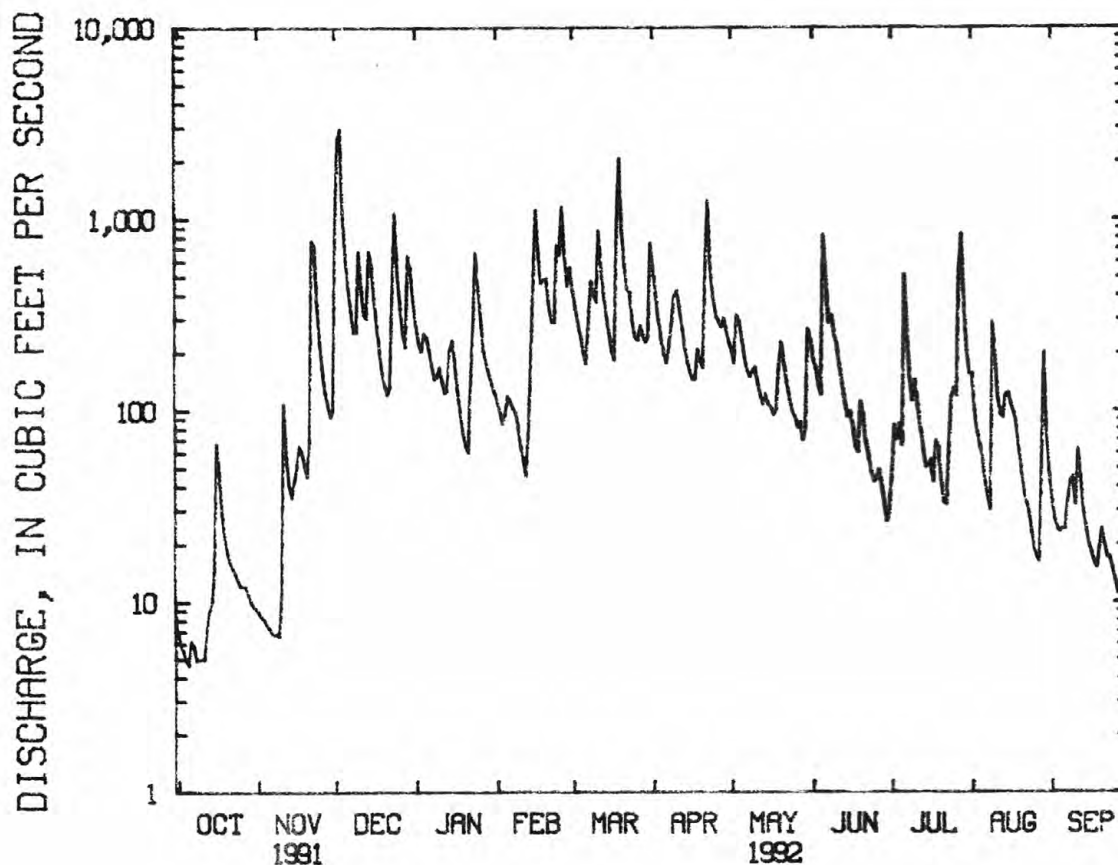
FOR 1991 CALENDAR YEAR

FOR 1992 WATER YEAR

WATER YEARS 1945 - 1952
1964 - 1982
1984 - 1992

ANNUAL TOTAL	69944.3		78900.9									
ANNUAL MEAN	192		216									
HIGHEST ANNUAL MEAN									236			
LOWEST ANNUAL MEAN									318			1979
HIGHEST DAILY MEAN	2950	Dec 3	2950	Dec 3					156			1966
LOWEST DAILY MEAN	2.3	Jul 12	4.6	Oct 5					6770	.16		Mar 21 1984
ANNUAL SEVEN-DAY MINIMUM	4.3	Jul 6	5.2	Oct 4					.28			Aug 21 1987
INSTANTANEOUS PEAK FLOW			8080	Dec 2					a11200	.14		Aug 15 1987
INSTANTANEOUS PEAK STAGE			9.80	Dec 2					b11.93			Aug 21 1989
INSTANTANEOUS LOW FLOW			4.3	Oct 5					.14			Aug 21 1989
ANNUAL RUNOFF (CFSM)	2.38		2.68						2.93			Aug 22 1987
ANNUAL RUNOFF (INCHES)	32.36		36.51						39.85			
10 PERCENT EXCEEDS	517		516						538			
50 PERCENT EXCEEDS	67		122						133			
90 PERCENT EXCEEDS	6.5		14						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 (gage 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 National Geodetic Vertical Datum of 1929.

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. 2	2300	*39,200	*22.25	Mar. 19	0500	14,000	16.21

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	42	45	4160	1960	899	2980	3810	1410	1050	340	987	251
2	38	43	13000	1560	691	2330	2800	1180	962	831	646	202
3	34	41	19800	1360	650	1930	2090	2400	782	561	503	176
4	32	39	7060	1480	694	1610	1690	2430	674	966	427	172
5	33	37	3550	1460	853	1310	1410	1790	2970	648	350	174
6	38	36	2370	1340	889	1130	1310	1380	2760	2960	286	176
7	39	36	1740	1100	815	1470	1580	1100	1760	2330	238	160
8	36	35	1420	928	748	2850	1870	973	2490	1300	207	173
9	34	35	1450	885	603	2780	2170	1050	2590	890	973	185
10	33	50	4460	1020	468	2400	2640	1060	2590	921	1040	187
11	32	334	3140	919	e350	5660	2150	924	1640	687	531	216
12	35	348	2180	780	e300	3810	1740	787	1160	483	907	244
13	40	245	1860	794	523	2770	1390	702	843	382	591	173
14	44	214	3600	1260	1380	2090	1130	907	666	307	845	129
15	60	225	3440	1740	2880	1720	1030	779	930	281	1330	107
16	189	286	2400	1420	6570	1370	925	749	1020	297	1120	95
17	267	357	1750	e1100	4200	1220	888	650	737	280	753	78
18	188	364	1340	e800	2940	4110	1550	633	552	321	595	69
19	136	301	983	e600	2800	11000	1470	1030	1100	317	447	80
20	107	263	728	e450	2840	5750	1240	1320	1390	234	354	107
21	90	273	e750	e400	2100	3470	2560	1070	866	185	294	119
22	78	2870	894	e500	1790	2580	7760	807	627	171	326	97
23	72	3870	1560	1270	1710	2830	3760	638	478	241	266	85
24	65	1990	6130	4410	3320	2170	2570	528	396	641	210	78
25	61	1230	3420	2780	3420	1760	2000	500	371	1050	169	71
26	59	853	2290	2070	6120	1630	1920	445	394	625	140	64
27	57	622	1680	1500	4200	1820	1840	441	344	1790	120	62
28	55	513	1390	1280	2860	1760	1960	381	278	4440	224	74
29	53	444	3500	1140	3580	1750	1760	429	228	2090	1150	82
30	49	442	3580	1040	---	1760	1530	1190	337	1190	530	75
31	47	---	2600	979	---	4340	---	1300	---	844	332	---
TOTAL	2143	16441	108225	40325	61193	86160	62543	30983	32985	28603	16891	3961
MEAN	69.1	548	3491	1301	2110	2779	2085	999	1099	923	545	132
MAX	267	3870	19800	4410	6570	11000	7760	2430	2970	4440	1330	251
MIN	32	35	728	400	300	1130	888	381	228	171	120	62
CFSM	.13	1.04	6.60	2.46	3.99	5.25	3.94	1.89	2.08	1.74	1.03	.25
IN.	.15	1.16	7.61	2.84	4.30	6.06	4.40	2.18	2.32	2.01	1.19	.28

e Estimated

KANAWHA RIVER BASIN

03189100 GAULEY RIVER NEAR CRAIGSVILLE, WV--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1965-1982, 1986-1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	862	1409	2018	1823	2090	2605	2041	1561	953	746	700	504
MAX	3531	4464	3561	3622	3612	4968	3525	3339	2730	2129	2819	1765
(WY)	1977	1986	1979	1974	1982	1967	1987	1989	1974	1979	1989	1971
MIN	69.1	302	341	464	551	1433	894	463	100	72.7	67.9	119
(WY)	1992	1979	1966	1977	1978	1976	1976	1991	1991	1991	1988	1991

SUMMARY STATISTICS

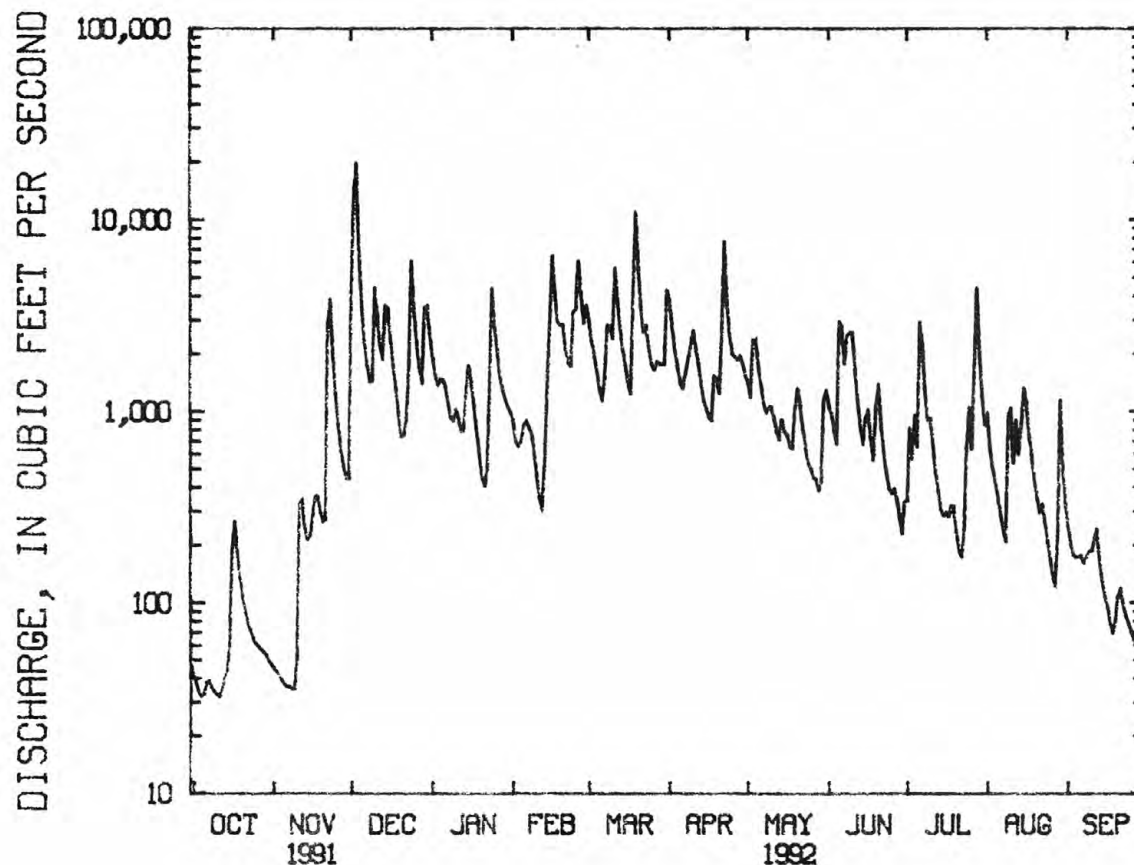
FOR 1991 CALENDAR YEAR

FOR 1992 WATER YEAR

WATER YEARS 1965 - 1982
1986 - 1992

ANNUAL TOTAL	436998			490453								
ANNUAL MEAN	1197			1340						1440		
HIGHEST ANNUAL MEAN										1914		1979
LOWEST ANNUAL MEAN										866		1966
HIGHEST DAILY MEAN	19800	Dec 3		19800	Dec 3					29800	Oct 9	1976
LOWEST DAILY MEAN	27	Jul 12		32	(a)					8.5	Aug 21	1987
ANNUAL SEVEN-DAY MINIMUM	35	Oct 4		35	Oct 4					11	Aug 16	1987
INSTANTANEOUS PEAK FLOW				39200	Dec 2					b61800	Nov 4	1985
INSTANTANEOUS PEAK STAGE				22.25	Dec 2					25.72	Nov 4	1985
INSTANTANEOUS LOW FLOW				29	Oct 5					7.6	Aug 22	1987
ANNUAL RUNOFF (CFSM)	2.26			2.53						2.72		
ANNUAL RUNOFF (INCHES)	30.73			34.49						36.99		
10 PERCENT EXCEEDS	3310			2950						3290		
50 PERCENT EXCEEDS	368			888						836		
90 PERCENT EXCEEDS	41			70						134		

a Oct. 4, 11.

b From rating curve extended above 35,000 ft^3/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 National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers).

REMARKS.--Records good, except those below 300 cfs, which are fair, and those for period of estimated daily discharges (lake outflow valves closed), which is 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, 14,900 ft³/s, Dec. 4, gage height, 18.29 ft.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2210	940	2510	2780	1520	773	413	1840	1480	428	1540	415
2	1870	932	5210	2290	1160	2520	168	1840	1310	941	1030	415
3	1920	926	8850	2110	1040	2800	169	1820	1200	1360	680	414
4	2520	918	14700	1930	1100	2290	170	2840	972	1010	675	366
5	2720	909	14300	1740	1230	1660	170	2850	2980	787	514	240
6	2700	915	11500	1970	1340	1620	170	2070	3270	3210	412	210
7	2420	914	8180	922	1390	1790	170	1440	2420	2850	355	210
8	1160	630	5590	348	1100	3200	170	1200	2660	1550	196	298
9	712	474	3910	356	949	3970	170	1320	2980	1350	973	243
10	710	473	3550	360	700	3260	171	1380	3070	1010	2320	412
11	707	473	4550	364	888	5950	650	1220	2150	914	612	1470
12	1650	886	4950	367	929	6970	1660	1220	1550	732	954	1600
13	1460	1210	4350	369	859	4620	2160	1110	1070	544	1510	1610
14	410	1190	4020	373	1640	3080	1560	1060	932	320	1340	1510
15	396	1180	5350	379	2920	2560	1000	1060	1320	320	2410	502
16	251	1170	5210	384	6020	1900	936	1060	2060	321	2250	479
17	152	828	3370	387	7420	1640	1200	1060	1550	321	1330	479
18	350	590	2430	391	4300	4250	2080	1000	735	380	1210	1450
19	534	730	1660	458	3090	9250	2510	1610	1340	402	908	1580
20	533	803	1040	536	3270	9060	2130	1740	2300	329	573	1600
21	516	662	1250	611	2690	5140	2540	1500	1460	329	496	1470
22	466	1350	1500	1000	2140	4010	10900	1160	917	329	496	463
23	433	2320	2000	1310	2180	4000	6030	888	664	329	407	456
24	432	2370	2970	4420	2340	3130	3650	788	662	997	268	456
25	430	2900	2810	5910	2160	2030	2970	790	659	2140	221	1370
26	429	3440	3730	3450	1990	2030	2510	789	613	1060	211	1530
27	429	2930	4060	2350	2030	2030	2310	623	517	1380	202	1490
28	710	2280	3470	1840	1160	2030	2310	412	430	6380	867	1360
29	957	1660	4080	1710	177	1890	2750	286	283	3510	876	e360
30	951	1060	5020	1580	---	1660	2390	1220	207	1400	799	e110
31	945	---	3790	1770	---	1340	---	2160	---	1540	626	---
TOTAL	32083	38063	149910	44765	59732	102453	56187	41356	43761	38473	27261	24568
MEAN	1035	1269	4836	1444	2060	3305	1873	1334	1459	1241	879	819
MAX	2720	3440	14700	5910	7420	9250	10900	2850	3270	6380	2410	1610
MIN	152	473	1040	348	177	773	168	286	207	320	196	110

e Estimated

KANAWHA RIVER BASIN

03189600 GAULEY RIVER BELOW SUMMERSVILLE DAM, WV--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966-1982, 1987-1992, BY WATER YEAR (WY) [REGULATED, UNADJUSTED]

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	2144	2693	2848	2755	2747	3224	1491	2101	1487	1050	1147	1212
MAX	5705	5258	4995	5825	5087	5555	5468	4806	3888	3052	3882	3352
(WY)	1977	1973	1973	1974	1982	1975	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

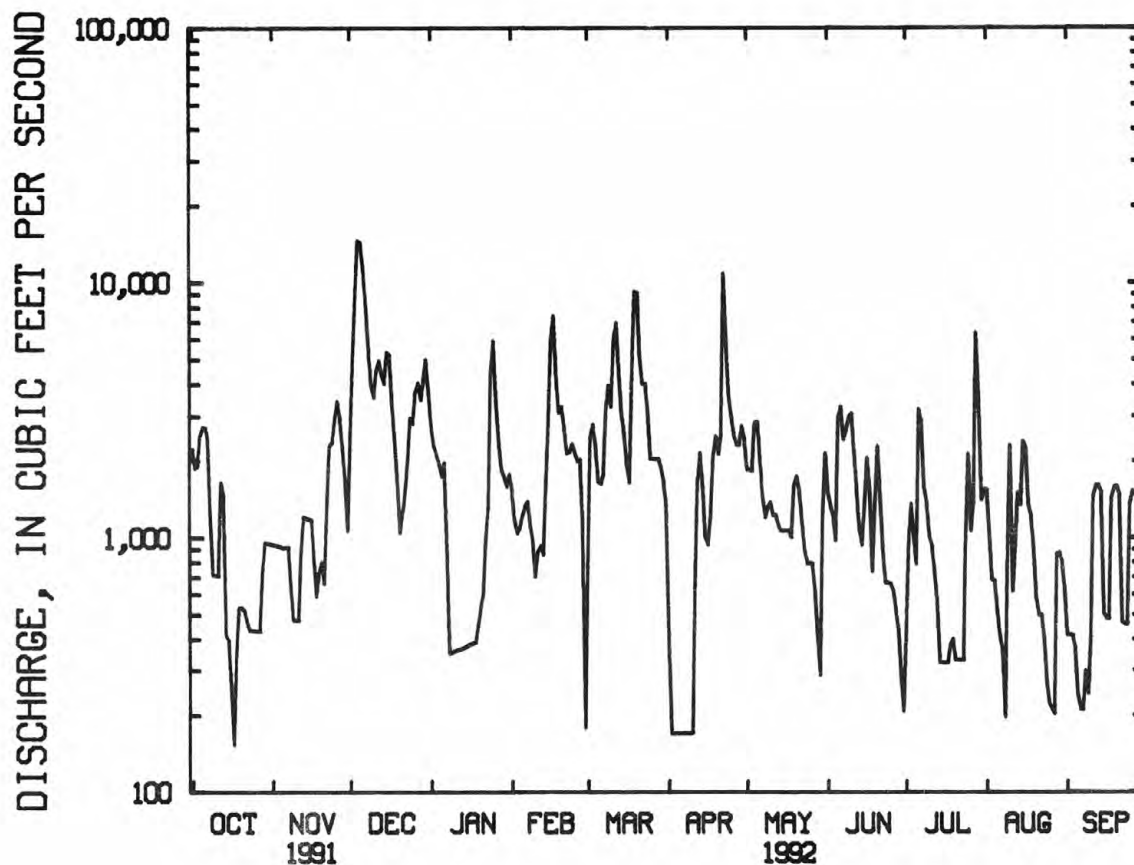
SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1966 - 1982	
ANNUAL TOTAL	636950		658612		1987 - 1992	
ANNUAL MEAN	1745		1799		2071	
HIGHEST ANNUAL MEAN					2741	
LOWEST ANNUAL MEAN					1346	
HIGHEST DAILY MEAN	14700	Dec 4	14700	Dec 4	18000	Aug 24 1989
LOWEST DAILY MEAN	99	Jun 23	e110	Sep 30	2.4	(a)
ANNUAL SEVEN-DAY MINIMUM	101	Jun 17	170	Apr 2	2.5	Feb 10 1967
INSTANTANEOUS PEAK FLOW			14900	Dec 4	18200	Aug 24 1989
INSTANTANEOUS PEAK STAGE			18.29	Dec 4	19.39	Aug 24 1989
INSTANTANEOUS LOW FLOW			(c)	Sep 30	1.9	(b)
10 PERCENT EXCEEDS	4950		3750		4790	
50 PERCENT EXCEEDS	730		1280		1310	
90 PERCENT EXCEEDS	140		353		180	

a Feb. 10, 13-16, 1967.

b Feb. 16, 17, 1967.

c Not determined.

e Estimated.



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 National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good except those for periods of estimated daily discharges (ice effect, recorder malfunction), 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. 2	2200	*10,200	*10.88	No other peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.3	7.0	531	1460	683	1740	1780	748	1380	177	265	129
2	7.6	6.7	3120	1140	564	1380	1500	633	1160	306	230	98
3	6.7	8.0	6160	888	490	1100	1210	570	906	e250	176	86
4	6.5	7.4	3650	745	492	869	1030	502	685	e350	159	72
5	7.0	7.4	1910	681	546	712	900	445	2460	e280	137	66
6	7.3	7.1	1200	624	598	632	942	412	3080	e420	117	65
7	6.7	6.7	828	560	553	745	1260	405	2500	537	96	75
8	6.5	6.5	575	481	497	1550	1430	495	2030	415	84	80
9	6.4	6.7	508	443	424	1700	1290	772	1750	303	84	73
10	5.8	11	1660	454	302	1560	1090	883	1450	230	100	66
11	5.2	43	1450	439	e200	3250	906	901	1040	201	120	62
12	5.2	133	1000	390	e150	2620	814	822	780	186	102	50
13	5.4	95	809	375	e190	2040	707	720	595	171	81	43
14	5.2	78	1420	457	387	1620	611	1020	465	136	101	38
15	7.4	66	1770	620	860	1280	557	1140	455	118	193	34
16	9.6	63	1320	605	2600	975	515	1020	510	156	204	30
17	12	63	976	505	2370	823	484	855	450	139	161	28
18	12	58	727	e400	1820	1500	489	734	380	126	213	26
19	11	51	515	e300	1420	3330	458	772	308	108	170	27
20	12	46	358	e230	1160	3060	427	698	308	92	132	37
21	14	45	e370	e200	919	2230	1010	602	260	82	104	43
22	12	317	e400	e250	758	1730	3680	490	202	74	87	46
23	10	802	512	786	668	1650	2450	399	172	131	74	40
24	9.3	456	1480	2550	879	1370	1810	339	156	236	64	34
25	8.6	265	1520	1820	1360	1130	1460	303	180	555	57	31
26	7.8	182	1130	1400	2490	983	1210	278	207	386	48	28
27	7.2	133	850	1020	2750	1040	1070	261	227	499	45	28
28	7.1	104	689	854	2180	1050	1160	236	226	1260	108	30
29	8.7	87	1410	754	1970	1030	1040	300	172	748	308	28
30	7.5	87	2230	730	---	996	879	1090	160	457	274	25
31	7.5	---	1880	725	---	1550	---	1620	---	312	173	---
TOTAL	253.5	3248.5	42958	22886	30280	47245	34169	20465	24654	9441	4267	1518
MEAN	8.18	108	1386	738	1044	1524	1139	660	822	305	138	50.6
MAX	14	802	6160	2550	2750	3330	3680	1620	3080	1260	308	129
MIN	5.2	6.5	358	200	150	632	427	236	156	74	45	25
CFSM	.02	.30	3.80	2.02	2.86	4.18	3.12	1.81	2.25	.83	.38	.14
IN.	.03	.33	4.38	2.33	3.09	4.82	3.48	2.09	2.51	.96	.43	.15

e Estimated

KANAWHA RIVER BASIN

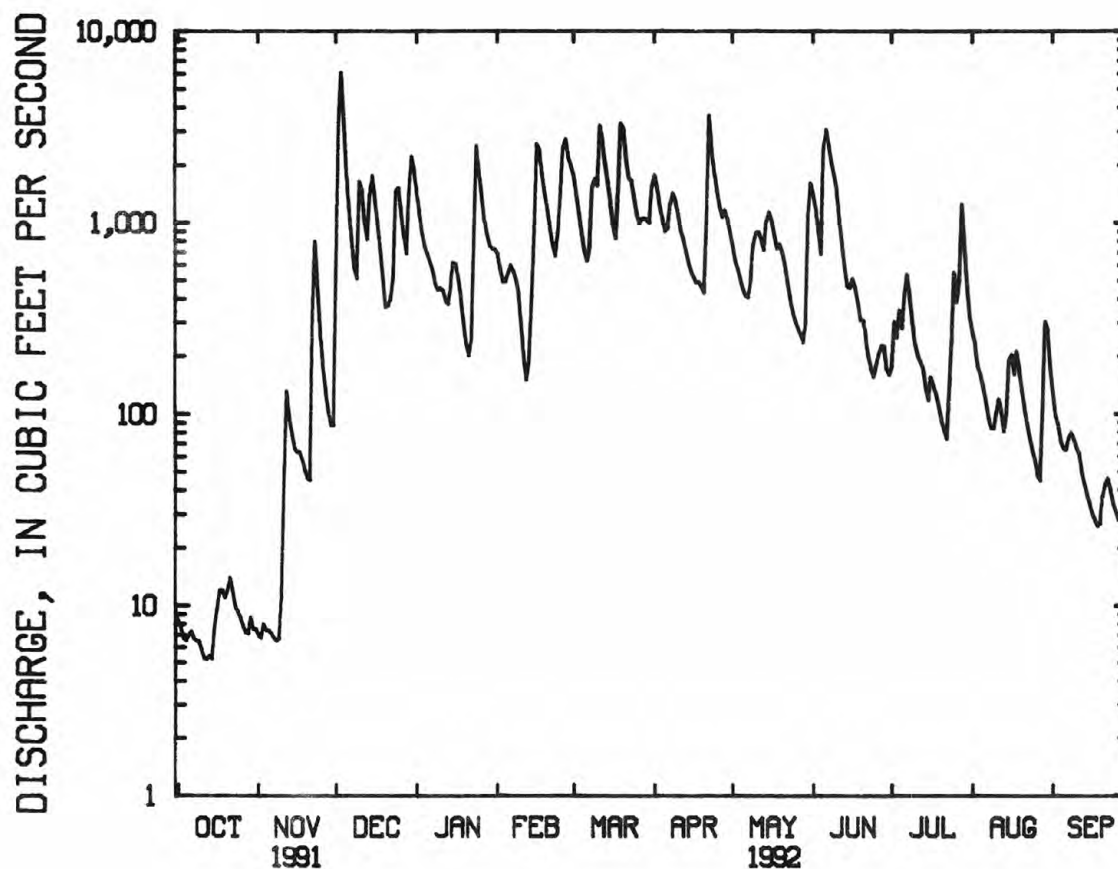
03190400 MEADOW RIVER NEAR MOUNT LOOKOUT, WV--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966-1983, 1986-1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	352	646	1005	1013	1222	1408	1137	876	497	324	299	168
MAX	1574	1529	1710	2148	2081	2492	2687	1904	1139	1057	1074	636
(WY)	1977	1986	1973	1974	1982	1975	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 1991 CALENDAR YEAR	FOR 1992 WATER YEAR	WATER YEARS 1966 - 1983 1986 - 1992
ANNUAL TOTAL	242065.8	241385.0	
ANNUAL MEAN	663	660	740
HIGHEST ANNUAL MEAN			975
LOWEST ANNUAL MEAN			410
HIGHEST DAILY MEAN	6160	6160	14200
LOWEST DAILY MEAN	5.2	5.2	4.1
ANNUAL SEVEN-DAY MINIMUM	5.7	5.7	5.7
INSTANTANEOUS PEAK FLOW		10200	18500
INSTANTANEOUS PEAK STAGE		10.88	13.44
INSTANTANEOUS LOW FLOW		5.0	3.0
ANNUAL RUNOFF (CFSM)	1.82	1.81	2.03
ANNUAL RUNOFF (INCHES)	24.67	24.60	27.54
10 PERCENT EXCEEDS	1970	1630	1850
50 PERCENT EXCEEDS	213	425	424
90 PERCENT EXCEEDS	8.9	12	49

- a Oct. 11, 12, 14.
b Aug. 21, 22, 1987.
c Oct. 11-14.



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 National Geodetic Vertical Datum, 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, 31,300 ft³/s, Dec. 3, gage height, 14.59 ft.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2270	909	3520	4820	2550	2500	3080	2830	3360	430	1960	677
2	1840	903	11000	4200	1890	3960	2220	2660	2700	932	1650	588
3	1820	897	20400	3260	1620	4370	1800	2540	2360	1520	898	575
4	2320	888	20500	3100	1550	3590	1560	3270	1850	1510	856	546
5	2880	879	17300	2600	1790	2820	1410	3710	4680	1310	746	453
6	2870	876	14100	2760	1900	2290	1500	2770	7030	2280	598	403
7	2770	885	9740	2270	1970	2750	1670	2130	5240	4460	537	350
8	1640	833	6920	910	1820	4730	1900	1750	4790	2110	412	384
9	702	495	5160	863	1350	6290	1750	2040	4790	1760	329	442
10	698	530	6350	870	1200	5560	1500	2450	4940	1310	2350	333
11	700	584	6490	875	974	9430	1390	2220	3540	1170	1350	1350
12	1350	688	6570	823	1310	11000	2320	2140	2490	924	576	1710
13	1750	1350	6020	802	1160	8060	3070	1960	1840	850	1540	1670
14	620	1310	5990	880	1460	5190	2670	2040	1410	533	1740	1670
15	441	1270	7510	1070	3410	4520	1760	2320	1610	468	7720	768
16	469	1250	7500	1130	7920	3360	1560	2240	2540	480	5200	528
17	265	1180	5210	1000	10200	2740	1640	2030	2520	495	2200	522
18	196	689	3750	999	7460	5000	2630	1900	1230	493	2000	1180
19	473	700	2610	881	4490	13400	3370	2270	1220	559	1580	1590
20	555	862	1610	980	4900	14100	3150	2790	2740	469	957	1650
21	552	865	1560	925	4000	8680	2500	2210	1910	448	698	1640
22	526	2080	1980	1170	3220	6310	15200	1890	1280	449	646	726
23	472	4120	2760	2190	2870	6310	10000	1410	850	503	618	517
24	462	3330	5470	6500	3360	5570	6130	1160	809	1020	466	503
25	462	3160	5130	9120	3860	3560	4920	1110	852	3000	371	1070
26	458	3970	5140	5550	5380	3360	4130	1070	879	2100	329	1550
27	456	3660	5500	3980	5670	3350	3660	1020	757	1370	301	1530
28	466	2530	5010	2930	4500	3360	3850	731	730	7710	1040	1520
29	910	2260	5290	2740	2690	3280	4010	640	585	5420	2050	610
30	921	1200	8120	2470	---	2930	3940	1620	430	2170	1350	135
31	916	---	7060	2550	---	3500	---	4180	---	1990	1080	---
TOTAL	33230	45153	221270	75218	96474	165870	100290	65101	71962	50243	44148	27190
MEAN	1072	1505	7138	2426	3327	5351	3343	2100	2399	1621	1424	906
MAX	2880	4120	20500	9120	10200	14100	15200	4180	7030	7710	7720	1710
MIN	196	495	1560	802	974	2290	1390	640	430	430	301	135

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	a105000
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 - 1992, BY WATER YEAR (WY) [REGULATED, UNADJUSTED]

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	2250	3339	3957	3709	4253	4906	2932	3040	1882	1429	1438	1289
MAX	7547	8434	7270	8493	7696	8609	7050	7362	5503	4249	5053	3722
(WY)	1977	1986	1973	1974	1982	1975	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

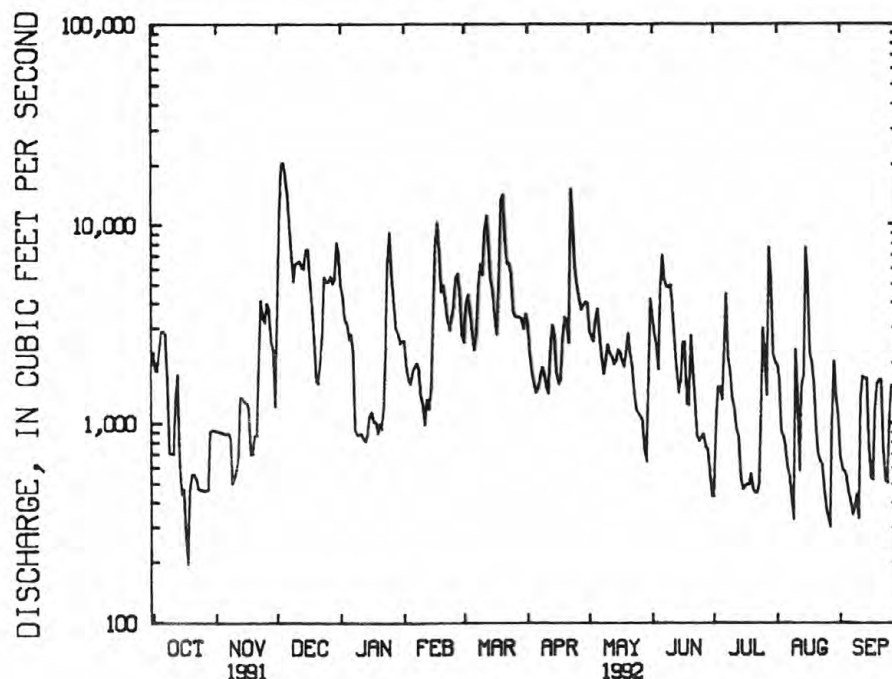
FOR 1991 CALENDAR YEAR

FOR 1992 WATER YEAR

WATER YEARS 1965 - 1992

ANNUAL TOTAL	973826	996149	
ANNUAL MEAN	2668	2722	2864
HIGHEST ANNUAL MEAN			3911
LOWEST ANNUAL MEAN			1452
HIGHEST DAILY MEAN	22500	Mar 24	20500
LOWEST DAILY MEAN	121	Jul 17	135
ANNUAL SEVEN-DAY MINIMUM	135	Jul 11	416
INSTANTANEOUS PEAK FLOW			31300
INSTANTANEOUS PEAK STAGE			14.59
INSTANTANEOUS LOW FLOW			103
10 PERCENT EXCEEDS	7570	5770	6800
50 PERCENT EXCEEDS	1050	1830	1720
90 PERCENT EXCEEDS	213	513	367

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 National Geodetic Vertical Datum of 1929. 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.--No estimated daily discharges. Records good. 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, 83,400 ft³/s, Apr. 23, gage height, 15.43 ft.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3740	2510	6780	20000	9810	25500	14000	14300	20700	7170	6860	4940
2	3290	2550	21200	16700	6920	22800	17300	11200	18400	8380	6330	4890
3	3150	2390	54700	12900	6320	19400	11800	8570	16000	7310	4470	4320
4	3470	2470	65400	12900	5930	15600	12400	12800	12300	7440	4530	4060
5	4150	2340	44800	33800	7210	14800	13800	9800	43200	7120	4480	3510
6	4150	2150	29800	32300	6980	11400	9100	13200	67500	7680	4200	3560
7	4030	2330	23600	23200	6840	12500	10800	10300	64300	11700	3450	6060
8	3180	2500	14400	17700	6730	19700	14500	9120	54900	8130	3180	4650
9	2000	2100	11400	13800	5220	26100	14400	16000	47000	7320	3090	4460
10	1990	2280	14600	11300	4360	19400	14500	19100	41900	7010	5090	4010
11	2150	3070	13700	7160	4560	41200	12200	19700	36000	6120	5130	4830
12	2640	8520	14800	8840	6130	56100	14800	15400	26000	5720	3880	6110
13	3090	6280	14500	6830	5500	37900	11000	15200	21800	6030	4740	5350
14	2250	6240	13400	6410	5650	27600	9850	16700	19100	4670	6080	4810
15	2150	6170	16200	7920	7700	22000	12100	16700	14400	4630	18800	3690
16	2250	4990	15700	6530	13800	17200	11300	22800	17100	4670	11000	3360
17	2280	4110	12000	7000	27200	14400	7180	24000	18300	4560	6390	3210
18	2100	3180	9300	6880	24000	16600	7990	20700	17200	4570	5350	4040
19	2060	2810	7140	5590	16400	30800	10500	17300	11800	4160	5230	4400
20	2160	2970	6010	4810	16700	44700	11300	17700	13600	3890	5040	4280
21	2150	3020	5180	4630	14900	30900	10400	15000	12800	3520	4290	4240
22	2140	5160	5600	4480	12500	23700	54900	12300	11400	4370	4010	3590
23	2110	9300	5890	6890	10300	21200	75300	11400	8920	4650	4020	3060
24	2070	9000	10500	15300	9950	17200	59500	10400	8680	5170	3790	2930
25	2070	10700	11500	18500	13600	17900	47200	8970	8050	7740	3480	3160
26	2070	9840	12500	16200	43000	15300	32600	8020	7970	7160	3500	3790
27	2030	7760	12400	11100	62800	14100	22700	7800	7930	6960	3000	3610
28	1980	6360	10800	9720	48200	20600	18700	7440	8310	13100	5910	3580
29	2440	6010	14300	10100	33600	18800	18300	8410	7750	11000	11600	2980
30	2520	4260	36100	9660	---	15900	16400	13500	6020	7450	6480	2340
31	2540	---	26900	9760	---	14800	---	23000	---	7020	4940	---
TOTAL	80400	143370	561100	378910	442810	706100	596820	436830	669330	206420	172340	121820
MEAN	2594	4779	18100	12220	15270	22780	19890	14090	22310	6659	5559	4061
MAX	4150	10700	65400	33800	62800	56100	75300	24000	67500	13100	18800	6110
MIN	1980	2100	5180	4480	4360	11400	7180	7440	6020	3520	3000	2340

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	a320000
INSTANTANEOUS PEAK STAGE	b37.80
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 - 1992, BY WATER YEAR (WY) [REGULATED, UNADJUSTED]

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	6080	8658	13080	15620	19950	23350	18150	14030	9013	6247	5777	4639
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 1991 CALENDAR YEAR

FOR 1992 WATER YEAR

WATER YEARS 1939 - 1992

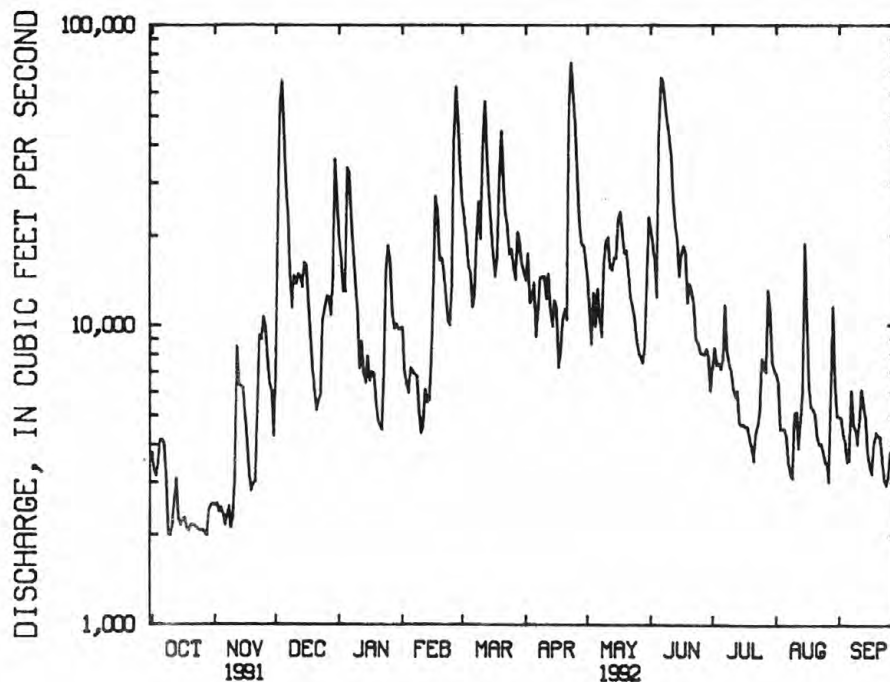
ANNUAL TOTAL	4675590	4516250	
ANNUAL MEAN	12810	12340	12010
HIGHEST ANNUAL MEAN			16830
LOWEST ANNUAL MEAN			6792
HIGHEST DAILY MEAN	80400	Mar 24	75300
LOWEST DAILY MEAN	1980	Oct 28	1980
ANNUAL SEVEN-DAY MINIMUM	2070	Oct 22	2070
INSTANTANEOUS PEAK FLOW			83400
INSTANTANEOUS PEAK STAGE			15.43
INSTANTANEOUS LOW FLOW			1480
10 PERCENT EXCEEDS	32200		24000
50 PERCENT EXCEEDS	8000		8220
90 PERCENT EXCEEDS	2550		2980

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

03193742 KANAWHA RIVER AT GLASGOW, WV

LOCATION.--Lat 38°12'23", long 81°25'30", Kanawha County, Hydrologic Unit 05050006, on right bank at Glasgow Power Plant, at Glasgow, 0.6 mi upstream from Kellys Creek, and at mile 78.4.

DRAINAGE AREA.--8,631 mi².

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: July 1977 to September 1992, discontinued.

REMARKS.--Values published are once-daily readings.

COOPERATION.--Records were furnished by Appalachian Power Company.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: Maximum daily, 30.0°C, Aug. 21, 1978, Aug. 3, 1981, July 22, Aug. 21, 1983, July 12, 1984, July 25, 1986, July 25-27, 1987; minimum daily, -1.0°C, Jan. 10, 12, 1988.

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY INSTANTANEOUS VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18.5	15.0	---	---	3.0	5.5	7.5	---	14.5	22.5	24.0	23.0
2	19.0	14.5	---	4.5	1.5	6.0	6.0	13.0	14.0	23.5	23.0	23.0
3	19.5	---	---	4.5	3.0	6.5	6.5	14.0	14.5	23.5	24.0	23.0
4	19.5	13.5	---	5.0	3.0	8.0	6.0	14.5	16.0	24.5	---	24.5
5	20.0	12.5	---	5.5	3.5	8.5	5.5	15.5	16.5	23.5	24.0	23.5
6	19.5	11.0	8.0	7.0	3.5	9.5	6.0	14.0	15.5	23.5	24.0	24.0
7	19.0	---	6.0	6.0	3.5	10.0	7.0	14.5	16.0	23.5	23.5	24.0
8	19.0	9.5	6.5	5.5	4.0	10.0	7.0	14.5	16.5	21.0	24.5	24.5
9	19.0	9.5	6.5	5.5	2.5	10.0	8.5	14.0	18.0	---	26.5	25.0
10	17.5	9.0	7.0	---	3.0	10.5	9.5	14.0	18.0	24.0	24.5	24.5
11	17.5	8.5	8.5	---	1.5	9.5	11.0	13.5	18.5	24.5	---	25.0
12	16.5	8.5	7.5	---	3.0	7.5	11.0	15.0	17.0	24.5	24.0	23.5
13	16.5	6.5	---	5.0	3.0	7.5	13.0	15.0	18.0	---	---	24.5
14	16.5	6.0	---	5.0	3.0	5.0	13.5	16.5	18.0	26.0	---	23.5
15	16.5	---	---	4.5	3.0	5.0	12.5	15.5	19.0	25.5	---	22.5
16	16.0	---	8.5	3.5	5.0	5.0	12.5	18.0	20.0	26.0	---	22.5
17	15.5	---	---	4.0	4.0	5.0	13.5	18.0	20.5	26.0	20.0	23.0
18	---	8.5	4.5	3.0	4.0	5.0	14.0	18.0	20.5	26.0	20.5	23.0
19	---	---	4.0	1.5	5.0	5.5	14.0	17.0	20.5	28.0	21.0	23.0
20	---	9.5	3.5	1.0	5.5	6.0	14.5	17.0	20.5	26.5	21.0	23.5
21	14.0	10.5	3.5	1.0	5.0	6.0	15.0	18.0	20.5	26.5	21.5	23.5
22	14.0	10.5	3.0	1.0	5.0	6.0	14.5	18.5	20.5	26.5	---	23.0
23	14.5	11.5	3.0	1.0	5.5	6.5	14.0	19.0	---	26.5	---	23.5
24	14.5	11.0	3.0	1.5	5.5	6.0	13.5	18.5	---	26.5	24.0	21.5
25	15.0	10.5	4.0	---	6.0	6.0	13.5	18.5	19.5	26.5	23.5	21.0
26	15.0	9.5	4.0	---	6.0	6.0	13.0	18.0	20.0	26.5	24.0	21.0
27	---	8.0	3.5	1.0	7.0	7.0	12.5	16.5	20.5	25.0	25.0	21.0
28	---	---	3.0	2.0	6.5	6.5	11.5	---	20.5	24.5	25.0	20.5
29	---	---	3.0	2.0	6.5	6.5	11.5	---	21.0	23.0	24.5	20.5
30	---	---	3.5	---	---	7.0	11.5	---	21.5	21.0	24.5	20.0
31	15.5	---	4.0	3.0	---	7.0	---	---	---	23.0	24.5	---

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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 National Geodetic Vertical Datum of 1929.

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. 2	2400	*18,600	*12.57	No other peaks greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	33	37	2060	865	499	1700	1750	708	245	237	846	168
2	30	36	4770	682	398	1260	1340	589	233	440	578	130
3	27	35	9140	584	348	967	996	3470	210	621	458	109
4	25	33	3410	551	366	776	797	2450	188	1030	365	110
5	26	32	1770	563	480	630	661	1490	252	597	298	107
6	29	30	1160	544	551	532	615	1000	681	2570	228	185
7	34	29	838	465	488	523	684	720	495	1660	185	164
8	36	29	688	392	429	1290	752	575	2100	906	154	374
9	31	28	677	368	364	1600	818	533	2070	607	155	300
10	27	35	1900	482	270	1260	1380	531	1910	570	208	217
11	26	114	1500	468	e190	2550	1180	471	1140	459	407	220
12	28	225	1020	401	e150	1930	951	398	743	338	1650	187
13	38	149	790	398	272	1390	750	356	514	264	672	146
14	51	117	1270	651	876	1020	605	485	388	229	556	117
15	63	121	1460	1050	1460	829	552	522	652	189	1650	96
16	116	180	1070	e800	3310	662	481	535	1610	212	885	83
17	173	238	775	e600	2310	577	448	448	934	188	554	72
18	129	241	594	e450	1620	930	800	374	623	175	429	65
19	101	203	443	e350	1520	4010	862	511	1270	181	316	66
20	85	177	326	e270	1490	2730	742	621	1410	157	253	96
21	74	159	344	e200	1110	1730	755	544	893	125	207	78
22	66	734	382	e250	921	1250	3820	414	618	119	172	68
23	61	1870	593	422	832	1480	1950	329	447	296	145	62
24	57	1110	3520	2100	1280	1140	1320	270	344	665	126	62
25	52	696	1900	1500	1550	897	1000	246	353	1160	104	55
26	50	465	1210	1070	2740	820	1070	217	321	783	92	49
27	48	335	827	745	2130	906	1140	205	283	2560	84	49
28	46	266	629	608	1450	908	1100	182	252	4390	138	58
29	45	226	1150	574	1960	897	941	161	203	1770	516	70
30	41	206	1480	553	---	864	793	169	176	1000	376	56
31	39	---	1140	531	---	1720	---	228	---	685	235	---
TOTAL	1687	8156	48836	19487	31364	39778	31053	19752	21558	25183	13042	3619
MEAN	54.4	272	1575	629	1082	1283	1035	637	719	812	421	121
MAX	173	1870	9140	2100	3310	4010	3820	3470	2100	4390	1650	374
MIN	25	28	326	200	150	523	448	161	176	119	84	49
CFSM	.20	1.02	5.92	2.36	4.07	4.82	3.89	2.40	2.70	3.05	1.58	.45
IN.	.24	1.14	6.83	2.73	4.39	5.56	4.34	2.76	3.01	3.52	1.82	.51

e Estimated

KANAWHA RIVER BASIN

03194700 ELK RIVER BELOW WEBSTER SPRINGS, WV--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1960-1983, 1986-1992, BY WATER YEAR (WY)

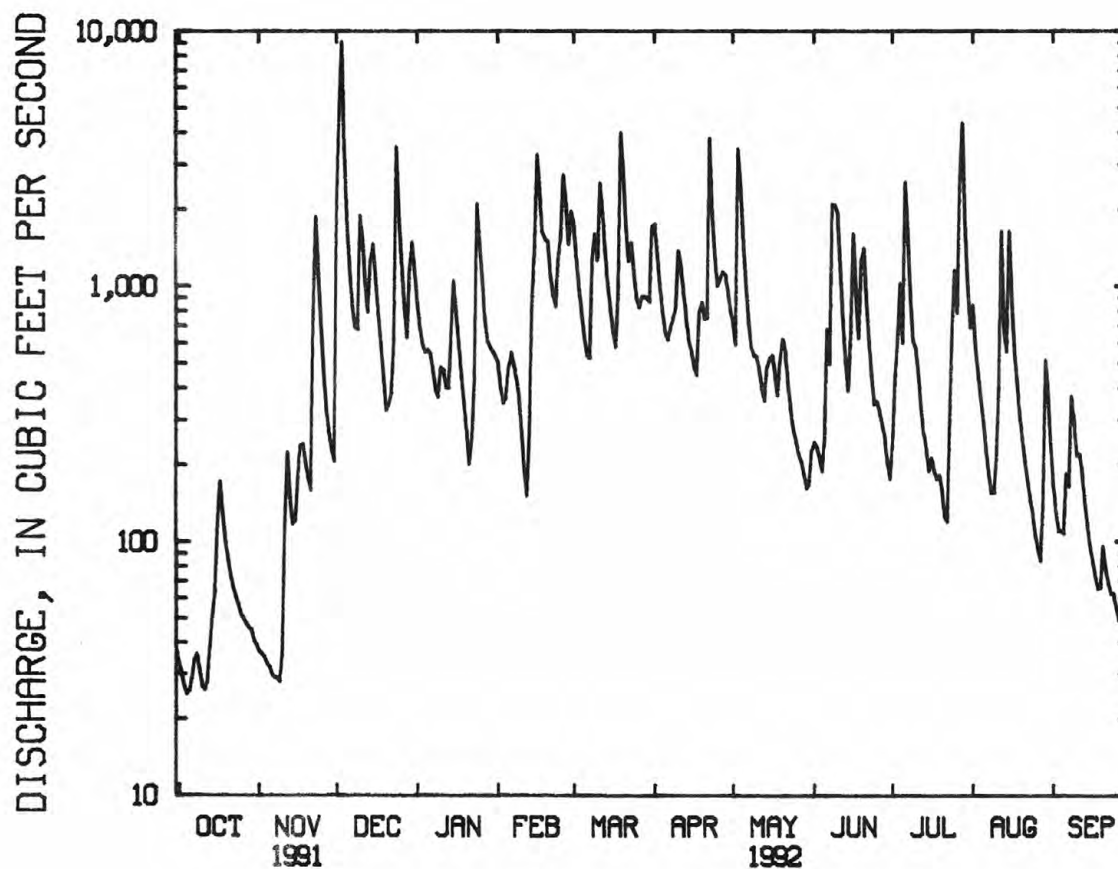
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	371	707	938	860	1024	1339	1074	721	473	361	310	219
MAX	1376	2293	1940	1708	1709	2820	1750	1823	1435	898	1171	940
(WY)	1977	1986	1973	1979	1961	1963	1972	1967	1974	1979	1989	1971
MIN	15.1	150	199	202	227	746	312	137	48.9	44.1	30.3	36.8
(WY)	1964	1966	1966	1977	1978	1976	1963	1964	1965	1968	1965	1983

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR	FOR 1992 WATER YEAR	WATER YEARS 1960 - 1983 1986 - 1992
ANNUAL TOTAL	209041	263515	
ANNUAL MEAN	573	720	696
HIGHEST ANNUAL MEAN			946
LOWEST ANNUAL MEAN			446
HIGHEST DAILY MEAN	9140	9140	15200
LOWEST DAILY MEAN	24	25	6.9
ANNUAL SEVEN-DAY MINIMUM	29	29	8.5
INSTANTANEOUS PEAK FLOW		18600	b38000
INSTANTANEOUS PEAK STAGE		12.57	c17.20
INSTANTANEOUS LOW FLOW		23	6.5
ANNUAL RUNOFF (CFSM)	2.15	2.71	2.62
ANNUAL RUNOFF (INCHES)	29.23	36.85	35.57
10 PERCENT EXCEEDS	1510	1650	1640
50 PERCENT EXCEEDS	219	486	393
90 PERCENT EXCEEDS	36	58	67

a Aug. 28, 29.

b From rating curve extended above 24,000 ft³/s.

c From floodmarks.



KANAWHA RIVER BASIN

03195500 ELK RIVER AT SUTTON, WV

LOCATION.--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 downstream from Sutton Dam, 2.5 mi downstream from Wolf Creek, and at mile 102.1.

DRAINAGE AREA.--542 mi².

PERIOD OF RECORD.--October 1938 to current year. Monthly discharge only October 1938 to February 1939, published in WSP 1305.

REVISED RECORDS.--WSP 1305: 1942(M), 1948-50(M). WDR WV82-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 800.00 ft above National Geodetic Vertical Datum of 1929. Prior to Apr. 5, 1940, nonrecording gage and Apr. 5, 1940, to Sept. 30, 1960, water-stage recorder at site 150 ft downstream at datum 8.03 ft higher.

REMARKS.--No estimated daily discharges. Records good. Flow regulated since April 1959 by Sutton Lake. U.S. Army Corps of Engineers satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 13, 1918, reached a stage of 45.2 ft, present datum, from floodmarks, discharge, about 49,000 ft³/s, from rating curve extended above 28,000 ft³/s.

PEAK DISCHARGE FOR CURRENT YEAR.--Maximum discharge, 7,940 ft³/s, Dec. 4, gage height, 20.76 ft.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	70	283	2260	3030	894	3180	889	1200	394	191	2770	329
2	70	305	3380	2490	777	2160	821	872	390	699	1520	286
3	70	303	2490	1760	606	1440	405	4140	389	1360	829	220
4	69	301	7600	1350	630	1100	241	7170	390	1770	904	219
5	70	301	5830	1220	646	943	521	5080	390	1430	613	189
6	69	300	3870	1210	848	943	890	1980	389	2630	326	169
7	159	299	3660	1010	940	805	1130	999	627	3390	326	169
8	215	298	2540	793	758	1970	1130	956	2280	1600	326	837
9	214	298	1950	632	648	2620	1140	815	3830	969	280	1130
10	214	299	3060	633	503	1850	1380	737	3840	694	224	628
11	214	298	2490	634	418	1470	1870	737	2760	694	327	628
12	214	298	1310	632	420	2170	2120	506	1020	397	3260	541
13	214	333	2930	632	477	2480	1450	333	676	186	1790	356
14	310	381	3060	775	1070	1330	1020	333	559	296	798	273
15	369	329	3230	1300	2070	856	930	766	644	394	4820	238
16	367	288	3230	1560	3500	856	789	1000	2120	334	4650	163
17	365	416	3000	1040	4190	1680	714	909	1970	262	1980	135
18	364	515	2570	700	3740	3550	1110	867	1150	263	946	96
19	361	512	2280	700	2440	4540	1380	1100	1300	263	589	96
20	359	510	2030	696	2100	4700	1380	1230	2090	262	570	96
21	357	511	1420	779	1670	4620	1390	1000	1520	265	568	96
22	356	578	855	705	1180	4360	2930	697	934	206	367	157
23	353	738	772	801	1180	3970	4150	525	778	613	199	191
24	349	894	1000	2310	1400	3570	3390	476	662	2180	199	190
25	348	881	1600	3250	1400	2190	1770	390	507	3570	199	166
26	345	884	1840	2380	595	1410	1340	346	505	1950	201	120
27	344	876	2110	1450	1240	1240	1680	263	506	2750	201	167
28	559	870	2410	916	2200	1240	1880	263	507	6310	598	228
29	670	1010	2910	958	2830	1240	1510	265	381	7080	941	224
30	673	1130	3330	1110	---	1410	1340	321	228	6250	852	159
31	347	---	3290	1000	---	1190	---	407	---	4540	501	---
TOTAL	9058	15239	84307	38456	41370	67083	42690	36683	33736	53798	32674	8496
MEAN	292	508	2720	1241	1427	2164	1423	1183	1125	1735	1054	283
MAX	673	1130	7600	3250	4190	4700	4150	7170	3840	7080	4820	1130
MIN	69	283	772	632	418	805	241	263	228	186	199	96

KANAWHA RIVER BASIN

03195500 ELK RIVER AT SUTTON, WV--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 1958, BY WATER YEAR (WY) [UNREGULATED]

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	297	645	1298	1701	2073	2075	1672	1191	746	809	586	239
MAX	1804	1540	2525	3211	4000	3742	3381	2113	2057	2535	2593	1205
(WY)	1955	1946	1949	1952	1939	1955	1958	1958	1940	1954	1958	1950
MIN	2.35	19.2	308	295	464	1279	525	382	217	87.8	35.9	12.4
(WY)	1954	1954	1954	1940	1941	1957	1942	1957	1949	1944	1957	1953

SUMMARY STATISTICS

WATER YEARS 1939 - 1958

ANNUAL MEAN	1107	
HIGHEST ANNUAL MEAN	1574	1958
LOWEST ANNUAL MEAN	692	1941
HIGHEST DAILY MEAN	20400	Apr 16 1939
LOWEST DAILY MEAN	.40	(a)
ANNUAL SEVEN-DAY MINIMUM	.47	Oct 23 1953
INSTANTANEOUS PEAK FLOW	34200	Jan 29 1957
INSTANTANEOUS PEAK STAGE	b39.30	Jan 29 1957
INSTANTANEOUS LOW FLOW	.40	(a)
10 PERCENT EXCEEDS	2620	
50 PERCENT EXCEEDS	587	
90 PERCENT EXCEEDS	58	

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1959 - 1992, BY WATER YEAR (WY) [REGULATED, UNADJUSTED]

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	810	1325	1660	1557	1746	2204	1230	1263	759	561	550	448
MAX	2887	3123	3653	3168	3087	4484	2642	3665	2435	1735	1933	1646
(WY)	1977	1986	1973	1979	1986	1963	1987	1989	1974	1992	1989	1971
MIN	108	440	220	372	902	1042	105	99.7	63.1	90.0	82.4	38.9
(WY)	1959	1959	1966	1977	1968	1988	1976	1963	1991	1991	1965	1959

SUMMARY STATISTICS

FOR 1991 CALENDAR YEAR

FOR 1992 WATER YEAR

WATER YEARS 1959 - 1992

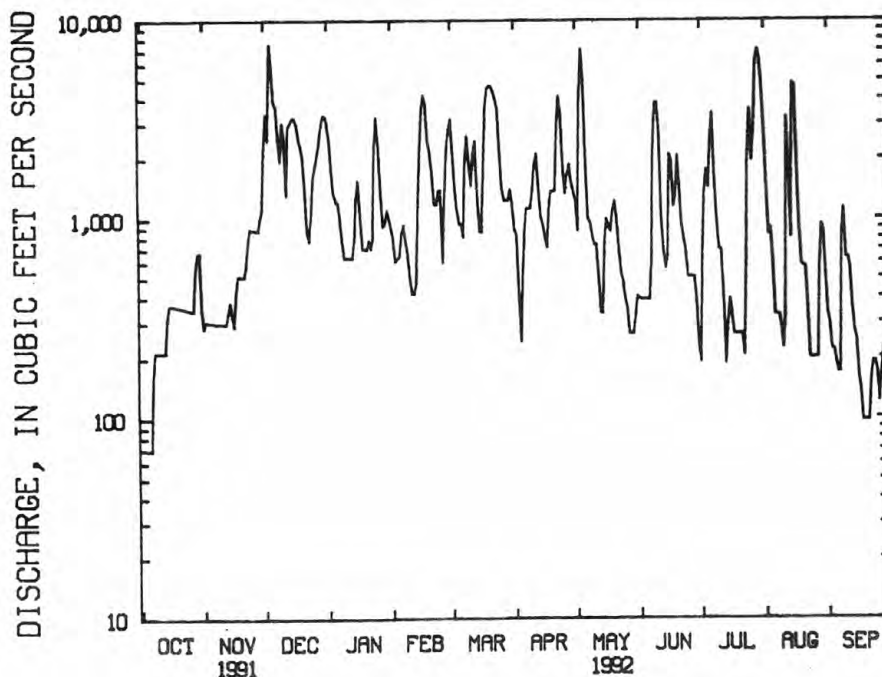
ANNUAL TOTAL	360620		463590	
ANNUAL MEAN	988		1267	
HIGHEST ANNUAL MEAN				1174
LOWEST ANNUAL MEAN				1619
HIGHEST DAILY MEAN	7600	Dec 4	7600	Dec 4
LOWEST DAILY MEAN	60	(c)	69	(d)
ANNUAL SEVEN-DAY MINIMUM	61	Jul 5	82	Oct 1
INSTANTANEOUS PEAK FLOW			7940	Dec 4
INSTANTANEOUS PEAK STAGE			20.76	Dec 4
INSTANTANEOUS LOW FLOW			67	Oct 4
10 PERCENT EXCEEDS	3060		3190	
50 PERCENT EXCEEDS	358		818	
90 PERCENT EXCEEDS	64		215	

a Oct. 25, 26, 28, 29, 1953.

b Present datum.

c July 3, 6-10.

d Oct. 4, 6.



KANAWHA RIVER BASIN

03196600 ELK RIVER NEAR FRAMETOWN, WV

LOCATION.--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.--751 mi², includes that of Birch River.

PERIOD OF RECORD.--October 1958 to September 1981, October 1981 to current year (gage heights and annual maximum discharge only).

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

GAGE.--Water-stage recorder. Datum of gage is 775.51 ft above National Geodetic Vertical Datum of 1929. Prior to Mar. 25, 1959, nonrecording gage at same site and datum.

REMARKS.--Records for winter periods not adjusted for ice effect. Flow regulated since October 1960 by Sutton Lake. U.S. Army Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--23 years (water years 1958-81), 1,572 ft³/s, 28.39 in/yr, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 22,100 ft³/s, Dec. 3, 1991, gage height, 16.31 ft; minimum discharge, 9.0 ft³/s, Sept. 28, 29, 1959; minimum gage height, 1.09 ft, June 15, 16, July 1, 1991.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 22,100 ft³/s, Dec. 3, gage height, 16.31 ft; minimum gage height, 1.27 ft, Oct. 5.

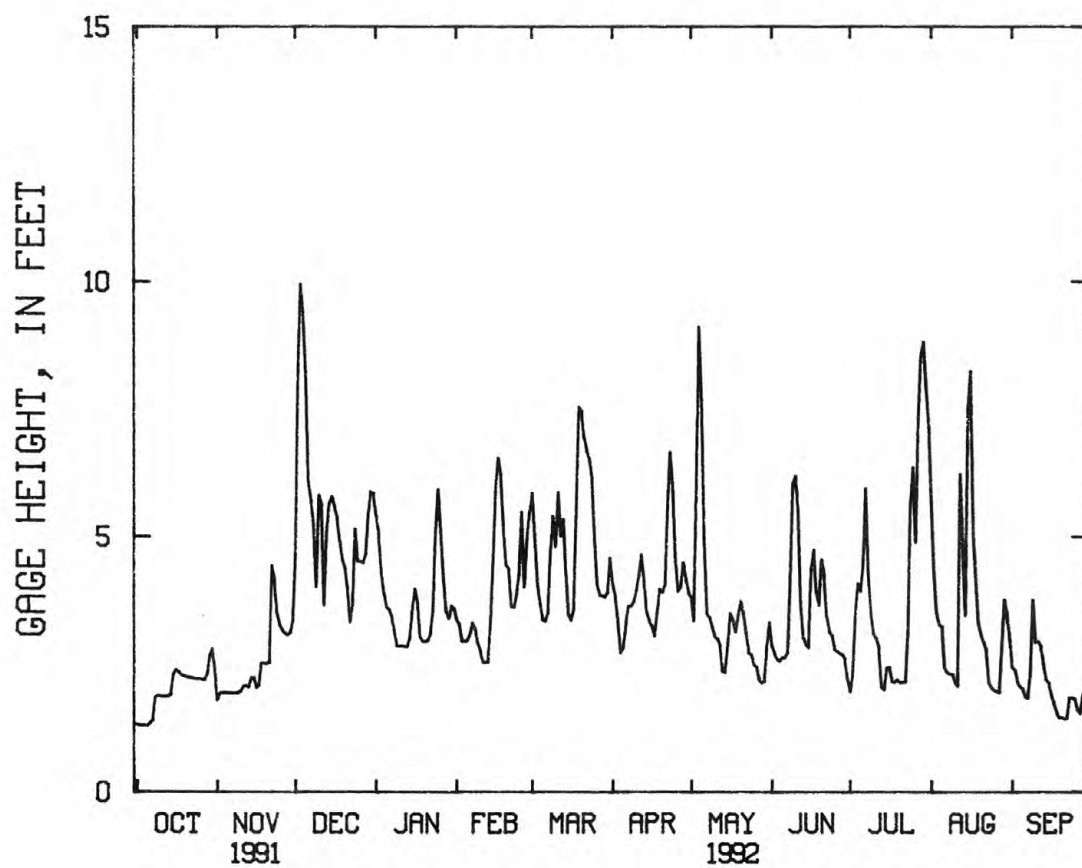
GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.31	1.78	4.62	5.42	3.36	5.86	4.05	3.80	2.85	1.94	5.66	2.44
2	1.30	1.93	8.25	5.06	3.27	5.02	3.80	3.34	2.69	2.34	4.31	2.37
3	1.30	1.94	9.96	4.33	2.94	4.11	3.31	5.96	2.58	3.49	3.48	2.12
4	1.30	1.94	9.40	3.88	2.94	3.68	2.71	9.13	2.55	4.08	3.26	2.05
5	1.29	1.94	8.21	3.61	2.95	3.36	2.82	7.66	2.63	3.93	3.23	2.01
6	1.35	1.93	6.03	3.56	3.07	3.33	3.25	4.93	2.63	4.46	2.42	1.85
7	1.40	1.93	5.70	3.42	3.31	3.49	3.64	3.47	2.73	5.98	2.33	1.83
8	1.85	1.93	5.20	3.14	3.18	4.66	3.63	3.41	4.16	4.26	2.30	2.29
9	1.88	1.93	3.99	2.84	2.91	5.40	3.72	3.21	6.07	3.51	2.29	3.77
10	1.87	1.97	5.83	2.84	2.76	4.80	3.95	3.03	6.21	3.09	2.14	2.91
11	1.86	2.06	5.61	2.86	2.54	5.89	4.25	2.99	5.50	2.99	2.06	2.95
12	1.87	2.08	3.64	2.83	2.52	5.00	4.65	2.86	3.68	2.81	6.24	2.85
13	1.87	2.04	5.10	2.84	2.54	5.35	4.12	2.35	3.01	2.03	4.84	2.50
14	1.91	2.23	5.65	3.01	3.29	4.28	3.50	2.33	2.87	1.99	3.44	2.19
15	2.29	2.23	5.80	3.52	4.49	3.44	3.34	2.86	2.82	2.43	7.53	2.13
16	2.39	2.02	5.58	3.97	5.97	3.35	3.23	3.50	4.39	2.44	8.25	1.87
17	2.34	2.08	5.34	3.69	6.55	3.58	3.04	3.35	4.75	2.15	5.08	1.73
18	2.28	2.52	4.90	3.02	6.20	5.50	3.50	3.12	3.89	2.14	4.19	1.55
19	2.26	2.52	4.54	2.93	5.18	7.56	3.97	3.46	3.65	2.19	3.28	1.44
20	2.24	2.51	4.37	2.94	4.44	7.46	3.90	3.73	4.57	2.13	3.06	1.46
21	2.23	2.53	3.98	2.96	4.36	6.95	4.06	3.46	4.24	2.15	2.92	1.42
22	2.22	4.44	3.31	3.10	3.62	6.69	5.62	3.10	3.42	2.15	2.77	1.43
23	2.21	4.16	3.71	3.54	3.60	6.51	6.68	2.71	3.12	3.11	2.13	1.84
24	2.20	3.48	5.16	5.07	3.87	6.16	6.01	2.68	3.05	5.60	2.02	1.84
25	2.20	3.25	4.51	5.94	4.24	5.00	4.56	2.48	2.78	6.37	1.98	1.81
26	2.19	3.15	4.51	5.11	5.50	4.04	3.92	2.44	2.74	4.87	1.95	1.60
27	2.18	3.09	4.48	4.21	3.99	3.84	4.02	2.19	2.70	7.33	1.93	1.53
28	2.30	3.06	4.67	3.52	4.91	3.83	4.49	2.12	2.68	8.56	2.83	1.84
29	2.67	3.11	5.43	3.38	5.48	3.80	4.15	2.16	2.60	8.82	3.78	2.05
30	2.80	3.34	5.89	3.64	---	3.90	3.88	2.80	2.19	7.91	3.44	1.72
31	2.39	---	5.85	3.57	---	4.58	---	3.32	---	7.15	3.01	---
MEAN	1.99	2.50	5.46	3.67	3.93	4.85	3.99	3.48	3.46	4.01	3.49	2.05
MAX	2.80	4.44	9.96	5.94	6.55	7.56	6.68	9.13	6.21	8.82	8.25	3.77
MIN	1.29	1.78	3.31	2.83	2.52	3.33	2.71	2.12	2.19	1.94	1.93	1.42

WTR YR 1992 MEAN 3.58 MAX 9.96 MIN 1.29

KANAWHA RIVER BASIN

03196600 ELK RIVER NEAR FRAMETOWN, WV--Continued



KANAWHA RIVER BASIN

03196800 ELK RIVER AT CLAY, WV

LOCATION.--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.--992 mi².

PERIOD OF RECORD.--October 1958 to September 1978, October 1978 to current year (gage heights, occasional discharge measurements, and annual maximum discharge only). Gage height records collected at same site since 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 677.46 ft above National Geodetic Vertical Datum of 1929. Prior to Mar. 27, 1959, nonrecording gage at same site and datum.

REMARKS.--Records for winter periods not adjusted for ice effect. Flow regulated since October 1960 by Sutton Lake. U.S. Army Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--20 years (water years 1959-78), 1,926 ft³/s, 26.31 in/yr, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 48,000 ft³/s, Mar. 15, 1967, gage height, 22.80 ft; minimum, 1.5 ft³/s, Sept. 22, 1959, gage height, -0.13 ft.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 14, 1918, reached a stage of 32.4 ft, from reports of National Weather Service.

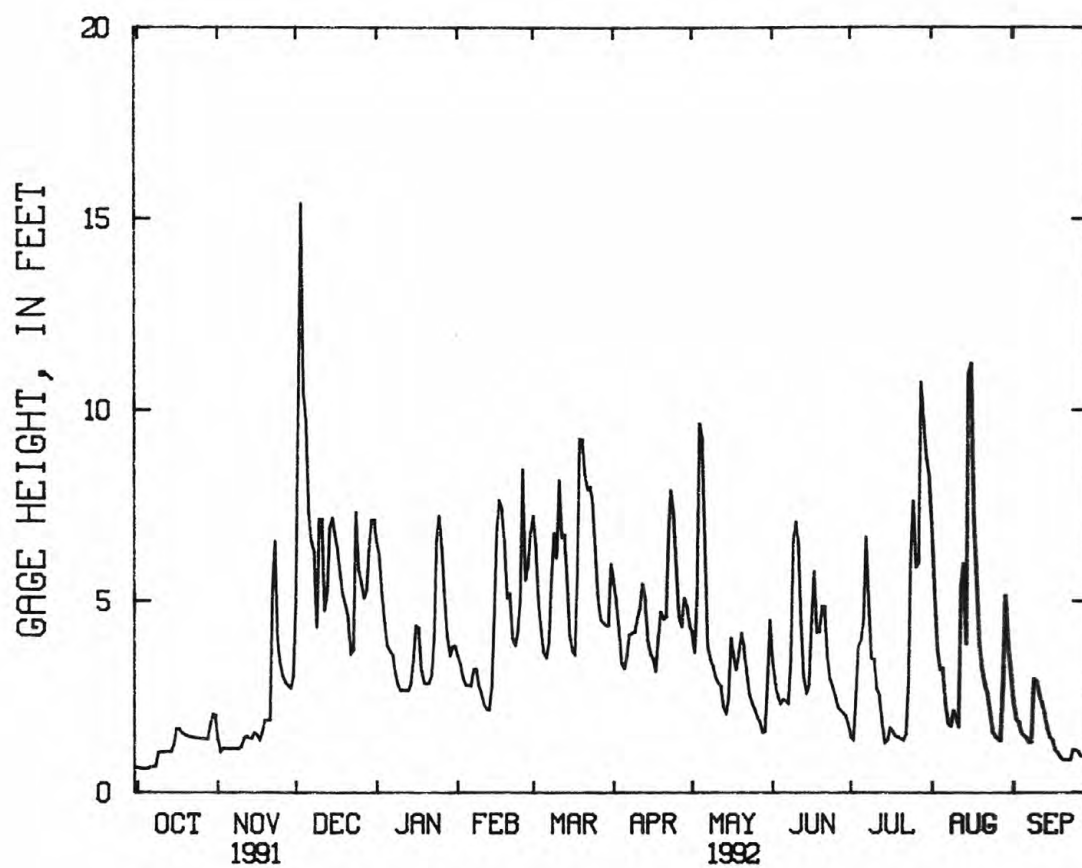
EXTREMES FOR CURRENT YEAR.--Maximum discharge, 41,100 ft³/s, Dec. 3, gage height, 20.83 ft; minimum gage height, 0.61 ft, Oct. 3-5.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.64	1.38	4.97	6.50	3.53	7.23	5.48	4.16	3.46	1.44	7.01	2.36
2	.62	1.04	10.34	6.10	3.33	6.48	4.97	3.64	2.84	1.35	5.29	1.90
3	.61	1.15	15.40	5.14	2.97	4.95	4.27	5.14	2.48	2.47	3.77	1.82
4	.61	1.15	10.49	4.39	2.79	4.22	3.36	9.67	2.29	3.83	3.18	1.54
5	.63	1.14	9.70	3.80	2.79	3.64	3.21	9.20	2.43	3.98	3.24	1.47
6	.67	1.14	7.29	3.67	2.77	3.49	3.58	6.53	2.39	4.53	2.33	1.42
7	.68	1.14	6.53	3.57	3.21	3.93	4.12	3.77	2.30	6.71	1.79	1.28
8	.69	1.14	6.25	3.09	3.22	5.53	4.16	3.45	3.46	5.00	1.71	1.31
9	1.04	1.14	4.28	2.78	2.77	6.79	4.19	3.27	6.57	3.47	2.14	2.99
10	1.06	1.20	7.16	2.64	2.57	6.12	4.57	2.99	7.09	3.47	1.97	2.89
11	1.06	1.41	7.14	2.68	2.29	8.18	4.83	2.84	6.49	2.69	1.69	2.55
12	1.07	1.47	4.71	2.65	2.16	6.64	5.46	2.77	4.40	2.51	5.40	2.34
13	1.07	1.40	5.24	2.65	2.15	6.73	5.01	2.23	2.96	1.83	6.00	2.06
14	1.06	1.40	6.93	2.83	2.73	5.61	3.94	2.02	2.57	1.27	3.84	1.69
15	1.25	1.56	7.17	3.46	4.63	4.07	3.61	2.47	2.81	1.37	10.96	1.43
16	1.66	1.49	6.66	4.35	6.87	3.68	3.47	4.05	4.46	1.69	11.24	1.37
17	1.66	1.35	6.27	4.27	7.64	3.56	3.14	3.51	5.80	1.58	7.14	1.11
18	1.55	1.58	5.68	3.16	7.36	5.79	4.00	3.19	4.15	1.45	5.69	1.03
19	1.50	1.89	5.11	2.84	6.55	9.26	4.72	3.65	4.20	1.44	3.89	.92
20	1.47	1.88	4.84	2.82	5.05	9.20	4.51	4.15	4.86	1.39	3.20	.85
21	1.45	1.89	4.52	2.85	5.19	8.31	4.59	3.74	4.86	1.35	2.81	.84
22	1.43	5.24	3.58	3.06	4.00	7.92	6.74	3.16	3.59	1.52	2.56	.84
23	1.42	6.58	3.71	3.98	3.81	7.99	7.93	2.57	2.94	2.90	2.06	.85
24	1.41	4.02	7.33	6.60	4.19	7.50	7.28	2.32	2.74	6.17	1.56	1.13
25	1.40	3.33	5.77	7.22	4.98	6.34	5.88	2.16	2.51	7.64	1.45	1.10
26	1.39	3.02	5.44	6.38	8.46	5.08	4.56	1.95	2.22	5.86	1.38	1.06
27	1.39	2.86	5.05	5.11	5.52	4.50	4.31	1.83	2.14	6.01	1.33	.94
28	1.38	2.77	5.26	4.04	5.95	4.42	5.08	1.55	2.06	10.74	2.79	.93
29	1.76	2.70	6.32	3.54	6.80	4.34	4.83	1.60	2.00	9.68	5.17	1.14
30	2.04	3.05	7.11	3.79	---	4.34	4.33	2.85	1.78	8.72	3.85	1.27
31	2.00	---	7.12	3.82	---	5.99	---	4.51	---	8.23	3.18	---
MEAN	1.22	2.08	6.56	3.99	4.35	5.87	4.67	3.58	3.49	3.94	3.86	1.48
MAX	2.04	6.58	15.40	7.22	8.46	9.26	7.93	9.67	7.09	10.74	11.24	2.99
MIN	.61	1.04	3.58	2.64	2.15	3.49	3.14	1.55	1.78	1.27	1.33	.84

WTR YR 1992 MEAN 3.76 MAX 15.40 MIN .61

KANAWHA RIVER BASIN
03196800 ELK RIVER AT CLAY, WV--Continued



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 National Geodetic Vertical Datum of 1929. 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.--No estimated daily discharges. Records good. 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, 36,800 ft³/s, Dec. 3, gage height, 21.22 ft.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	92	569	2750	5210	1960	5960	4300	2520	2360	558	6060	1190
2	86	305	9010	4640	1700	5320	3490	2180	1590	460	3870	753
3	83	245	28800	3740	1500	3680	2800	2180	1220	518	2240	662
4	79	278	11200	2860	1240	2750	2080	8160	1040	1630	1660	555
5	78	278	10000	2260	1230	2130	1680	8350	1080	2120	1420	474
6	88	278	6790	2000	1200	1840	1840	5680	1090	2580	1150	468
7	96	278	5160	1900	1370	2220	2220	2730	977	4250	634	397
8	97	278	4810	1600	1510	4080	2390	1840	1330	3700	545	362
9	104	275	3230	1360	1300	5240	2330	1730	4090	2020	750	726
10	235	293	5680	1160	1050	4880	2690	1500	5710	1730	871	1640
11	244	382	6250	1170	950	7170	2870	1300	5140	1210	634	999
12	247	440	4050	1150	782	5850	3340	1240	3410	996	2220	941
13	251	442	3080	1130	766	5150	3220	1080	1660	831	4910	834
14	249	408	5520	1330	994	4310	2310	815	1080	440	2660	635
15	265	441	6210	1780	2230	2780	1810	1030	1130	334	11800	484
16	434	482	5440	2350	4800	2050	1610	2340	2340	458	14800	420
17	526	415	4840	2530	6180	1870	1440	2020	3840	520	7230	362
18	491	381	4230	1910	6100	3310	2290	1750	2760	474	4570	274
19	452	581	3550	1310	5210	8460	2910	1870	2620	418	2770	253
20	434	623	3130	1230	3610	9110	2820	2410	2720	413	1760	205
21	421	627	2850	1260	3410	7580	2920	2180	3130	403	1360	174
22	410	3210	2230	1310	2580	6770	4980	1700	2200	420	1130	170
23	405	7450	1850	2010	2090	7010	6620	1270	1430	1130	952	168
24	404	2800	6190	5560	2430	6270	6260	941	1130	4030	594	192
25	403	1840	4850	5870	3230	5190	4910	898	1050	7370	480	277
26	402	1440	3990	5240	8460	3500	3230	741	824	5020	435	265
27	399	1250	3510	3800	5400	2850	2660	684	777	4230	405	270
28	396	1160	3550	2670	4270	2680	3300	552	713	11900	773	221
29	406	1100	4560	2050	5400	2570	3380	503	677	9490	3710	219
30	647	1200	5670	2010	---	2530	2830	1080	671	8020	2440	309
31	737	---	5960	2150	---	3930	---	2940	---	7110	1740	---
TOTAL	9661	29749	178940	76550	82952	139040	91530	66214	59789	84783	86573	14899
MEAN	312	992	5772	2469	2860	4485	3051	2136	1993	2735	2793	497
MAX	737	7450	28800	5870	8460	9110	6620	8350	5710	11900	14800	1640
MIN	78	245	1850	1130	766	1840	1440	503	671	334	405	168

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
LOWEST ANNUAL MEAN	1214
HIGHEST DAILY MEAN	58100
LOWEST DAILY MEAN	.30
ANNUAL SEVEN-DAY MINIMUM	.86
INSTANTANEOUS PEAK FLOW	b72000
INSTANTANEOUS PEAK STAGE	29.20
INSTANTANEOUS LOW FLOW	.30
10 PERCENT EXCEEDS	4650
50 PERCENT EXCEEDS	955
90 PERCENT EXCEEDS	90

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1959 - 1992, BY WATER YEAR (WY) [REGULATED, UNADJUSTED]

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1115	2116	3047	2916	3455	4104	2844	2428	1304	877	899	634
MAX	5017	6135	7402	6259	5973	9051	5649	6601	4745	2735	3487	3072
(WY)	1977	1986	1973	1979	1986	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 1991 CALENDAR YEAR

FOR 1992 WATER YEAR

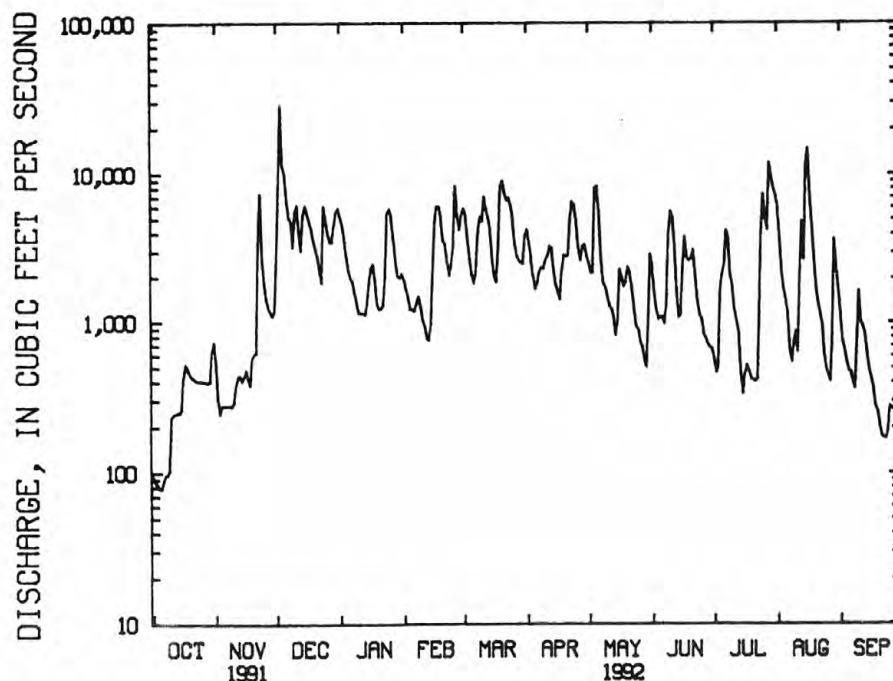
WATER YEARS 1959 - 1992

ANNUAL TOTAL	750357	920680	
ANNUAL MEAN	2056	2516	2140
HIGHEST ANNUAL MEAN			3085
LOWEST ANNUAL MEAN			1063
HIGHEST DAILY MEAN	28800	Dec 3	35300
LOWEST DAILY MEAN	58	Jun 14	9.0
ANNUAL SEVEN-DAY MINIMUM	62	Jun 9	11
INSTANTANEOUS PEAK FLOW			45500
INSTANTANEOUS PEAK STAGE			21.22
INSTANTANEOUS LOW FLOW			74
10 PERCENT EXCEEDS	5750	5750	5510
50 PERCENT EXCEEDS	526	1740	1130
90 PERCENT EXCEEDS	110	308	218

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 National Geodetic Vertical Datum of 1929 (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, 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 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e3900	e3200	12300	27300	e13000	32400	21800	18200	24400	7700	14300	6790
2	e3500	e2900	31400	23800	e9700	28600	24300	15900	21100	8850	10900	6160
3	e3300	e2700	95500	19400	e8800	25300	18600	11600	18700	7670	7440	5780
4	e3600	e2800	87700	17500	e8100	20500	16800	19400	14500	8510	7510	5390
5	e4300	e2700	60200	32700	e9300	19100	19000	19200	36400	8830	6750	5080
6	e4300	e2500	38100	33700	e9000	16200	15000	20200	62900	9170	5500	4980
7	e4200	e2700	29200	26100	e9000	18600	15200	15500	63500	14800	4420	7140
8	e3400	e2900	21400	21200	e9000	26800	18900	12100	55000	12200	e4000	5700
9	e2200	e2500	17700	e16000	e7200	33200	19300	18200	48600	9790	e4100	5520
10	e2300	e2700	23200	e13000	e6000	26500	19300	21000	45700	8680	6440	6440
11	e2500	e3500	23200	e9200	e6100	45400	17100	21700	39700	7520	6600	6710
12	e3000	e9200	21900	e11000	e7500	66900	19300	18000	29300	6740	e9100	7560
13	e3400	e7000	19800	e8800	e6800	46800	16400	17200	22800	6450	e11000	e6500
14	e2600	e6900	21900	e8800	e7200	33300	14100	17400	20400	5060	e9500	e5800
15	e2500	e6800	25000	e11000	11700	27000	15400	20600	14600	5020	25500	e4500
16	e2800	e5700	24200	e10000	19300	22000	14800	24000	19500	4730	29600	e4000
17	e3000	e4700	20100	e11000	31600	18800	11100	25900	19900	5310	16000	e3800
18	e2800	e3700	e15000	e9900	31000	20900	13600	22800	20900	5220	11500	e4500
19	e2700	e3600	e12000	e7800	23700	38600	15200	20900	15000	4860	8570	e4900
20	e2700	e3700	e10000	e6900	22300	57100	15900	21700	15500	4410	7830	e4900
21	e2700	e3800	e8900	e6700	20200	42100	14500	18900	15400	4400	6490	e4700
22	e2600	e9800	e8900	e6500	e16000	31600	49500	15500	14100	5270	5970	e4000
23	e2600	21200	e9100	e9900	e13000	30500	80500	13900	10700	7190	5650	e3500
24	e2600	15400	20000	24000	e14000	26100	68000	12400	10400	8150	4900	e3400
25	e2600	14600	20700	26800	e18000	25500	53500	10700	9220	13700	e4400	e3600
26	e2600	13000	19400	25000	49400	21900	36700	10600	9080	12100	e4400	e4200
27	e2500	e9400	19000	e17000	72900	19300	25400	9070	8780	11100	e3800	e4100
28	e2500	e7800	16900	e14000	56000	24000	22600	8890	8700	23800	7650	e4100
29	e2900	e7400	19800	e14000	41600	23500	22500	9420	8650	21000	14800	e3400
30	e3200	e5700	39700	e13000	---	20200	20400	14900	6240	15500	10300	e2800
31	e3400	---	35100	e13000	---	21600	---	26800	---	14500	7260	---
TOTAL	93200	190500	827300	495000	557400	910300	734700	532580	709670	288230	282180	149950
MEAN	3006	6350	26690	15970	19220	29360	24490	17180	23660	9298	9103	4998
MAX	4300	21200	95500	33700	72900	66900	80500	26800	63500	23800	29600	7560
MIN	2200	2500	8900	6500	6000	16200	11100	8890	6240	4400	3800	2800

e Estimated

KANAWHA RIVER BASIN

03198000 KANAWHA RIVER AT CHARLESTON, WV--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 1992, BY WATER YEAR (WY) [REGULATED, UNADJUSTED]

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	7127	10880	16910	20090	24960	29670	22910	17460	10730	7664	6952	5360
MAX	30780	32440	40920	44180	50790	62900	59000	38550	26110	18030	23120	18360
(WY)	1977	1986	1973	1974	1957	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 1991 CALENDAR YEAR

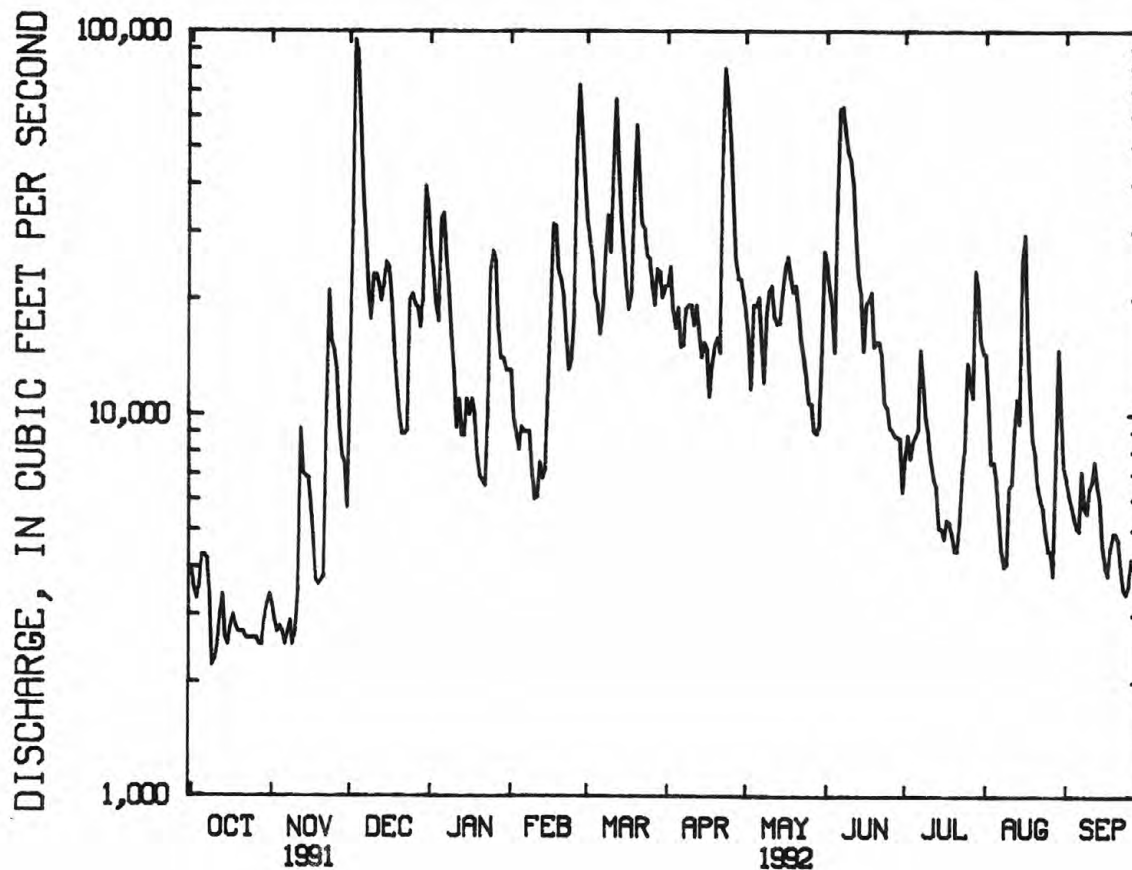
FOR 1992 WATER YEAR

WATER YEARS 1939 - 1992

ANNUAL TOTAL	5617830	5771010	15020
ANNUAL MEAN	15390	15770	20960
HIGHEST ANNUAL MEAN			8649
LOWEST ANNUAL MEAN			1100
HIGHEST DAILY MEAN	95500	Dec 3	160000
LOWEST DAILY MEAN	e2200	Oct 9	1100
ANNUAL SEVEN-DAY MINIMUM	2570	Oct 22	1250
INSTANTANEOUS PEAK FLOW			216000
INSTANTANEOUS PEAK STAGE			39.72
INSTANTANEOUS LOW FLOW			1030
10 PERCENT EXCEEDS	37200	31100	33300
50 PERCENT EXCEEDS	9430	12000	9300
90 PERCENT EXCEEDS	3000	3400	3030

a Minimum discharge less than 1,030 ft³/s during period 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 National Geodetic Vertical Datum of 1929. 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.--No estimated daily discharges. Records good.

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. 3	0330	*20,700	*23.27	Aug. 15	1100	8,280	13.53

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	46	28	650	942	502	994	973	441	901	141	328	190
2	40	27	4530	755	440	843	1050	396	648	144	223	162
3	39	27	13600	654	395	707	972	381	481	168	170	157
4	36	29	3700	612	367	604	940	340	409	310	148	169
5	39	30	1360	575	351	523	974	304	1100	229	121	184
6	46	28	824	529	332	523	1010	315	1300	414	106	208
7	58	26	630	482	318	954	1080	340	806	386	94	166
8	43	26	522	441	307	1890	1000	375	556	269	85	176
9	35	25	505	426	285	1550	873	563	435	198	120	285
10	32	28	1740	415	250	1280	764	717	395	166	113	198
11	32	74	1510	388	229	2540	669	671	329	141	226	190
12	32	105	932	360	221	2190	632	589	282	123	1210	190
13	33	82	751	350	221	1480	585	581	242	109	324	144
14	32	68	1210	446	239	1140	523	603	217	97	223	129
15	38	60	1610	511	260	961	500	554	202	91	4030	112
16	58	57	1090	475	360	805	466	650	406	135	2100	100
17	61	56	768	436	472	701	477	641	318	117	1120	91
18	51	52	623	414	441	853	664	563	232	101	1040	85
19	41	46	505	359	412	2320	634	555	216	95	625	120
20	36	42	425	338	375	2160	566	560	322	95	433	133
21	34	42	426	326	336	1540	770	444	223	83	331	115
22	32	608	465	307	315	1230	1410	358	181	96	267	103
23	29	1390	496	417	310	1240	1220	306	153	651	228	109
24	29	674	913	1760	362	1130	937	272	140	236	198	94
25	28	377	1050	1340	430	982	778	255	166	201	175	82
26	29	251	792	1010	1590	871	671	234	198	168	160	74
27	30	184	650	778	1750	793	598	213	177	232	146	89
28	34	151	570	684	1180	700	576	195	154	608	290	92
29	36	131	738	629	1070	617	522	236	134	429	543	78
30	32	135	1130	581	---	598	476	470	128	244	342	67
31	29	---	1170	544	---	807	---	1010	---	263	241	---
TOTAL	1170	4859	45885	18284	14120	35526	23310	14132	11451	6740	15760	4092
MEAN	37.7	162	1480	590	487	1146	777	456	382	217	508	136
MAX	61	1390	13600	1760	1750	2540	1410	1010	1300	651	4030	285
MIN	28	25	425	307	221	523	466	195	128	83	85	67
CFSM	.10	.41	3.79	1.51	1.25	2.93	1.99	1.17	.98	.56	1.30	.35
IN.	.11	.46	4.37	1.74	1.34	3.38	2.22	1.34	1.09	.64	1.50	.39

KANAWHA RIVER BASIN

03198500 BIG COAL RIVER AT ASHFORD, WV--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1908-1916, 1930-1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	128	245	576	822	1002	1192	911	574	297	227	169	95.0
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

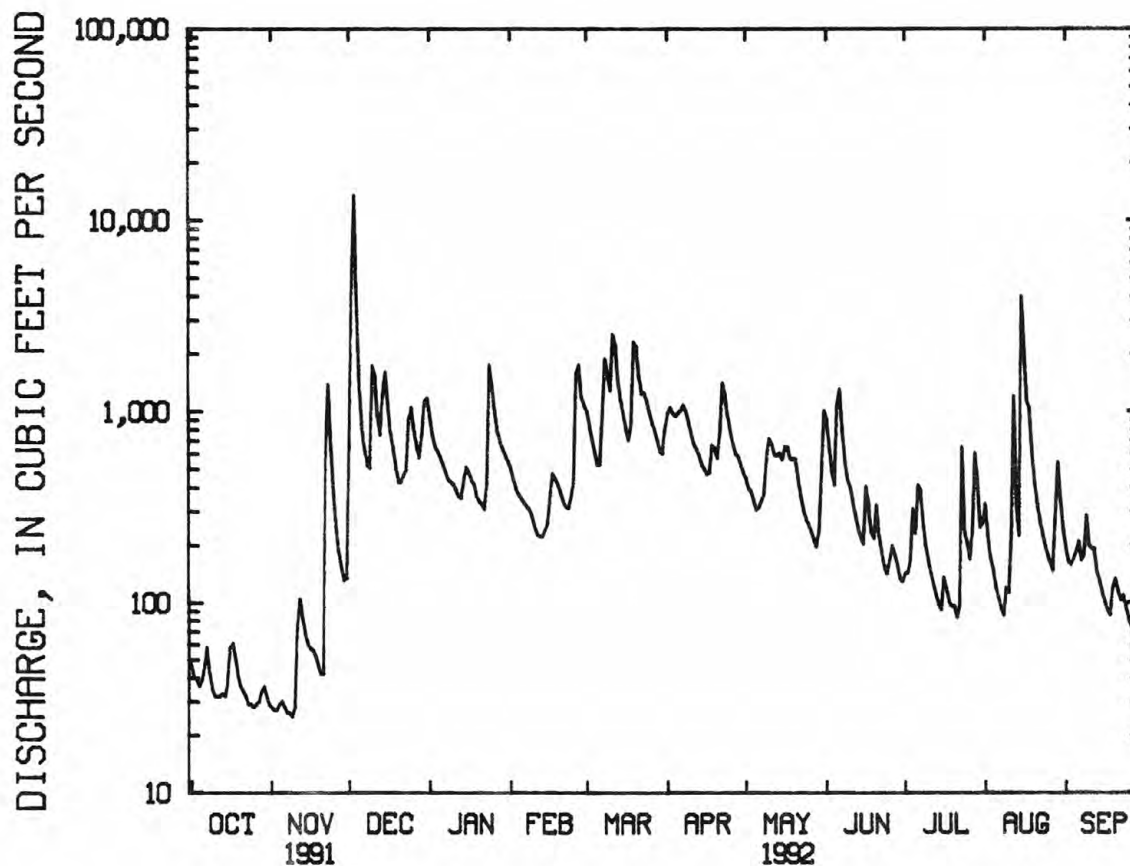
SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1908 - 1916		1930 - 1992	
ANNUAL TOTAL	211408		195329		519			
ANNUAL MEAN	579		534		833		1979	
HIGHEST ANNUAL MEAN					206		1941	
LOWEST ANNUAL MEAN					20400		Mar 7 1967	
HIGHEST DAILY MEAN	13600	Dec 3	13600	Dec 3				
LOWEST DAILY MEAN	20	Aug 29	25	Nov 9	.00	(a)		
ANNUAL SEVEN-DAY MINIMUM	22	Aug 25	27	Nov 3	.00		Oct 6 1930	
INSTANTANEOUS PEAK FLOW			20700	Dec 3	b35800		Aug 9 1916	
INSTANTANEOUS PEAK STAGE			23.27	Dec 3	c36.30		Aug 9 1916	
INSTANTANEOUS LOW FLOW			24	(d)	.00	(a)		
ANNUAL RUNOFF (CFSM)	1.48		1.36		1.33			
ANNUAL RUNOFF (INCHES)	20.11		18.58		18.03			
10 PERCENT EXCEEDS	1460		1110		1230			
50 PERCENT EXCEEDS	177		350		218			
90 PERCENT EXCEEDS	32		43		26			

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 Nov. 7, 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 National Geodetic Vertical Datum of 1929. 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.--No estimated daily discharges. Records good. 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)
Dec. 3	1200	*27,500	*26.32	No other peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	110	72	919	2310	1160	2320	2210	1070	1590	339	941	506
2	103	72	4140	1850	1030	2000	2500	983	1180	505	683	419
3	94	72	23300	1550	910	1680	2320	979	929	560	511	374
4	87	72	10700	1390	840	1440	2140	973	832	761	439	389
5	89	74	3250	1270	797	1250	2310	946	1160	676	361	414
6	100	79	1940	1140	747	1320	2150	953	1980	895	308	533
7	115	81	1400	1030	710	2130	2190	1100	1360	1070	268	424
8	145	80	1100	927	681	3810	2040	1050	1060	711	246	364
9	118	76	1150	882	641	3460	1780	1290	844	538	263	481
10	94	74	3140	886	578	2930	1580	1580	758	444	330	396
11	84	80	3250	836	532	4640	1390	1500	647	388	322	393
12	81	223	2160	777	515	4560	1320	1320	568	336	2840	397
13	80	260	1740	749	516	3380	1200	1170	510	307	1220	331
14	82	207	2470	1000	567	2630	1080	1190	677	278	700	296
15	91	174	3540	1410	615	2180	1040	1500	586	269	4650	271
16	110	168	2650	1280	805	1790	990	1450	573	281	5550	243
17	163	165	1840	1130	932	1530	1180	1270	702	288	2750	219
18	170	158	1410	1040	911	1800	1870	1060	628	262	2090	213
19	134	151	1100	889	874	3880	1510	1210	525	239	1380	226
20	109	134	891	810	815	4360	1320	1180	634	265	996	350
21	96	128	832	764	747	3410	1320	950	591	233	778	281
22	93	1380	969	712	692	2750	2940	781	519	281	647	242
23	91	2940	1320	954	731	2730	2770	671	446	921	566	249
24	82	1330	2080	2890	1090	2470	2110	610	336	824	509	231
25	78	689	2410	2920	1210	2130	1730	610	350	581	446	194
26	74	460	1910	2360	3920	1870	1520	572	489	483	396	172
27	74	351	1500	1930	4030	1720	1350	528	460	576	373	204
28	76	287	1270	1670	2910	1520	1360	531	397	1300	688	250
29	76	250	1620	1500	2540	1330	1250	520	343	1150	1430	208
30	75	237	2280	1360	---	1270	1150	1150	347	658	907	166
31	74	---	2640	1260	---	1770	---	1580	---	532	631	---
TOTAL	3048	10524	90921	41476	33046	76060	51620	32277	22021	16951	34219	9436
MEAN	98.3	351	2933	1338	1140	2454	1721	1041	734	547	1104	315
MAX	170	2940	23300	2920	4030	4640	2940	1580	1980	1300	5550	533
MIN	74	72	832	712	515	1250	990	520	336	233	246	166
CF5M	.11	.41	3.40	1.55	1.32	2.85	2.00	1.21	.85	.63	1.28	.36
IN.	.13	.45	3.92	1.79	1.43	3.28	2.23	1.39	.95	.73	1.48	.41

KANAWHA RIVER BASIN

03200500 COAL RIVER AT TORNADO, WV--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1908-1911, 1929-1931, 1961-1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	399	822	1426	1699	2154	2427	2041	1454	808	560	428	292
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

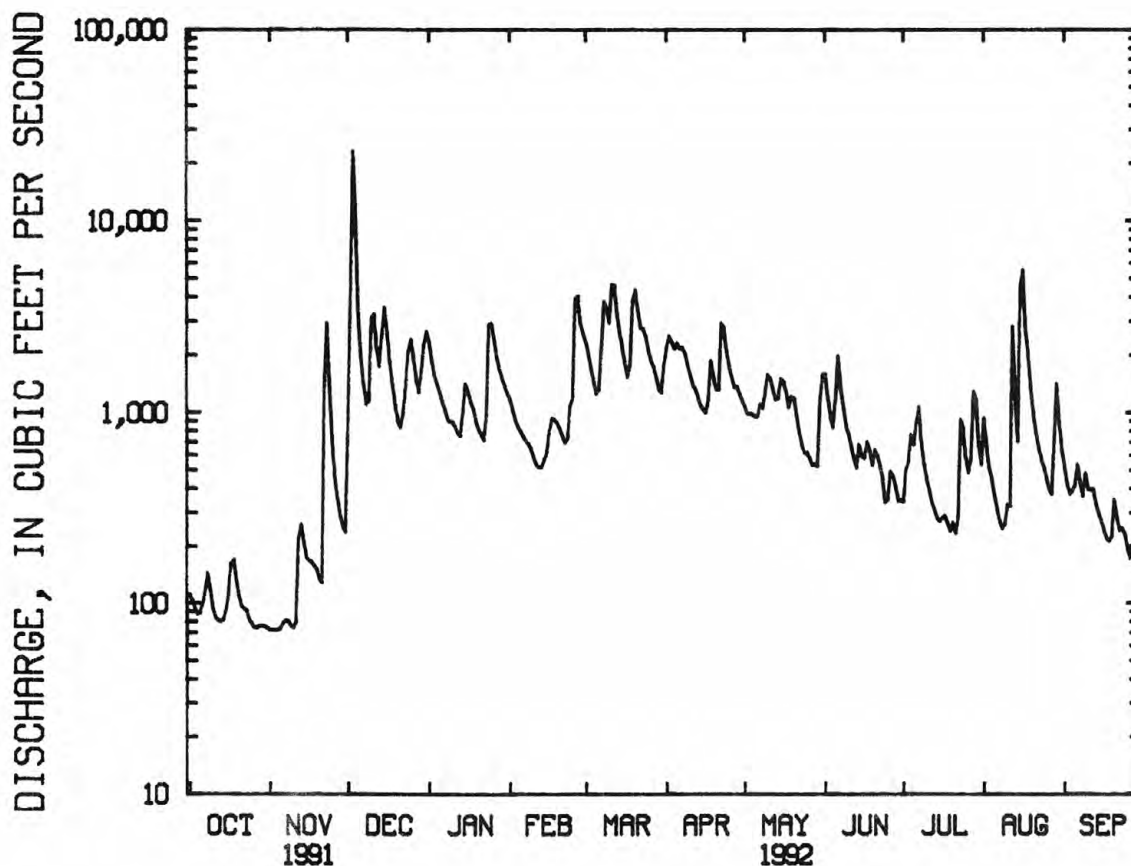
FOR 1991 CALENDAR YEAR

FOR 1992 WATER YEAR

WATER YEARS 1908 - 1911
1929 - 1931
1961 - 1992

ANNUAL TOTAL	446783		421599									
ANNUAL MEAN	1224		1152						1206			
HIGHEST ANNUAL MEAN									1788			1967
LOWEST ANNUAL MEAN									585			1988
HIGHEST DAILY MEAN	23300	Dec 3	23300	Dec 3					32000	Dec 31	1969	
LOWEST DAILY MEAN	62	Aug 31	72	(a)					e2.0	(b)		
ANNUAL SEVEN-DAY MINIMUM	68	Aug 27	73	Oct 30					2.0	Oct 1	1930	
INSTANTANEOUS PEAK FLOW			27500	Dec 3					35500	Mar 7	1967	
INSTANTANEOUS PEAK STAGE			26.32	Dec 3					31.98	Mar 7	1967	
INSTANTANEOUS LOW FLOW			72	(c)					e2.0	(b)		
ANNUAL RUNOFF (CFSM)	1.42		1.34						1.40			
ANNUAL RUNOFF (INCHES)	19.28		18.19						19.01			
10 PERCENT EXCEEDS	3010		2470						2700			
50 PERCENT EXCEEDS	429		819						650			
90 PERCENT EXCEEDS	86		113						101			

- a Nov. 1-4.
b Oct. 1-10, 1930.
c Nov. 1-5.
e Estimated.



KANAWHA RIVER BASIN

03200650 KANAWHA RIVER AT POCA, WV

LOCATION.--Lat 38°28'29", long 81°49'09", Putnam County, Hydrologic Unit 05050008, on left bank at John Amos Power Plant, at Poca, 200 ft upstream from Pocatalico River, and at mile 39.2.

DRAINAGE AREA.--11,435 mi², excludes that of Pocatalico River.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: October 1975 to September 1992, discontinued.

REMARKS.--Values published are once-daily readings.

COOPERATION.--Records were furnished by Appalachian Power Company.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: Maximum daily, 37.0°C, July 27, 1982; minimum daily, 0.0°C, Jan. 18, 1977.

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY INSTANTANEOUS VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21.0	18.0	---	---	4.5	---	8.5	---	17.0	24.5	24.0	25.5
2	20.5	18.0	---	6.0	---	8.0	9.0	14.5	18.0	---	---	25.5
3	20.0	---	---	6.0	4.5	8.5	9.0	---	18.0	---	24.0	25.5
4	20.0	18.0	---	6.0	4.5	8.5	8.0	15.5	16.5	---	23.5	25.5
5	20.0	---	---	---	4.5	9.0	---	15.5	18.0	---	23.5	25.5
6	---	14.5	8.5	6.0	4.5	10.0	4.0	15.5	18.0	26.0	23.5	---
7	---	---	---	6.0	5.0	11.0	6.5	15.5	---	26.0	25.5	25.0
8	20.0	13.5	---	6.0	5.0	---	7.0	15.5	18.0	25.5	---	25.5
9	20.0	12.5	9.0	---	---	12.0	10.0	15.5	18.0	25.5	---	25.5
10	19.0	---	9.0	---	4.5	12.0	11.0	---	20.0	25.5	26.5	25.5
11	19.0	8.5	9.0	---	4.5	10.0	11.0	15.5	20.0	25.5	26.5	25.5
12	18.5	11.0	9.0	---	4.5	9.5	---	16.0	19.0	---	26.5	25.5
13	---	11.0	---	7.0	4.5	8.0	13.5	15.5	19.0	---	26.5	---
14	19.0	10.5	---	7.0	4.5	6.5	12.5	16.5	---	---	26.5	25.5
15	19.0	---	---	6.5	6.0	---	13.0	16.5	20.0	---	26.0	25.5
16	19.0	---	5.5	5.5	---	6.5	14.5	16.0	19.0	---	---	26.0
17	19.0	---	---	5.0	5.5	7.0	---	---	21.0	28.0	21.0	25.5
18	---	10.0	6.5	5.0	5.5	7.0	15.0	16.5	---	28.5	21.0	25.5
19	---	---	5.5	---	6.0	8.0	---	16.5	---	---	21.0	25.5
20	---	10.0	5.5	5.0	6.5	8.0	18.0	17.0	---	28.5	28.0	---
21	15.5	11.0	6.0	5.0	6.5	8.0	16.5	18.5	---	28.5	23.0	25.5
22	15.5	10.0	---	4.0	6.5	---	15.5	18.0	---	28.5	23.0	25.5
23	14.5	11.0	6.0	---	---	6.0	14.5	18.5	---	28.5	---	25.5
24	14.5	---	6.5	4.0	8.0	9.0	14.5	---	---	28.5	23.5	24.5
25	18.0	10.0	---	---	8.0	9.0	14.5	---	21.5	29.0	24.5	24.5
26	---	8.0	---	---	8.5	9.0	14.5	---	21.5	---	24.5	24.5
27	---	8.0	5.5	4.0	9.0	9.0	14.5	---	22.0	26.5	24.5	---
28	---	---	5.5	4.0	9.0	9.0	14.5	---	---	25.5	25.5	24.5
29	---	---	---	---	8.0	---	14.5	---	23.5	24.0	25.5	24.5
30	---	---	5.5	---	---	9.5	14.5	18.0	23.5	24.5	---	23.5
31	---	---	5.5	4.5	---	9.5	---	---	---	24.5	25.5	---

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KANAWHA RIVER BASIN

03201300 KANAWHA RIVER AT WINFIELD DAM, AT WINFIELD, WV
(National stream-quality accounting network station)

LOCATION.--Lat 38°31'32", long 81°54'40", Putnam County, Hydrologic Unit 05050008, on left bank at intake line to Ohio River Valley Water Sanitation Commission (ORSANCO) monitor at Kanawha Valley Power Company raw water intake at Winfield Dam, 1.0 mi downstream from Winfield Bridge, and at mile 31.1.

DRAINAGE AREA.--11,809 mi².

PERIOD OF RECORD.--Water years 1957-70, 1974 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1957 to September 1970, January 1974 to September 1980.

pH: October 1974 to September 1980.

WATER TEMPERATURE: October 1956 to September 1970, January 1974 to September 1980.

DISSOLVED OXYGEN: October 1974 to September 1980.

REMARKS.--Discharges in water-quality tables are estimated. All prior daily records furnished by ORSANCO. NASQAN samples since January 1974 taken at Winfield Bridge.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 2,700 microsiemens, Apr. 21, 1961; minimum 76 microsiemens, Mar. 17, 1978.

pH: Maximum daily, 8.6 units, May 14, 1977; minimum daily, 5.3 units, July 16, 1979.

WATER TEMPERATURE: Maximum daily, 33.0°C, July 24, 1964; minimum daily, 0.0°C, Feb. 14, 1958, Mar. 12, 1960, Jan. 30, 1978.

DISSOLVED OXYGEN: Maximum daily, 16.0 mg/L, Feb. 19, 20, 1977; minimum daily, 3.1 mg/L, July 28, 1977.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

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 (MG/L) ATION) (00300)	OXYGEN, (PER- CENT SOLVED (MG/L) 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)
OCT												
29...	1351	E3020	229	7.1	17.5	7.2	752	8.2	87	K6	K5	68
MAR												
27...	1310	E22100	140	7.2	7.0	4.5	745	12.2	103	230	88	46
MAY												
22...	1200	E16800	141	7.1	20.0	12	753	8.3	92	200	K10	53
SEP												
09...	1215	E6290	245	7.5	25.5	5.1	748	7.4	92	93	K4	77

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)
OCT											
29...	16	6.8	17	2.1	50	0	41	48	13	0.10	2.7
MAR											
27...	11	4.4	5.8	1.2	28	0	23	31	5.2	0.20	4.8
MAY											
22...	14	4.4	5.5	1.3	37	0	30	24	5.0	<0.10	5.7
SEP											
09...	18	7.8	16	2.2	57	0	47	47	15	0.20	5.5

E: Estimated.

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

KANAWHA RIVER BASIN

03201300 KANAWHA RIVER AT WINFIELD DAM, AT WINFIELD, WV--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L) AS N) (00618)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L) AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L) AS N) (00631)	NITRO- GEN, AMMONIA TOTAL (MG/L) AS N) (00610)	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)
OCT 29...	123	133	0.390	0.010	0.400	0.170	0.170	0.33	0.50	0.060	0.050
MAR 27...	88	80	--	<0.010	0.580	0.090	0.080	--	<0.20	0.080	0.060
MAY 22...	87	79	--	<0.010	0.150	0.030	0.040	--	<0.20	0.030	0.020
SEP 09...	131	144	0.770	0.010	0.780	0.080	0.080	0.22	0.30	0.040	0.020
DATE	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)	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)
OCT 29...	0.010	20	44	<3	12	4	7	<10	<1	<1	<1.0
MAR 27...	0.010	40	28	<3	56	<4	39	<10	2	<1	<1.0
MAY 22...	<0.010	30	28	<3	58	5	28	<10	1	<1	<1.0
SEP 09...	0.020	20	43	<3	12	6	2	<10	1	<1	<1.0
DATE	STRON- TIUM, DIS- SOLVED (UG/L) AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L) AS V) (01085)	GROSS ALPHA, DIS- SOLVED (UG/L) AS U-NAT) (80030)	GROSS ALPHA, SUSP. TOTAL (UG/L) AS U-NAT) (80040)	GROSS BETA, DIS- SOLVED (PCI/L) AS CS-137) (03515)	GROSS BETA, SUSP. TOTAL (PCI/L) AS CS-137) (03516)	GROSS BETA, DIS- SOLVED (PCI/L) AS SR/ YT-90) (80050)	GROSS BETA, SUSP. TOTAL (PCI/L) AS SR/ YT-90) (80060)	RADIUM 226, DIS- SOLVED, RADON METHOD (PCI/L) (09511)	SEDI- MENT, SUS- PENDEED (MG/L) (80154)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
OCT 29...	140	<6	--	--	--	--	--	--	--	9	98
MAR 27...	97	<6	<0.6	<0.6	1.6	0.7	1.4	0.7	0.05	10	97
MAY 22...	95	<6	--	--	--	--	--	--	--	17	99
SEP 09...	170	<6	<0.6	<0.6	2.4	0.9	2.0	0.8	0.59	11	98

OHIO RIVER MAIN STEM

03201500 OHIO RIVER AT POINT PLEASANT, WV

LOCATION.--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.--52,760 mi², approximately, includes that of Kanawha River.

PERIOD OF RECORD.--March 1940 to September 1977, (since October 1952, no low-flow records). October 1977 to current year (gage heights only). Records of gage heights collected in this vicinity since 1889 are in reports of National Weather Service.

GAGE.--Water-stage recorder. Datum of gage is 514.10 ft, Sandy Hook datum. Prior to Oct. 1, 1951, water-stage recorder at site 0.3 mi upstream at same datum.

REMARKS.--U.S. Army Corps of Engineers satellite telemeter at station. Several days of missing record due to recorder malfunction.

AVERAGE DISCHARGE.--12 years (water years 1941-52), 74,350 ft³/s, 19.14 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 55.00 ft, Apr. 16, 1948; minimum gage height recorded, 22.52 ft, Sept. 10, 1956.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1896, 62.8 ft, Mar. 30, 1913. Flood of Jan. 27, 1937, reached a stage of 62.7 ft.

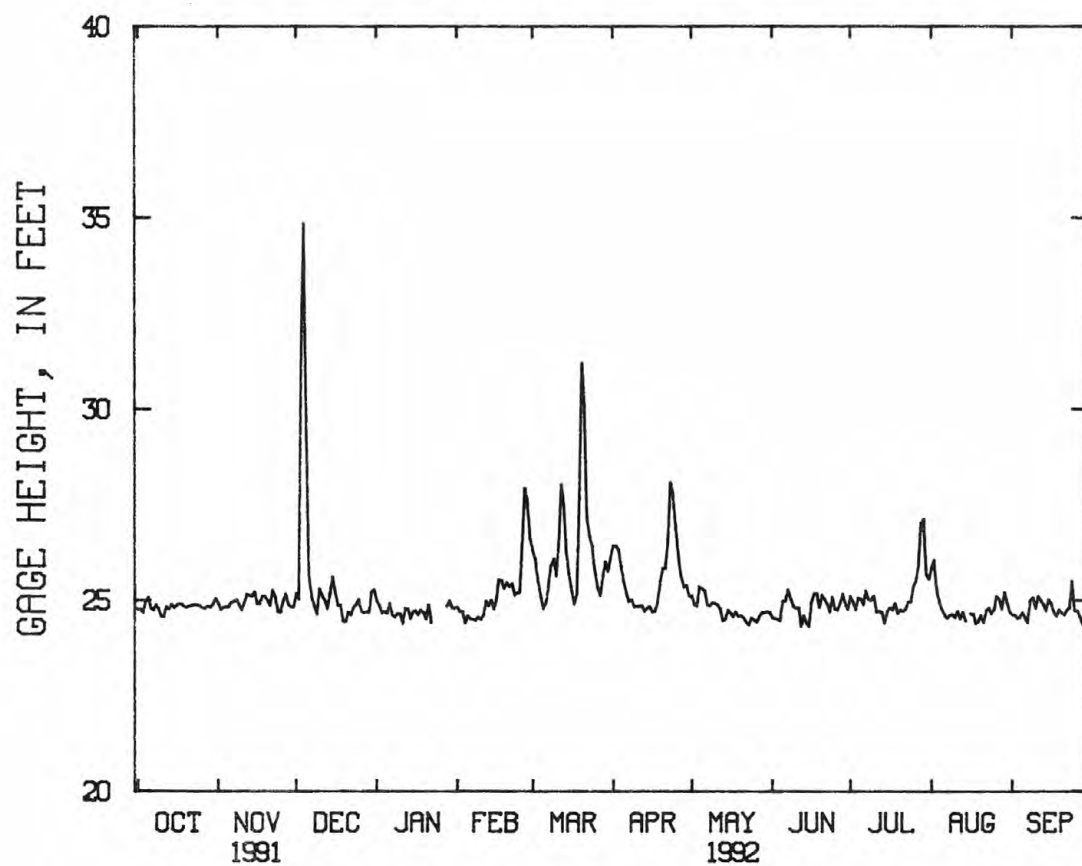
EXTREMES FOR CURRENT YEAR.--Maximum gage height, 35.55 ft, Dec. 4; minimum, 24.10 ft, Dec. 20 and June 15.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24.75	24.92	25.17	24.97	24.82	26.26	26.42	25.10	24.52	25.09	25.82	24.60
2	24.75	24.74	25.02	24.84	24.69	26.03	26.42	24.87	24.50	24.94	26.04	24.60
3	24.66	24.81	31.44	24.65	24.70	25.49	26.31	24.82	24.49	24.73	25.28	24.51
4	24.95	24.82	34.85	24.71	24.39	25.07	25.87	25.35	24.45	25.06	24.92	24.55
5	25.07	24.83	29.65	24.64	24.59	24.77	25.47	25.29	24.97	25.01	24.73	24.67
6	24.78	24.94	25.58	24.91	24.50	24.91	25.17	25.23	24.98	24.86	24.60	24.52
7	24.72	24.96	25.06	24.60	24.49	25.37	24.94	24.86	25.27	25.24	24.50	24.39
8	24.87	25.02	24.82	24.54	24.46	25.90	25.01	24.83	25.03	25.00	24.61	24.97
9	24.77	24.88	24.62	24.65	24.56	26.08	24.81	24.93	24.82	24.99	24.62	25.07
10	24.56	24.73	25.30	24.63	24.48	25.61	24.85	24.91	24.78	25.11	24.53	24.78
11	24.56	24.91	25.09	24.37	24.60	26.50	24.83	24.86	24.79	24.68	24.71	25.10
12	24.82	25.15	24.99	24.78	24.98	28.05	24.85	24.76	24.30	24.72	24.50	24.99
13	24.76	25.12	24.77	24.76	24.84	27.54	24.70	24.45	24.59	24.67	24.68	24.87
14	24.88	25.09	25.16	24.50	25.00	26.30	24.79	24.50	24.40	24.38	24.44	24.71
15	24.79	25.22	25.62	24.68	24.76	25.68	24.83	24.74	24.29	24.69	---	25.02
16	24.86	24.89	25.19	24.73	25.02	25.25	24.68	24.65	24.94	24.79	24.64	24.89
17	24.91	24.90	24.85	24.60	25.54	24.87	24.71	24.55	25.16	24.73	24.62	24.67
18	24.88	25.10	24.86	24.74	25.50	25.15	24.96	24.69	25.17	24.91	24.37	24.57
19	24.81	25.11	24.42	24.67	25.29	27.65	25.47	24.57	24.79	24.64	24.45	24.75
20	24.80	24.98	24.44	24.49	25.45	31.21	25.83	24.59	25.12	24.74	24.61	24.65
21	24.85	24.84	24.69	24.87	25.34	30.11	25.84	24.52	25.02	24.70	24.40	24.60
22	24.86	25.26	24.60	24.40	25.43	27.09	26.52	24.41	24.88	24.77	24.72	24.74
23	24.88	25.08	24.79	---	25.11	26.64	28.09	24.33	24.68	24.95	24.79	24.80
24	24.86	24.68	24.88	---	25.19	26.37	27.73	24.53	25.07	24.95	24.63	25.49
25	24.83	24.69	25.02	---	25.20	25.74	26.91	24.47	24.75	25.34	24.76	24.72
26	24.78	24.96	24.71	---	26.50	25.32	26.19	24.41	24.73	25.49	25.09	24.70
27	24.78	25.16	24.66	---	27.94	25.10	25.61	24.55	24.91	25.92	25.01	24.54
28	24.84	24.88	24.70	24.84	27.53	25.60	25.32	24.67	25.15	27.03	24.76	24.36
29	24.80	24.81	24.69	24.98	26.59	26.01	25.38	24.68	24.90	27.11	25.20	24.78
30	24.90	24.81	25.20	24.78	---	25.74	25.09	24.70	24.74	25.64	24.91	24.50
31	25.05	---	25.28	24.78	---	26.11	---	24.67	---	25.53	24.68	---
MEAN	24.82	24.94	25.62	---	25.22	26.24	25.59	24.73	24.81	25.11	---	24.74
MAX	25.07	25.26	34.85	---	27.94	31.21	28.09	25.35	25.27	27.11	---	25.49
MIN	24.56	24.68	24.42	---	24.39	24.77	24.68	24.33	24.29	24.38	---	24.36

OHIO RIVER MAIN STEM

03201500 OHIO RIVER AT POINT PLEASANT, WV--Continued



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 National Geodetic Vertical Datum of 1929. 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 fair. 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)
Dec. 2	2400	*5,280	*10.14	No other peaks greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	47	44	362	782	371	729	797	541	450	173	148	115
2	46	43	2450	628	322	652	795	484	372	206	141	101
3	45	43	3910	539	299	568	693	480	322	182	115	105
4	46	43	1790	665	292	501	657	423	315	170	106	97
5	44	42	770	722	285	444	623	396	1680	156	99	160
6	46	41	487	651	272	444	715	444	1430	164	92	114
7	47	42	363	560	261	649	800	477	808	179	88	107
8	46	43	297	476	250	1360	791	554	573	149	85	194
9	45	42	279	435	228	1280	695	691	490	137	104	115
10	45	62	919	405	201	1110	608	788	512	127	249	111
11	49	139	887	364	204	2860	756	733	427	117	147	131
12	49	92	594	325	195	1870	866	633	375	107	143	101
13	50	67	468	316	197	1270	771	768	327	103	133	86
14	49	58	922	340	219	957	680	990	301	97	159	81
15	55	54	1130	336	246	804	606	750	283	97	174	73
16	61	55	754	307	423	664	558	778	275	114	212	70
17	57	54	540	278	474	586	540	632	247	101	196	65
18	49	52	428	e250	465	670	640	545	224	96	191	64
19	45	51	333	e230	416	1490	623	518	224	91	151	67
20	45	47	276	e220	363	1490	586	449	223	87	124	72
21	44	54	286	e210	316	1190	719	390	194	86	109	70
22	45	524	301	e220	295	1000	1710	344	177	103	101	67
23	44	710	352	368	281	1120	1240	313	165	112	96	67
24	45	299	1200	888	318	1060	933	291	163	111	94	67
25	45	180	1000	755	328	888	937	279	185	95	90	62
26	44	125	681	628	1110	784	827	265	223	93	87	60
27	45	98	521	506	1370	716	735	255	235	138	125	65
28	45	86	495	457	986	629	722	236	192	502	205	70
29	43	78	1060	420	864	569	653	327	166	231	406	66
30	43	75	1290	396	---	565	600	509	178	148	219	59
31	42	---	1040	388	---	695	---	566	---	125	148	---
TOTAL	1451	3343	26185	14065	11851	29614	22876	15849	11736	4397	4537	2682
MEAN	46.8	111	845	454	409	955	763	511	391	142	146	89.4
MAX	61	710	3910	888	1370	2860	1710	990	1680	502	406	194
MIN	42	41	276	210	195	444	540	236	163	86	85	59
CFSM	.15	.36	2.76	1.48	1.34	3.12	2.49	1.67	1.28	.46	.48	.29
IN.	.18	.41	3.18	1.71	1.44	3.60	2.78	1.93	1.43	.53	.55	.33

e Estimated

GUYANDOTTE RIVER BASIN

03202400 GUYANDOTTE RIVER NEAR BAILEYSVILLE, WV--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1968 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	166	243	437	611	758	766	759	601	323	185	161	105
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 1991 CALENDAR YEAR

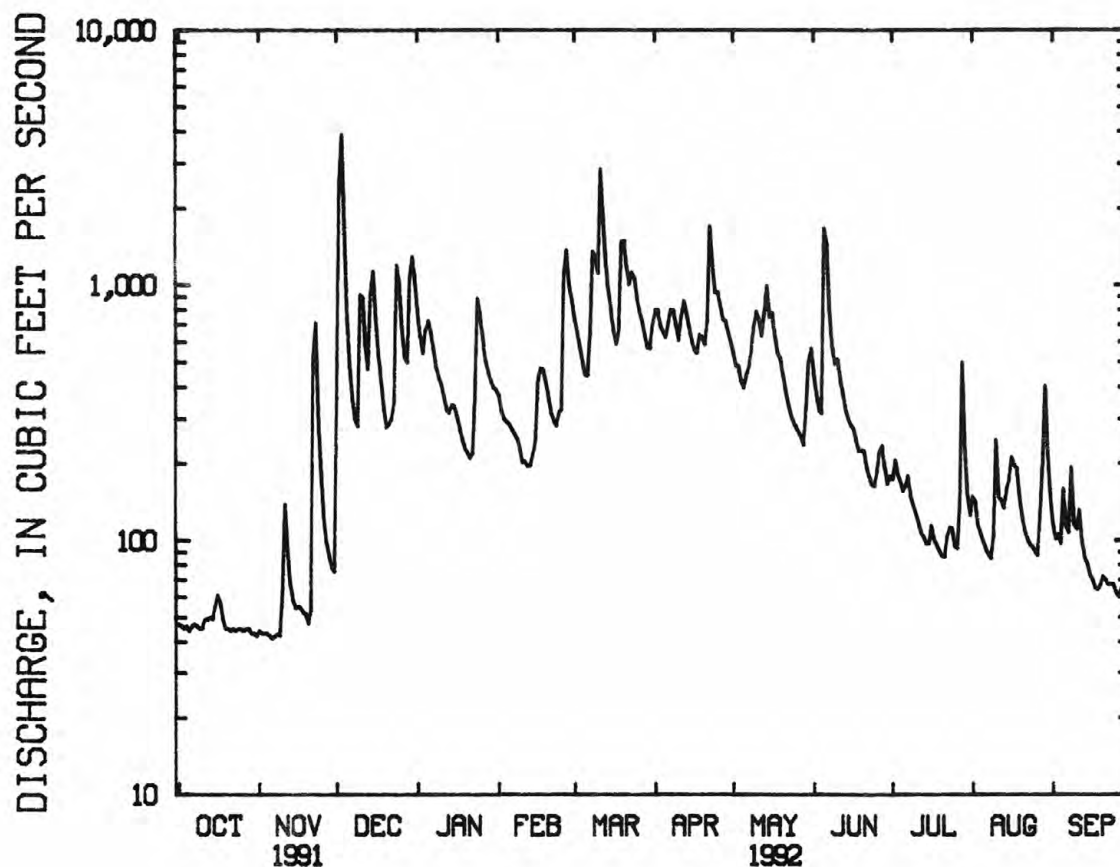
FOR 1992 WATER YEAR

WATER YEARS 1968 - 1992

ANNUAL TOTAL	164637			148586								
ANNUAL MEAN	451			406						425		
HIGHEST ANNUAL MEAN										620		1974
LOWEST ANNUAL MEAN										174		1988
HIGHEST DAILY MEAN	3910	Dec 3		3910	Dec 3					17900	Apr 5	1977
LOWEST DAILY MEAN	41	Nov 6		41	Nov 6					23	Nov 11	1978
ANNUAL SEVEN-DAY MINIMUM	42	Nov 3		42	Nov 3					27	Oct 17	1978
INSTANTANEOUS PEAK FLOW				5280	Dec 2					a36700	Apr 5	1977
INSTANTANEOUS PEAK STAGE				10.14	Dec 2					26.89	Apr 5	1977
INSTANTANEOUS LOW FLOW				41	(b)					21	Oct 14	1970
ANNUAL RUNOFF (CFSM)	1.47			1.33						1.39		
ANNUAL RUNOFF (INCHES)	20.01			18.06						18.88		
10 PERCENT EXCEEDS	1130			887						911		
50 PERCENT EXCEEDS	238			278						234		
90 PERCENT EXCEEDS	47			49						60		

a From rating curve extended above 14,000 ft³/s on basis of slope-area measurement of peak flow.

b Nov. 5, 6, 9.



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 National Geodetic Vertical Datum of 1929, 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 periods of estimated daily discharges (ice effect; missing gage-height record), 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 1,600 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage Height (ft)	Date	Time	Discharge (ft ³ /s)	Gage Height (ft)
Dec. 3	0200	*2,970	*8.18	No other peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.0	4.2	59	329	176	312	367	208	197	64	93	83
2	3.8	4.0	873	255	146	281	356	180	154	106	66	67
3	3.6	3.9	2250	206	134	246	298	175	124	84	51	90
4	3.2	3.9	699	195	131	215	274	142	122	83	42	83
5	3.5	3.9	258	167	124	190	259	126	416	69	35	243
6	4.6	4.3	156	153	117	213	321	130	400	71	31	141
7	5.3	3.7	112	139	111	464	362	132	257	80	27	95
8	4.4	3.8	88	124	108	1000	334	150	186	62	24	264
9	4.0	3.9	83	118	98	748	281	204	156	50	44	190
10	4.2	6.6	283	115	86	547	238	301	137	42	98	164
11	3.6	19	292	104	80	e1300	232	325	111	35	55	239
12	3.6	19	203	93	77	e850	227	273	93	31	53	149
13	3.6	12	163	89	78	523	216	261	80	27	40	105
14	3.7	9.5	561	108	90	383	204	313	73	25	43	81
15	5.5	7.6	549	125	121	318	191	238	73	49	198	65
16	15	6.6	308	122	329	265	176	209	79	73	417	54
17	14	6.2	205	e110	356	232	169	165	65	50	207	46
18	11	6.1	152	e100	307	314	206	138	54	43	144	42
19	7.3	5.8	111	e92	257	1110	206	136	57	41	105	51
20	5.6	5.2	86	e90	207	815	198	126	62	32	81	54
21	5.0	7.3	89	e86	173	558	286	105	49	28	65	44
22	4.6	86	103	84	151	445	954	88	43	26	55	38
23	4.8	168	139	242	139	570	591	77	37	25	48	36
24	5.0	72	607	726	161	529	396	70	33	31	44	32
25	4.6	42	447	489	162	405	365	66	49	31	38	29
26	4.3	29	285	361	425	331	309	61	72	31	35	27
27	4.3	22	206	277	540	285	275	56	80	167	93	27
28	4.2	18	196	241	405	241	281	50	60	598	297	32
29	4.5	16	569	218	365	210	260	82	46	200	397	28
30	4.4	15	665	202	---	204	235	184	43	107	181	24
31	4.2	---	474	190	---	289	---	224	---	83	114	---
TOTAL	163.4	614.5	11271	5950	5654	14393	9067	4995	3408	2444	3221	2623
MEAN	5.27	20.5	364	192	195	464	302	161	114	78.8	104	87.4
MAX	15	168	2250	726	540	1300	954	325	416	598	417	264
MIN	3.2	3.7	59	84	77	190	169	50	33	25	24	24
CFSM	.04	.16	2.89	1.52	1.55	3.68	2.40	1.28	.90	.63	.82	.69
IN.	.05	.18	3.33	1.76	1.67	4.25	2.68	1.47	1.01	.72	.95	.77

e Estimated

GUYANDOTTE RIVER BASIN

03202750 CLEAR FORK AT CLEAR FORK, WV--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1974 - 1992, BY WATER YEAR (WY)

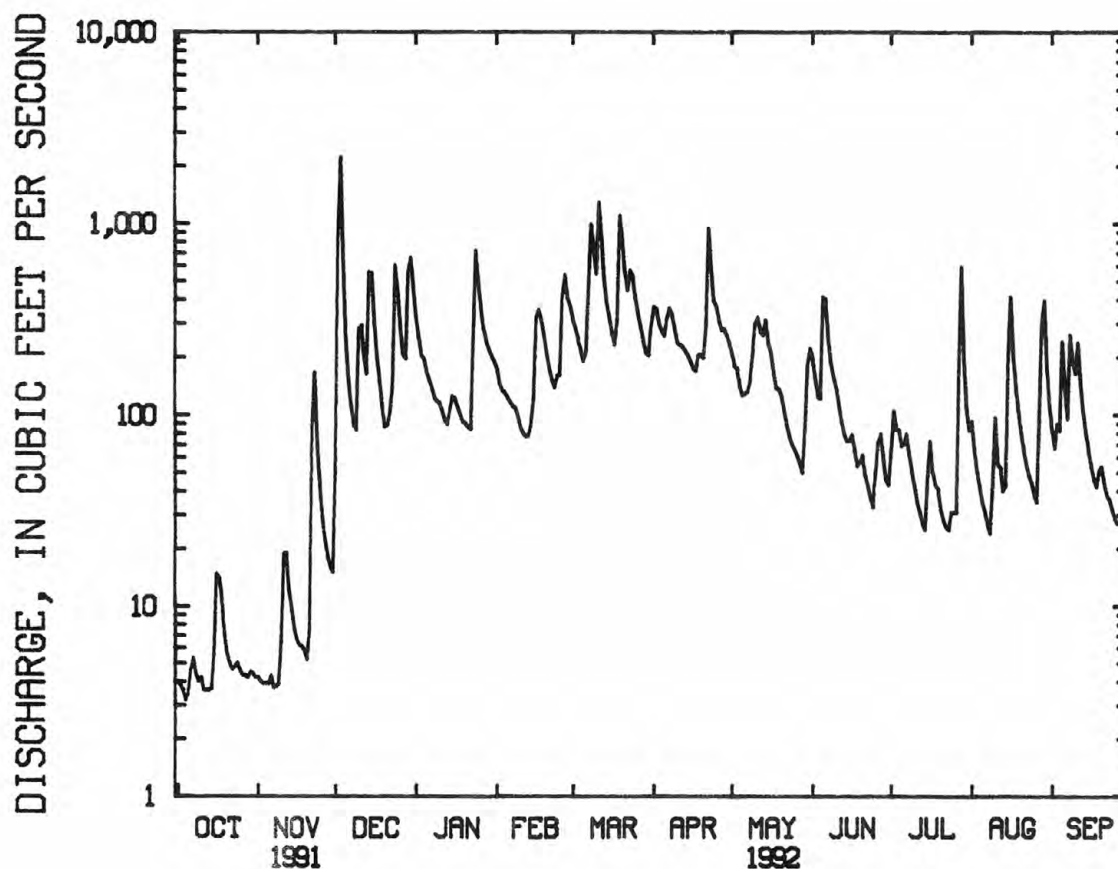
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	79.3	135	223	278	357	356	322	244	118	73.0	59.3	41.3
MAX	365	366	491	833	562	981	766	556	551	333	308	103
(WY)	1990	1978	1979	1979	1979	1975	1987	1984	1981	1980	1977	1982
MIN	5.27	11.7	67.5	47.5	126	96.0	74.8	38.9	18.3	12.2	6.32	7.68
(WY)	1992	1988	1981	1977	1988	1988	1986	1976	1988	1988	1987	1983

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR	FOR 1992 WATER YEAR	WATER YEARS 1974 - 1992
ANNUAL TOTAL	64029.7	63803.9	
ANNUAL MEAN	175	174	190
HIGHEST ANNUAL MEAN			318
LOWEST ANNUAL MEAN			76.5
HIGHEST DAILY MEAN	2460 Mar 23	2250 Dec 3	6380 Apr 5 1977
LOWEST DAILY MEAN	3.2 Oct 4	3.2 Oct 4	2.3 Aug 18 1988
ANNUAL SEVEN-DAY MINIMUM	3.8 Sep 29	3.9 Oct 8	2.9 Aug 13 1988
INSTANTANEOUS PEAK FLOW		2970 Dec 3	a9900 Apr 5 1977
INSTANTANEOUS PEAK STAGE		8.18 Dec 3	b18.64 Apr 5 1977
INSTANTANEOUS LOW FLOW		2.8 Oct 4	2.3 (c)
ANNUAL RUNOFF (CFSM)	1.39	1.38	1.51
ANNUAL RUNOFF (INCHES)	18.90	18.84	20.48
10 PERCENT EXCEEDS	494	396	437
50 PERCENT EXCEEDS	65	108	85
90 PERCENT EXCEEDS	4.4	5.6	12

a From rating curve extended above 3,000 ft³/s on basis of slope-area measurement of peak flow.

b Site and datum then in use.

c Aug. 17-19, 1988.



GUYANDOTTE RIVER BASIN

03202915 GUYANDOTTE RIVER BELOW R. D. BAILEY DAM, WV

LOCATION.--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.--535 mi².

PERIOD OF RECORD.--November 1978 to September 1982, October 1986 to September 1991 (daily discharge). October 1982 to September 1986, October 1991 to current year (gage heights, occasional discharge measurements, and annual maximum discharge only).

GAGE.--Water-stage recorder. Datum of gage is 880.00 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records for winter periods not adjusted for ice effect. Flow regulated since February 1980 by R. D. Bailey Lake at mile 112. U.S. Army Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--8 years, (water years 1980-82, 1987-91), 778 ft³/s, 19.75 in/yr, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,800 ft³/s, June 22, 1979, gage height, 13.90 ft; minimum discharge, 2.1 ft³/s, Dec. 18, 1978; minimum daily discharge, 34 ft³/s, Nov. 1, 1987; minimum gage height observed, 1.91 ft, Aug. 30, 1983 (gates closed) but may have been less Sept. 14, 30, 1983 (gates closed).

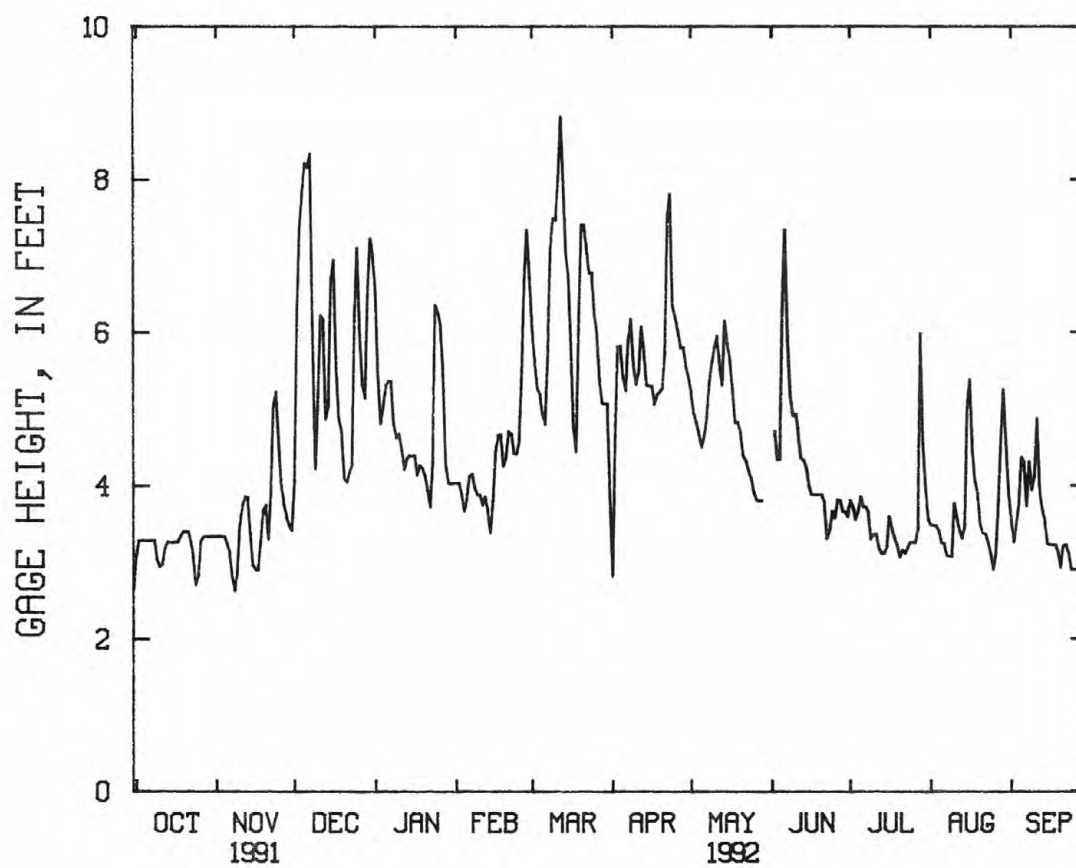
EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,810 ft³/s, Mar. 12, gage height, 8.91 ft; minimum gage height, 2.59 ft, Oct. 24, 25.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.08	3.34	4.06	6.54	4.04	6.08	2.80	5.20	---	3.81	3.48	3.54
2	3.29	3.34	6.24	5.42	4.04	5.65	4.68	4.95	4.72	3.72	3.48	3.26
3	3.29	3.34	7.40	4.80	3.88	5.27	5.83	4.82	4.34	3.55	3.47	3.53
4	3.29	3.34	7.78	5.06	3.67	5.19	5.83	4.66	4.35	3.66	3.40	3.76
5	3.29	3.24	8.21	5.32	3.83	4.93	5.41	4.50	6.26	3.86	3.25	4.38
6	3.29	3.13	8.15	5.37	4.13	4.80	5.24	4.66	7.36	3.72	3.24	4.30
7	3.29	2.81	8.34	5.37	4.16	5.65	5.89	4.90	5.94	3.72	3.08	3.72
8	3.29	2.62	5.94	4.79	3.97	7.06	6.18	5.32	5.18	3.65	3.07	4.32
9	3.03	2.87	4.21	4.62	3.88	7.50	5.59	5.62	4.91	3.30	3.07	3.94
10	2.94	3.49	5.10	4.68	3.88	7.47	5.32	5.82	4.94	3.36	3.78	4.14
11	2.98	3.75	6.23	4.46	3.75	8.01	5.52	5.96	4.67	3.37	3.57	4.88
12	3.18	3.86	6.16	4.21	3.86	8.83	6.09	5.62	4.36	3.18	3.40	3.99
13	3.27	3.84	4.86	4.35	3.67	8.03	5.76	5.31	4.33	3.11	3.31	3.68
14	3.26	3.37	5.05	4.40	3.38	7.04	5.31	6.16	4.24	3.11	3.47	3.51
15	3.26	2.96	6.69	4.39	3.80	6.75	5.30	5.85	4.00	3.20	5.03	3.23
16	3.27	2.90	6.96	4.40	4.46	5.90	5.30	5.62	3.88	3.60	5.39	3.22
17	3.27	2.90	5.53	4.13	4.67	4.77	5.06	5.25	3.88	3.43	4.46	3.22
18	3.34	3.26	4.85	4.27	4.68	4.44	5.19	4.82	3.88	3.31	4.05	3.22
19	3.40	3.68	4.68	4.23	4.26	6.15	5.23	4.83	3.88	3.21	3.89	3.12
20	3.40	3.75	4.09	4.12	4.37	7.42	5.28	4.68	3.88	3.06	3.49	2.92
21	3.40	3.30	4.05	3.94	4.72	7.41	5.72	4.39	3.78	3.16	3.37	3.21
22	3.26	3.87	4.17	3.72	4.68	7.13	7.50	4.32	3.30	3.11	3.36	3.23
23	3.07	5.06	4.28	4.31	4.42	6.78	7.81	4.19	3.42	3.19	3.25	3.12
24	2.70	5.23	6.17	6.37	4.42	6.78	6.33	4.09	3.67	3.26	3.09	2.90
25	2.83	4.58	7.12	6.26	4.58	6.26	6.18	3.91	3.57	3.26	2.90	2.90
26	3.28	4.01	5.97	6.09	5.40	5.98	6.00	3.81	3.82	3.26	3.10	2.90
27	3.34	3.75	5.30	5.50	6.67	5.38	5.80	3.80	3.80	3.44	3.74	2.90
28	3.34	3.58	5.14	4.24	7.36	5.07	5.81	3.80	3.66	5.99	4.57	2.90
29	3.34	3.47	6.50	4.03	6.76	5.07	5.55	---	3.66	4.55	5.26	3.17
30	3.34	3.41	7.24	4.03	---	5.07	5.41	---	3.59	3.96	4.56	3.24
31	3.34	---	6.99	4.03	---	3.84	---	---	---	3.55	3.90	---
MEAN	3.22	3.53	5.92	4.76	4.46	6.18	5.63	---	---	3.54	3.69	3.48
MAX	3.40	5.23	8.34	6.54	7.36	8.83	7.81	---	---	5.99	5.39	4.88
MIN	2.70	2.62	4.05	3.72	3.38	3.84	2.80	---	---	3.06	2.90	2.90

GUYANDOTTE RIVER BASIN

03202915 GUYANDOTTE RIVER BELOW R. D. BAILEY DAM, WV--Continued



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 Middelburg 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 640.00 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1962, at datum 1.32 ft lower.

REMARKS.--Records good except those for period of estimated daily discharge (ice effect), which is fair. Flow regulated since February 1980 by R. D. Bailey Lake at mile 112. U.S. Army Corps of Engineers satellite telemeter at station.

PEAK DISCHARGE FOR CURRENT YEAR.--Maximum discharge, 12,800 ft³/s, Dec. 2, gage height, 15.38 ft.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	56	201	540	2370	747	2050	824	1430	1130	538	499	453
2	130	200	4030	1900	695	1760	989	1260	995	717	380	323
3	186	200	7060	1130	667	1440	1850	1120	769	523	330	321
4	185	200	3910	1160	548	1320	1850	1040	672	497	309	398
5	199	198	3950	1300	517	1230	1760	850	1400	496	256	794
6	211	169	3680	1310	623	1180	1560	937	3010	647	209	1020
7	192	138	3730	1280	664	2080	1740	1010	1960	503	194	582
8	186	108	3010	1150	640	4040	2160	1220	1230	432	164	545
9	186	49	708	828	526	4050	1720	1460	1010	349	198	777
10	128	76	1350	880	496	3770	1500	1690	915	285	185	419
11	104	318	1940	842	488	5020	1430	1680	968	285	509	1090
12	116	339	2140	653	455	5850	1770	1760	633	273	433	812
13	167	392	1260	651	492	5000	1780	1260	645	196	232	434
14	179	332	1650	807	399	3100	1340	1700	582	176	311	389
15	203	198	2420	796	417	2570	1320	1670	550	178	1870	286
16	223	120	2910	796	805	2220	1310	1430	413	207	2430	223
17	197	103	1780	742	987	1320	1290	1340	405	343	1190	211
18	186	101	1120	627	980	1140	1140	1060	403	243	778	211
19	211	187	873	720	940	2310	1360	1000	414	228	619	275
20	221	310	781	593	676	3840	1180	1160	401	185	461	221
21	223	336	534	e520	871	3560	1670	819	394	160	321	160
22	221	680	663	451	982	3330	3810	753	310	197	290	218
23	175	1060	725	800	783	2880	4280	710	213	236	279	207
24	139	1200	1990	2310	806	2780	2720	623	277	249	225	177
25	88	983	3210	2830	816	2420	2000	605	465	267	187	138
26	61	468	2200	1890	1580	1930	2020	494	362	239	153	135
27	190	455	1360	2010	2370	1740	1770	483	541	441	407	149
28	206	287	1270	1130	3150	1350	1860	477	361	1860	1030	150
29	202	275	2270	844	2950	1300	1750	613	341	1190	1500	136
30	201	243	3610	807	---	1300	1560	945	346	548	1130	197
31	202	---	3240	778	---	1400	---	1330	---	534	666	---
TOTAL	5374	9926	69914	34905	27070	79280	53313	33929	22115	13222	17745	11451
MEAN	173	331	2255	1126	933	2557	1777	1094	737	427	572	382
MAX	223	1200	7060	2830	3150	5850	4280	1760	3010	1860	2430	1090
MIN	56	49	534	451	399	1140	824	477	213	160	153	135

e Estimated

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	a55000
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 - 1992, BY WATER YEAR (WY) [REGULATED, UNADJUSTED]

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	465	707	1101	1348	2112	1969	1869	1685	808	456	305	267
MAX	2211	1649	2255	2606	3579	3662	5213	3828	3430	1693	740	602
(WY)	1990	1980	1992	1991	1990	1991	1987	1984	1981	1980	1980	1989
MIN	173	98.9	373	416	690	449	353	716	174	120	89.1	115
(WY)	1992	1988	1981	1981	1988	1988	1986	1991	1988	1988	1987	1990

SUMMARY STATISTICS

FOR 1991 CALENDAR YEAR

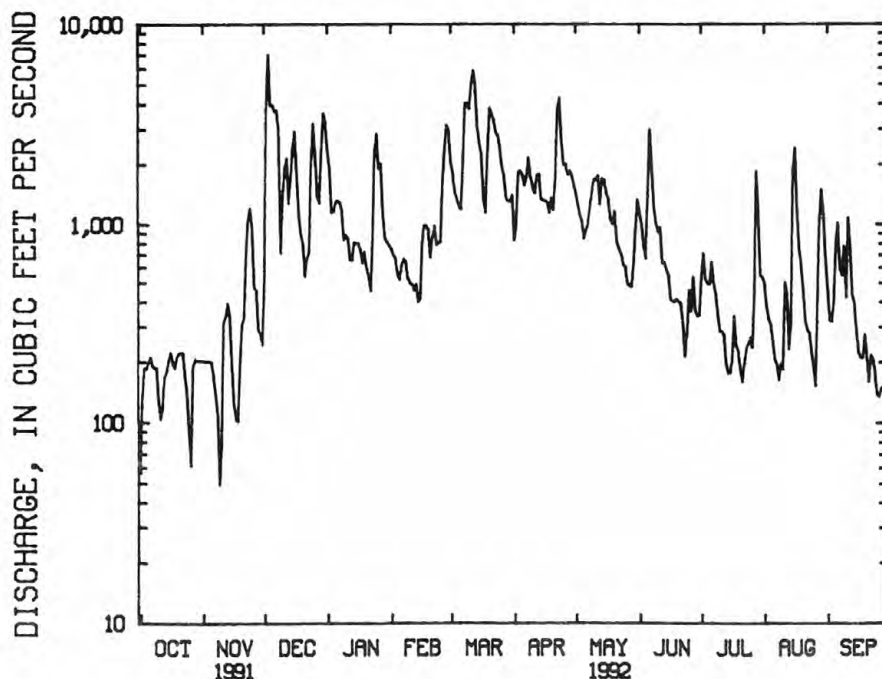
FOR 1992 WATER YEAR

WATER YEARS 1980 - 1992

ANNUAL TOTAL	447225	378244	
ANNUAL MEAN	1225	1033	1086
HIGHEST ANNUAL MEAN			1439
LOWEST ANNUAL MEAN			432
HIGHEST DAILY MEAN	9860	7060	14800
LOWEST DAILY MEAN	49	49	48
ANNUAL SEVEN-DAY MINIMUM	59	134	57
INSTANTANEOUS PEAK FLOW		12800	27200
INSTANTANEOUS PEAK STAGE		15.38	23.30
INSTANTANEOUS LOW FLOW		45	45
10 PERCENT EXCEEDS	3590	2330	2780
50 PERCENT EXCEEDS	540	678	563
90 PERCENT EXCEEDS	98	186	150

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 10, Aug. 18, 1988.



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 National Geodetic Vertical Datum of 1929. 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.--No estimated daily discharges. Water-discharge 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.

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, 18,700 ft³/s, Dec. 3, gage height, 26.03 ft.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	85	241	1180	3700	1150	3500	2070	1870	1680	641	1450	775
2	85	241	2890	2950	1050	2720	1810	1650	1330	1070	973	563
3	90	237	16400	2110	965	2240	2220	1480	1150	925	715	427
4	196	237	10500	1630	910	1890	2720	1310	962	1090	594	407
5	210	237	4910	1610	784	1730	2760	1180	959	816	509	481
6	242	235	4400	1650	744	1670	2380	1100	2240	833	413	919
7	251	225	4020	1610	842	2570	2230	1260	2930	843	344	1010
8	220	182	4120	1540	846	4350	2570	1600	1820	658	316	630
9	210	170	2390	1320	781	5440	2600	2120	1290	574	301	681
10	209	125	1830	1180	659	5530	2080	2490	1120	548	342	762
11	192	96	2310	1160	634	7140	1850	2410	1060	427	300	566
12	133	281	2530	1070	605	7370	1890	2290	1010	437	807	1140
13	143	366	2550	922	640	7140	2150	1950	732	408	617	779
14	167	406	2740	1090	722	5210	1900	1590	2130	306	380	497
15	224	358	3400	1400	638	3870	1580	2100	2200	277	529	440
16	256	267	3620	1310	859	3280	1550	1850	1050	278	2490	340
17	271	177	3160	1240	1150	2470	1600	1600	1050	289	2050	274
18	242	145	1960	1110	1270	2080	1970	1410	819	407	1220	263
19	227	135	1380	987	1250	3340	1750	1280	893	406	855	332
20	238	163	1140	988	1120	4930	1700	2240	743	332	708	400
21	261	321	1010	892	956	5060	1670	1720	634	279	550	298
22	263	1090	937	850	1100	4590	3040	1180	579	255	413	231
23	260	1770	1120	975	1210	4340	4940	990	469	586	370	276
24	242	1290	1550	2110	1380	3850	4440	890	361	861	352	263
25	199	1230	3200	3560	1410	3580	2870	792	547	606	302	239
26	164	991	3380	3090	3920	2940	2590	720	795	498	266	187
27	123	532	2280	2750	3750	2600	2360	616	589	652	229	209
28	164	499	1710	2290	3940	2080	2340	581	667	1690	1080	245
29	252	351	2080	1570	4310	1740	2340	622	493	2200	1950	213
30	246	332	3830	1320	---	1690	2080	1160	668	1260	1640	184
31	242	---	4410	1230	---	2100	---	1490	---	1030	1160	---
TOTAL	6307	12930	102937	51214	39595	113040	70050	45541	32970	21482	24225	14031
MEAN	203	431	3321	1652	1365	3646	2335	1469	1099	693	781	468
MAX	271	1770	16400	3700	4310	7370	4940	2490	2930	2200	2490	1140
MIN	85	96	937	850	605	1670	1550	581	361	255	229	184

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	a41800
LOWEST DAILY MEAN	3.8
ANNUAL SEVEN-DAY MINIMUM	5.6
INSTANTANEOUS PEAK FLOW	44500
INSTANTANEOUS PEAK STAGE	43.83
INSTANTANEOUS LOW FLOW	4020
50 PERCENT EXCEEDS	700
90 PERCENT EXCEEDS	100

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1980 - 1992, BY WATER YEAR (WY) [REGULATED, UNADJUSTED]

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	623	1060	1671	1865	3081	2859	2716	2260	1233	656	410	360
MAX	3000	2553	3321	3613	5080	5228	7513	5255	4403	2173	928	977
(WY)	1990	1980	1992	1991	1990	1991	1987	1989	1981	1980	1980	1989
MIN	203	157	558	629	1094	864	481	876	227	157	131	166
(WY)	1992	1988	1981	1981	1988	1988	1986	1991	1988	1988	1987	1985

SUMMARY STATISTICS

FOR 1991 CALENDAR YEAR

FOR 1992 WATER YEAR

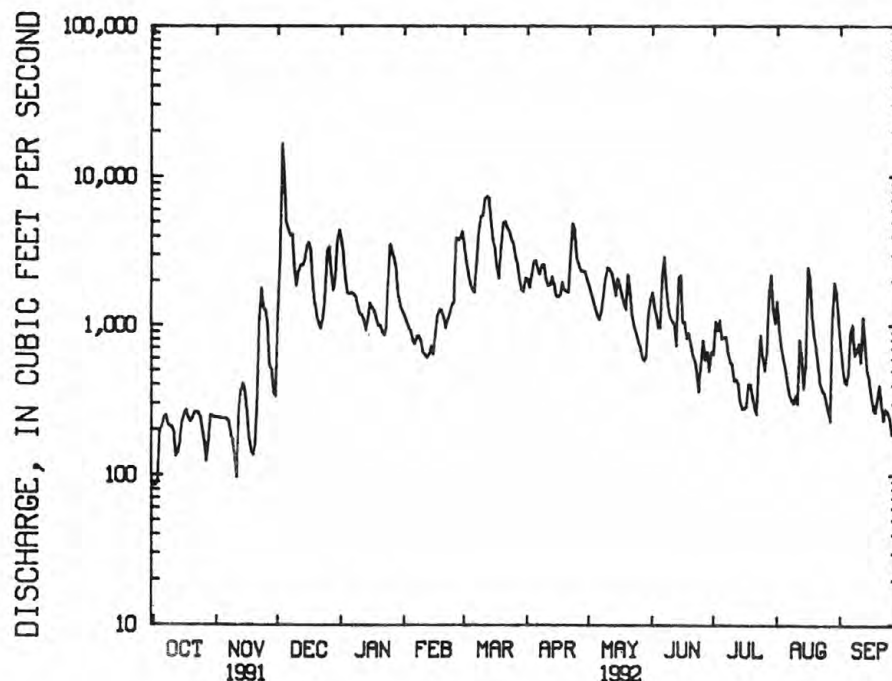
WATER YEARS 1980 - 1992

ANNUAL TOTAL	639790	534322	
ANNUAL MEAN	1753	1460	1558
HIGHEST ANNUAL MEAN			2052
LOWEST ANNUAL MEAN			643
HIGHEST DAILY MEAN	16400	Dec 3	a18500
LOWEST DAILY MEAN	85	(b)	77
ANNUAL SEVEN-DAY MINIMUM	94	Sep 27	87
INSTANTANEOUS PEAK FLOW			18700
INSTANTANEOUS PEAK STAGE			26.03
INSTANTANEOUS LOW FLOW			82
10 PERCENT EXCEEDS	4880		3220
50 PERCENT EXCEEDS	744		1050
90 PERCENT EXCEEDS	148		237

a Computed by using fall as a factor.

b Oct. 1, 2.

c Backwater.



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 current year.

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 1991 TO SEPTEMBER 1992

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 (MG/L) (00300)	OXYGEN, DIS- SOLVED SATUR- ATION (00301)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)
OCT										
30...	1211	246	698	7.7	16.0	4.9	749	7.4	76	25
DEC										
19...	1145	1380	255	7.3	4.0	9.6	768	12.3	93	1500
MAY										
21...	1340	1630	235	7.2	19.0	34	755	8.5	93	1400
JUN										
30...	1155	654	362	7.3	24.0	24	744	7.2	88	3600
SEP										
04...	1140	420	459	7.7	23.0	5.5	750	7.4	88	260

DATE	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)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)
OCT										
30...	33	150	34	16	97	4.3	191	0	157	180
DEC										
19...	500	72	16	7.7	18	2.2	46	0	38	69
MAY										
21...	510	77	18	7.6	15	2.2	43	0	35	62
JUN										
30...	4800	110	24	11	28	2.6	66	0	54	87
SEP										
04...	100	120	28	13	43	3.2	106	0	87	110

GUYANDOTTE RIVER BASIN

03204000 GUYANDOTTE RIVER AT BRANCHLAND, WV--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	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, 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 TOTAL (MG/L AS N) (00610)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)
OCT 30...	23	0.20	0.74	436	451	--	<0.010	0.240	0.010	0.010
DEC 19...	7.0	0.20	7.5	161	154	0.720	0.010	0.730	0.060	0.060
MAY 21...	5.1	0.10	6.9	146	141	--	<0.010	0.500	0.020	0.030
JUN 30...	13	<0.10	5.2	214	207	--	<0.010	0.610	0.030	0.040
SEP 04...	17	0.20	5.1	285	275	--	<0.010	0.640	0.030	0.030

DATE	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)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)
OCT 30...	0.19	0.20	0.010	<0.010	<0.010	30	75	<3	95	29
DEC 19...	--	<0.20	0.010	<0.010	0.010	--	--	--	--	--
MAY 21...	--	<0.20	0.020	0.020	<0.010	40	31	<3	61	12
JUN 30...	--	<0.20	<0.010	<0.010	<0.010	70	52	<3	70	15
SEP 04...	--	<0.20	<0.010	<0.010	<0.010	30	59	<3	61	19

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)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
OCT 30...	36	<10	2	<1	<1.0	600	<6	11	7.3	97
DEC 19...	--	--	--	--	--	--	--	20	75	95
MAY 21...	10	<10	<1	<1	<1.0	250	<6	73	321	100
JUN 30...	20	<10	1	<1	<1.0	390	<6	64	113	99
SEP 04...	25	<10	<1	<1	<1.0	470	<6	25	28	97

OHIO RIVER MAIN STEM

03206000 OHIO RIVER AT HUNTINGTON, WV

LOCATION.--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.--55,900 mi², approximately.

PERIOD OF RECORD.--August 1934 to September 1986, October 1986 to current year (gage heights only). No low-flow records since October 1968. Gage-height records collected at same site since 1913 are in reports of National Weather Service.

REVISED RECORDS.--WSP 853: 1934, 1936. WSP 893: Drainage area. WSP 1305: 1935(M), 1939(M).

GAGE.--Water-stage recorder. Datum of gage is 490.263 ft, Sandy Hook datum. Prior to July 8, 1942, at datum 1.737 ft higher. Prior to September 30, 1986, auxiliary water-stage recorder 4.7 mi upstream from base gage at datum 490.102 ft (Sandy Hook datum).

REMARKS.--Flow regulated by Ohio River system of locks, dams, and reservoirs upstream. U.S. Army Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--34 years (water years 1935-68), 75,240 ft³/s, 18.28 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 654,000 ft³/s, Jan. 28, 1937; maximum gage height, 69.45 ft, Jan. 27, 1937, present datum; minimum daily discharge determined, 3,200 ft³/s, Sept. 6, 13, Nov. 2, 1934, Oct. 3, 1935, Oct. 1, 1937.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 42.29 ft, Dec. 4; minimum, 24.85 ft, Aug. 22.

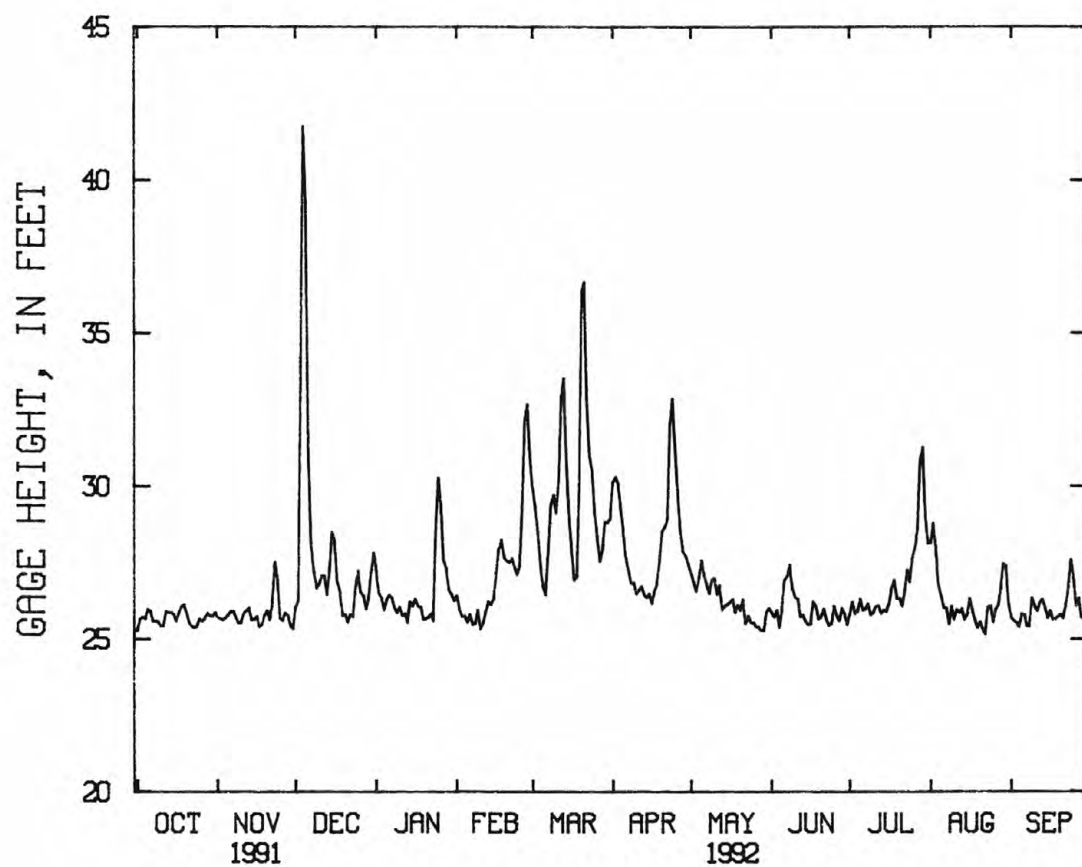
GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25.26	25.69	26.04	27.26	26.42	29.92	30.15	27.12	25.85	25.80	28.15	25.67
2	25.64	25.64	26.24	26.48	25.94	29.32	30.32	26.83	25.70	26.21	28.80	25.57
3	25.71	25.60	33.89	26.32	25.71	28.55	30.10	26.54	25.94	25.81	28.02	25.51
4	25.64	25.68	41.76	25.93	25.75	27.44	29.31	26.99	25.36	25.91	26.72	25.37
5	25.96	25.78	39.26	26.27	25.52	26.71	28.57	27.58	25.97	26.31	26.38	25.81
6	25.89	25.89	30.94	26.45	25.80	26.43	27.63	27.08	26.91	25.93	26.00	25.79
7	25.56	25.90	28.12	26.33	25.45	27.81	27.22	26.75	27.07	25.98	25.99	25.40
8	25.58	25.68	27.20	26.00	25.51	29.38	26.80	26.47	27.43	26.15	25.47	25.41
9	25.54	25.50	26.65	25.83	25.94	29.73	26.85	26.95	26.63	25.77	26.07	26.34
10	25.40	25.53	26.80	26.04	25.29	29.12	26.45	26.99	26.36	25.86	25.62	26.06
11	25.43	25.82	27.07	25.75	25.50	30.16	26.60	26.45	26.30	26.07	25.96	25.89
12	25.90	25.92	27.06	25.82	25.88	32.98	26.73	26.76	25.71	26.08	25.84	26.18
13	25.84	26.01	26.42	25.52	26.22	33.54	26.42	25.95	25.79	25.81	25.99	26.30
14	25.85	25.61	27.20	26.22	26.11	30.80	26.34	26.08	25.57	25.94	25.60	26.00
15	25.79	25.63	28.51	26.06	26.31	29.13	26.47	26.14	25.46	25.88	25.79	25.66
16	25.56	25.73	28.16	26.31	27.14	27.98	26.14	26.21	25.49	26.15	26.32	25.92
17	25.84	25.38	26.83	26.06	27.94	26.90	26.57	26.29	26.22	26.65	25.92	25.62
18	26.07	25.47	26.50	26.02	28.26	27.05	26.82	25.85	26.05	26.91	25.61	25.65
19	26.11	25.77	25.74	25.62	27.67	30.45	27.63	26.10	25.64	26.31	25.34	25.73
20	25.81	25.92	25.80	25.67	27.56	36.39	28.54	25.92	25.73	26.33	25.55	25.80
21	25.51	25.61	25.53	25.72	27.50	36.69	28.70	26.29	25.98	26.06	25.29	25.66
22	25.39	26.19	25.80	25.81	27.64	32.86	28.94	25.49	25.63	26.57	25.12	26.13
23	25.34	27.53	25.70	25.57	27.33	30.96	32.00	25.76	25.43	27.25	26.04	26.71
24	25.41	26.91	26.69	28.65	27.10	30.49	32.86	25.52	25.51	26.84	26.08	27.61
25	25.66	25.65	27.23	30.31	27.41	29.20	31.24	25.53	26.08	27.64	25.53	26.96
26	25.56	25.58	26.50	29.35	29.24	28.32	29.82	25.38	25.75	28.02	25.95	26.06
27	25.66	25.85	26.41	27.52	32.20	27.54	28.57	25.37	25.57	28.63	26.10	26.32
28	25.83	25.76	25.96	27.28	32.68	27.94	27.85	25.25	26.00	30.84	26.65	25.69
29	25.74	25.42	26.31	26.57	30.94	28.86	27.70	25.27	25.81	31.27	27.46	25.62
30	25.74	25.30	27.18	26.43	---	28.82	27.41	25.88	25.45	29.02	27.37	25.82
31	25.86	---	27.83	26.22	---	28.98	---	26.01	---	28.11	26.12	---
MEAN	25.68	25.80	27.98	26.50	27.17	29.69	28.22	26.22	25.95	26.84	26.22	25.94
MAX	26.11	27.53	41.76	30.31	32.68	36.69	32.86	27.58	27.43	31.27	28.80	27.61
MIN	25.26	25.30	25.53	25.52	25.29	26.43	26.14	25.25	25.36	25.77	25.12	25.37

WTR YR 1992 MEAN 26.85 MAX 41.76 MIN 25.12

OHIO RIVER MAIN STEM

03206000 OHIO RIVER AT HUNTINGTON, WV--Continued



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 National Geodetic Vertical Datum of 1929. Prior to Dec. 22, 1964, nonrecording gage at same site and datum.

REMARKS.--Records good except those for periods of estimated daily discharges (ice effect), and October, November and September, which are fair. 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)
Dec. 3	0030	*2,300	*12.28	June 14	1100	1,170	10.19

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.24	.33	175	63	36	90	108	22	31	30	122	14
2	.21	.33	661	52	30	73	115	20	26	28	54	11
3	.14	.33	1360	46	28	60	102	21	22	33	34	9.5
4	.10	.33	192	43	26	50	98	16	23	39	25	8.2
5	1.3	.33	70	36	24	43	86	16	28	27	18	7.2
6	2.4	.31	43	33	22	61	74	26	23	28	14	6.6
7	1.0	.28	32	29	21	106	68	27	17	21	11	5.7
8	.64	.28	25	26	19	115	59	65	14	17	9.7	5.4
9	.52	.28	29	30	16	94	51	104	15	16	29	5.1
10	.41	.31	76	31	14	157	44	131	14	16	16	4.4
11	.39	.55	56	29	e13	254	43	93	11	11	12	3.8
12	.44	.55	44	28	14	178	41	64	9.2	24	20	3.4
13	.44	.51	139	28	19	127	35	55	7.6	12	13	3.1
14	.43	.42	282	60	22	94	33	46	435	8.2	10	2.9
15	1.5	.38	167	65	27	73	31	38	136	9.4	11	2.7
16	1.6	.36	92	e52	34	57	30	31	56	8.1	11	2.5
17	1.6	.33	59	e40	31	51	57	25	35	6.3	12	2.3
18	.91	.29	42	e33	32	111	107	22	55	11	15	2.7
19	.65	.28	31	e27	31	247	71	27	56	19	10	16
20	.44	.28	25	e23	28	193	58	161	34	8.8	8.2	7.7
21	.48	.46	32	e22	25	136	60	50	26	5.8	7.1	4.2
22	.55	146	32	e24	24	118	63	30	20	5.5	6.1	4.3
23	.50	46	38	88	28	118	55	22	16	24	5.3	5.6
24	.54	17	53	120	44	94	50	18	14	15	4.6	3.8
25	.46	9.7	48	90	71	77	44	17	185	11	4.1	3.0
26	.44	6.1	42	95	364	68	38	14	91	13	3.7	2.6
27	.44	4.5	37	79	202	60	35	12	57	55	3.5	11
28	.44	3.8	39	66	126	49	31	11	37	87	109	8.2
29	.39	3.3	82	55	121	43	27	16	28	33	56	4.3
30	.33	21	92	47	---	48	24	47	27	22	28	3.2
31	.33	---	78	42	---	107	---	36	---	150	20	---
TOTAL	20.26	264.92	4173	1502	1492	3152	1738	1283	1548.8	794.1	702.3	174.4
MEAN	.65	8.83	135	48.5	51.4	102	57.9	41.4	51.6	25.6	22.7	5.81
MAX	2.4	146	1360	120	364	254	115	161	435	150	122	16
MIN	.10	.28	25	22	13	43	24	11	7.6	5.5	3.5	2.3
CFSM	.02	.23	3.50	1.26	1.34	2.64	1.50	1.07	1.34	.67	.59	.15
IN.	.02	.26	4.03	1.45	1.44	3.05	1.68	1.24	1.50	.77	.68	.17

e Estimated

TWELVEPOLE CREEK BASIN

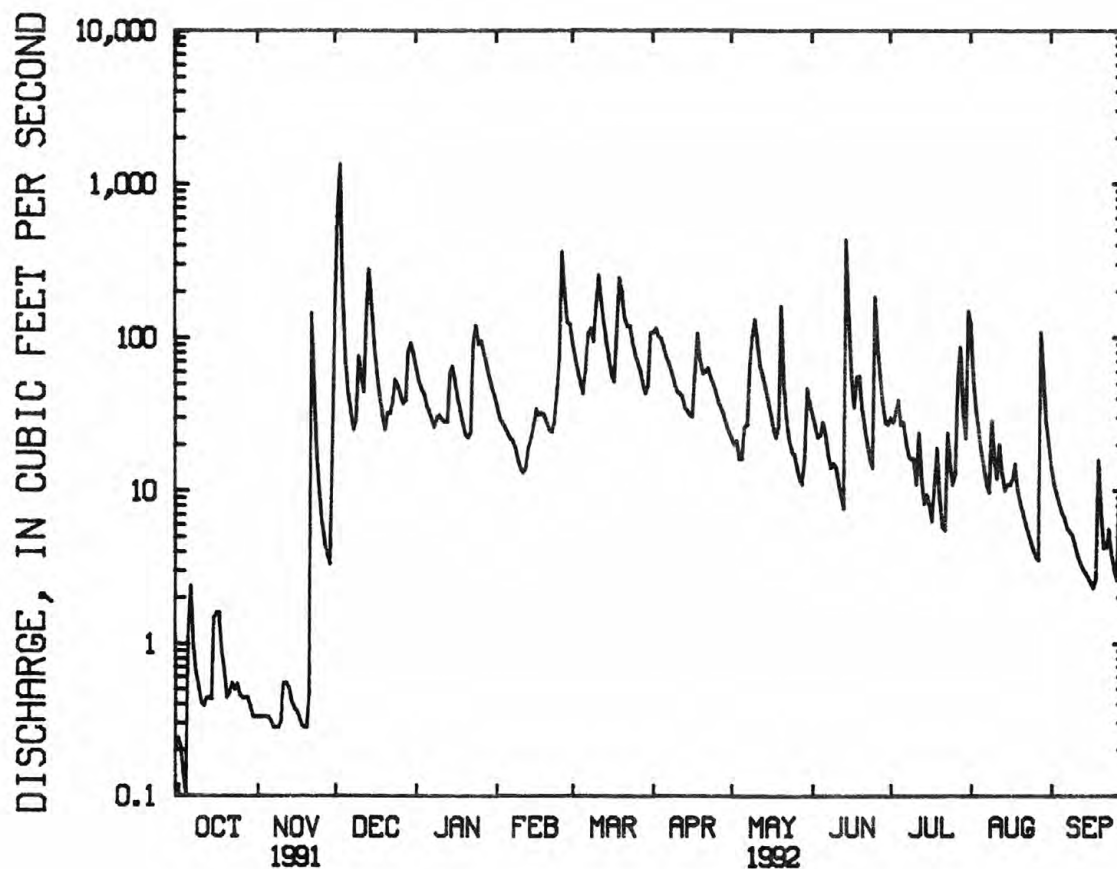
03206600 EAST FORK TWELVEPOLE CREEK NEAR DUNLOW, WV--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1965 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	13.3	33.1	75.4	76.6	97.5	102	95.3	64.1	35.2	17.1	13.6	10.1
MAX	92.6	98.1	279	232	241	251	212	147	185	92.4	79.4	70.9
(WY)	1990	1974	1979	1974	1972	1975	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 1991 CALENDAR YEAR	FOR 1992 WATER YEAR	WATER YEARS 1965 - 1992
ANNUAL TOTAL	17767.39	16844.78	
ANNUAL MEAN	48.7	46.0	52.5
HIGHEST ANNUAL MEAN			98.3
LOWEST ANNUAL MEAN			18.9
HIGHEST DAILY MEAN	1360	1360	3110
LOWEST DAILY MEAN	.10	.10	.01
ANNUAL SEVEN-DAY MINIMUM	.19	.30	.01
INSTANTANEOUS PEAK FLOW		2300	b5040
INSTANTANEOUS PEAK STAGE		12.28	15.84
INSTANTANEOUS LOW FLOW		.05	.01
ANNUAL RUNOFF (CFSM)	1.26	1.20	1.36
ANNUAL RUNOFF (INCHES)	17.17	16.28	18.54
10 PERCENT EXCEEDS	138	106	121
50 PERCENT EXCEEDS	7.7	26	19
90 PERCENT EXCEEDS	.33	.49	1.3

- a July 3-6, 8-12, 1966, Sept. 18-27, 1967.
b From rating curve extended above 1,300 ft³/s on basis of slope-area measurement of peak flow.
c July 2-13, 1966, Sept. 18-28, 1967, Sept. 8, 9, 1973.



BIG SANDY RIVER BASIN

03212750 TUG FORK AT WELCH, WV

LOCATION.--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.--174 mi².

PERIOD OF RECORD.--January 1985 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,268.00 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for periods of estimated daily discharges (ice effect, faulty gage-height record), which are poor. National Weather Service gage-height telemeter and 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)
Dec. 02	1800	*2,190	*8.04	No peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	56	49	681	319	192	282	376	281	300	169	116	e74
2	52	45	1320	276	180	264	368	269	276	147	99	e68
3	52	45	1290	261	174	243	345	269	258	144	88	e62
4	51	44	624	529	174	229	353	250	317	174	e82	61
5	52	43	301	444	173	215	358	247	659	140	e78	77
6	53	43	223	360	169	223	417	342	488	141	e76	73
7	51	43	179	309	166	247	424	344	381	132	e74	e60
8	50	43	155	276	162	333	393	362	336	128	83	e50
9	49	43	172	256	155	329	357	386	335	127	91	47
10	49	106	499	241	147	444	333	374	320	123	92	52
11	52	81	319	221	148	1320	359	351	292	118	85	72
12	53	46	235	208	145	757	344	329	271	115	97	e62
13	53	54	209	210	144	555	320	362	251	112	e100	e55
14	47	51	332	225	143	446	301	340	242	108	e120	e50
15	55	49	333	212	154	387	283	377	234	108	e130	e46
16	53	48	258	199	149	335	278	481	e291	108	101	e43
17	52	49	214	e180	141	309	287	400	238	105	90	e41
18	49	47	188	e170	141	329	386	384	215	104	e82	40
19	49	45	161	e160	141	411	323	569	205	103	e76	68
20	49	45	141	e150	137	422	300	504	195	99	e70	62
21	49	60	147	e150	128	391	348	425	183	111	e68	50
22	49	417	137	163	126	389	575	369	172	110	e60	44
23	49	225	170	240	126	426	456	333	170	105	e56	55
24	50	120	363	310	137	402	397	310	167	108	e54	50
25	50	87	295	271	147	368	364	294	171	110	e50	47
26	51	71	234	245	473	361	335	277	178	101	e70	50
27	50	61	202	222	451	345	318	254	176	147	e90	60
28	47	59	226	212	338	315	312	249	158	197	e130	53
29	46	56	342	207	322	299	299	303	150	120	e140	49
30	46	63	453	205	---	299	293	356	166	105	e100	46
31	47	---	389	199	---	358	---	328	---	110	e80	---
TOTAL	1561	2238	10792	7630	5383	12033	10602	10719	7795	3829	2728	1667
MEAN	50.4	74.6	348	246	186	388	353	346	260	124	88.0	55.6
MAX	56	417	1320	529	473	1320	575	569	659	197	140	77
MIN	46	43	137	150	126	215	278	247	150	99	50	40
CFSM	.29	.43	2.00	1.41	1.07	2.23	2.03	1.99	1.49	.71	.51	.32
IN.	.33	.48	2.31	1.63	1.15	2.57	2.27	2.29	1.67	.82	.58	.36

e Estimated

BIG SANDY RIVER BASIN

03212750 TUG FORK AT WELCH, WV--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1985 - 1992, BY WATER YEAR (WY)

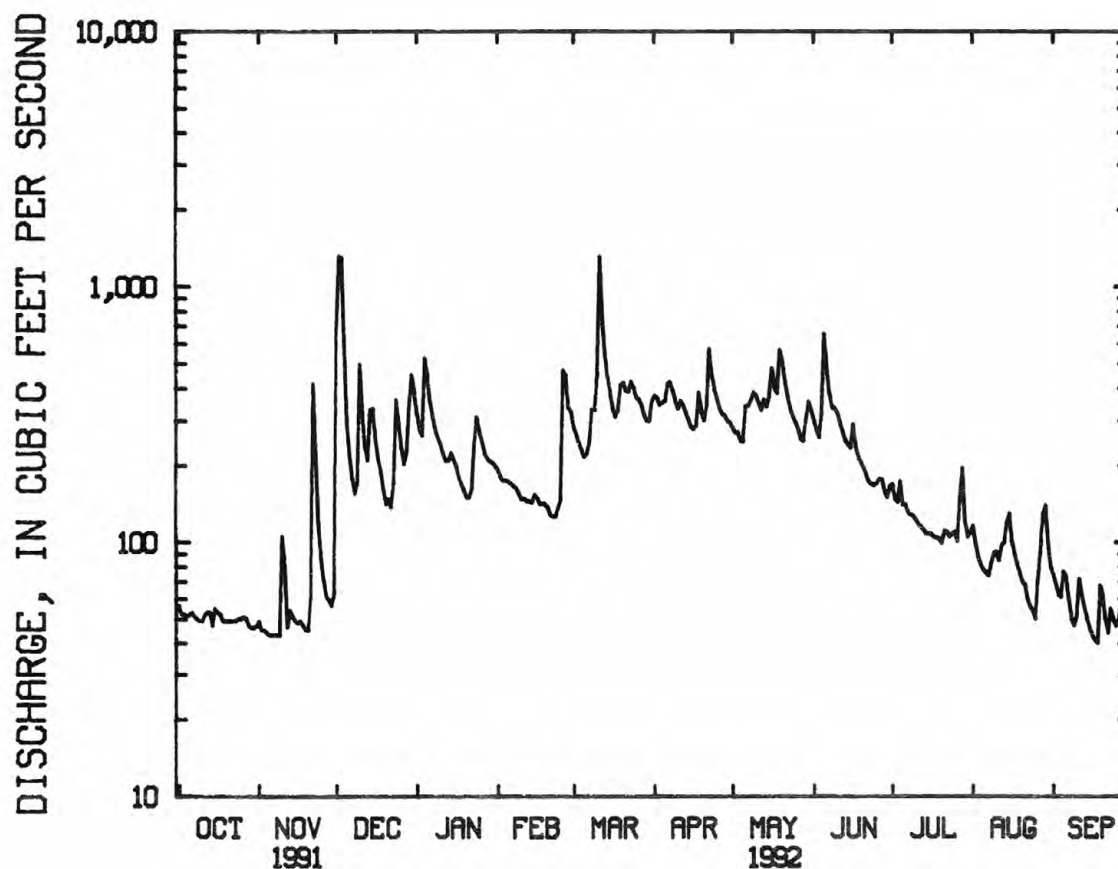
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	73.8	92.4	159	219	357	347	381	312	169	102	77.1	64.8
MAX	189	171	348	405	704	655	1206	648	260	124	101	112
(WY)	1990	1990	1992	1990	1990	1991	1987	1989	1992	1992	1985	1989
MIN	37.9	38.5	61.8	68.6	98.2	83.3	155	128	74.1	56.6	39.3	39.1
(WY)	1988	1988	1988	1988	1988	1988	1986	1988	1988	1988	1988	1987

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR	FOR 1992 WATER YEAR	WATER YEARS 1985 - 1992
ANNUAL TOTAL	87528	76977	
ANNUAL MEAN	240	210	200
HIGHEST ANNUAL MEAN			274
LOWEST ANNUAL MEAN			75.9
HIGHEST DAILY MEAN	1590	1320	4300
LOWEST DAILY MEAN	43	40	29
ANNUAL SEVEN-DAY MINIMUM	43	43	33
INSTANTANEOUS PEAK FLOW		2190	5490
INSTANTANEOUS PEAK STAGE		8.04	11.90
INSTANTANEOUS LOW FLOW		34	24
ANNUAL RUNOFF (CFSM)	1.38	1.21	1.15
ANNUAL RUNOFF (INCHES)	18.71	16.46	15.58
10 PERCENT EXCEEDS	522	388	403
50 PERCENT EXCEEDS	179	170	126
90 PERCENT EXCEEDS	51	49	44

a Dec. 2, Mar. 11.

b Nov. 5-9.

c Sept. 4, 5, 1987.



BIG SANDY RIVER BASIN

03212980 DRY FORK AT BEARTOWN, WV

LOCATION.--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, .4 mi upstream from Grapevine Branch, at mile 7.1.

DRAINAGE AREA.--209 mi².

PERIOD OF RECORD.--February 1985 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,056.00 ft above National Geodetic Vertical Datum of 1929.

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

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. 2	1900	*4,430	*8.39	Mar. 11	0630	3,010	7.08

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	32	25	1250	429	221	347	377	265	273	112	100	41
2	32	25	2800	360	197	312	403	249	242	109	77	40
3	32	24	2600	319	185	282	382	236	217	100	66	42
4	35	22	1170	736	179	253	409	216	250	98	64	41
5	37	20	511	756	176	233	494	209	873	92	56	56
6	33	19	338	555	169	235	576	234	815	90	51	45
7	30	20	258	424	161	276	575	211	479	87	51	40
8	29	21	214	345	153	540	491	246	351	85	53	45
9	28	29	216	310	139	500	408	316	309	84	62	40
10	33	67	648	281	127	603	357	329	268	80	62	41
11	31	84	523	245	127	2280	328	302	239	77	50	63
12	29	56	366	225	125	1130	294	278	223	74	51	46
13	29	45	306	225	125	714	265	261	199	71	51	38
14	32	41	458	237	123	526	247	240	188	67	56	34
15	43	45	536	230	128	433	240	223	181	67	80	34
16	42	42	401	219	143	358	241	221	527	80	84	33
17	31	36	308	e200	153	317	268	215	270	70	70	33
18	27	34	254	e180	149	322	409	226	209	71	57	33
19	25	32	205	e160	142	401	361	524	185	71	49	35
20	25	28	173	e150	133	461	323	699	166	67	44	36
21	25	40	181	e150	123	451	380	525	152	66	40	33
22	24	481	176	e160	119	435	640	375	139	65	39	32
23	26	408	192	253	119	451	562	295	130	67	38	38
24	27	192	448	477	121	429	455	255	126	78	35	35
25	28	120	484	409	125	396	388	236	128	91	35	32
26	29	87	367	355	935	374	330	216	131	76	46	32
27	26	70	296	301	881	355	307	199	148	82	56	32
28	27	60	305	276	544	311	295	191	127	251	74	33
29	27	54	550	255	436	288	282	252	117	127	77	30
30	28	59	660	241	---	288	277	312	114	86	52	28
31	27	---	550	234	---	339	---	312	---	89	43	---
TOTAL	929	2286	17744	9697	6458	14640	11364	8868	7776	2730	1769	1141
MEAN	30.0	76.2	572	313	223	472	379	286	259	88.1	57.1	38.0
MAX	43	481	2800	756	935	2280	640	699	873	251	100	63
MIN	24	19	173	150	119	233	240	191	114	65	35	28
CFSM	.14	.36	2.74	1.50	1.07	2.26	1.81	1.37	1.24	.42	.27	.18
IN.	.17	.41	3.16	1.73	1.15	2.61	2.02	1.58	1.38	.49	.31	.20

e Estimated

BIG SANDY RIVER BASIN

03212980 DRY FORK AT BEARTOWN, WV--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1985 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	84.2	102	217	275	447	386	417	330	171	76.0	57.4	63.7
MAX	347	246	572	500	780	772	1455	799	409	99.6	99.0	221
(WY)	1990	1990	1992	1990	1990	1991	1987	1989	1989	1991	1989	1989
MIN	25.2	25.3	67.0	85.5	135	93.7	110	104	39.3	28.2	22.4	26.9
(WY)	1986	1988	1988	1986	1988	1988	1986	1988	1988	1988	1988	1985

SUMMARY STATISTICS

FOR 1991 CALENDAR YEAR

FOR 1992 WATER YEAR

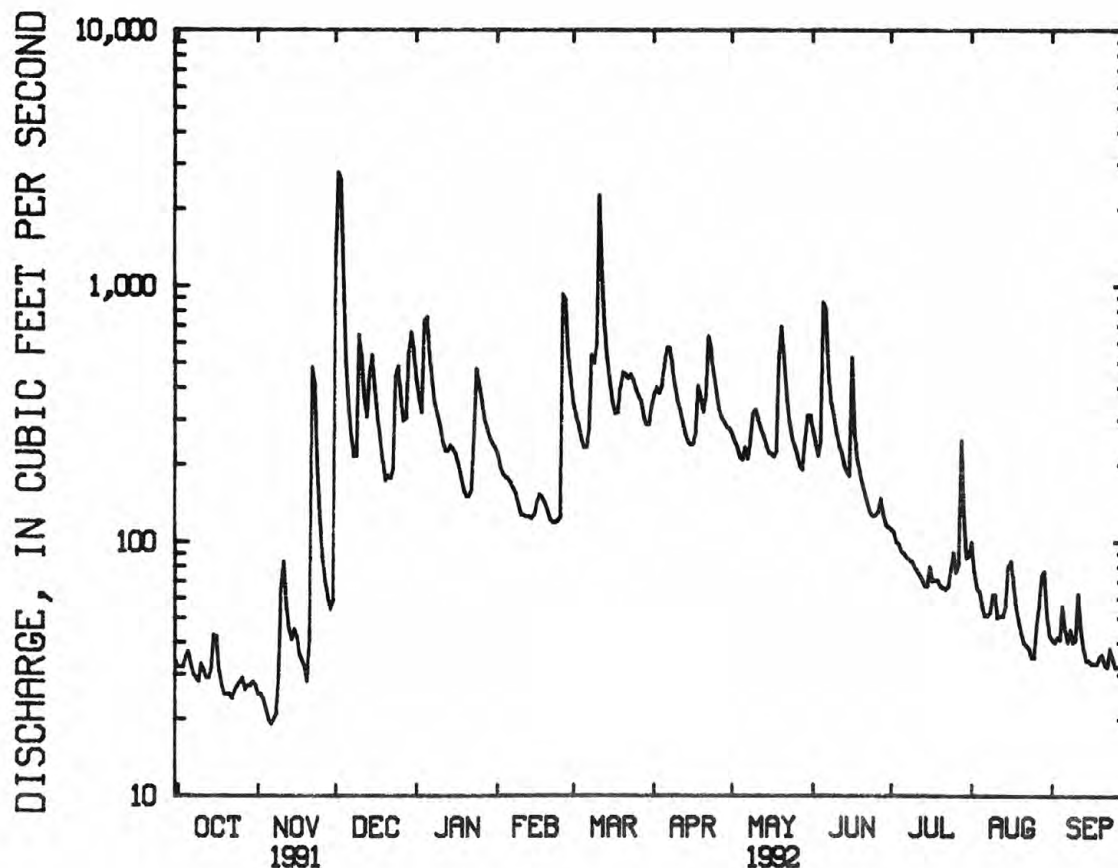
WATER YEARS 1985 - 1992

ANNUAL TOTAL	93410			85402								
ANNUAL MEAN	256			233								
HIGHEST ANNUAL MEAN										226		
LOWEST ANNUAL MEAN										317		1987
HIGHEST DAILY MEAN	2800	Dec 2		2800	Dec 2					75.0		1988
LOWEST DAILY MEAN	19	Nov 6		19	Nov 6					5080	Apr 25	1987
ANNUAL SEVEN-DAY MINIMUM	22	Nov 2		22	Nov 2					15		(a)
INSTANTANEOUS PEAK FLOW				4430	Dec 2					18	Oct 29	1987
INSTANTANEOUS PEAK STAGE				8.39	Dec 2					6840	May 6	1989
INSTANTANEOUS LOW FLOW				19	(b)					9.90	May 6	1989
ANNUAL RUNOFF (CFSM)	1.22			1.12						13		(c)
ANNUAL RUNOFF (INCHES)	16.63			15.20						1.08		
10 PERCENT EXCEEDS	550			486						14.68		
50 PERCENT EXCEEDS	144			167						490		
90 PERCENT EXCEEDS	33			32						110		
										29		

a Oct. 29, 1987 and Sept. 3, 1988.

b Nov. 5-7.

c Oct. 29, 30, 1987.



BIG SANDY RIVER BASIN

03213620 TUG FORK AT VULCAN, W. VA.

LOCATION.--Lat 37°33'06", long 82°07'28", Mingo County, Hydrologic Unit 05070201, on right bank at highway bridge at Vulcan, and 5.8 mi downstream from Knox Creek (Kentucky), and 1.9 mi upstream from Peter Creek, and at mile 78.7.

DRAINAGE AREA.--778 mi².

PERIOD OF RECORD.--February 1985 to current year.

GAGE.--Water-stage recorder. Datum of gage is 695.00 ft above National Geodetic Vertical Datum of 1929.

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

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 7,500 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage Height (ft)	Date	Time	Discharge (ft ³ /s)	Gage Height (ft)
Dec. 2	2100	*18,500	*16.55	Mar. 11	1300	8,130	10.99

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e110	90	1740	1840	800	1350	1730	1020	1080	560	443	215
2	e110	90	9150	1460	707	1180	1760	935	935	552	353	193
3	e100	90	12200	1270	640	1070	1600	897	815	394	281	218
4	e100	88	4870	1460	613	962	1600	804	794	407	240	195
5	e110	86	1990	2140	596	868	1950	735	1820	390	221	456
6	e130	85	1250	1740	569	1060	2040	815	2380	418	204	396
7	e120	85	923	1430	548	2410	2050	913	1620	378	194	273
8	e110	85	735	1180	523	3040	1790	1000	1210	335	194	228
9	e110	85	662	1060	481	2350	1500	1300	1060	315	198	352
10	e100	102	2160	973	426	2080	1310	1390	1030	301	219	244
11	e100	253	2190	871	414	6200	1570	1260	882	287	214	382
12	e110	242	1460	765	407	4190	1580	1130	784	266	266	308
13	e110	160	1210	732	404	2710	1370	1040	693	250	307	228
14	e100	133	1770	862	409	2010	1210	1020	642	237	384	195
15	e110	130	2280	913	438	1670	1110	892	611	250	1080	173
16	166	125	1680	861	510	1390	1060	940	766	232	726	153
17	143	121	1210	e750	494	1210	1040	892	850	237	424	145
18	113	115	984	e680	484	1220	1400	810	629	240	362	141
19	103	109	765	e610	477	1700	1410	1700	556	228	288	159
20	97	107	625	e550	456	2050	1260	3090	500	220	237	172
21	95	110	607	e540	422	1920	1630	1900	450	226	208	170
22	94	1210	651	e560	397	1740	3400	1330	410	358	193	149
23	94	1900	674	779	391	1850	2600	1050	384	295	182	155
24	95	817	1510	1870	441	1770	1920	892	375	287	175	154
25	96	473	1900	1740	462	1590	1620	820	390	271	165	140
26	96	321	1450	1450	1950	1460	1340	745	410	268	154	131
27	97	242	1140	1200	3180	1390	1230	693	454	361	200	136
28	96	203	1040	1070	2150	1220	1200	625	404	962	369	158
29	96	182	2250	973	1690	1090	1120	892	359	603	623	149
30	93	170	3050	903	---	1080	1080	1200	378	350	365	126
31	90	---	2470	861	---	1440	---	1240	---	329	256	---
TOTAL	3294	8009	66596	34093	21479	57270	47480	33970	23671	10807	9725	6294
MEAN	106	267	2148	1100	741	1847	1583	1096	789	349	314	210
MAX	166	1900	12200	2140	3180	6200	3400	3090	2380	962	1080	456
MIN	90	85	607	540	391	868	1040	625	359	220	154	126
CFSM	.14	.34	2.76	1.41	.95	2.37	2.03	1.41	1.01	.45	.40	.27
IN.	.16	.38	3.18	1.63	1.03	2.74	2.27	1.62	1.13	.52	.46	.30

e Estimated

BIG SANDY RIVER BASIN

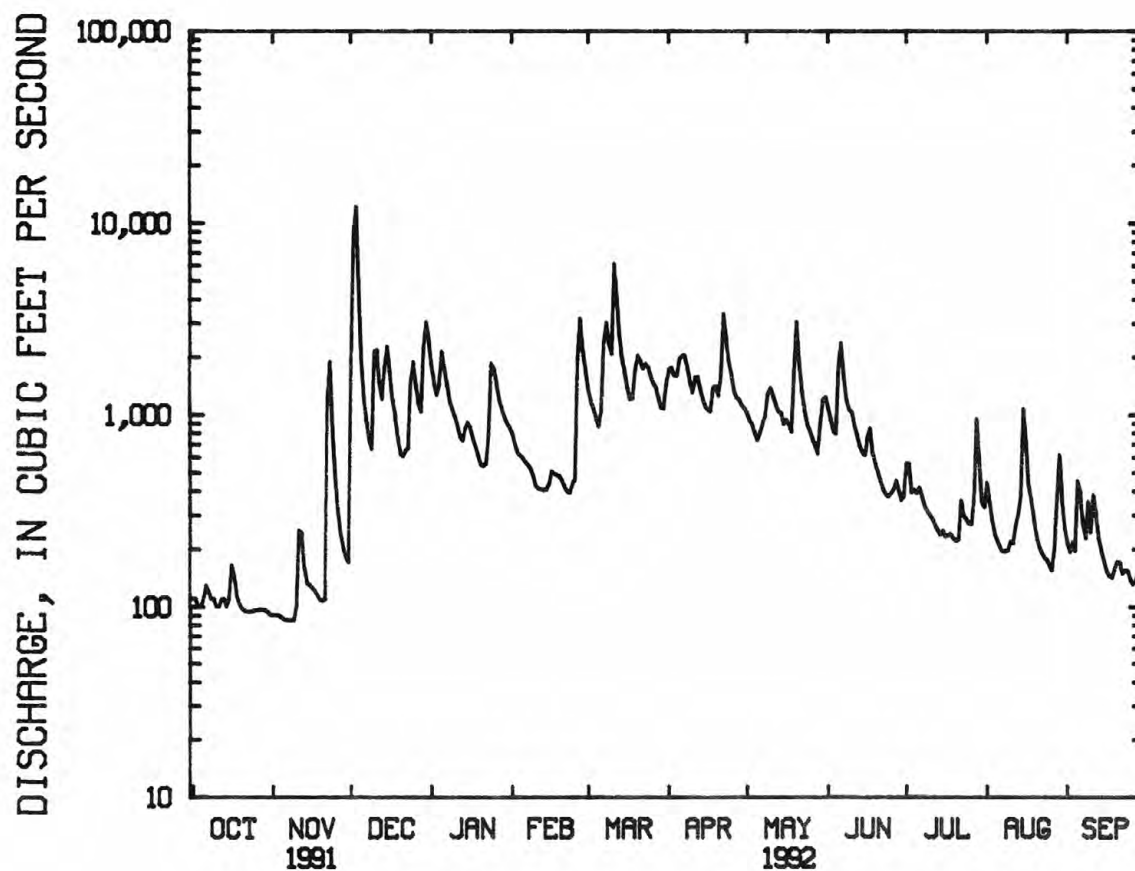
03213620 TUG FORK AT VULCAN, WV--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1985 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	369	471	932	1067	1716	1470	1612	1166	591	281	213	222
MAX	1674	885	2148	1663	3020	2956	5270	2824	1273	349	314	611
(WY)	1990	1990	1992	1990	1990	1991	1987	1989	1989	1992	1992	1989
MIN	90.9	107	347	400	526	380	404	446	135	98.5	91.1	101
(WY)	1986	1988	1988	1986	1988	1988	1986	1988	1988	1988	1988	1985

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1985 - 1992	
ANNUAL TOTAL	363190		322688			
ANNUAL MEAN	995		882		857	
HIGHEST ANNUAL MEAN					1171	
LOWEST ANNUAL MEAN					313	
HIGHEST DAILY MEAN	12200		12200		17300	
LOWEST DAILY MEAN	85		85		63	
ANNUAL SEVEN-DAY MINIMUM	86		86		67	
INSTANTANEOUS PEAK FLOW			18500		33300	
INSTANTANEOUS PEAK STAGE			16.55		22.15	
INSTANTANEOUS LOW FLOW			85		62	
ANNUAL RUNOFF (CFSM)	1.28		1.13		1.10	
ANNUAL RUNOFF (INCHES)	17.37		15.43		14.97	
10 PERCENT EXCEEDS	2220		1860		1890	
50 PERCENT EXCEEDS	559		608		442	
90 PERCENT EXCEEDS	110		110		105	

- a Nov. 6-9.
b Nov. 5-10.
c Aug. 18, 19, 1988.



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 620.90 ft, Ohio River Datum (levels by U.S. Army Corps of Engineers). Prior to Jan. 21, 1969, at datum 0.92 ft lower.

REMARKS.--Records fair except those for July, August, and September, 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. 3	0400	*13,900	*22.79	No other peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	120	101	851	2200	915	1580	2050	1170	1320	1280	593	e350
2	119	99	6510	1730	815	1350	2120	1070	1120	1140	531	e300
3	114	99	12300	1460	728	1210	1960	1020	959	718	384	e280
4	112	100	6240	1480	688	1090	1880	935	1020	729	309	e300
5	123	95	2610	2220	667	982	2220	840	1730	621	271	e290
6	137	92	1600	1950	639	1000	2340	858	2610	648	246	e440
7	129	89	1170	1630	614	2360	2360	1000	1920	590	229	e400
8	120	87	917	1350	589	3440	2120	1050	1430	513	224	e350
9	110	87	819	1190	555	2810	1810	1350	1200	469	232	e370
10	107	100	1890	1090	526	2310	1580	1520	1140	444	232	e400
11	105	185	2530	987	522	4880	1660	1410	1000	430	257	e380
12	108	307	1730	872	519	4840	1790	1260	880	418	398	e420
13	113	222	1390	814	525	3140	1620	1140	778	378	290	e370
14	110	158	2060	943	513	2360	1410	1090	750	357	514	319
15	127	144	2670	1040	537	1950	1290	992	701	352	1020	253
16	165	136	2040	990	635	1650	1210	946	645	357	1160	205
17	196	136	1480	908	618	1410	1210	989	1230	346	698	156
18	155	130	1160	886	609	1380	1440	894	863	378	526	e170
19	128	120	917	796	595	1850	1620	1380	707	380	454	e190
20	118	113	736	696	564	2320	1440	3510	613	360	374	e200
21	110	119	695	690	525	2280	1630	2340	547	352	308	e190
22	106	805	752	668	494	2080	3680	1610	522	419	271	e170
23	105	2320	794	802	484	2170	3030	1230	496	492	248	e180
24	105	1100	1610	1830	513	2110	2300	1020	477	426	233	e180
25	104	611	2160	1990	560	1920	1980	921	511	415	216	e170
26	107	418	1730	1690	1500	1750	1650	844	608	395	e210	e150
27	106	318	1360	1400	3440	1660	1460	777	621	570	e330	e160
28	112	262	1200	1230	2530	1490	1400	714	565	1310	e650	e170
29	108	229	2270	1110	1960	1320	1310	966	482	994	e1100	e160
30	103	213	3350	1020	---	1280	1220	1450	529	602	e700	e140
31	103	---	2890	962	---	1670	---	1550	---	538	e450	---
TOTAL	3685	8995	70431	38624	24379	63642	54790	37846	27974	17421	13658	7813
MEAN	119	300	2272	1246	841	2053	1826	1221	932	562	441	260
MAX	196	2320	12300	2220	3440	4880	3680	3510	2610	1310	1160	440
MIN	103	87	695	668	484	982	1210	714	477	346	210	140
CFSM	.13	.32	2.43	1.33	.90	2.19	1.95	1.30	1.00	.60	.47	.28
IN.	.15	.36	2.80	1.54	.97	2.53	2.18	1.50	1.11	.69	.54	.31

e Estimated

BIG SANDY RIVER BASIN

03213700 TUG FORK AT WILLIAMSON, WV--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1968 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	411	684	1116	1603	1970	2013	2065	1606	887	451	388	282
MAX	2059	2363	3631	4515	3782	5328	5745	4318	3263	1257	1419	839
(WY)	1990	1978	1973	1974	1972	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 1991 CALENDAR YEAR

FOR 1992 WATER YEAR

WATER YEARS 1968 - 1992

ANNUAL TOTAL	428158					369258						
ANNUAL MEAN	1173					1009				1118		
HIGHEST ANNUAL MEAN										1729		1979
LOWEST ANNUAL MEAN										353		1988
HIGHEST DAILY MEAN	12300	Dec 3				12300	Dec 3			74000	Apr 5	1977
LOWEST DAILY MEAN	87	(a)				87	(a)			59	Oct 19	1969
ANNUAL SEVEN-DAY MINIMUM	93	Nov 3				93	Nov 3			62	Oct 14	1969
INSTANTANEOUS PEAK FLOW						13900	Dec 3			b94000	Apr 5	1977
INSTANTANEOUS PEAK STAGE						22.79	Dec 3			c52.56	Apr 5	1977
INSTANTANEOUS LOW FLOW						86	(d)			59	(f)	
ANNUAL RUNOFF (CFSM)	1.25					1.08				1.19		
ANNUAL RUNOFF (INCHES)	17.02					14.68				16.23		
10 PERCENT EXCEEDS	2710					2120				2490		
50 PERCENT EXCEEDS	650					723				602		
90 PERCENT EXCEEDS	122					122				142		

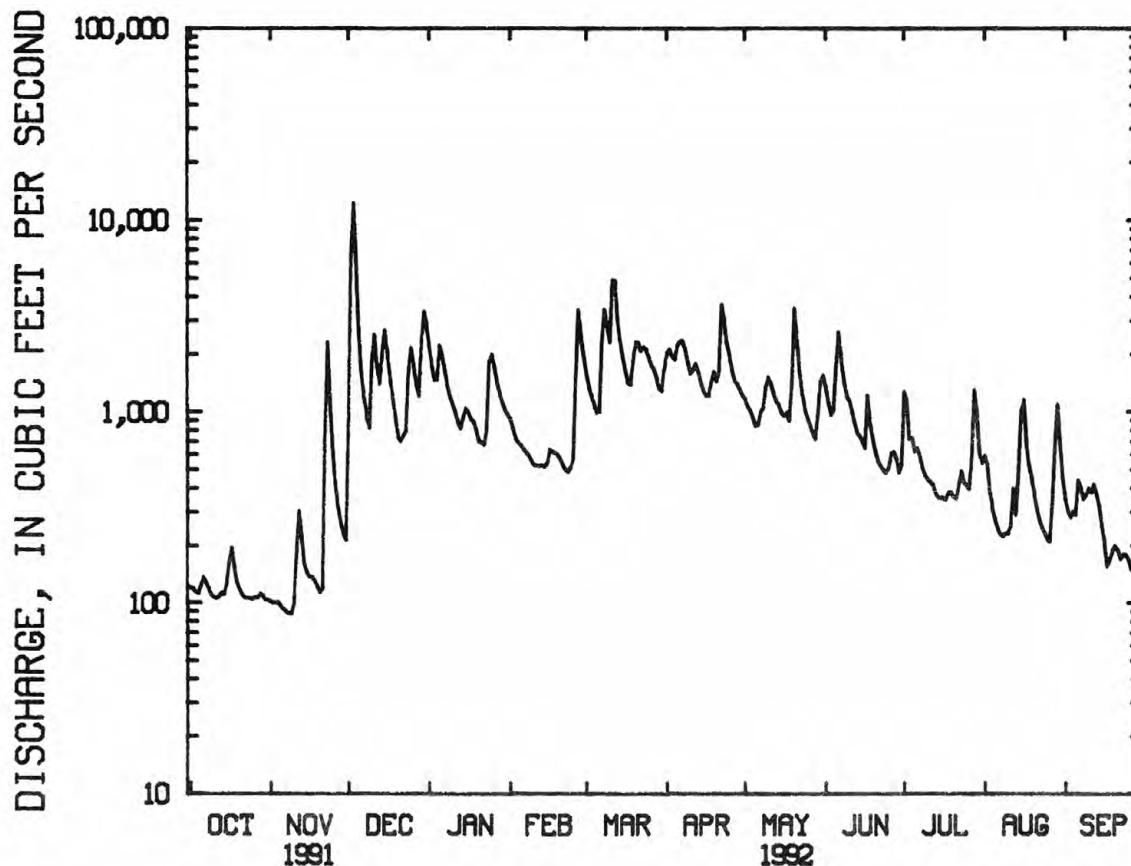
a Nov. 8, 9.

b From rating curve extended above 18,000 ft³/s.

c From floodmarks.

d Nov. 7-10.

f 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 National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair except those for periods of estimated daily discharge (recorder malfunction), which are 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. 3	1200	*23,200	*33.28	No other peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	139	118	810	3080	1260	2360	2780	1490	1880	1990	1160	404
2	134	117	7590	2420	1110	1990	2900	1330	1560	2740	881	336
3	132	114	21900	2040	1020	1760	2730	1260	e1400	1640	626	297
4	128	114	13500	1940	963	1590	2600	1150	e1200	1390	492	307
5	135	114	4260	2420	933	1420	2830	e1100	e1900	1080	410	299
6	161	111	2400	2460	890	1440	2980	e1000	2880	972	359	519
7	159	110	1750	2100	837	2650	2980	e1200	2430	883	321	461
8	143	107	1370	1760	798	4860	2750	e1300	1800	729	299	385
9	133	107	1190	1590	737	4310	2380	e1500	1480	626	323	415
10	125	110	2210	1440	654	3640	2090	1780	1350	574	306	457
11	122	134	3340	1300	606	5930	1980	1720	1200	496	304	444
12	121	252	2470	1150	580	7470	2140	1560	1050	491	449	495
13	123	270	2310	1060	611	4590	1980	1480	958	437	405	395
14	127	205	3550	1220	639	e3500	1750	1390	976	389	431	314
15	150	170	3900	1360	691	e2700	1600	1240	941	362	612	269
16	175	163	3030	e1300	881	e2300	1480	1100	855	360	1340	239
17	194	155	2210	e1200	881	e2100	1460	1150	1240	340	825	215
18	185	155	1730	e1100	870	e2300	1650	1070	1300	373	605	207
19	154	150	1350	e1000	850	e2900	1900	1580	1160	372	473	320
20	138	141	1070	e960	802	3160	1750	4110	893	329	388	288
21	132	142	1030	e920	737	3140	1730	3300	731	312	331	250
22	127	1050	1050	e960	692	e2900	3760	2200	635	352	292	239
23	125	2800	1160	e1400	678	e3000	3920	1670	564	842	275	229
24	124	1730	2270	e2000	749	e2900	2930	1320	539	497	262	219
25	120	872	2880	e2600	794	2680	2500	1160	597	447	248	210
26	121	540	2470	e2300	2120	e2400	2130	1060	699	389	237	199
27	125	407	1960	2040	4440	e2200	1840	989	920	436	285	240
28	121	343	1690	1770	3740	2050	1740	915	728	1570	905	255
29	125	293	2670	1590	2880	1770	1620	1090	601	1170	1170	223
30	119	281	4300	1440	---	1690	1530	1900	676	773	852	207
31	116	---	4010	1370	---	1530	---	2170	---	976	534	---
TOTAL	4233	11375	107430	51290	33443	89230	68410	47284	35143	24337	16400	9337
MEAN	137	379	3465	1655	1153	2878	2280	1525	1171	785	529	311
MAX	194	2800	21900	3080	4440	7470	3920	4110	2880	2740	1340	519
MIN	116	107	810	920	580	1420	1460	915	539	312	237	199
CFSM	.11	.30	2.71	1.29	.90	2.25	1.78	1.19	.92	.61	.41	.24
IN.	.12	.33	3.12	1.49	.97	2.59	1.99	1.37	1.02	.71	.48	.27

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, 1985-1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	433	730	1496	1978	2932	3562	2369	1625	804	499	458	280
MAX	3004	3062	3465	4095	4634	10220	7827	4584	2976	1020	1496	1110
(WY)	1990	1930	1992	1917	1990	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 1991 CALENDAR YEAR

FOR 1992 WATER YEAR

WATER YEARS 1916 - 1917
1929 - 1934
1985 - 1992

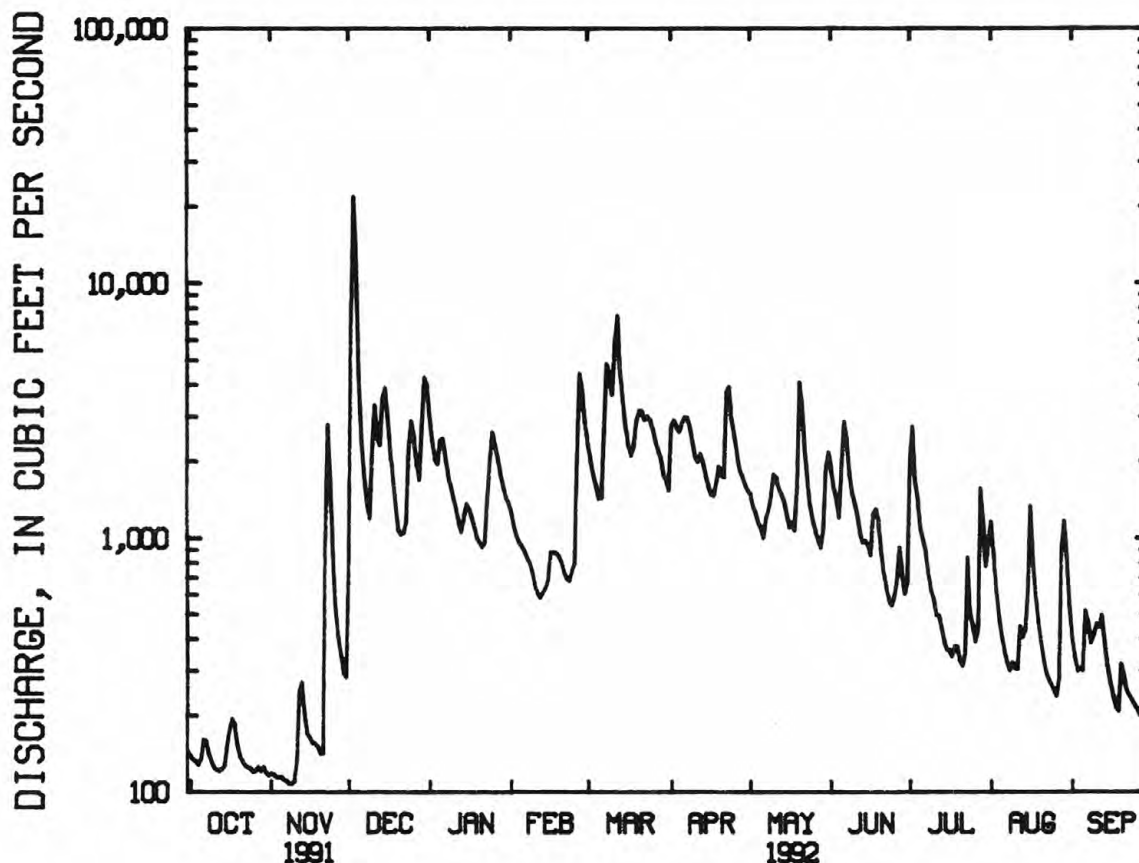
ANNUAL TOTAL	595783		497912									
ANNUAL MEAN	1632		1360						1422			
HIGHEST ANNUAL MEAN									2178			1917
LOWEST ANNUAL MEAN									476			1988
HIGHEST DAILY MEAN									34300			Mar 5 1917
LOWEST DAILY MEAN									14			Oct 23 1930
ANNUAL SEVEN-DAY MINIMUM									18			Oct 5 1930
INSTANTANEOUS PEAK FLOW									b24900			Apr 9 1987
INSTANTANEOUS PEAK STAGE									c35.12			Apr 9 1987
INSTANTANEOUS LOW FLOW									d69			Aug 19 1988
ANNUAL RUNOFF (CFSM)									1.11			
ANNUAL RUNOFF (INCHES)									15.09			
10 PERCENT EXCEEDS									3400			
50 PERCENT EXCEEDS									640			
90 PERCENT EXCEEDS									110			

a Nov, 8, 9.

b Instantaneous peak flow prior to 1985, undetermined.

c Several higher peaks outside period of record. (See EXTREMES on previous page).

d Instantaneous minimum prior to 1985, undetermined.



BIG SANDY RIVER BASIN

03214900 TUG FORK AT GLENHAYES, WV

LOCATION.--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 Oct. 1, 1990 at site 1,600 ft downstream at same datum.

DRAINAGE AREA.--1,507 mi².

PERIOD OF RECORD.--March 1976 to September 1982, October 1982 to September 1983 (gage heights, discharge measurements, and annual maximum discharge only). October 1984 to December 1989, periodic discharge measurements (gage-heights collected by U.S. Army Corps of Engineers), at original site 1,600 ft downstream. October 1990 to current year.

REVISED RECORDS.--WDR WV-78-1: 1977.

GAGE.--Water-stage recorder. Datum of gage is 536.57 ft National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for period of estimated daily discharges (missing gage-height record), which is poor.

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. 4	0130	*21,700	*30.47	No other peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	153	131	1110	4020	1540	3010	3210	1700	2140	1300	1900	562
2	147	134	3120	3150	1400	2500	3520	1580	1820	4410	1330	447
3	142	131	15400	2610	1250	2200	3390	1480	1550	2500	1010	389
4	139	126	18700	2360	1140	1980	3180	1380	1390	2240	774	361
5	145	126	9140	2370	1080	1800	3330	1250	1860	1720	629	371
6	199	126	4210	2920	1020	1710	3500	1190	2670	1440	526	452
7	194	128	2730	2580	967	2420	3500	1230	2930	1250	464	551
8	179	123	2100	2160	919	4680	3350	1390	2180	1060	422	475
9	163	123	1750	1930	855	5220	2950	1750	1860	917	437	457
10	147	123	2040	1810	777	4520	2570	2120	1630	826	439	498
11	139	131	3300	1640	717	5800	2340	2130	1480	714	407	473
12	134	158	3370	1480	681	8000	2450	1920	1300	651	508	508
13	131	e300	2720	1360	723	6020	2370	1730	1140	617	588	483
14	134	e220	4390	1440	807	4360	2130	1710	2230	533	447	388
15	153	e200	4910	1760	807	3480	1930	1570	2130	488	605	327
16	202	e190	4220	1700	1010	2940	1810	1410	1400	461	1210	291
17	212	e190	3100	1550	1060	2510	1810	1340	1280	442	1100	263
18	226	e180	2360	1460	1030	2440	2030	1300	1790	456	826	261
19	207	e180	1870	1320	1010	3380	2160	1420	1910	500	614	318
20	174	171	1500	1180	965	3940	2140	3200	1380	442	504	415
21	158	163	1290	1120	893	3990	1990	4180	1090	395	423	313
22	153	457	1310	1060	831	3660	3100	2730	907	411	375	293
23	145	2580	1310	1200	811	3680	4560	2000	790	862	344	281
24	145	2670	1830	2150	954	3590	3560	1620	709	997	327	258
25	139	1440	2920	2980	1030	3290	2930	1390	985	726	312	241
26	134	886	3070	2880	3320	2980	2550	1270	877	557	296	230
27	137	629	2480	2490	4810	2760	2200	1160	1440	550	316	256
28	139	494	2040	2170	4960	2510	2050	1050	1100	1470	756	328
29	134	422	2330	1950	3800	2220	1930	1050	886	1650	1730	278
30	139	384	4010	1780	---	2060	1800	1870	878	1170	1170	245
31	134	---	4840	1650	---	2570	---	2270	---	1210	795	---
TOTAL	4877	13316	119470	62230	41167	106220	80340	53390	45732	32965	21584	11013
MEAN	157	444	3854	2007	1420	3426	2678	1722	1524	1063	696	367
MAX	226	2670	18700	4020	4960	8000	4560	4180	2930	4410	1900	562
MIN	131	123	1110	1060	681	1710	1800	1050	709	395	296	230
CFSM	.10	.29	2.56	1.33	.94	2.27	1.78	1.14	1.01	.71	.46	.24
IN.	.12	.33	2.95	1.54	1.02	2.62	1.98	1.32	1.13	.81	.53	.27

e Estimated

BIG SANDY RIVER BASIN

03214900 TUG FORK AT GLENHAYES, WV--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1976-1982, 1990-1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	705	998	2398	2823	2763	3726	3058	1733	1675	919	901	530
MAX	1892	2912	4995	6312	4034	5052	5985	3737	4459	2402	2519	1063
(WY)	1977	1978	1979	1979	1979	1991	1977	1978	1979	1977	1977	1982
MIN	157	200	544	501	1420	2275	1583	549	434	310	355	246
(WY)	1992	1982	1981	1981	1992	1981	1982	1976	1976	1976	1976	1991

SUMMARY STATISTICS

FOR 1991 CALENDAR YEAR

FOR 1992 WATER YEAR

WATER YEARS 1976 - 1982
1990 - 1992

ANNUAL TOTAL	682756			592304								
ANNUAL MEAN	1871			1618						1903		
HIGHEST ANNUAL MEAN										2870		1979
LOWEST ANNUAL MEAN										1432		1981
HIGHEST DAILY MEAN	18700	Dec 4		18700	Dec 4					45800	Apr 6	1977
LOWEST DAILY MEAN	123	(a)		123	(a)					123	(b)	
ANNUAL SEVEN-DAY MINIMUM	125	Nov 4		125	Nov 4					125	Nov 4	1991
INSTANTANEOUS PEAK FLOW				21700	Dec 4					c48000	Apr 6	1977
INSTANTANEOUS PEAK STAGE				30.47	Dec 4					c44.00	Apr 6	1977
INSTANTANEOUS LOW FLOW				120	(d)					120	(f)	
ANNUAL RUNOFF (CFSM)	1.24			1.07						1.26		
ANNUAL RUNOFF (INCHES)	16.85			14.62						17.16		
10 PERCENT EXCEEDS	4610			3360						4050		
50 PERCENT EXCEEDS	953			1260						1060		
90 PERCENT EXCEEDS	164			169						238		

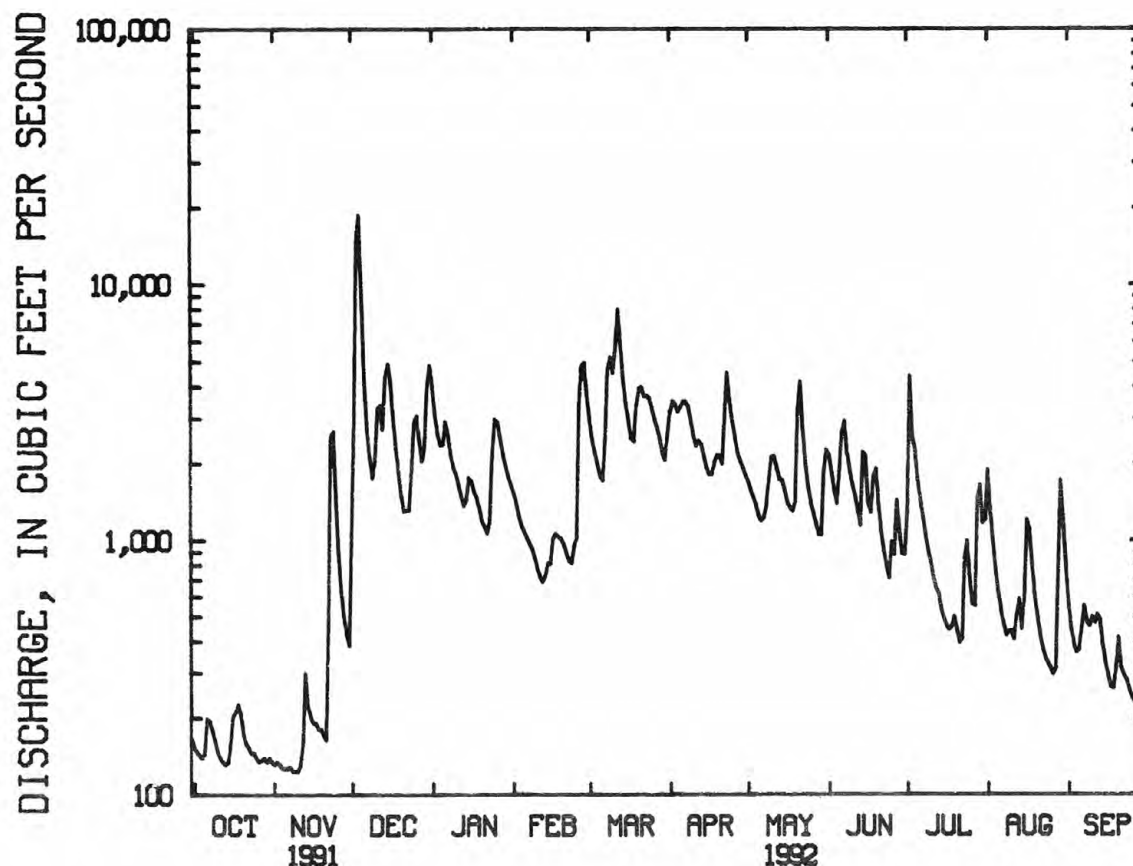
a Nov. 8-10.

b Nov. 8-10, 1991.

c At original site 1,600 ft downstream.

d Nov. 9, 10.

f Nov. 9, 10, 1991.



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WATER RESOURCES DATA - WEST VIRGINIA, 1992

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

As the number of streams on which streamflow information is likely to be desired far exceeds the number of stream-gaging stations feasible to operate at one time, the Geological Survey collects limited streamflow data at sites other than stream-gaging stations. When limited streamflow data are collected on a systematic basis over a period of years for use in hydrologic analyses, the site at which the data are collected is called a partial-record station. Data collected at these partial-record stations are usable in low-flow or floodflow analyses, depending on the type of data collected. In addition, discharge measurements are made at other sites not included in the partial-record program. These measurements are generally made in times of drought or flood to give better areal coverage to those events. Those measurements and others collected for some special reason are called measurements at miscellaneous sites.

Records collected at partial-record stations are presented in two tables. The first is a table of annual maximum stage and discharge at crest-stage stations and the second is a table of discharge measurements at low-flow partial-record stations.

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 at crest-stage partial-record stations

Maximum discharge at crest stage partial record stations									
Station name and number	Location and drainage area	Period of record	Water year 1992 maximum		Period of record maximum		Date	Gage height (ft)	Dis- charge (ft ³ /s)
			Date	Gage height (ft)	Date	Gage height (ft)			
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 mile downstream from Coon Creek, and 0.9 mile upstream from Strouds Creek, and at mile 69.6. Drainage area is 236 mi ² .	1909-16, 1930-75*, 1976-92a	12-02-91	19.72	20,400	07-04-32	27.38	42,500	
GUYANDOTTE RIVER BASIN									
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*, 1963-92a	12-02-91	10.56	8,810	03-12-63	24.78	49,000	

* Operated as a continuous-record gaging station.
a Gage-height records on file in district office.

MISCELLANEOUS FIELD DETERMINATIONS

WATER QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

01607500 - SO FK SO BR POTOMAC R AT BRANDYWINE, WV

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)
OCT								
16...	1045	7.2	204	8.0	11.0	719	10.0	96
DEC								
05...	1230	202	95	7.4	4.0	726	11.9	95
JAN								
29...	1115	27	105	7.1	2.0	--	8.4	--
MAR								
23...	1200	146	102	7.5	6.0	716	11.7	100
MAY								
19...	1200	223	102	7.3	15.0	732	10.5	108
JUL								
09...	1100	26	153	7.8	23.5	719	8.6	108
AUG								
27...	1130	6.9	191	8.0	25.0	--	--	--

03056250 - THREE FORK CREEK NR GRAFTON, WV

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					
01...	1055	1.5	820	4.3	16.0
21...	1430	3.2	780	4.7	9.5
NOV					
05...	1300	2.5	900	4.3	4.5
18...	1130	6.0	750	4.5	6.0
DEC					
13...	0845	117	275	4.9	7.0
20...	0900	32	265	5.2	0.0
JAN					
09...	0840	61	300	4.2	4.0
29...	1000	145	340	4.1	1.0
FEB					
12...	0845	62	255	4.5	0.0
24...	1020	154	365	3.5	2.0
MAR					
06...	0745	117	375	3.8	9.0
18...	0750	171	330	3.7	4.0
APR					
03...	0820	292	290	3.8	2.5
20...	1440	141	290	3.8	16.0
MAY					
08...	0910	96	310	3.8	11.0
18...	1100	80	285	3.9	19.0
JUN					
01...	0915	75	355	3.9	14.0
17...	0820	18	440	3.9	20.5
JUL					
01...	0800	8.6	650	3.5	24.0
06...	1100	12	660	3.5	23.0
09...	0915	11	600	3.5	24.0
13...	1130	148	230	4.3	20.0
16...	0730	312	195	5.3	20.0
20...	1200	46	300	4.5	22.5
23...	0800	29	410	4.3	23.0
28...	0830	731	170	5.3	17.0
31...	0810	96	180	4.5	19.0
AUG					
03...	1115	43	370	4.4	21.0
07...	0800	43	350	4.5	21.0
10...	1145	27	450	4.3	24.0
17...	1130	48	360	4.5	20.0
21...	0845	31	450	4.5	18.0
26...	1045	15	565	4.3	24.0
SEP					
08...	1130	16	550	4.4	23.0
21...	0910	15	590	4.4	19.0

MISCELLANEOUS FIELD DETERMINATIONS

WATER QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

03058000

- WEST FORK R BL STONEWALL JACKSON DAM NR WESTON

DATE	TIME	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)
OCT							
01...	1345	120	7.3	20.0	736	8.6	98
23...	0920	113	7.2	14.0	739	10.1	101
NOV							
04...	1000	135	7.5	11.5	740	10.1	95
18...	1400	155	6.8	9.0	734	10.5	94
DEC							
13...	1030	155	7.3	8.0	732	11.1	98
20...	1120	140	7.5	6.0	750	11.3	92
JAN							
09...	1040	130	7.2	5.0	730	11.0	90
29...	1120	136	7.0	3.5	740	11.4	88
FEB							
12...	1200	175	6.9	3.5	744	12.8	99
24...	1300	140	6.5	4.0	731	12.2	97
MAR							
06...	0915	105	7.2	5.0	734	13.6	111
18...	1215	106	6.3	6.0	732	11.4	95
APR							
03...	0930	115	7.5	6.5	729	11.6	99
22...	0750	118	7.3	7.0	731	11.2	96
MAY							
08...	1030	112	7.3	11.0	728	10.8	103
19...	0930	105	7.0	14.0	738	9.9	99
JUN							
01...	1050	110	6.7	14.5	734	9.6	98
17...	1200	110	6.6	19.0	735	9.3	104
JUL							
01...	1030	111	6.5	19.0	729	8.9	100
06...	1315	116	6.7	20.0	730	8.4	97
09...	1100	119	6.5	21.0	731	8.2	96
13...	1330	121	6.4	19.5	731	8.5	97
16...	1025	117	6.8	19.0	731	8.8	99
20...	1340	117	6.8	20.0	734	8.7	99
23...	1500	120	6.9	20.0	733	8.4	96
28...	1045	120	6.8	21.0	732	8.6	101
31...	1000	120	7.0	22.0	729	8.3	99
AUG							
03...	1240	115	6.9	22.0	732	8.3	99
07...	0930	106	6.8	21.5	736	8.2	96
10...	1350	112	6.8	24.0	731	8.1	101
17...	1300	110	6.8	21.0	736	8.4	98
21...	1000	110	6.8	20.5	740	8.6	98
26...	1330	106	6.8	24.0	739	8.3	102
SEP							
09...	1410	103	7.0	25.0	735	8.0	101
21...	1145	102	7.0	23.0	732	8.2	100

03185400

- NEW RIVER AT THURMOND, WV

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)
OCT								
04...	1535	1160	171	8.1	21.5	735	8.2	96
DEC								
20...	1100	3480	137	7.6	2.0	--	13.5	--
JAN								
10...	1100	9400	120	7.8	5.5	--	12.1	--
FEB								
25...	1100	8940	116	7.7	7.5	730	11.4	99
JUN								
03...	1045	12800	122	7.7	16.0	734	9.3	98
JUL								
09...	1100	5200	158	8.0	25.0	734	7.2	91
AUG								
06...	1200	3150	162	8.1	24.5	741	7.9	98

ANALYSES OF SAMPLES COLLECTED AT PARTIAL-RECORD, SPECIAL STUDY, AND MISCELLANEOUS SITES

Samples are collected at partial-record, special study, and miscellaneous sites to give better areal coverage. The results of these samples are given herein.

WATER QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

03062500 - DECKERS CREEK AT MORGANTOWN, WV

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 (PER-CENT) (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												
21...	1150	2.7	800	6.0	7.0	741	10.2	87	K67	K100	540	170
NOV												
27...	1000	25	650	6.2	0.5	747	13.6	96	20	K12	190	57
DEC												
12...	0945	100	260	6.5	5.0	744	12.2	98	20	32	89	26
JAN												
23...	1000	--	380	7.1	1.5	726	11.8	88	300	270	140	43
FEB												
12...	0940	--	290	4.3	0.0	752	12.7	88	K7	130	140	43
MAR												
18...	0945	123	300	5.1	4.0	741	11.9	93	<1	39	110	32
APR												
20...	1300	68	365	4.5	16.0	737	9.0	94	K3	K39	120	40
MAY												
11...	1130	81	215	5.2	14.0	743	9.3	93	<1	K15	110	33
JUN												
15...	1000	18	520	3.7	18.5	738	7.9	87	<1	34	200	60
JUL												
21...	1015	16	510	7.1	21.0	740	8.3	96	K1300	950	240	73
AUG												
10...	0945	18	465	5.2	20.5	737	7.7	89	K49	67	200	59
SEP												
02...	0900	36	340	3.6	16.0	743	9.4	98	400	200	140	43

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 HCO3 (MG/L AS) (00453)	CAR-BONATE WATER DIS IT FIELD CO3 (MG/L AS) (00452)	ALKA-LINITY WAT DIS TOT IT FIELD CACO3 (MG/L AS) (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												
21...	27	23	4.4	10	0	8	540	16	0.30	11	838	811
NOV												
27...	11	8.5	2.7	24	0	20	190	10	0.20	6.4	287	307
DEC												
12...	5.8	5.2	1.8	6	0	5	93	7.7	0.20	5.5	159	156
JAN												
23...	7.2	20	1.9	44	0	36	110	38	0.20	4.9	243	252
FEB												
12...	8.6	7.0	1.7	0	0	0	150	12	0.20	7.3	232	--
MAR												
18...	7.5	5.7	1.3	1	0	1	110	10	0.20	6.5	186	183
APR												
20...	5.3	3.2	1.9	0	0	0	35	2.4	<0.10	5.7	182	--
MAY												
11...	7.1	5.5	1.4	1	0	1	110	6.3	0.20	6.8	186	176
JUN												
15...	13	8.3	1.9	0	0	0	220	8.3	0.30	10	348	--
JUL												
21...	14	11	2.8	33	0	27	210	11	0.20	5.5	364	348
AUG												
10...	13	9.2	2.2	2	0	2	210	0.90	0.20	10	316	313
SEP												
02...	8.9	14	1.8	0	0	0	130	9.2	0.30	7.4	208	--

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

03062500 - DECKERS CREEK AT MORGANTOWN, WV--Continued

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 21...	0.021	1.20	1.00	<0.010	--	--	--	--	--	--	--
NOV 27...	0.010	1.30	0.320	<0.010	--	--	--	--	--	--	--
DEC 12...	<0.010	1.20	0.090	0.010	30	<1	67	0.8	<1.0	<5	20
JAN 23...	0.010	0.870	0.170	<0.010	--	--	--	--	--	--	--
FEB 12...	0.010	1.10	0.200	<0.010	--	--	--	--	--	--	--
MAR 18...	<0.010	0.920	0.160	<0.010	540	<1	66	0.9	1.0	<5	20
APR 20...	<0.010	0.500	0.140	<0.010	--	--	--	--	--	--	--
MAY 11...	<0.010	0.380	0.770	<0.010	--	--	--	--	--	--	--
JUN 15...	<0.010	0.300	0.250	<0.010	4300	<1	65	3	1.0	<5	40
JUL 21...	0.010	0.640	0.340	<0.010	--	--	--	--	--	--	--
AUG 10...	<0.010	0.420	0.280	<0.010	--	--	--	--	--	--	--
SEP 02...	<0.010	0.340	0.180	<0.010	90	<1	64	<0.5	<1.0	<5	30

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 21...	--	6900	--	--	1100	--	--	--	--	--	--
NOV 27...	--	2700	--	--	1000	--	--	--	--	--	--
DEC 12...	<10	1400	<10	10	520	<10	20	<1.0	140	<6	67
JAN 23...	--	680	--	--	420	--	--	--	--	--	--
FEB 12...	--	4400	--	--	630	--	--	--	--	--	--
MAR 18...	<10	3100	<10	15	490	<10	40	<1.0	170	<6	91
APR 20...	--	33	--	--	18	--	--	--	--	--	--
MAY 11...	--	2500	--	--	480	--	--	--	--	--	--
JUN 15...	<10	6200	<10	36	940	<10	70	<1.0	290	<6	180
JUL 21...	--	33	--	--	1000	--	--	--	--	--	--
AUG 10...	--	4400	--	--	820	--	--	--	--	--	--
SEP 02...	<10	1500	<10	18	670	<10	40	<1.0	230	<6	78

ANALYSES OF SAMPLES COLLECTED AT PARTIAL-RECORD, SPECIAL STUDY, AND MISCELLANEOUS SITES

WATER QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

385119079094201 - SOUTH MILL CREEK NEAR MOZER, WV

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)
OCT												
22...	0945	0.47	220	7.8	8.0	730	11.4	101	K100	<33	140	49
NOV												
26...	1110	0.75	360	7.5	1.0	733	14.1	103	160	1000	140	48
DEC												
11...	1110	1.8	265	7.2	4.5	731	12.1	98	300	900	100	32
JAN												
22...	1030	1.2	160	7.3	0.0	729	13.6	97	K60	210	120	39
FEB												
11...	1000	1.2	290	7.4	0.0	730	14.5	104	K11	110	130	43
MAR												
17...	1020	3.2	230	6.9	3.5	722	13.0	103	110	100	95	30
APR												
21...	0945	1.7	260	7.3	15.0	722	8.8	92	1300	920	120	40
MAY												
12...	1000	8.0	160	7.1	14.0	727	10.2	104	580	280	69	21
JUN												
16...	0845	3.7	215	6.8	16.5	730	8.6	92	6000	7000	98	30
JUL												
22...	0900	1.2	255	7.6	21.0	729	8.0	94	K9000	8400	120	40
AUG												
11...	1000	0.88	275	7.7	22.0	722	9.7	117	1000	980	140	45
SEP												
01...	0915	0.63	280	7.4	16.0	732	9.6	101	370	2600	150	50

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												
22...	4.2	2.2	1.9	140	0	115	16	2.3	0.10	4.7	150	150
NOV												
26...	4.9	2.8	1.8	140	0	115	37	4.0	0.10	5.8	184	176
DEC												
11...	5.2	4.3	2.2	66	0	54	49	4.4	0.20	7.5	145	141
JAN												
22...	5.1	3.2	1.6	110	0	90	39	6.1	0.20	6.3	131	157
FEB												
11...	5.4	3.5	1.6	128	0	105	38	6.6	0.10	4.7	162	167
MAR												
17...	4.9	3.5	1.5	62	0	51	35	4.2	<0.10	6.2	125	118
APR												
21...	5.3	3.2	1.9	110	0	90	35	2.4	<0.10	5.7	182	149
MAY												
12...	4.0	3.0	1.8	67	0	55	27	2.8	<0.10	7.7	106	101
JUN												
16...	5.5	4.3	2.7	67	0	55	56	2.8	<0.10	8.9	134	145
JUL												
22...	4.8	2.5	3.1	104	0	85	23	2.3	0.10	7.6	158	137
AUG												
11...	5.6	3.1	2.9	116	0	95	27	4.0	0.10	5.4	160	151
SEP												
01...	5.3	5.0	2.3	134	0	110	23	0.90	0.20	3.9	150	158

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

385119079094201 - SOUTH MILL CREEK NEAR MOZER, WV--CONTINUED

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 22...	<0.010	0.160	<0.010	<0.010	--	--	--	--	--	--	--
NOV 26...	<0.010	0.500	0.020	<0.010	--	--	--	--	--	--	--
DEC 11...	0.010	0.820	<0.010	0.030	<10	2	52	<0.5	<1.0	<5	<3
JAN 22...	<0.010	0.560	<0.010	<0.010	--	--	--	--	--	--	--
FEB 11...	<0.010	0.340	<0.010	<0.010	--	--	--	--	--	--	--
MAR 17...	<0.010	0.510	<0.010	<0.010	30	<1	44	<0.5	2.0	<5	<3
APR 21...	<0.010	0.360	0.050	<0.010	--	--	--	--	--	--	--
MAY 12...	<0.010	0.240	0.020	<0.010	--	--	--	--	--	--	--
JUN 16...	0.010	0.410	0.040	<0.010	30	<1	49	<0.5	<1.0	<5	<3
JUL 22...	0.020	0.540	0.030	0.030	--	--	--	--	--	--	--
AUG 11...	<0.010	0.280	0.010	<0.010	--	--	--	--	--	--	--
SEP 01...	<0.010	0.340	0.030	<0.010	<10	<1	62	<0.5	<1.0	<5	<3

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 22...	--	16	--	--	5	--	--	--	--	--	--
NOV 26...	--	18	--	--	9	--	--	--	--	--	--
DEC 11...	<10	37	<10	<4	11	<10	<10	<1.0	110	<6	3
JAN 22...	--	21	--	--	8	--	--	--	--	--	--
FEB 11...	--	13	--	--	7	--	--	--	--	--	--
MAR 17...	<10	25	<10	5	16	<10	<10	<1.0	120	<6	<3
APR 21...	--	33	--	--	18	--	--	--	--	--	--
MAY 12...	--	52	--	--	10	--	--	--	--	--	--
JUN 16...	<10	77	<10	4	17	<10	<10	<1.0	120	<6	13
JUL 22...	--	64	--	--	17	--	--	--	--	--	--
AUG 11...	--	14	--	--	10	--	--	--	--	--	--
SEP 01...	<10	11	<10	4	10	<10	<10	<1.0	180	<6	6

ANALYSES OF SAMPLES COLLECTED AT PARTIAL-RECORD, SPECIAL STUDY, AND MISCELLANEOUS SITES

WATER QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

390059079283401 - CLUB RUN NEAR HEADWATERS

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, 0.7 UM-MF (COLS./100 ML) (31625)	STREP-TOCOCCHI, KF AGAR (COLS. PER 100 ML) (31673)
NOV 20...	1540	0.02	81	6.5	10.0	675	8.7	87	<3	K2
MAY 29...	0819	0.09	54	5.9	10.0	678	8.2	82	K1	K15
JUL 14...	1315	0.08	59	6.0	21.0	674	6.4	81	200	--
AUG 19...	1100	0.10	64	6.1	15.0	676	7.6	85	<10	--
DATE	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-LINITY WAT DIS TOT IT FIELD (MG/L AS CACO3) (39086)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	
NOV 20...	28	9.7	0.96	2.9	0.80	23	0	19	6.7	
MAY 29...	18	6.1	0.68	1.9	0.30	10	0	8	4.9	
JUL 14...	20	7.0	0.72	2.3	0.40	--	--	--	5.0	
AUG 19...	21	7.2	0.74	3.0	0.30	--	--	--	4.5	
DATE	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, NITRITE TOTAL (MG/L AS N) (00615)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N) (00610)	
NOV 20...	6.4	0.10	3.4	48	44	<0.010	<0.010	0.320	0.020	
MAY 29...	6.5	<0.10	3.1	34	30	<0.010	<0.010	0.270	0.020	
JUL 14...	6.0	<0.10	2.5	50	32	0.010	<0.010	0.210	0.030	
AUG 19...	7.7	<0.10	3.1	45	36	<0.010	<0.010	0.290	0.020	
DATE	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHORUS ORTHO TOTAL (MG/L AS P) (70507)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	
NOV 20...	<0.010	<0.20	0.330	<0.010	0.010	<0.010	<0.010	220	43	
MAY 29...	0.010	<0.20	0.280	0.020	0.020	<0.010	<0.010	220	49	
JUL 14...	0.030	0.20	0.190	<0.010	<0.010	<0.010	<0.010	400	110	
AUG 19...	0.010	<0.20	0.280	<0.010	<0.010	<0.010	<0.010	460	45	

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

390136079273301 - MILL RUN AT CANAAN VALLEY STATE PARK, WV

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, (PER-UM-MF) (COLS./100 ML) (31625)	STREP-TOCOCCI, FECAL, KF AGAR (COLS. PER 100 ML) (31673)
NOV 21...	0830	1.4	139	7.0	10.5	678	7.5	76	K28	140
JAN 29...	1715	--	137	6.9	0.0	679	11.5	88	K11	440
MAY 29...	1158	0.73	187	7.7	11.5	680	10.0	103	76	74
JUL 14...	1415	0.86	149	7.2	27.0	674	7.4	106	K650	--
AUG 18...	1100	2.3	131	7.4	17.5	682	9.3	109	620	--

DATE	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-LINITY WAT DIS TOT IT FIELD (MG/L AS CACO3) (39086)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)
NOV 21...	57	20	1.7	4.4	1.0	63	0	52	11
JAN 29...	55	20	1.2	4.4	0.60	48	0	39	8.5
MAY 29...	78	28	1.9	7.7	0.50	77	0	63	6.3
JUL 14...	58	21	1.4	5.8	0.50	--	--	--	13
AUG 18...	59	21	1.6	2.8	0.50	--	--	--	6.5

DATE	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, NITRITE TOTAL (MG/L AS N) (00615)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N) (00610)
NOV 21...	8.7	0.20	2.5	86	81	<0.010	<0.010	<0.050	0.030
JAN 29...	7.6	0.10	3.6	83	71	<0.010	<0.010	0.300	0.060
MAY 29...	15	<0.10	1.8	116	100	<0.010	<0.010	0.130	0.040
JUL 14...	8.9	<0.10	2.1	93	81	0.020	<0.010	0.082	0.070
AUG 18...	4.5	<0.10	2.3	69	70	<0.010	<0.010	0.100	0.040

DATE	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHORUS ORTHO TOTAL (MG/L AS P) (70507)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)
NOV 21...	<0.010	1.0	<0.050	0.070	0.010	<0.010	<0.010	210	74
JAN 29...	0.050	0.40	0.290	0.030	0.010	<0.010	0.010	190	87
MAY 29...	0.030	0.20	0.210	0.030	0.020	<0.010	0.010	360	92
JUL 14...	0.050	0.50	0.066	0.030	0.020	0.020	0.020	440	96
AUG 18...	0.050	0.30	0.110	0.010	0.020	<0.010	<0.010	140	26

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

390211079253601 - BLACKWATER RIVER ON TIMBERLINE ROAD

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, 0.7 UM-MF (COLS./100 ML) (31625)	STREP-TOCOCCHI, KF AGAR (COLS. PER 100 ML) (31673)
NOV 20...	1350	6.2	124	7.6	9.5	677	11.5	113	K3	K6
JAN 30...	0845	29	93	7.0	0.0	675	11.5	89	K9	K11
APR 01...	1100	75	66	6.8	4.5	669	10.4	92	K9	K2
MAY 28...	1624	11	107	7.8	13.5	679	10.1	109	54	K8
JUL 14...	1433	18	79	7.2	23.0	680	7.2	94	410	--
AUG 18...	1315	16	90	7.2	18.0	681	8.1	96	190	--

DATE	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-LINITY WAT DIS TOT IT FIELD (MG/L AS CACO3) (39086)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)
NOV 20...	51	18	1.5	2.7	0.90	59	0	48	12
JAN 30...	39	14	1.0	2.0	0.40	50	0	41	8.7
APR 01...	28	9.7	0.86	1.5	0.40	24	0	20	6.8
MAY 28...	50	18	1.3	2.0	0.30	49	0	40	6.3
JUL 14...	34	12	0.98	2.1	0.30	--	--	--	9.2
AUG 18...	39	14	1.1	1.6	0.40	--	--	--	5.5

DATE	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, NITRITE TOTAL (MG/L AS N) (00615)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N) (00610)
NOV 20...	5.5	0.20	4.2	69	75	<0.010	0.010	0.110	0.020
JAN 30...	2.7	0.20	4.2	54	59	<0.010	<0.010	0.320	0.020
APR 01...	3.0	<0.10	2.6	38	38	<0.010	<0.010	0.230	0.030
MAY 28...	3.4	<0.10	3.2	71	60	<0.010	<0.010	0.210	0.020
JUL 14...	3.1	<0.10	3.0	57	46	<0.010	0.010	0.120	0.070
AUG 18...	2.5	<0.10	3.4	56	50	<0.010	<0.010	0.130	0.040

DATE	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHORUS ORTHO TOTAL (MG/L AS P) (70507)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)
NOV 20...	<0.010	0.30	0.110	0.010	0.010	<0.010	<0.010	180	44
JAN 30...	0.020	<0.20	0.330	<0.010	<0.010	<0.010	<0.010	140	61
APR 01...	0.020	<0.20	0.220	<0.010	<0.010	<0.010	<0.010	94	28
MAY 28...	0.020	0.20	0.190	0.030	0.020	<0.010	0.010	250	36
JUL 14...	0.110	0.50	0.094	0.040	0.020	0.010	0.010	500	81
AUG 18...	0.020	0.30	0.130	<0.010	0.030	0.010	<0.010	270	28

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

390222079272001 - BLACKWATER RIVER AT CANAAN VALLEY STATE PARK, WV

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, 0.7 UM-MF (COLS./100 ML) (31625)	STREP-TOCOCOCI KF AGAR (COLS. PER 100 ML) (31673)
NOV 21...	1000	3.4	85	6.7	11.0	679	9.1	93	K15	27
JAN 29...	1515	14	62	6.5	0.0	680	11.1	85	K2	K9
APR 01...	1300	41	49	6.6	3.5	670	11.3	97	K5	K2
MAY 29...	1027	4.3	80	6.9	11.5	680	8.0	82	110	62
JUL 14...	1510	11	56	6.2	25.5	673	7.3	101	320	--
AUG 18...	1600	11	61	6.7	21.0	680	8.5	107	100	--

DATE	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-LINITY WAT DIS TOT IT FIELD (MG/L AS CACO3) (39086)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)
NOV 21...	35	12	1.2	2.2	0.80	23	0	19	12
JAN 29...	25	8.5	0.81	1.5	0.40	17	0	14	6.3
APR 01...	19	6.3	0.77	1.5	0.40	12	0	10	6.2
MAY 29...	35	12	1.1	2.6	0.30	30	0	25	5.8
JUL 14...	23	7.9	0.79	1.6	0.30	--	--	--	8.4
AUG 18...	26	9.1	0.88	1.3	0.20	--	--	--	4.8

DATE	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, NITRITE TOTAL (MG/L AS N) (00615)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N) (00610)
NOV 21...	4.5	0.20	3.8	61	48	<0.010	0.010	<0.050	0.020
JAN 29...	2.2	0.20	3.9	40	33	<0.010	<0.010	0.240	0.030
APR 01...	3.2	<0.10	2.2	29	28	<0.010	<0.010	0.200	0.020
MAY 29...	4.1	<0.10	2.5	50	44	<0.010	<0.010	0.089	0.030
JUL 14...	2.4	<0.10	2.9	47	33	0.020	<0.010	0.078	0.050
AUG 18...	2.0	<0.10	3.0	54	35	<0.010	<0.010	0.053	0.020

DATE	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHORUS ORTHO TOTAL (MG/L AS P) (70507)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)
NOV 21...	0.010	0.20	<0.050	<0.010	0.010	<0.010	<0.010	200	58
JAN 29...	0.020	<0.20	0.250	0.010	0.010	<0.010	<0.010	150	72
APR 01...	0.030	<0.20	0.200	<0.010	<0.010	<0.010	<0.010	110	41
MAY 29...	0.030	0.30	0.088	0.030	0.020	<0.010	0.010	360	66
JUL 14...	0.050	0.40	0.058	0.030	<0.010	0.010	<0.010	510	90
AUG 18...	0.020	0.20	<0.050	<0.010	0.020	<0.010	<0.010	350	35

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

390346079244801 - YOAKUM RUN AT MOUTH

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, 0.7 UM-MF (COLS./100 ML) (31625)	STREP-TOCOCCHI, KF AGAR (COLS. PER 100 ML) (31673)
NOV 20...	1130	0.11	82	7.2	8.5	679	9.3	89	140	78
JAN 30...	1300	3.1	57	6.8	1.0	675	12.2	97	K11	31
APR 01...	1700	8.0	45	6.8	5.0	671	11.6	103	K20	K6
MAY 28...	1314	1.4	53	7.2	13.0	680	9.5	101	92	K8
JUL 14...	1500	2.0	73	7.0	25.0	680	6.7	91	280	--
AUG 19...	1430	1.5	61	6.9	18.5	679	7.5	90	130	--

DATE	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-LINITY WAT DIS TOT IT FIELD (MG/L AS CACO3) (39086)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)
NOV 20...	30	9.5	1.5	3.5	1.2	30	0	25	7.5
JAN 30...	20	6.8	0.79	1.4	0.60	18	0	15	6.0
APR 01...	18	6.1	0.79	0.80	0.50	13	0	11	6.0
MAY 28...	22	7.1	0.96	1.0	0.50	20	0	16	5.2
JUL 14...	32	11	1.2	1.4	0.60	--	--	--	5.3
AUG 19...	26	8.5	1.1	1.5	0.50	--	--	--	--

DATE	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, NITRITE TOTAL (MG/L AS N) (00615)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N) (00610)
NOV 20...	3.2	<0.10	3.9	65	47	<0.010	0.010	0.260	0.020
JAN 30...	2.1	0.20	3.6	37	33	<0.010	<0.010	0.480	0.240
APR 01...	1.4	<0.10	2.3	28	26	<0.010	<0.010	0.300	0.040
MAY 28...	1.4	<0.10	3.1	36	30	<0.010	<0.010	0.160	0.030
JUL 14...	1.0	<0.10	2.9	54	40	<0.010	0.010	0.230	0.070
AUG 19...	--	--	--	--	--	<0.010	<0.010	0.180	0.040

DATE	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHORUS ORTHO TOTAL (MG/L AS P) (70507)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)
NOV 20...	<0.010	0.50	0.260	0.020	0.010	<0.010	<0.010	540	55
JAN 30...	0.250	0.50	0.440	0.030	0.020	0.010	0.020	160	45
APR 01...	0.040	<0.20	0.300	<0.010	<0.010	<0.010	<0.010	90	22
MAY 28...	0.020	0.30	0.160	0.040	0.020	<0.010	0.010	450	33
JUL 14...	0.080	0.50	0.220	0.030	0.020	<0.010	0.010	700	51
AUG 19...	0.050	0.30	0.180	0.060	0.010	0.040	0.050	730	71

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

390351079244901 - BLACKWATER RIVER AT CORTLAND, WV

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 KF AGAR (COLS. PER 100 ML) (31673)
NOV 20...	1010	6.3	115	7.5	6.5	680	11.1	101	K32	K12
JAN 30...	1100	33	82	6.8	0.0	676	12.8	99	K7	K11
APR 01...	1515	83	55	6.9	5.5	670	11.4	103	K5	<1
MAY 28...	1510	12	90	8.0	14.5	680	9.8	108	K11	K16

DATE	HARD-NESS TOTAL (MG/L AS CAC03) (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-LINITY WAT DIS TOT IT FIELD (MG/L AS CAC03) (39086)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)
NOV 20...	--	--	1.5	2.7	0.80	61	0	50	12
JAN 30...	34	12	0.95	1.8	1.0	35	0	29	7.5
APR 01...	23	8.0	0.76	1.4	0.40	18	0	15	6.4
MAY 28...	40	14	1.2	1.8	0.40	40	0	33	5.9

DATE	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, NITRITE TOTAL (MG/L AS N) (00615)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N) (00610)
NOV 20...	4.9	0.20	3.3	72	--	<0.010	0.020	0.061	0.020
JAN 30...	2.9	0.20	4.1	47	50	<0.010	<0.010	0.450	0.040
APR 01...	2.6	<0.10	2.3	27	32	<0.010	<0.010	0.220	0.030
MAY 28...	3.0	<0.10	2.6	51	50	<0.010	<0.010	0.140	0.030

DATE	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHORUS ORTHO TOTAL (MG/L AS P) (70507)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)
NOV 20...	<0.010	<0.20	0.069	<0.010	0.010	<0.010	<0.010	200	14
JAN 30...	0.050	0.20	0.670	0.020	0.010	<0.010	<0.010	140	38
APR 01...	0.020	<0.20	0.210	<0.010	<0.010	<0.010	<0.010	89	22
MAY 28...	0.020	0.30	0.140	0.030	0.020	<0.010	0.010	300	22

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

390400079253301 - NORTH BRANCH AT CORTLAND, WV

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, 0.7 UM-MF (COLS./100 ML) (31625)	STREP-TOCOCCI KF AGAR (COLS. PER 100 ML) (31673)
NOV 20...	0815	1.3	146	7.1	7.0	681	9.2	85	K22	480
JAN 29...	0815	14	108	6.8	1.0	682	11.6	91	93	61
APR 01...	0825	27	83	6.8	4.0	670	11.1	96	K4	500
MAY 28...	1120	4.1	122	7.2	10.0	680	10.5	104	86	180
JUL 15...	1030	4.3	124	6.9	19.0	673	8.2	100	700	--
AUG 18...	1015	3.9	126	7.2	15.0	681	10.4	116	490	--

DATE	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-LINITY WAT DIS TOT IT FIELD (MG/L AS CACO3) (39086)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)
NOV 20...	59	20	2.1	4.8	0.70	62	0	51	9.4
JAN 29...	39	14	1.1	4.0	0.50	34	0	28	7.5
APR 01...	34	12	1.0	3.0	0.40	28	0	23	6.9
MAY 28...	54	19	1.6	2.4	0.40	59	0	48	7.3
JUL 15...	54	19	1.6	3.5	0.50	--	--	--	8.4
AUG 18...	65	23	1.8	2.9	0.50	--	--	--	7.5

DATE	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, NITRITE TOTAL (MG/L AS N) (00615)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N) (00610)
NOV 20...	7.8	0.10	3.1	80	80	<0.010	<0.010	0.200	0.020
JAN 29...	7.1	0.10	4.0	60	57	<0.010	<0.010	0.400	0.050
APR 01...	5.8	<0.10	3.0	44	47	<0.010	<0.010	0.300	0.020
MAY 28...	3.8	<0.10	3.5	73	68	<0.010	<0.010	0.250	0.040
JUL 15...	6.1	<0.10	3.3	77	70	0.020	0.010	0.290	0.070
AUG 18...	4.8	<0.10	3.7	83	82	<0.010	0.020	0.350	0.030

DATE	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHORUS ORTHO TOTAL (MG/L AS P) (70507)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)
NOV 20...	<0.010	<0.20	0.200	0.010	0.010	<0.010	<0.010	230	47
JAN 29...	0.050	<0.20	0.410	0.010	0.010	<0.010	0.020	86	36
APR 01...	0.020	<0.20	0.290	<0.010	<0.010	<0.010	<0.010	76	29
MAY 28...	0.030	0.20	0.250	0.030	0.020	<0.010	0.020	190	57
JUL 15...	0.060	0.30	0.270	0.020	<0.010	0.010	0.010	470	58
AUG 18...	0.030	0.20	0.330	0.020	0.020	0.020	0.020	260	42

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

390824079251201 - BLACKWATER RIVER NR. DAVIS, WV

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-TOCOCOCI KF AGAR (COLS. PER 100 ML) (31673)
NOV 19...	1530	14	118	7.4	7.0	684	11.1	102	K7	K21
JAN 29...	1145	95	60	6.7	0.0	683	11.6	89	K5	K3
MAR 31...	1550	286	49	6.7	6.5	675	10.7	98	K5	K3
MAY 28...	0745	19	72	7.2	10.0	685	8.9	88	110	K13
JUL 16...	1415	141	75	7.2	25.0	679	7.3	100	70	--
AUG 19...	1030	49	61	6.9	18.5	681	7.3	87	130	--

DATE	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-LINITY WAT DIS TOT IT FIELD (MG/L AS CACO3) (39086)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)
NOV 19...	52	18	1.6	3.0	0.90	45	0	37	9.2
JAN 29...	24	8.2	0.78	1.2	0.40	18	0	15	6.7
MAR 31...	20	6.8	0.67	1.8	0.20	15	0	12	6.0
MAY 28...	35	12	1.1	1.3	0.40	33	0	27	5.1
JUL 16...	32	11	1.1	1.6	0.40	--	--	--	5.9
AUG 19...	29	10	0.95	1.2	0.40	--	--	--	4.1

DATE	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, NITRITE TOTAL (MG/L AS N) (00615)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N) (00610)
NOV 19...	3.5	<0.10	2.8	71	62	0.010	0.010	0.087	0.020
JAN 29...	1.8	0.20	3.9	32	34	<0.010	<0.010	0.300	0.030
MAR 31...	2.1	<0.10	2.2	24	28	<0.010	<0.010	0.210	0.010
MAY 28...	1.8	<0.10	2.3	53	41	<0.010	<0.010	0.110	0.020
JUL 16...	0.70	<0.10	3.0	58	40	0.010	<0.010	0.130	0.050
AUG 19...	1.6	<0.10	3.1	42	36	<0.010	<0.010	0.087	0.030

DATE	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHORUS ORTHO TOTAL (MG/L AS P) (70507)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)
NOV 19...	<0.010	<0.20	0.082	<0.010	0.010	<0.010	<0.010	370	46
JAN 29...	0.030	0.20	0.300	0.010	<0.010	<0.010	<0.010	150	49
MAR 31...	0.020	<0.20	0.200	<0.010	<0.010	<0.010	<0.010	140	34
MAY 28...	0.020	0.30	0.120	0.030	0.020	<0.010	<0.010	660	48
JUL 16...	0.050	0.50	0.100	<0.010	<0.010	<0.010	<0.010	1100	120
AUG 19...	0.030	0.30	0.150	<0.010	<0.010	<0.010	<0.010	780	67

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

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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 National Geodetic Vertical Datum of 1929. Measuring point: Top edge of recorder shelter base, 3.30 ft above land-surface datum.

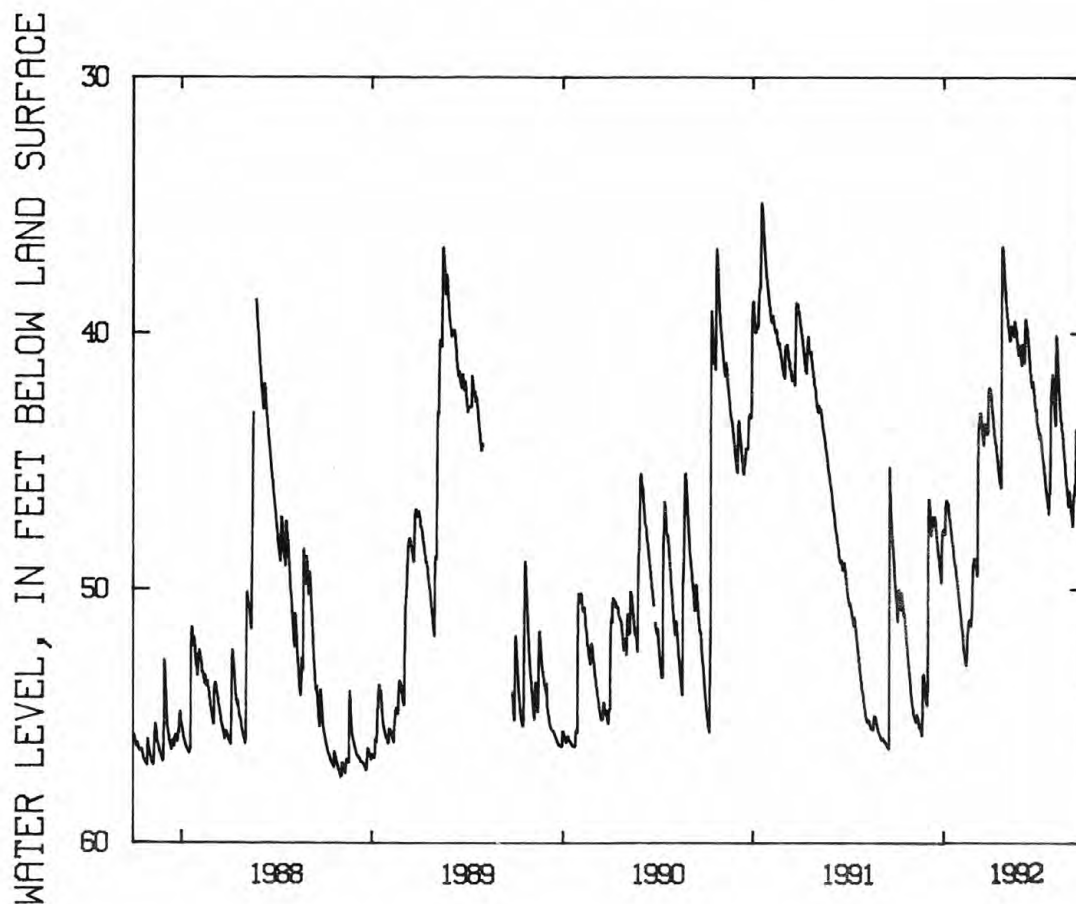
PERIOD OF RECORD.--November 1956 to current year.

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 1991 TO SEPTEMBER 1992
NOON VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	51.32	54.98	46.54	46.87	51.45	49.33	43.30	39.91	39.95	44.04	40.22	47.56
10	50.69	55.29	47.20	46.71	52.58	43.41	44.37	39.70	39.98	45.06	42.36	45.93
15	50.63	55.35	47.18	47.57	52.53	43.69	45.24	40.13	41.35	46.03	43.80	44.62
20	51.49	55.69	48.19	48.50	51.24	43.52	46.07	40.02	41.89	46.91	44.91	46.11
25	52.71	53.52	49.12	49.31	50.65	43.97	37.02	40.72	42.85	42.46	46.10	45.80
EOY	54.07	54.54	47.68	50.38	48.79	42.24	38.72	40.44	43.73	42.60	46.54	44.75

WATER YEAR 1992 HIGHEST 36.58 APR 23, 1992 LOWEST 55.82 NOV 21, 1991



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 National Geodetic Vertical Datum of 1929.
 Measuring point: Top of casing, 2.20 ft above land-surface datum.

REMARKS.--No water-level record Nov. 7-13, due to recorder malfunction. Aquifer test data available.

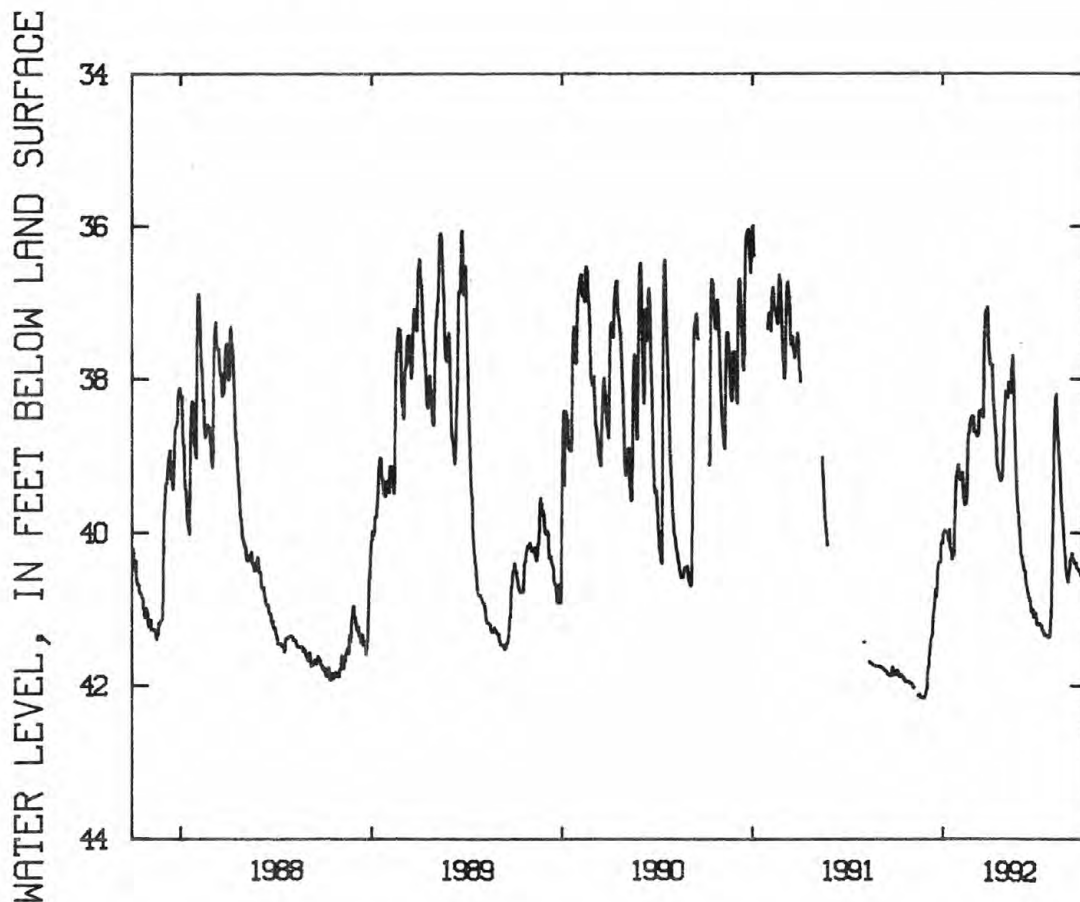
PERIOD OF RECORD.--July 1982 to current year.

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 1991 TO SEPTEMBER 1992
 NOON VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	41.79	42.03	41.74	40.04	39.31	38.73	38.08	38.04	40.50	41.21	38.40	40.34
10	41.89	---	41.36	39.95	39.55	38.47	38.68	38.03	40.77	41.29	39.09	40.40
15	41.89	42.12	41.00	40.16	39.61	38.40	39.21	38.16	40.90	41.33	39.74	40.48
20	41.95	42.15	40.83	40.28	38.68	37.61	39.32	39.34	41.00	41.37	40.21	40.56
25	41.95	42.16	40.38	39.65	38.50	37.09	38.87	39.93	41.05	41.09	40.61	40.19
EQM	41.97	42.05	40.15	39.11	38.59	37.81	38.15	40.34	41.21	38.88	40.35	39.70

WATER YEAR 1992 HIGHEST 37.06 MAR 26, 1992 LOWEST 42.17 NOV 26, 1991



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.

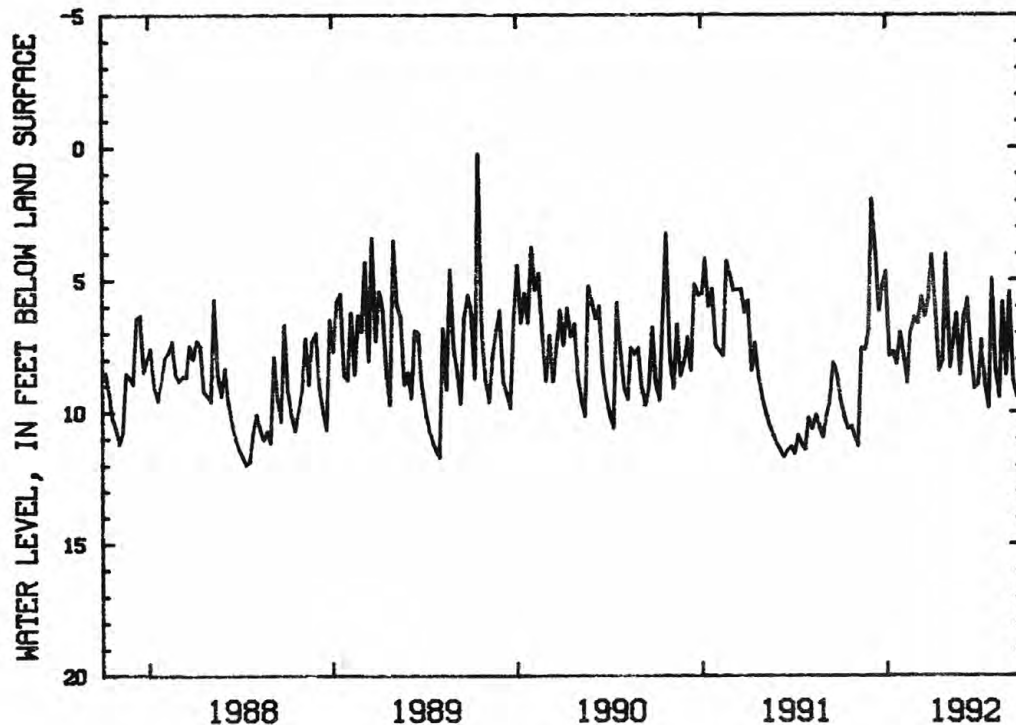
DATUM.--Elevation of land-surface datum is about 2,280 ft above National Geodetic Vertical Datum of 1929.
 Measuring point: Top of casing cover, 1.00 ft above land-surface datum.

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 1991 TO SEPTEMBER 1992

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 01	9.56	DEC 03	1.93	FEB 04	7.90	APR 07	5.93	JUN 09	5.71	AUG 11	9.46
08	10.17	10	3.81	11	8.92	14	8.47	16	7.78	18	5.83
15	10.64	17	6.19	18	6.94	21	8.07	23	9.14	25	8.62
22	10.53	24	5.18	25	6.41	28	4.01	30	8.96	SEP 01	5.44
29	10.95	31	4.68	MAR 03	6.65	MAY 06	8.36	JUL 07	7.28	08	8.89
NOV 05	11.28	JAN 07	7.91	10	5.64	12	7.40	14	9.04	15	9.45
12	7.56	14	7.74	17	6.37	19	6.28	21	9.85	22	9.31
19	7.65	21	8.21	24	5.78	26	8.62	28	4.94	29	9.81
26	6.88	28	6.98	31	4.06	JUN 02	6.40	AUG 04	8.49		
WATER YEAR 1992		HIGHEST	1.93	DEC 03, 1991	LOWEST	11.28	NOV 05, 1991				



GROUND-WATER LEVELS

GILMER COUNTY

385604080495901. Local number, 33-3-1.

LOCATION.--Lat $38^{\circ}56'04''$, long $80^{\circ}49'59''$, 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 National Geodetic Vertical Datum of 1929. Measuring point: Top of concrete cover at land-surface datum.

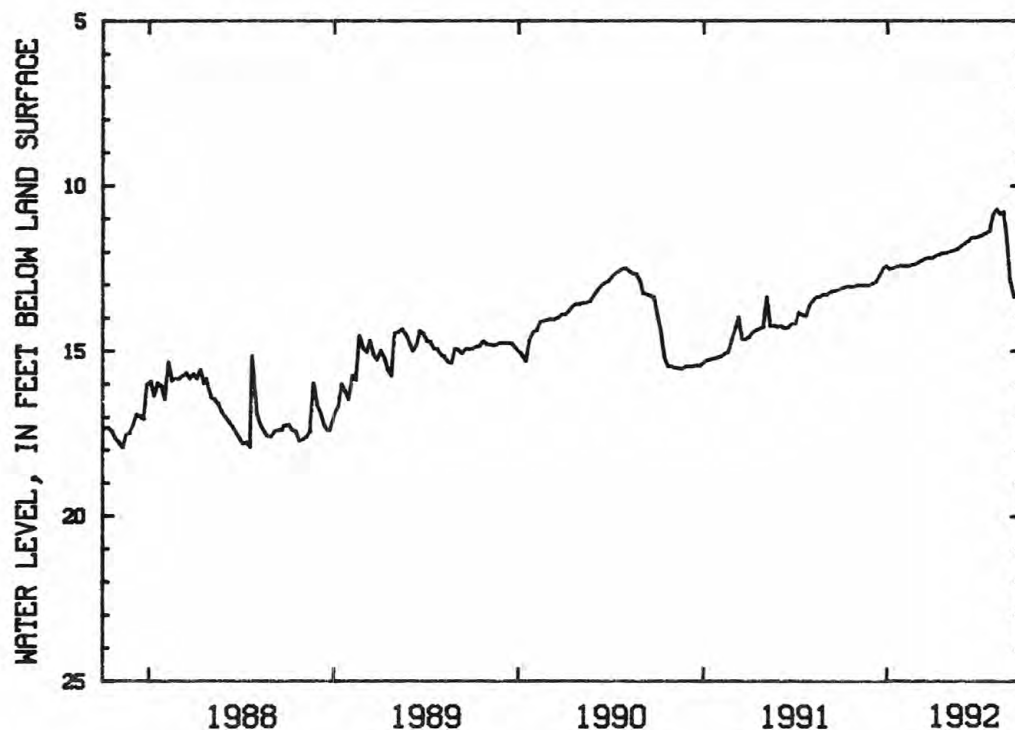
REMARKS.--West Virginia index well.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 10.70 ft below land-surface datum, Aug. 3, 1992; lowest measured, 18.75 ft below land-surface datum, Nov. 30, 1953.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 07	13.08	DEC 09	12.90	FEB 10	12.45	APR 13	12.07	JUN 15	11.55	AUG 17	10.78
14	13.04	16	12.72	17	12.40	20	12.03	22	11.55	24	11.65
21	13.08	23	12.50	24	12.37	27	12.02	29	11.52	31	12.90
28	13.04	30	12.43	MAR 02	12.32	MAY 04	11.98	JUL 06	11.47	SEP 07	13.38
NOV 04	13.01	JAN 06	12.55	09	12.25	11	11.94	13	11.41	14	13.30
11	13.03	13	12.48	16	12.20	18	11.91	20	11.36	21	13.29
18	13.04	20	12.44	23	12.17	25	11.82	27	10.88	28	13.20
25	13.03	27	12.41	30	12.20	JUN 01	11.74	AUG 03	10.70		
DEC 02	12.96	FEB 03	12.44	APR 06	12.11	08	11.66	10	10.85		
WATER YEAR 1992		HIGHEST	10.70	AUG 03, 1992	LOWEST	13.38	SEP 07, 1992				



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 National Geodetic Vertical Datum of 1929. Measuring point: Top edge of recorder shelter base, 1.50 ft above land-surface datum.

REMARKS.--Well is near reclaimed surface mine.

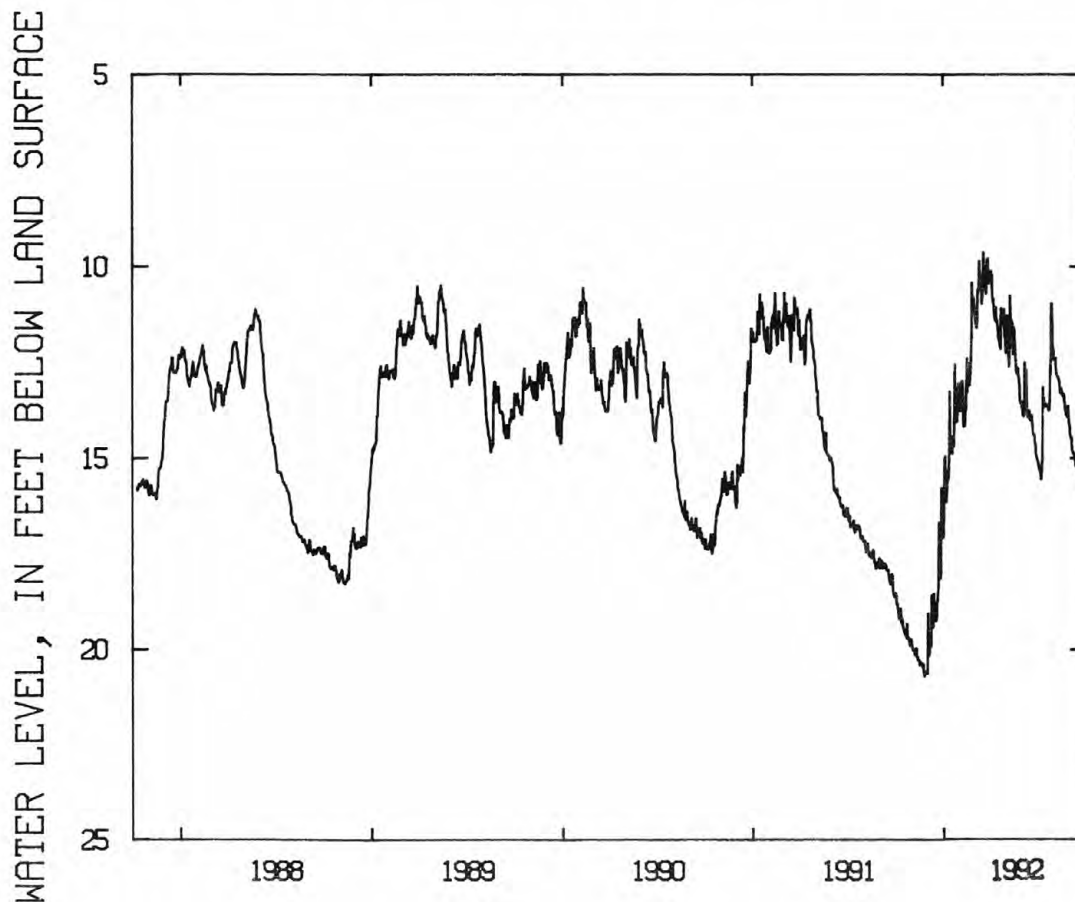
PERIOD OF RECORD.--June 1978 to current year.

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 1991 TO SEPTEMBER 1992
NOON VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	18.84	20.06	20.19	14.95	13.01	11.60	10.72	11.75	13.59	15.32	12.67	14.82
10	19.11	19.98	18.59	15.30	14.19	10.42	11.39	11.26	13.18	15.04	12.99	15.00
15	19.23	20.30	18.89	14.41	13.11	10.58	11.54	12.30	13.84	13.58	13.25	15.44
20	19.64	20.39	19.08	14.44	13.03	10.00	12.11	12.49	13.93	13.67	13.43	15.49
25	19.74	20.63	17.54	13.58	11.85	10.38	11.17	12.87	14.47	12.59	13.91	15.92
EOM	19.75	20.59	17.10	13.04	10.81	10.25	11.84	13.53	15.05	12.22	14.20	15.95

WATER YEAR 1992 HIGHEST 9.63 MAR 19, 1992 LOWEST 20.74 NOV 26, 1991



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 National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 0.90 ft above land-surface datum.

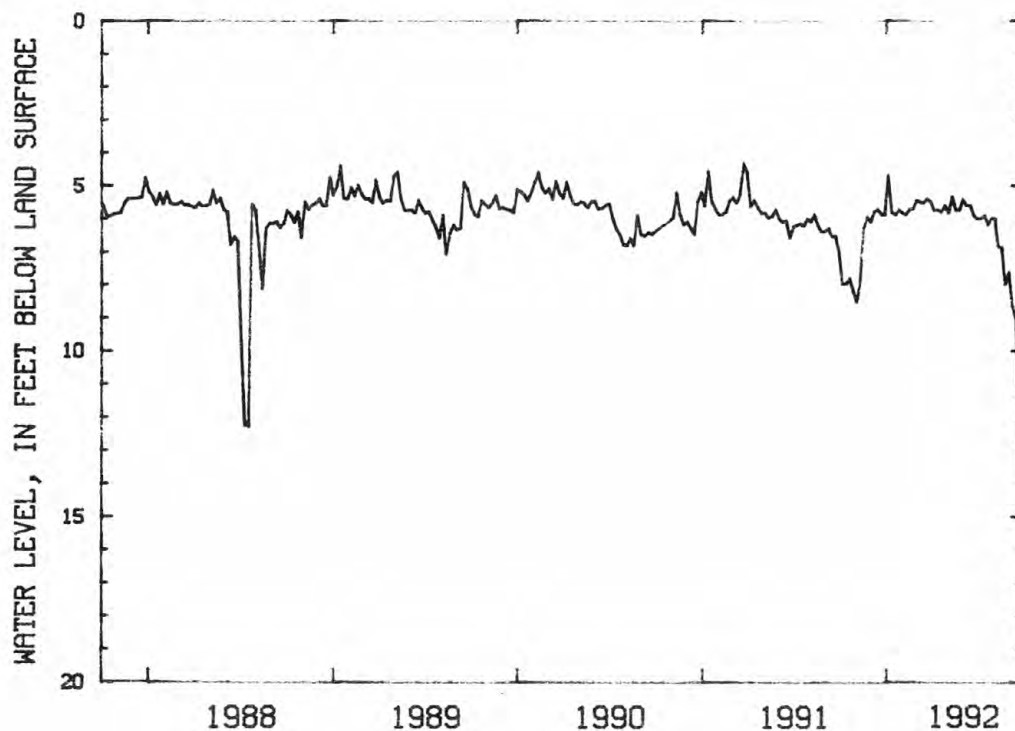
PERIOD OF RECORD.--November 1953 to current year.

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 1991 TO SEPTEMBER 1992

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 05	8.00	DEC 07	5.80	FEB 08	5.90	APR 11	5.75	JUN 13	5.60	AUG 15	6.90
12	8.00	14	5.72	15	5.72	18	5.82	20	5.90	22	8.00
19	7.82	21	5.88	22	5.70	25	5.60	27	6.03	29	7.62
26	8.20	28	5.90	29	5.45	MAY 02	5.85	JUL 04	6.00	SEP 05	8.65
NOV 02	8.55	JAN 04	4.68	MAR 07	5.50	09	5.33	11	5.90	12	9.10
09	7.87	11	5.82	14	5.54	16	5.74	18	6.20	19	12.12
16	6.30	18	5.90	21	5.40	23	5.76	25	6.00	26	13.90
23	5.95	25	5.74	28	5.48	30	5.41	AUG 01	6.00		
30	6.11	FEB 01	5.84	APR 04	5.75	JUN 06	5.62	08	6.85		

WATER YEAR 1992 HIGHEST 4.68 JAN 04, 1992 LOWEST 13.90 SEP 26, 1992



GROUND-WATER LEVELS

265

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 National Geodetic Vertical Datum of 1929.
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.

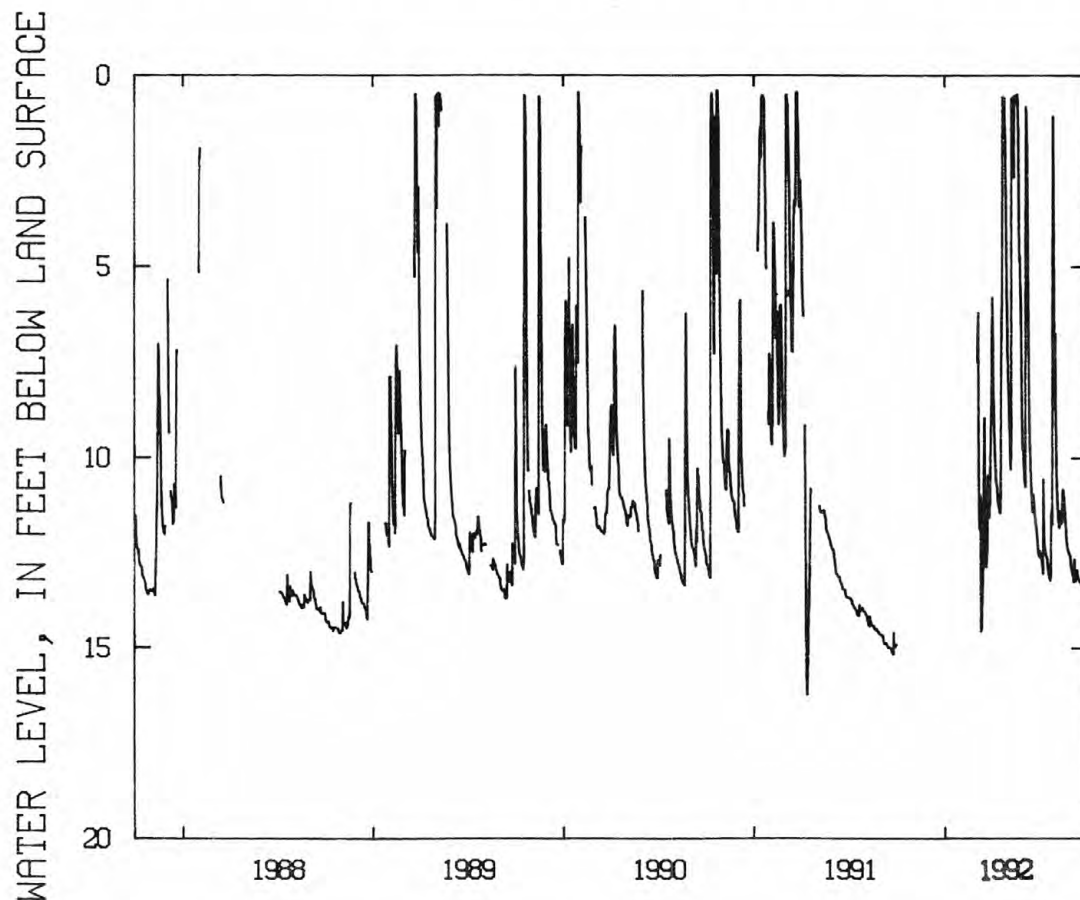
REMARKS.--No water-level record Oct. 1 to Mar. 3, except for water-level measurements Oct. 9, Dec. 11, and Feb. 12, due to recorder malfunction.

PERIOD OF RECORD.--February 1972 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 0.30 ft below land-surface datum, Sept. 25, 1975; lowest, 16.69 ft, estimated, below land-surface datum, July 15, 1973.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
NOON VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	---	---	---	---	---	6.70	8.89	9.13	4.50	12.72	11.11	13.29
10	---	---	---	---	---	10.99	10.72	.56	4.99	11.95	11.62	13.08
15	---	---	---	---	---	12.88	11.31	.52	10.54	12.62	10.82	13.24
20	---	---	---	---	---	12.37	6.47	.48	11.04	13.15	11.71	13.39
25	---	---	---	---	---	10.44	.59	4.73	11.84	11.36	12.45	13.60
EOM	---	---	---	---	---	8.91	5.71	9.73	12.60	8.75	12.84	13.28



GROUND-WATER LEVELS

HARDY COUNTY

385714078441301. Local number, 25-4-5.

LOCATION.--Lat $38^{\circ}57'14''$, long $78^{\circ}44'13''$, 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.

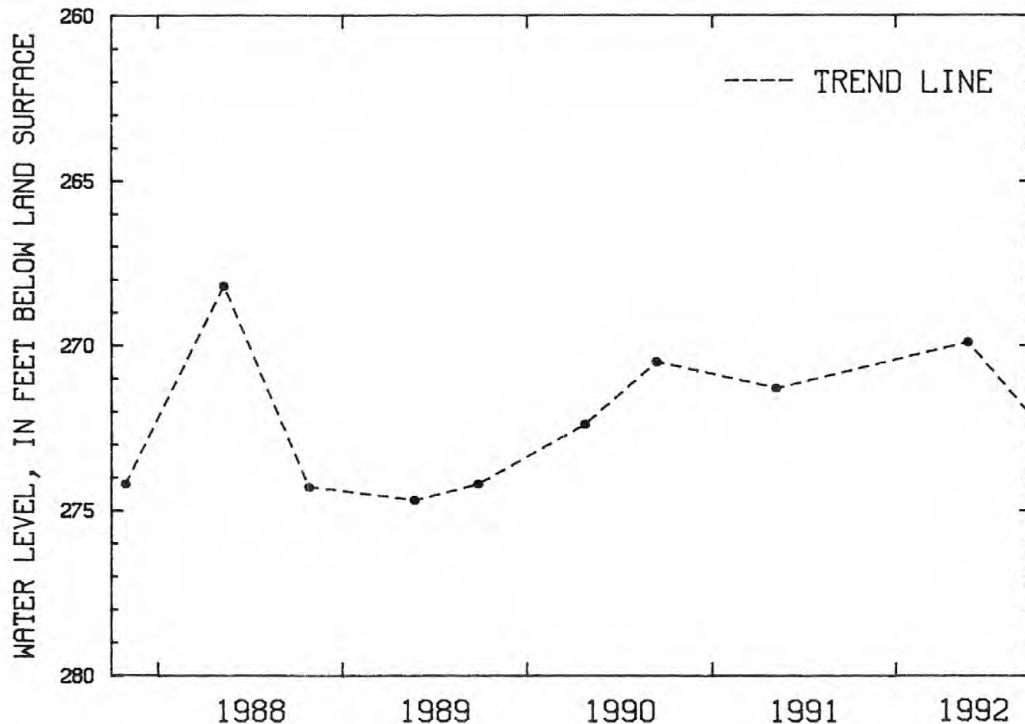
DATUM.--Elevation of land-surface datum is about 1,920 ft above National Geodetic Vertical Datum of 1929.
Measuring point: Top of well casing, 0.90 ft above land-surface datum.

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 1991 TO SEPTEMBER 1992

DATE	WATER LEVEL	DATE	WATER LEVEL
MAY 21	269.90	SEP 22	272.10



GROUND-WATER LEVELS

267

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 National Geodetic Vertical Datum of 1929. Measuring point: Top edge of recorder shelter base, at land-surface datum.

REMARKS.--Water-quality and well log data available. No water-level record July 13 to Aug. 31, due to recorder malfunction.

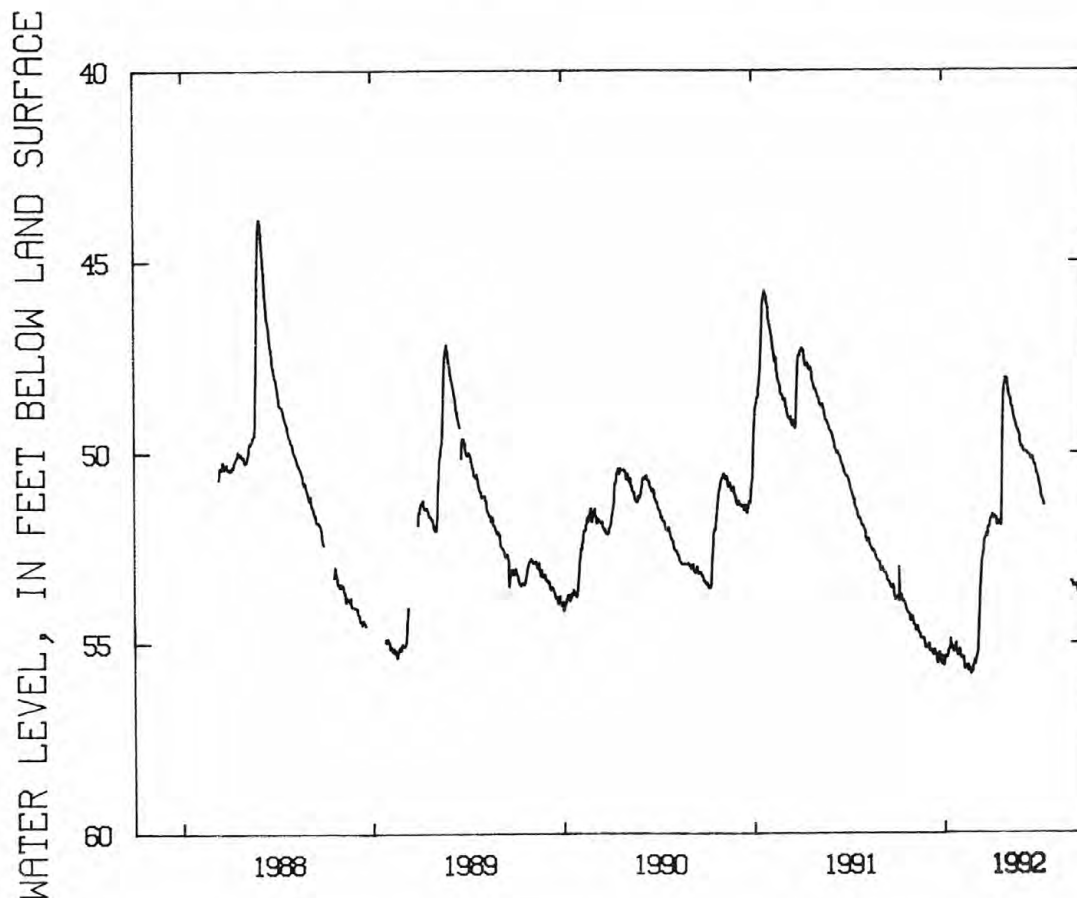
PERIOD OF RECORD.--March 1988 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 43.82 ft, below land-surface datum, May 30, 1988; lowest, 61.89 ft below land-surface datum, Sept. 28, 1988.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
NOON VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	53.83	54.56	55.25	55.37	55.37	55.28	51.67	48.27	49.99	50.94	---	53.54
10	53.80	54.64	55.21	55.16	55.71	53.99	51.71	48.62	49.99	51.27	---	53.47
15	53.90	54.78	55.28	55.06	55.84	52.77	51.86	49.01	50.08	---	---	53.72
20	54.08	54.89	55.56	55.13	55.71	52.24	51.91	49.32	50.11	---	---	53.77
25	54.25	55.01	55.43	55.22	55.77	52.20	48.92	49.51	50.34	---	---	53.88
EOY	54.30	55.13	55.59	55.17	55.44	51.74	48.03	49.83	50.61	---	---	53.88

WATER YEAR 1992 HIGHEST 48.03 APR 30, 1992 LOWEST 55.84 FEB 22, 1992



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 National Geodetic Vertical Datum of 1929. Measuring point: Top edge of recorder shelter base, 2.40 ft above land-surface datum.

REMARKS.--Water-quality and well log data available.

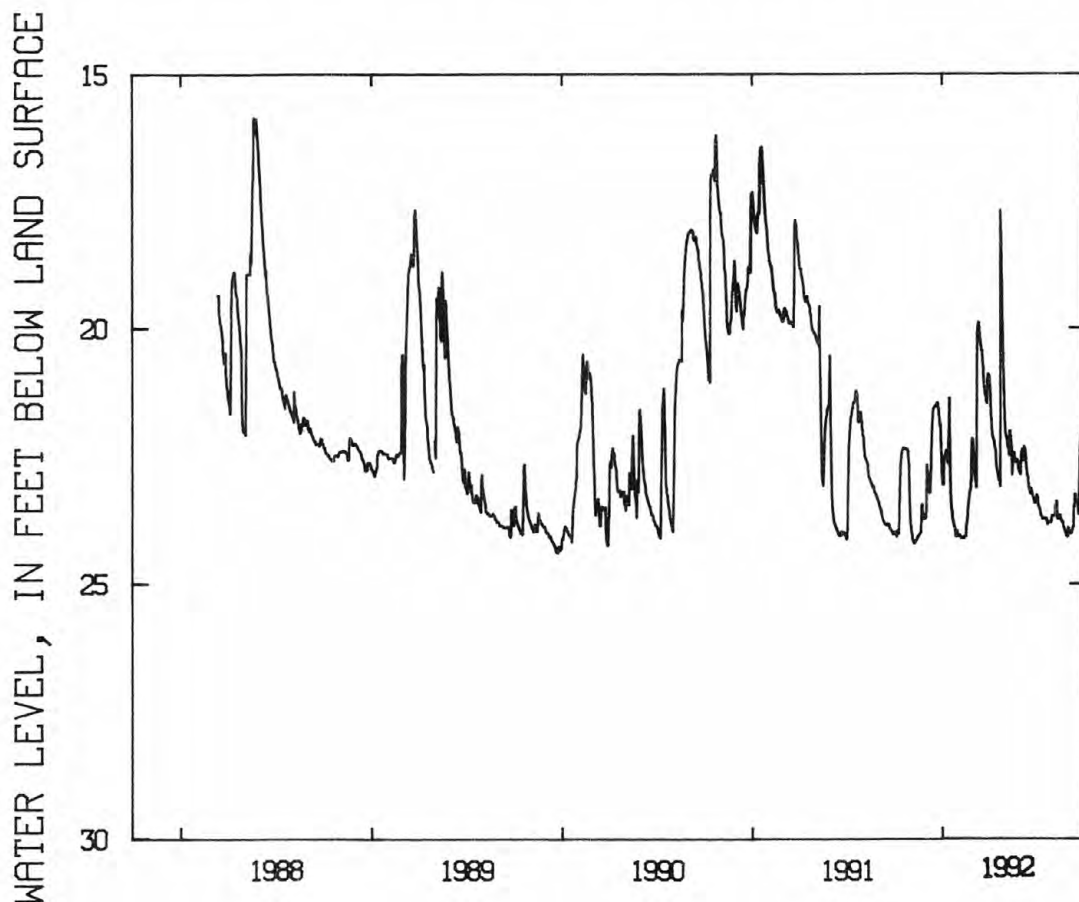
PERIOD OF RECORD.--March 1988 to current year.

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 1991 TO SEPTEMBER 1992
NOON VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	24.10	24.15	22.86	22.61	24.09	23.03	22.00	22.33	22.52	23.53	23.45	24.00
10	23.75	24.21	22.98	22.41	24.12	19.89	22.34	22.01	22.66	23.71	23.74	23.49
15	22.43	24.08	21.58	21.37	24.07	20.37	22.83	22.63	23.14	23.74	23.77	23.39
20	22.35	24.01	21.50	23.62	23.43	20.95	23.05	22.64	23.19	23.85	23.91	22.75
25	22.38	23.64	21.58	23.94	22.99	21.44	19.28	22.67	23.42	23.81	24.08	22.07
EOM	23.52	23.71	22.48	24.05	22.33	20.99	21.75	22.50	23.27	23.68	23.98	23.14

WATER YEAR 1992 HIGHEST 17.68 APR 22, 1992 LOWEST 24.22 NOV 08, 09, 1991



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 National Geodetic Vertical Datum of 1929.

Measuring point: Drilled hole in steel plate covering casing at land-surface datum.

REMARKS.--Water level affected by stage of West Fork River.

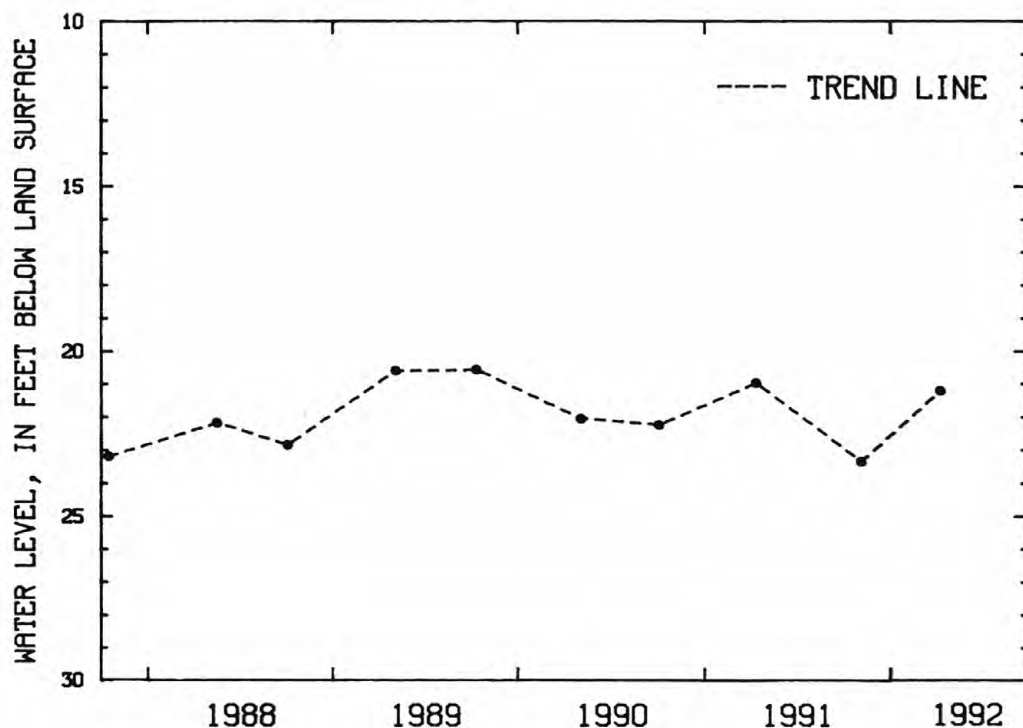
PERIOD OF RECORD.--May 1961 to May 1976, October 1977 to current year. No measurements May 1976 to October 1977.

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 1991 TO SEPTEMBER 1992

DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 04	23.35	APR 08	21.20



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 National Geodetic Vertical Datum of 1929. Measuring point: Top of steel plate at land-surface datum.

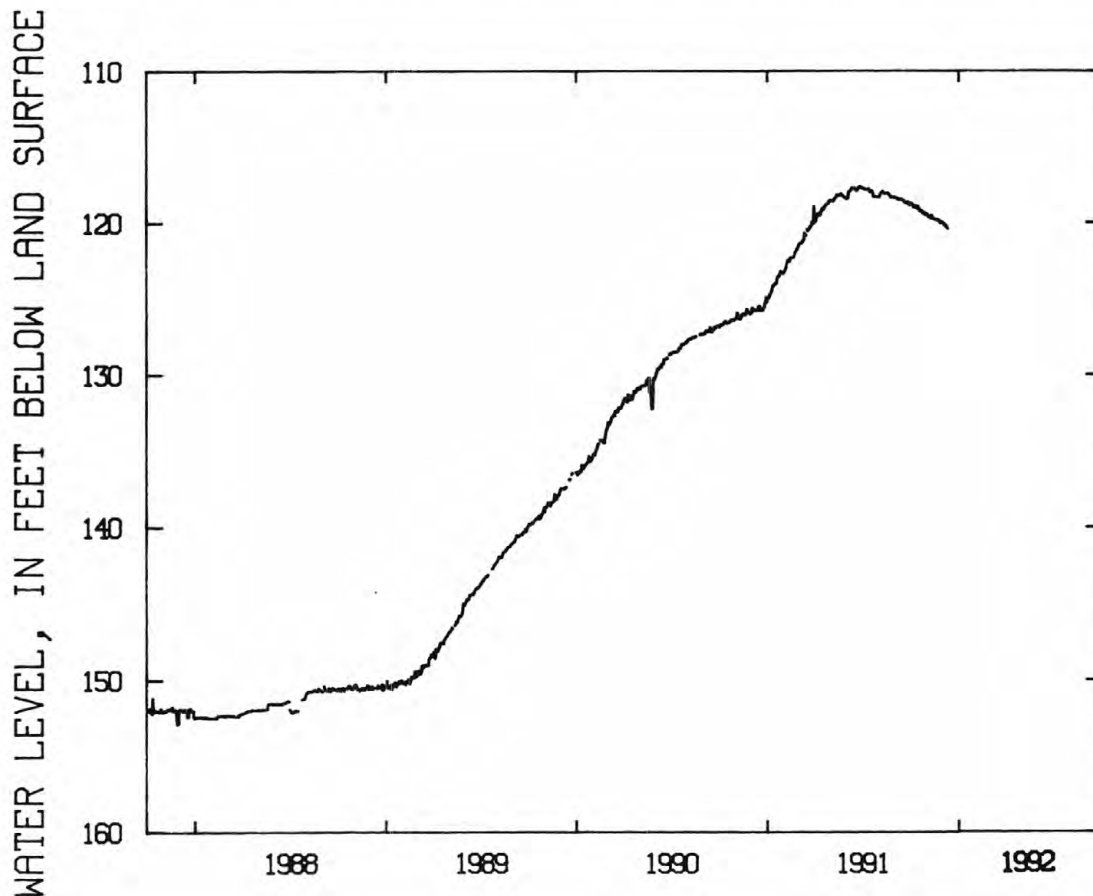
REMARKS.--Well formerly used by U.S. Bureau of Mines to back-fill abandoned mine with shale slurry. Water level possibly affected by mine pumpage. No water-level record Dec. 12 to Sept. 30 except for USGS periodic measurement Aug. 12.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 117.60 ft below land-surface datum, June 26, 1991; lowest measured, 219.47 ft below land-surface datum, May 12, 1978.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	118.86	119.57	120.21	---	---	---	---	---	---	---	---	---
10	118.94	119.51	120.39	---	---	---	---	---	---	---	---	---
15	118.98	119.81	---	---	---	---	---	---	---	---	---	---
20	119.24	119.84	---	---	---	---	---	---	---	---	---	---
25	119.39	119.97	---	---	---	---	---	---	---	---	---	---
EOY	119.39	119.98	---	---	---	---	---	---	---	---	---	---



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 National Geodetic Vertical Datum of 1929.

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).

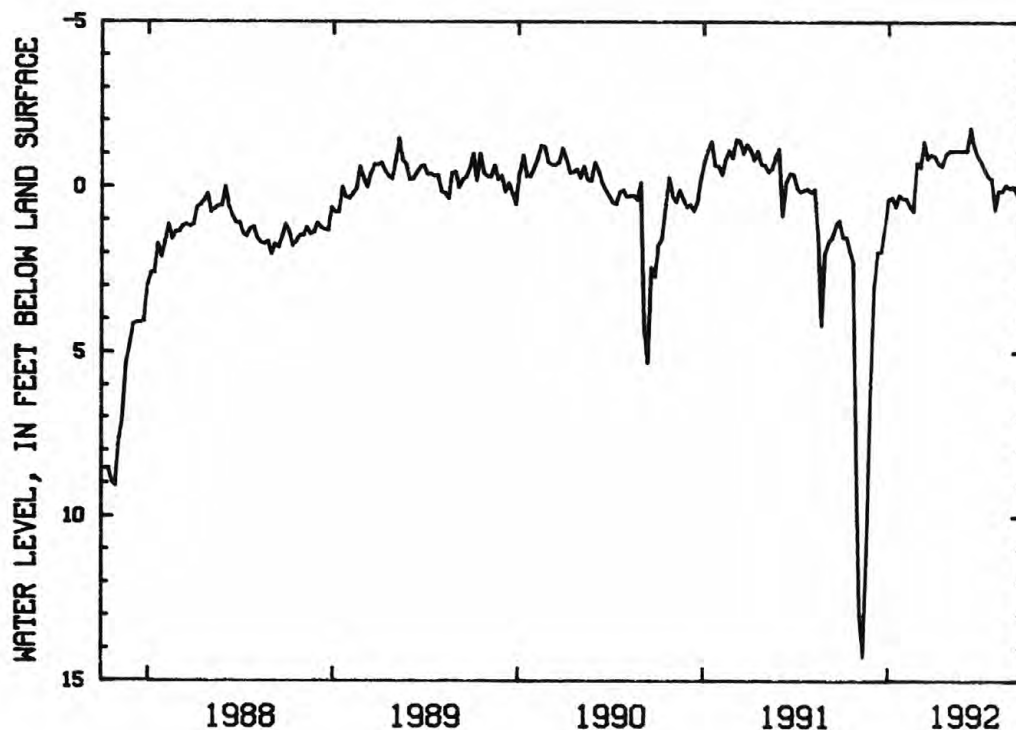
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.14 ft above land-surface datum, Apr. 15, 1987, (flowing at land-surface datum, many days 1968 to 1985); lowest measured, 90.58 ft below land-surface datum, Dec. 10, 1969.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 02	1.53	DEC 04	3.07	FEB 05	.36	APR 08	++.71	JUL 08	++.52	SEP 09	.16
09	1.53	11	1.98	12	.59	15	++.63	15	++.31	16	.45
16	1.92	18	1.94	19	.74	22	++.98	22	++.24	23	.48
23	2.29	30	.64	26	++.75	29	++.10	29	.68	30	.79
30	8.29	JAN 01	.36	MAR 04	++.60	JUN 03	++.11	AUG 05	.10		
NOV 06	13.02	08	.30	11	++.40	10	++.80	12	.12		
13	14.27	15	.60	18	++.86	17	++.25	19	++.09		
20	11.10	22	.23	25	++.00	24	++.94	26	.04		
27	6.30	29	.34	APR 01	++.93	JUL 01	++.76	SEP 02	++.03		

WATER YEAR 1992 HIGHEST ++1.80 JUN 10, 1992 LOWEST 14.27 NOV 13, 1991

* 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 National Geodetic Vertical Datum of 1929.
Measuring point: Top of casing extension, 0.70 ft above land-surface datum.

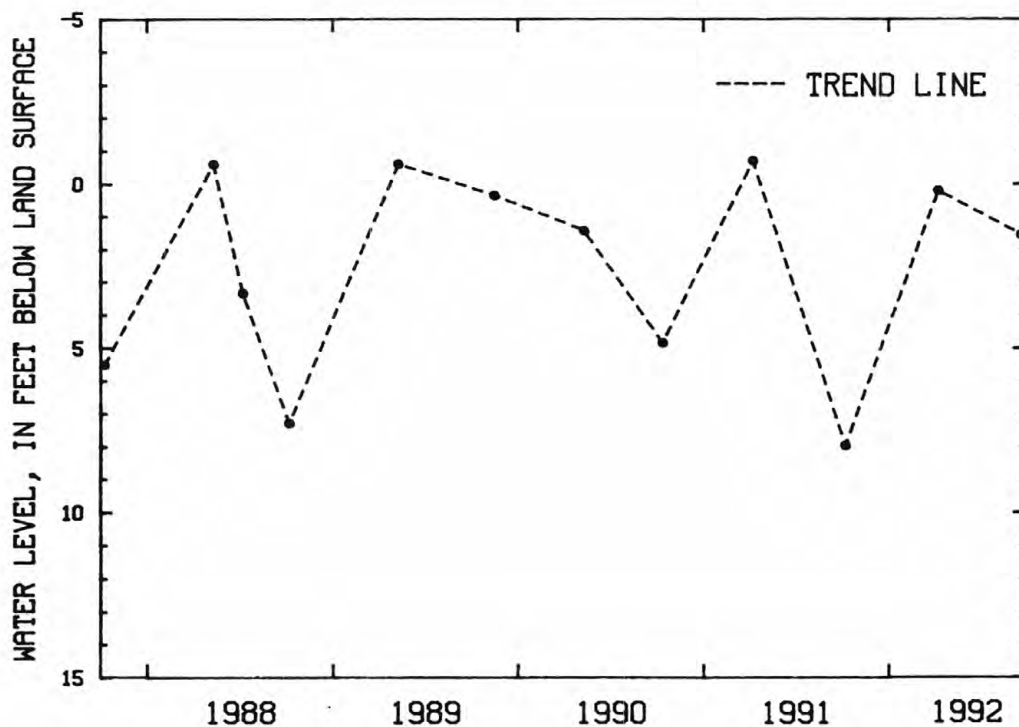
REMARKS.--Well flows at times. Water level affected by pumpage at times from a nearby dug well of 6 ft depth.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.20 ft above land-surface datum, Apr. 7, 1992;
lowest measured, 10.81 ft below land-surface datum, Oct. 29, 1968.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 07	7.98	APR 07	.20	SEP 16	1.57



GROUND-WATER LEVELS

273

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 National Geodetic Vertical Datum of 1929. 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. 6 to Jan. 14 and June 1 to Sept. 16, due to recorder malfunction. At times, water level affected by Guyandotte River.

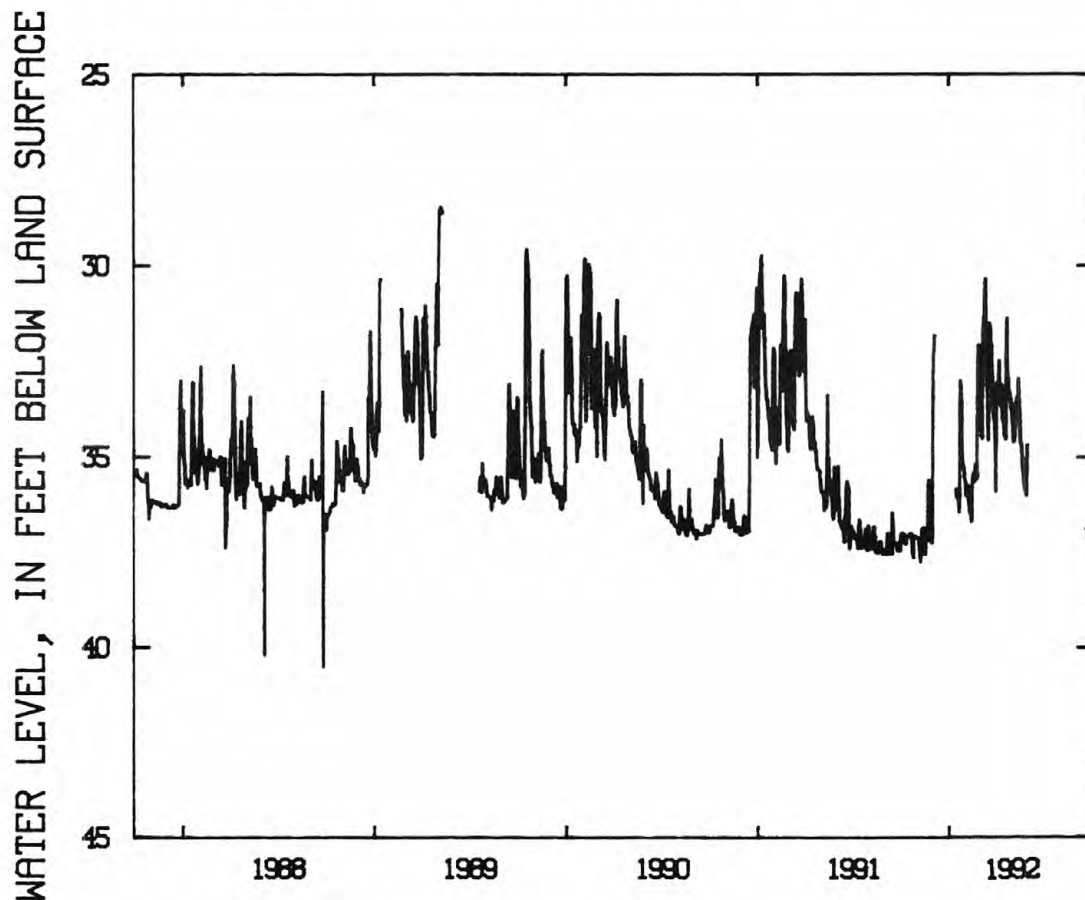
PERIOD OF RECORD.--March 1980 to current year.

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 1991 TO SEPTEMBER 1992
NOON VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	37.00	37.21	31.82	---	36.03	34.39	33.42	34.62	---	---	---	---
10	37.30	37.12	---	---	36.30	31.38	33.54	33.56	---	---	---	---
15	37.07	37.50	---	35.88	36.65	32.23	34.08	33.42	---	---	---	---
20	37.01	36.97	---	36.13	35.66	31.49	34.56	34.70	---	---	---	37.16
25	37.66	35.90	---	33.13	35.53	32.66	32.99	35.71	---	---	---	37.23
EQM	37.11	37.27	---	35.30	32.60	34.46	33.49	34.69	---	---	---	36.83

WATER YEAR 1992 HIGHEST 30.33 MAR 12, 1992 LOWEST 37.78 NOV 08, 1991



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 National Geodetic Vertical Datum of 1929.

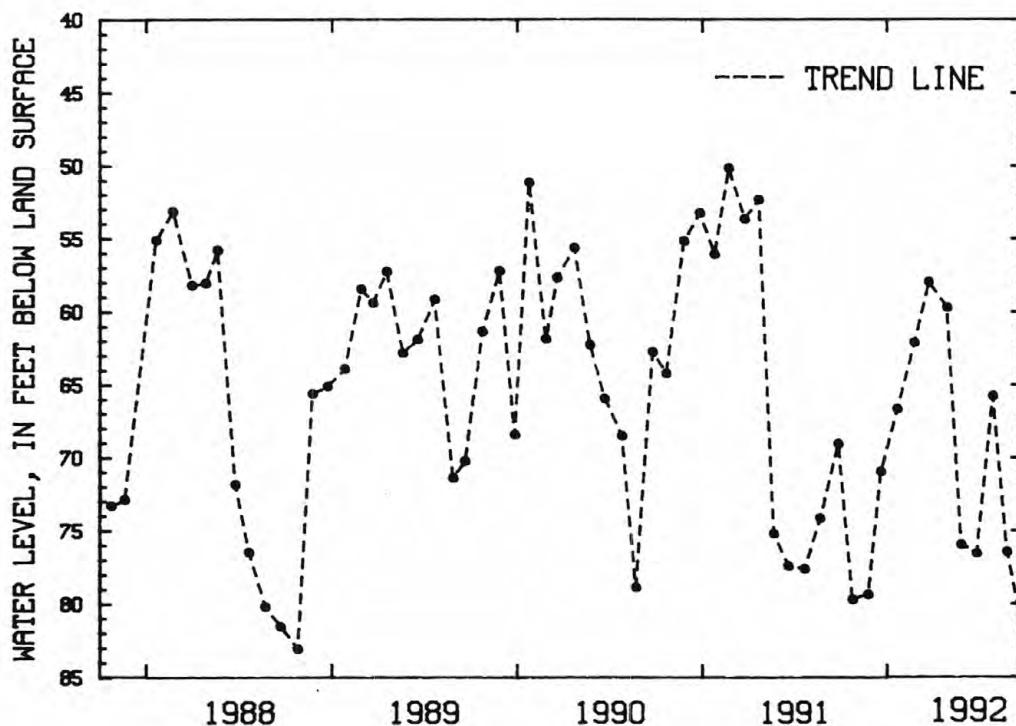
Measuring point: Top of casing, 0.35 ft above land-surface datum.

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, 83.08 ft below land-surface datum, Oct. 25, 1988.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25	79.70	DEC 20	70.95	FEB 24	62.10	APR 28	59.70	JUN 25	76.55	AUG 24	76.45
NOV 25	79.35	JAN 21	66.65	MAR 23	57.95	MAY 26	75.95	JUL 27	65.75	SEP 24	81.80
WATER YEAR 1992		HIGHEST	57.95	MAR 23, 1992	LOWEST	81.80	SEP 24, 1992				



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 National Geodetic Vertical Datum of 1929.
Measuring point: Top of casing, 1.20 ft above land-surface datum.

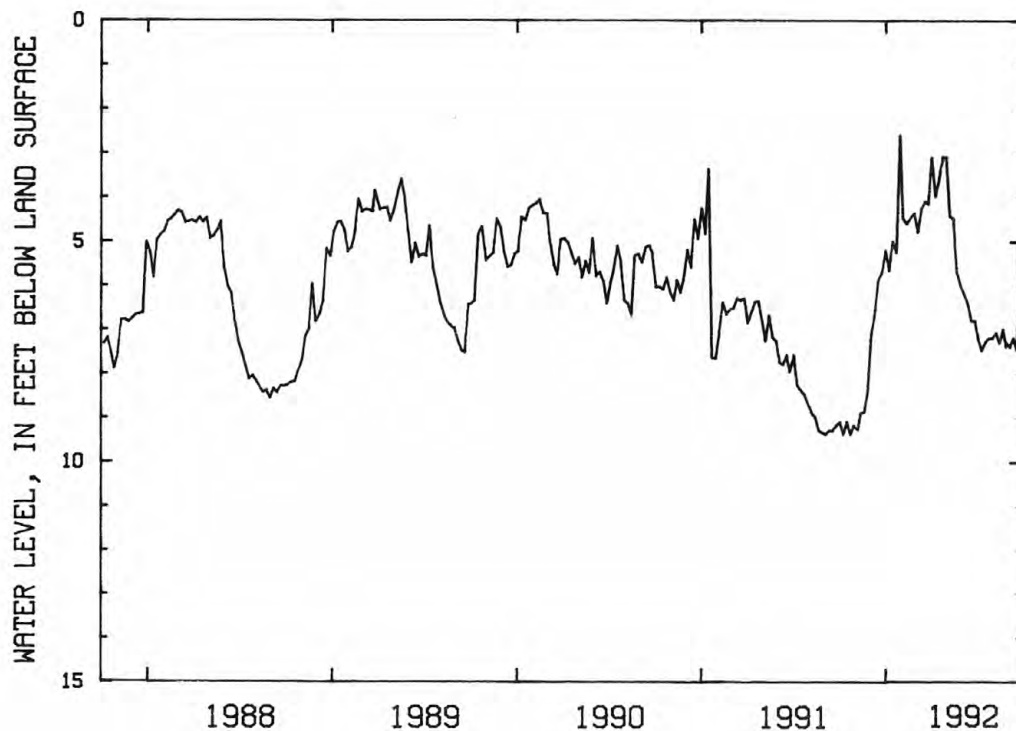
PERIOD OF RECORD.--July 1971 to current year.

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 1991 TO SEPTEMBER 1992

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 01	9.09	DEC 03	7.10	FEB 03	4.49	APR 07	3.99	JUN 09	6.40	AUG 11	7.30
08	9.38	10	6.59	11	4.60	14	3.56	16	6.80	18	6.98
15	9.08	17	5.87	18	4.46	21	3.08	23	6.80	24	7.39
22	9.38	24	5.70	25	4.36	28	3.09	30	7.19	25	7.28
29	9.17	31	5.20	MAR 03	4.80	MAY 05	4.45	JUL 07	7.48	SEP 01	7.39
NOV 06	9.27	JAN 07	5.67	10	4.26	12	4.48	14	7.28	08	7.18
12	8.89	14	4.99	17	4.09	19	5.69	21	7.19	15	7.47
19	8.87	21	5.26	24	4.16	26	6.00	28	7.19	22	4.89
26	8.38	28	2.58	31	3.09	JUN 02	6.19	AUG 04	7.06	29	7.69

WATER YEAR 1992 HIGHEST 2.58 JAN 28, 1992 LOWEST 9.38 OCT 08, 1991 OCT 22, 1991



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 National Geodetic Vertical Datum of 1929. 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.

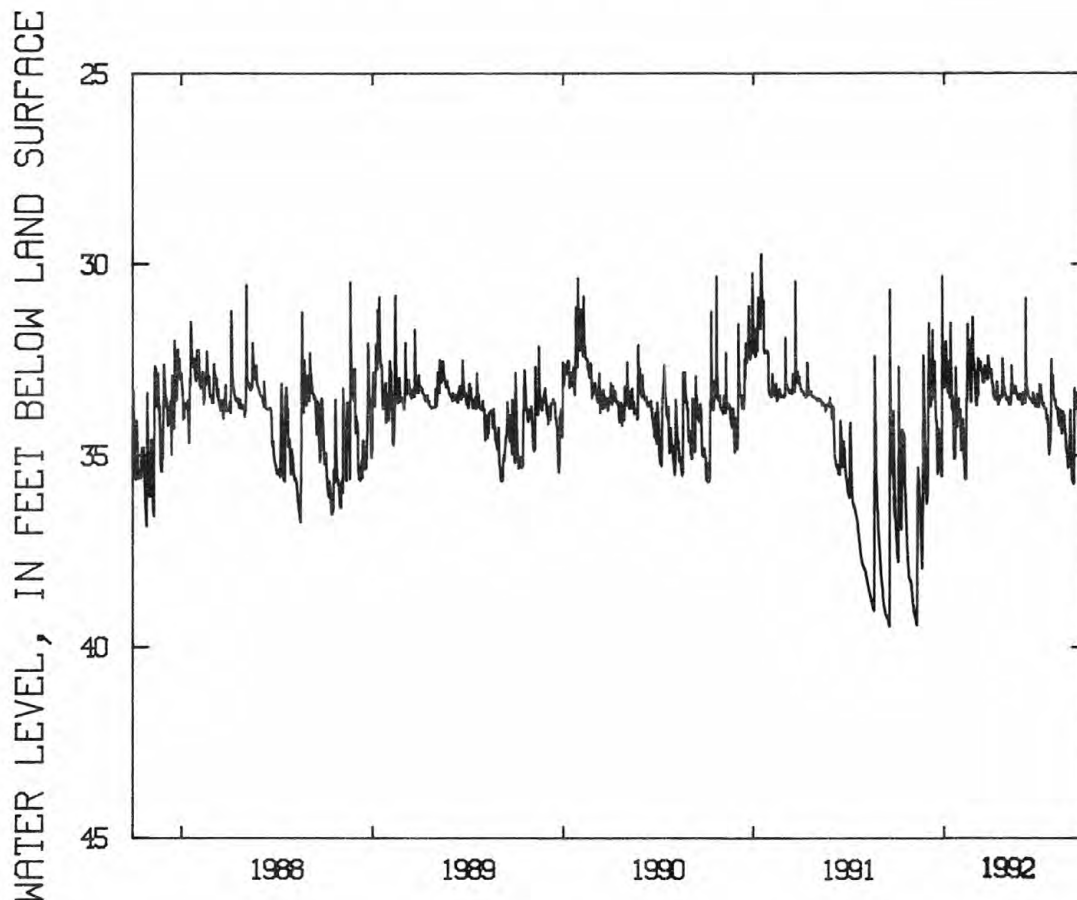
PERIOD OF RECORD.--July 1971 to July 1973, November 1974 to March 1975, July 1976 to current year.

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 1991 TO SEPTEMBER 1992
NOON VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	37.79	39.14	32.96	32.02	34.11	33.45	33.46	33.70	30.89	33.43	33.77	35.71
10	36.51	39.45	31.73	32.55	35.11	32.77	33.48	33.05	33.46	33.78	33.82	33.80
15	35.69	36.14	33.35	32.60	33.55	32.89	33.56	33.39	33.56	34.05	33.87	34.38
20	36.48	37.96	35.48	34.12	32.42	32.73	33.50	33.51	33.46	34.99	34.48	34.64
25	38.02	34.02	35.23	33.52	32.22	33.03	33.28	33.40	33.71	32.92	35.33	34.93
EOY	38.48	36.01	32.65	34.06	32.79	32.76	33.58	33.36	33.75	33.57	35.04	34.59

WATER YEAR 1992 HIGHEST 30.31 DEC 29, 1991 LOWEST 39.45 NOV 10, 1991



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 National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 2.00 ft above land-surface datum.

REMARKS.--No water-level record Dec. 2 to Feb. 28, due to recorder malfunction.

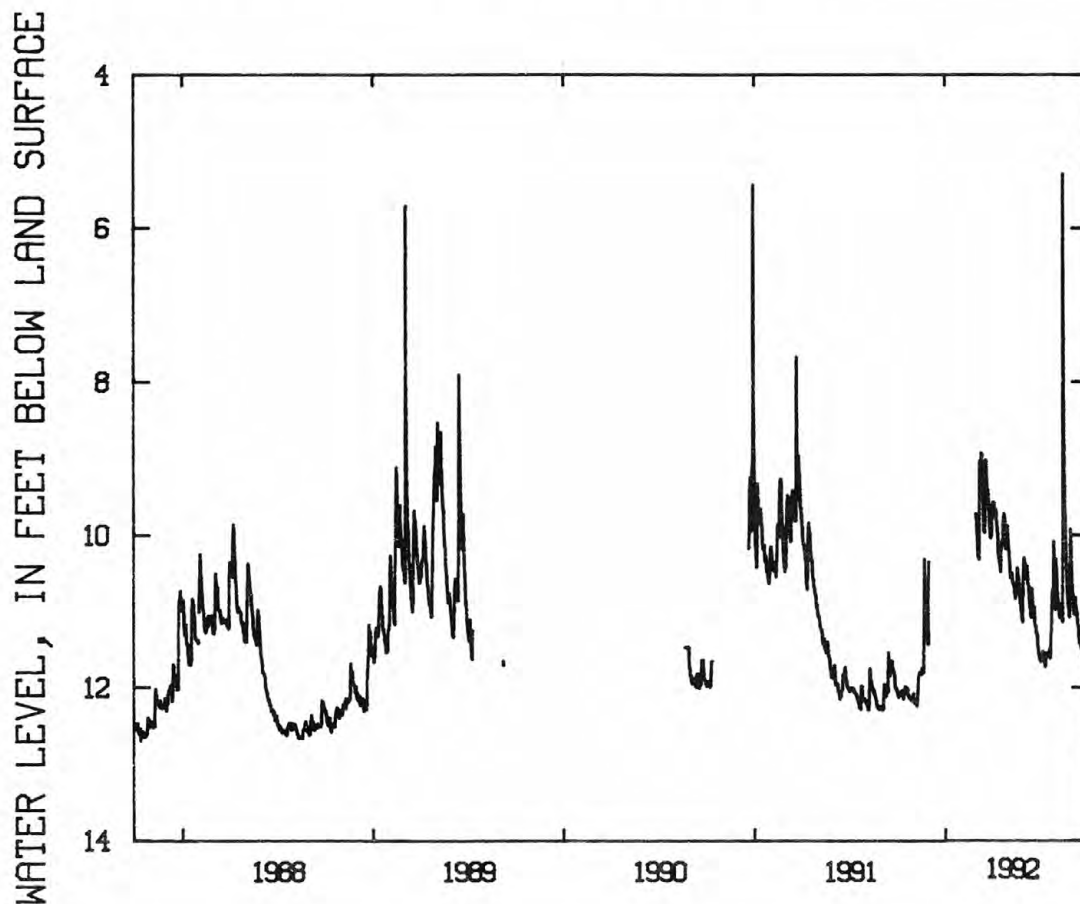
PERIOD OF RECORD.--July 1982 to current year.

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 1991 TO SEPTEMBER 1992
NOON VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	12.11	12.20	---	---	---	10.29	9.77	10.45	10.44	11.63	10.88	11.05
10	12.05	12.06	---	---	---	9.29	9.93	10.63	10.69	11.70	10.91	11.05
15	12.06	11.84	---	---	---	9.71	10.38	10.84	11.06	11.54	5.29	11.43
20	12.05	11.80	---	---	---	9.05	10.10	10.46	10.95	11.54	10.10	11.43
25	12.13	10.95	---	---	---	9.62	9.92	10.91	11.30	10.71	10.97	11.65
EOM	12.11	11.44	---	---	9.73	9.91	9.88	10.32	11.63	10.99	10.42	11.71

WATER YEAR 1992 HIGHEST 5.29 AUG 15, 1992 LOWEST 12.25 NOV 08, 1991



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 National Geodetic Vertical Datum of 1929.

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 Jan. 23 to Mar. 30, 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.

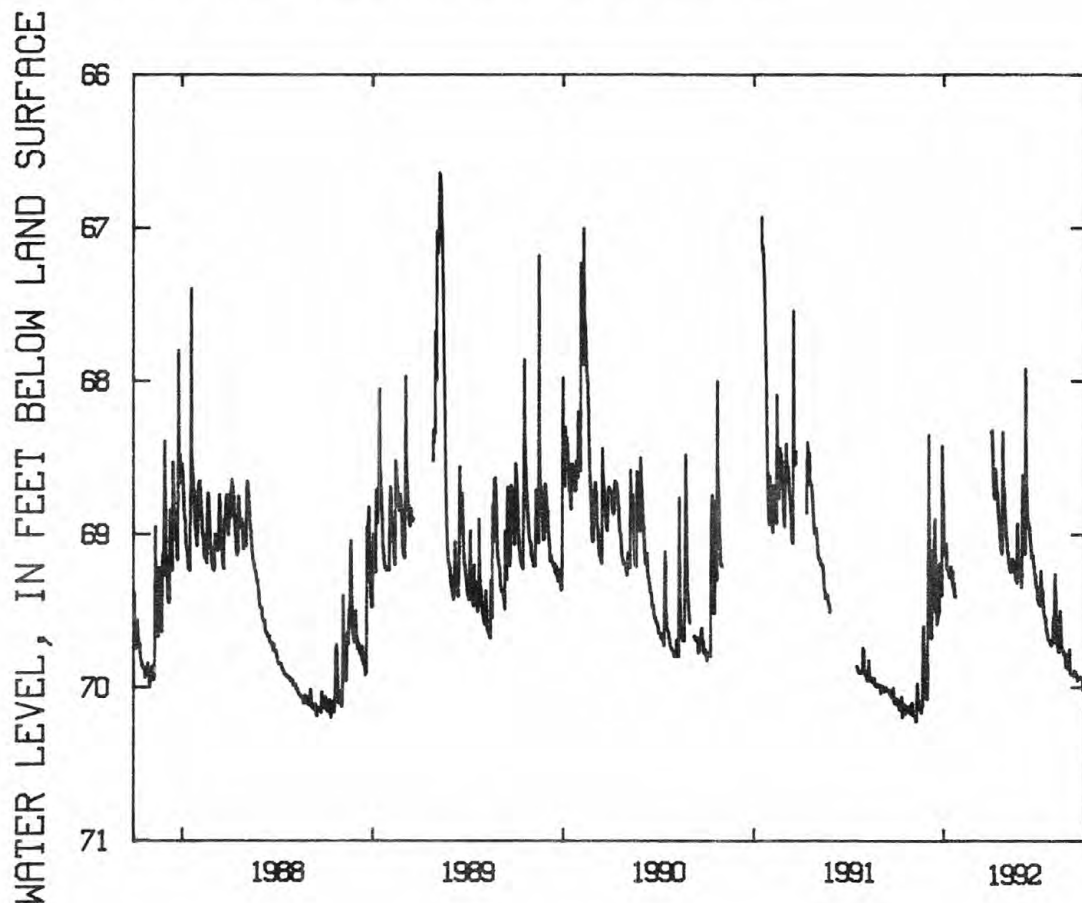
REVISED RECORDS.--WDR WV-79-1: Well location, well characteristics, and water levels. WDR WV-83-1: Station identification number and lowest water level.

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 1991 TO SEPTEMBER 1992
NOON VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	70.09	70.18	69.32	69.06	---	---	68.75	69.21	67.92	69.35	69.71	69.93
10	70.10	70.11	69.10	69.23	---	---	68.73	69.16	68.93	69.53	69.50	69.92
15	70.11	70.13	68.90	69.29	---	---	68.92	69.25	69.08	69.62	69.76	69.95
20	70.15	70.13	69.57	69.32	---	---	69.13	68.93	69.19	69.70	69.81	69.95
25	70.14	69.96	69.19	---	---	---	68.75	69.22	69.34	69.69	69.87	69.99
EOY	70.10	70.08	68.82	---	---	68.33	69.04	68.70	69.46	69.26	69.91	69.99

WATER YEAR 1992 HIGHEST 67.92 JUNE 05, 1992 LOWEST 70.23 NOV 08, 1991



GROUND-WATER LEVELS

279

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.

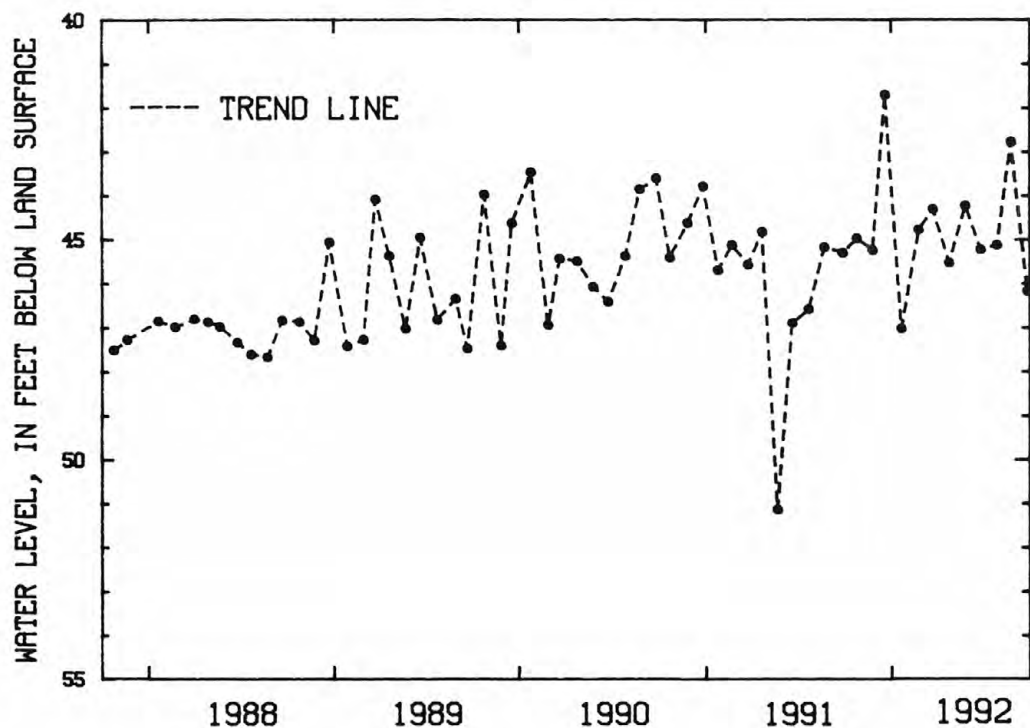
DATUM.--Elevation of land-surface datum is about 1,770 ft above National Geodetic Vertical Datum of 1929.
Measuring point: Top of extended casing, 3.53 ft above land-surface datum. Prior to July 1978 measuring point was 3.00 ft below land-surface datum.

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 1991 TO SEPTEMBER 1992

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25	44.97	DEC 20	41.70	FEB 24	44.77	APR 24	45.52	JUN 25	45.22	AUG 24	42.77
NOV 25	45.24	JAN 21	47.02	MAR 23	44.30	MAY 26	44.22	JUL 27	45.12	SEP 25	46.17
WATER YEAR 1992		HIGHEST	41.70	DEC 20, 1991	LOWEST	47.02	JAN 21, 1992				



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 National Geodetic Vertical Datum of 1929.
 Measuring point: Top of casing 3.00 ft above land-surface datum.

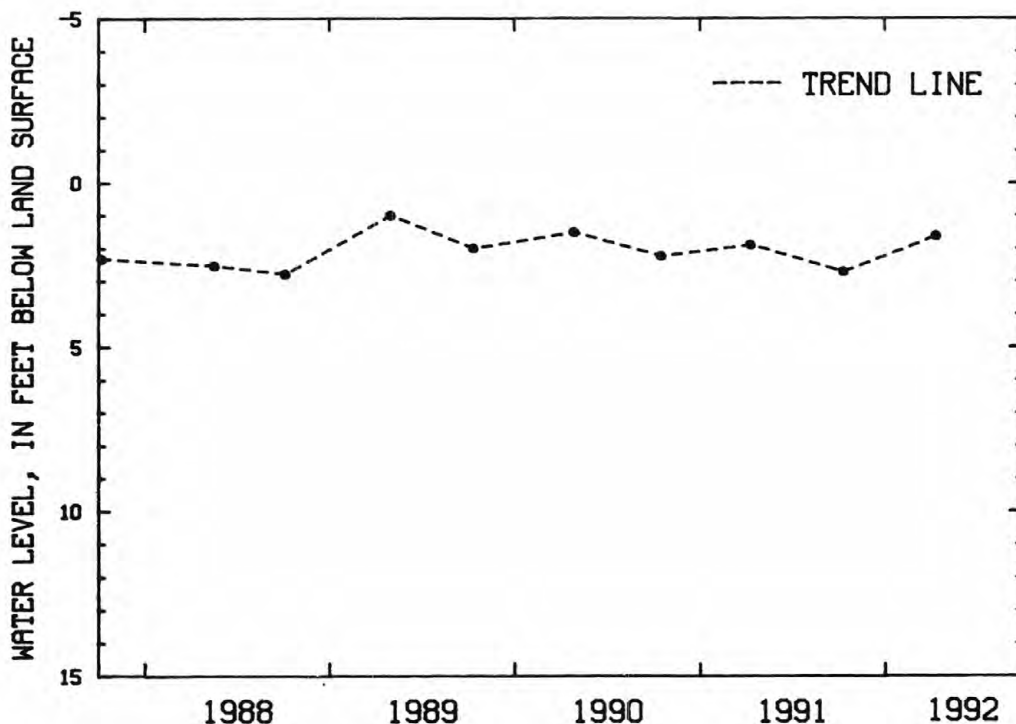
REMARKS.--U.S. Geological Survey Test Well No. 2. Geologic log and aquifer test data available. At times, water level affected by stage of Tygart Valley River.

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, 3.60 ft below land-surface datum, Oct. 16, 1985.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 10	2.73	APR 10	1.63



GROUND-WATER LEVELS

RANDOLPH COUNTY (Continued)

385341079575401. Local number, 18-3-110.

LOCATION.--Lat $38^{\circ}53'41''$, long $79^{\circ}57'54''$, 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 National Geodetic Vertical Datum of 1929. 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.

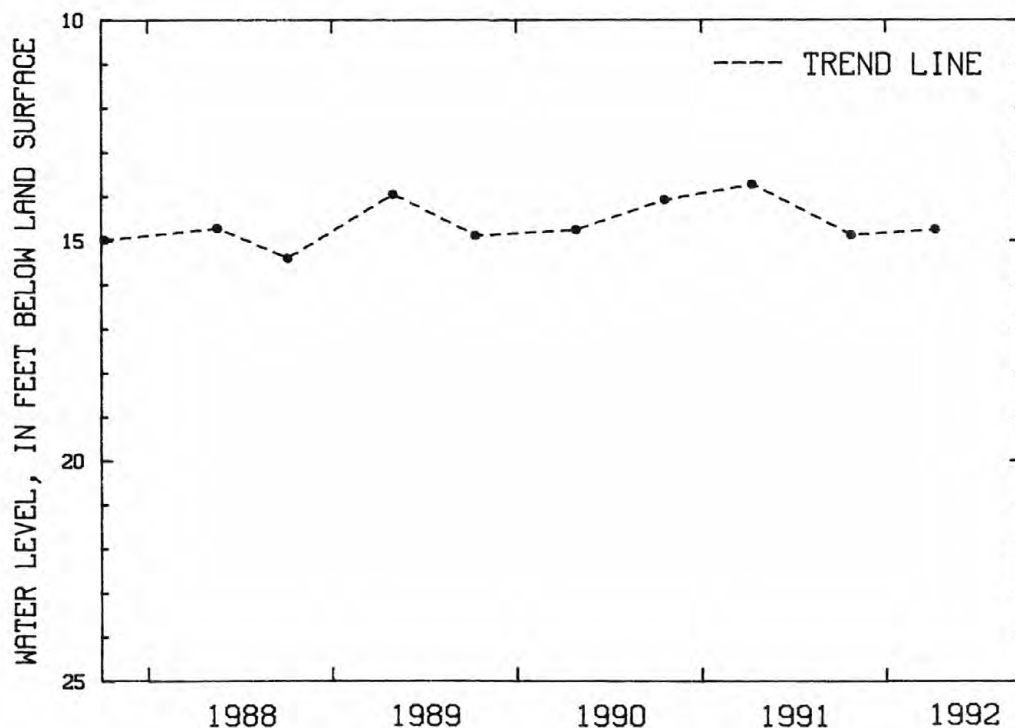
REMARKS.--Water level affected by nearby pumping.

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 1991 TO SEPTEMBER 1992

DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 23	14.88	APR 07	14.75



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 National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 1.20 ft above land-surface datum.

REMARKS.--Formerly public-supply well.

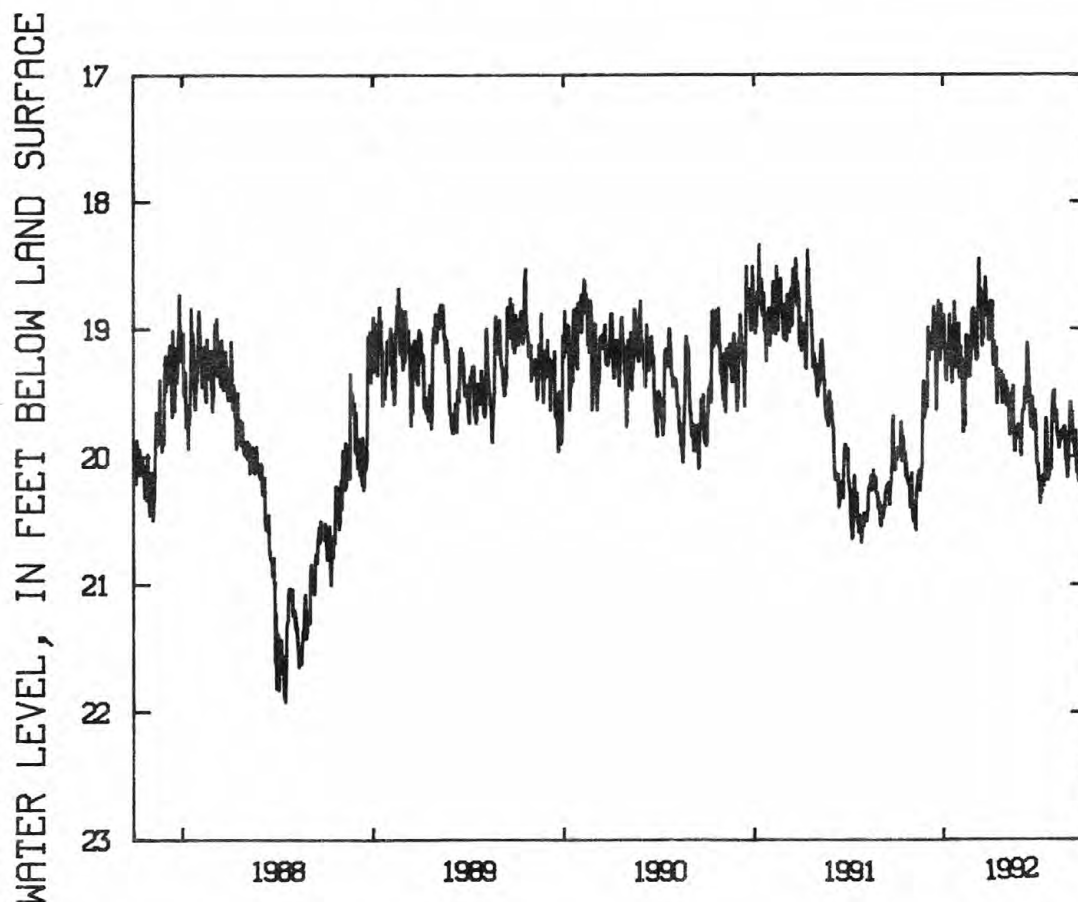
PERIOD OF RECORD.--August 1966 to October 1966, April 1968 to current year.

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 1991 TO SEPTEMBER 1992
NOON VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	19.93	20.51	19.25	19.18	19.38	19.25	19.22	19.57	19.46	20.29	19.79	19.90
10	19.88	20.31	19.17	19.13	19.77	18.45	19.24	19.64	19.11	20.19	19.90	19.80
15	19.85	20.11	19.05	19.26	19.05	18.92	19.35	19.79	19.60	19.70	19.85	20.18
20	20.16	20.09	19.48	19.15	19.36	18.80	19.42	19.81	19.63	20.11	19.85	20.23
25	20.22	19.57	19.09	19.10	19.07	18.86	19.41	19.85	19.72	20.10	20.17	19.90
EOY	20.19	19.50	19.15	18.96	19.13	18.91	19.42	19.70	20.08	19.48	19.58	19.88

WATER YEAR 1992 HIGHEST 18.45 MAR 10, 1992 LOWEST 20.58 NOV 09, 1991



GROUND-WATER LEVELS

283

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 National Geodetic Vertical Datum of 1929. 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.

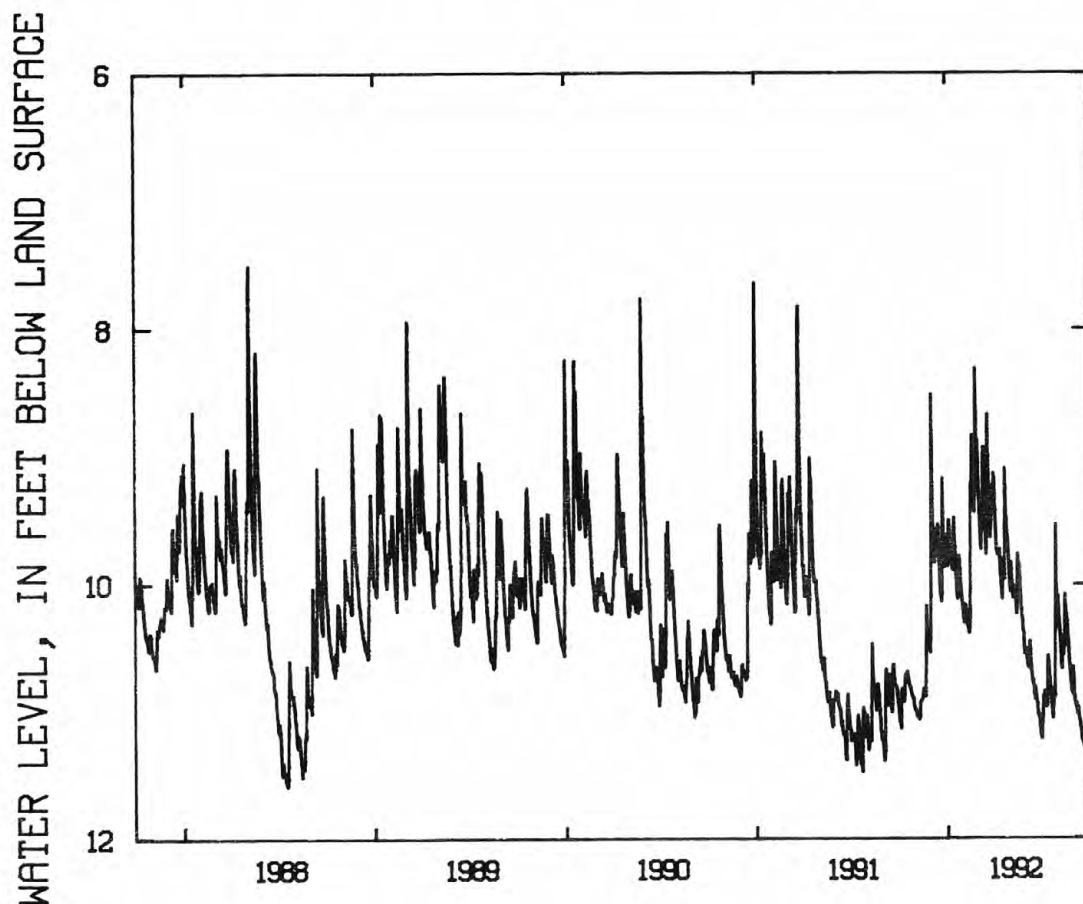
PERIOD OF RECORD.--June 1971 to December 1975, April 1978 to current year.

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 1991 TO SEPTEMBER 1992
NOON VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	11.14	11.05	9.44	9.50	10.16	9.55	9.68	9.98	10.58	10.97	10.41	10.99
10	10.93	11.04	9.57	9.72	10.33	9.40	9.77	10.02	10.60	10.92	10.45	11.07
15	10.75	10.90	9.53	9.48	10.26	9.54	10.02	10.14	10.76	10.71	10.19	11.23
20	10.80	10.87	10.08	9.99	8.93	8.67	9.95	9.91	10.87	10.97	10.45	11.15
25	10.87	10.41	9.44	9.78	9.08	9.64	9.59	10.30	11.05	10.81	10.76	11.18
EOM	10.98	10.54	9.72	10.16	8.87	9.13	9.92	10.51	11.22	10.35	10.83	11.22

WATER YEAR 1992 HIGHEST 8.31 FEB 26, 1992 LOWEST 11.28 SEP 18, 1992



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 National Geodetic Vertical Datum of 1929. Measuring point: Top of well casing, 3.90 ft above land-surface datum.

REMARKS.--Aquifer test data available. No water-level record Mar. 22-25, due to recorder malfunction.

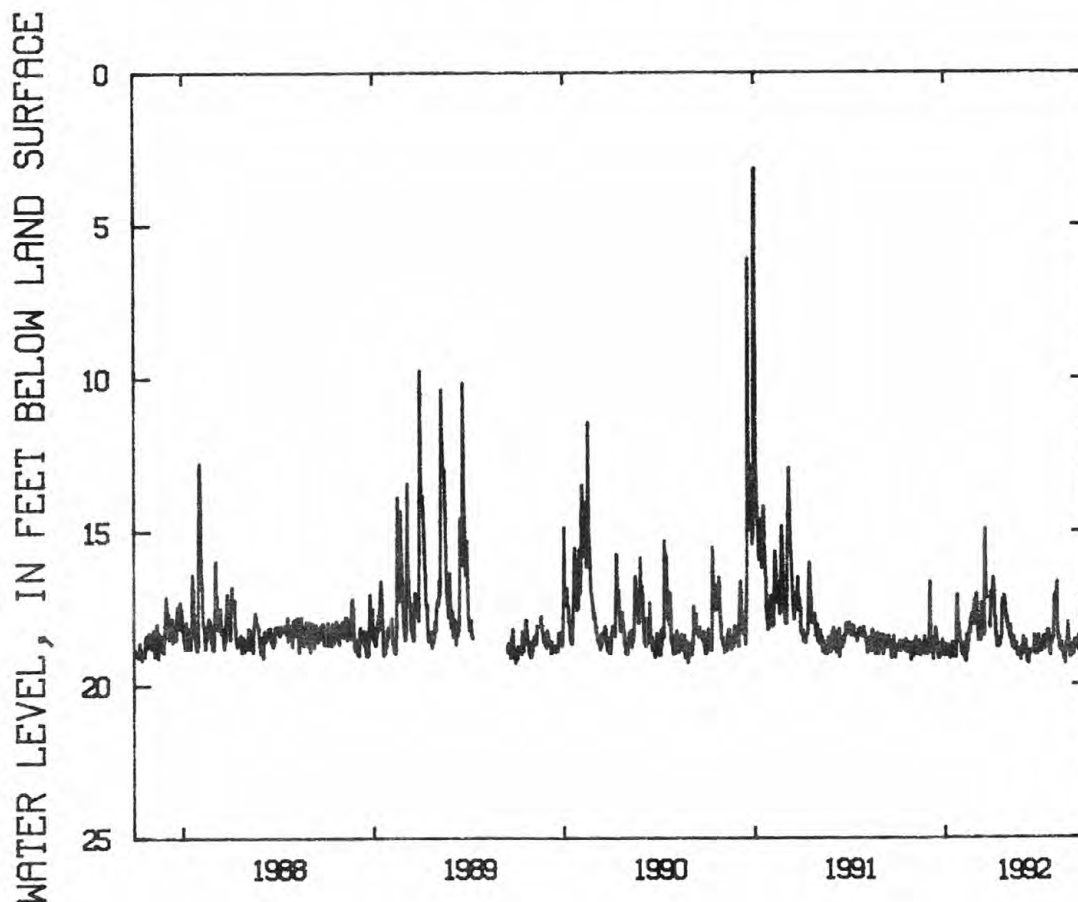
PERIOD OF RECORD.--November 1983 to current year.

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 1991 TO SEPTEMBER 1992
 NOON VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	18.59	18.85	18.22	19.05	19.01	18.59	17.83	18.06	18.95	18.91	18.56	18.54
10	18.85	18.72	19.20	19.01	19.26	18.09	18.47	18.80	18.90	18.67	18.64	18.75
15	18.87	19.07	18.29	18.68	18.60	18.06	18.73	18.83	18.88	18.21	19.19	18.87
20	18.69	18.73	19.15	19.08	17.84	17.18	17.21	18.98	18.38	19.07	18.88	18.31
25	18.76	18.82	18.86	17.08	17.75	---	17.44	19.22	18.53	18.54	18.90	18.51
EOM	18.86	18.98	18.67	18.64	17.42	17.03	18.20	18.81	18.81	17.95	18.67	18.87

WATER YEAR 1992 HIGHEST 14.91 MAR 18, 1992 LOWEST 19.34 AUG 18, 1992



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 National Geodetic Vertical Datum of 1929. 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.

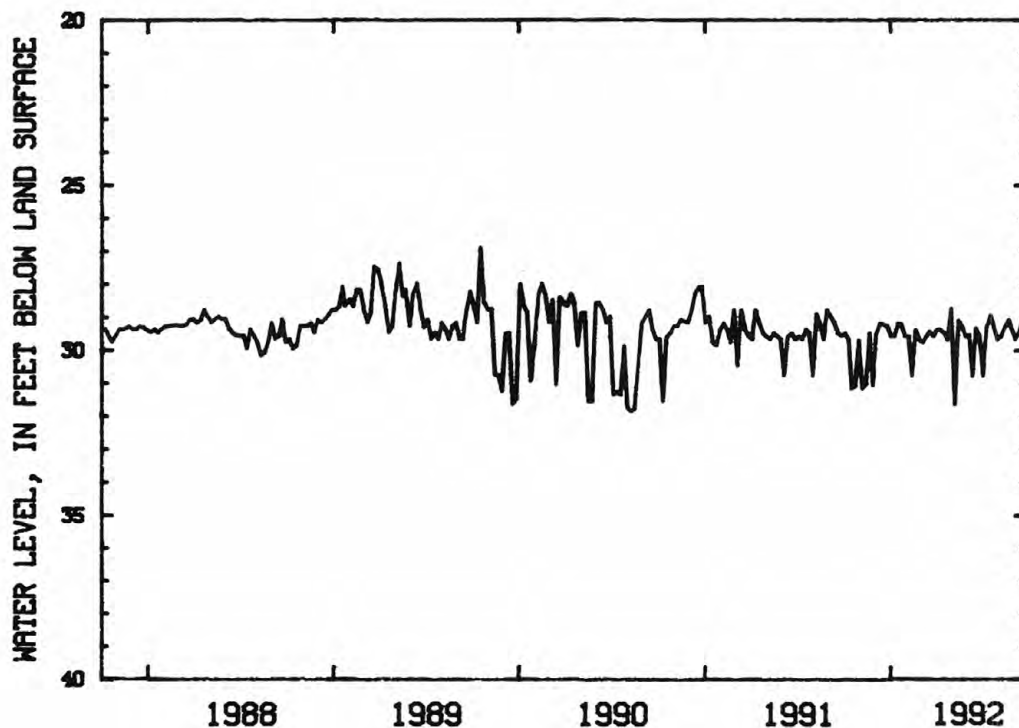
PERIOD OF RECORD.--May 1971 to current year.

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 1991 TO SEPTEMBER 1992

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 02	29.47	DEC 04	29.47	FEB 05	29.57	APR 08	29.37	JUN 10	30.77	AUG 20	29.07
09	29.67	11	29.17	12	30.77	15	29.47	17	29.32	SEP 02	29.67
16	31.17	18	29.22	19	29.37	22	29.67	24	29.57	09	29.47
23	31.07	25	29.27	26	29.67	29	28.72	JUL 01	30.77	16	29.07
30	29.67	JAN 01	29.57	MAR 04	29.77	MAY 06	31.67	08	29.27	23	29.57
NOV 06	31.17	08	29.57	11	29.57	13	29.07	15	28.92	30	29.67
13	31.02	15	29.17	18	29.42	20	29.27	29	29.67		
20	29.47	22	29.22	25	29.57	27	29.57	AUG 05	29.57		
27	31.07	29	29.57	APR 01	29.37	JUN 03	29.52	13	29.27		

WATER YEAR 1992 HIGHEST 28.72 APR 29, 1992 LOWEST 31.67 MAY 06, 1992



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 National Geodetic Vertical Datum of 1929.
Measuring point: Top of extended casing, 2.00 ft above land-surface datum.

PERIOD OF RECORD.--March 1980 to current year.

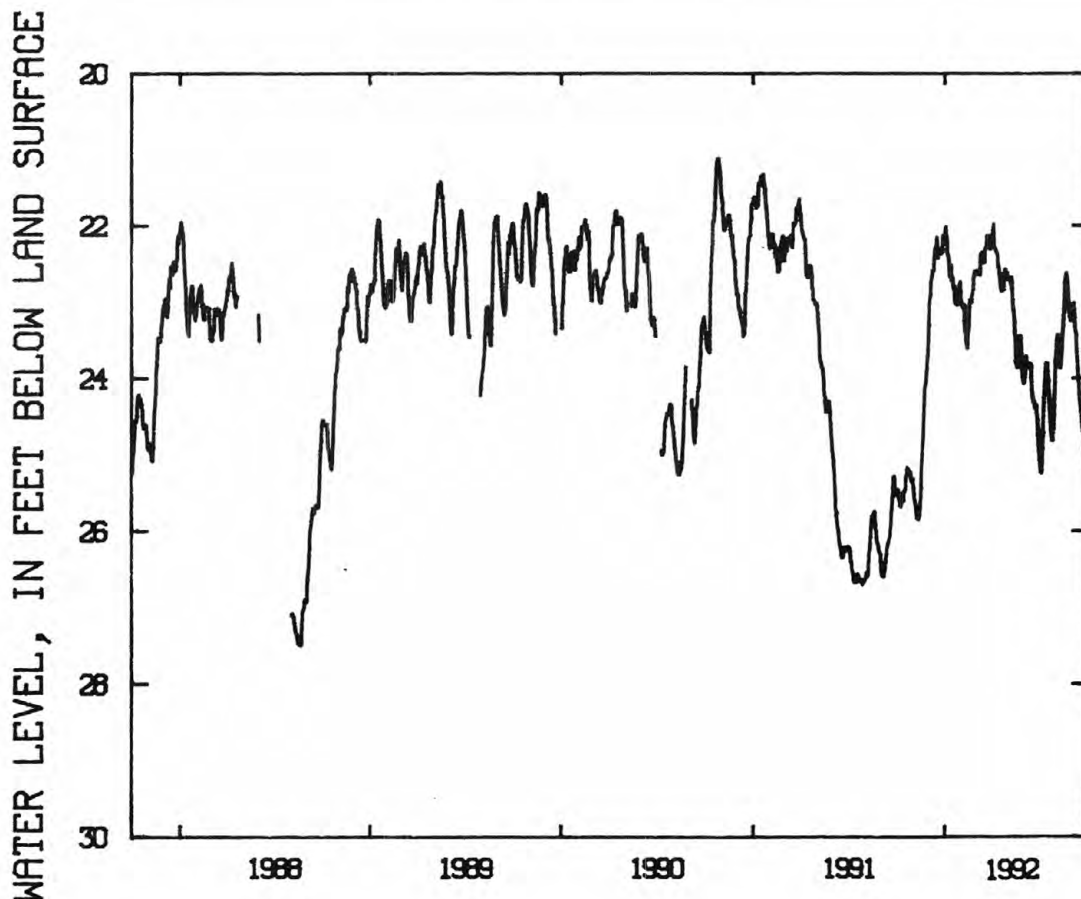
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 21.05 ft below land-surface datum, Jan. 7, 1985; lowest, 27.51 ft below land-surface datum, Aug. 22, 1988.

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 1991 TO SEPTEMBER 1992
NOON VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	25.53	25.62	22.91	22.12	23.09	22.62	22.22	22.68	23.71	25.13	23.51	23.20
10	25.64	25.76	22.60	22.46	23.41	22.39	22.37	22.99	23.81	24.12	23.81	23.73
15	25.49	25.71	22.31	22.74	23.44	22.35	22.64	23.49	24.00	23.82	23.24	24.29
20	25.23	24.91	22.44	22.80	23.02	22.31	22.86	23.85	24.33	24.41	22.62	24.66
25	25.24	24.09	22.38	23.05	22.84	22.28	22.59	23.46	24.40	24.82	23.06	24.95
EOM	25.32	23.69	22.25	22.74	22.61	22.26	22.62	24.08	25.03	23.76	23.11	25.14

WATER YEAR 1992 HIGHEST 21.98 APR 4, 1992 LOWEST 25.86 NOV 12, 1991



GROUND-WATER LEVELS

287

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 National Geodetic Vertical Datum of 1929.

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.

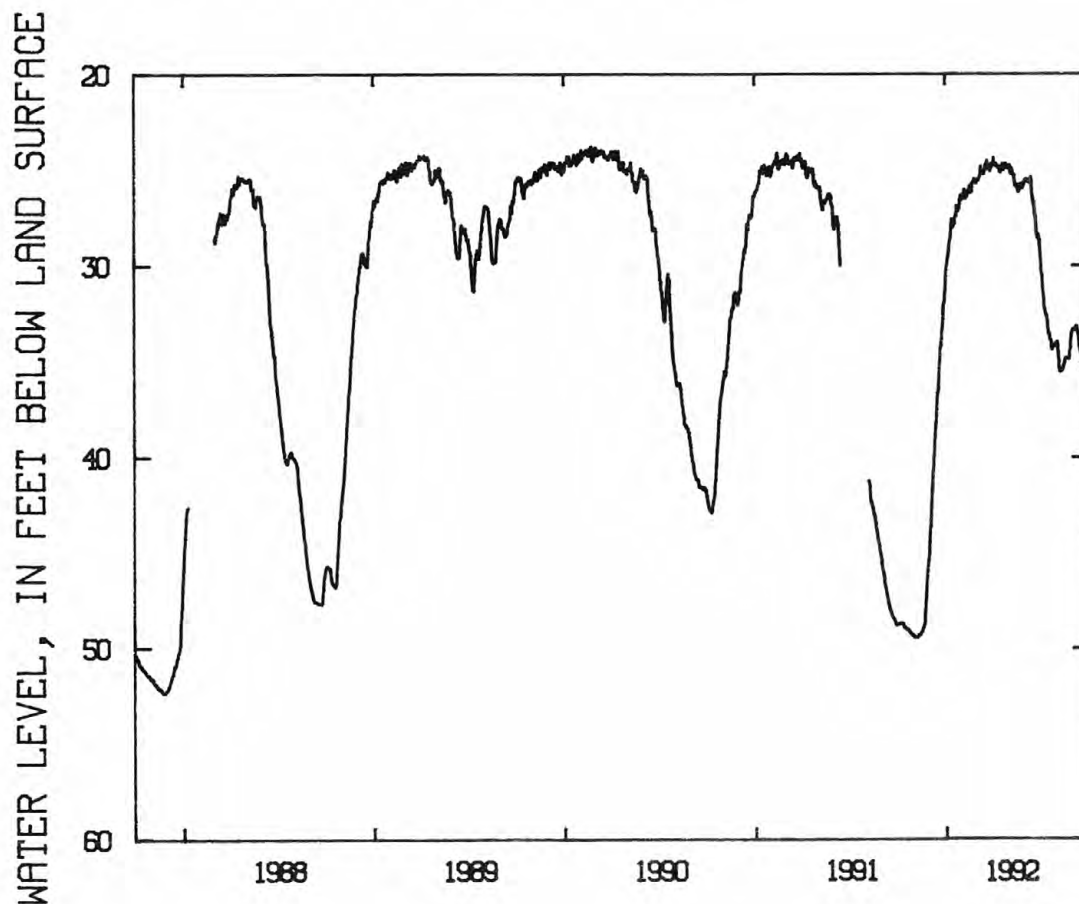
PERIOD OF RECORD.--December 1976 to current year.

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 1991 TO SEPTEMBER 1992
NOON VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	48.66	49.41	43.01	29.86	26.30	25.57	24.80	24.92	25.46	30.49	34.26	33.44
10	48.70	49.30	40.40	28.67	26.51	24.80	24.87	25.28	25.55	32.25	35.52	33.19
15	48.90	49.20	37.91	27.99	26.04	25.04	25.02	25.84	25.58	32.85	35.26	34.10
20	49.07	48.78	35.88	27.42	26.19	24.92	24.75	26.04	26.67	33.61	34.83	35.09
25	49.23	47.18	33.88	27.11	25.60	24.97	24.71	25.73	28.36	34.42	34.85	35.42
EOM	49.35	45.35	31.80	26.31	25.68	24.84	24.74	25.71	28.70	34.12	33.51	35.08

WATER YEAR 1992 HIGHEST 24.34 APR 4, 1992 LOWEST 49.48 NOV 2, 1991



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FACTORS FOR CONVERTING INCH-POUND UNITS TO INTERNATIONAL SYSTEM UNITS (SI)

The following factors may be used to convert the inch-pound units published herein to the International System of Units (SI).

Multiply inch-pound units	By	To obtain SI units
<i>Length</i>		
inches (in)	2.54×10^1 2.54×10^{-2}	millimeters (mm) meters (m)
feet (ft)	3.048×10^{-1}	meters (m)
miles (mi)	1.609×10^0	kilometers (km)
<i>Area</i>		
acres	4.047×10^3 4.047×10^{-1} 4.047×10^{-3}	square meters (m ²) square hectometers (hm ²) square kilometers (km ²)
square miles (mi ²)	2.590×10^0	square kilometers (km ²)
<i>Volume</i>		
gallons (gal)	3.785×10^0 3.785×10^0 3.785×10^{-3}	liters (L) cubic decimeters (dm ³) cubic meters (m ³)
million gallons	3.785×10^3 3.785×10^{-3}	cubic meters (m ³) cubic hectometers (hm ³)
cubic feet (ft ³)	2.832×10^1 2.832×10^{-2}	cubic decimeters (dm ³) cubic meters (m ³)
cfs-days	2.447×10^3 2.447×10^{-3}	cubic meters (m ³) cubic hectometers (hm ³)
acre-feet (acre-ft)	1.233×10^3 1.233×10^{-3} 1.233×10^{-6}	cubic meters (m ³) cubic hectometers (hm ³) cubic kilometers (km ³)
<i>Flow</i>		
cubic feet per second (ft ³ /s)	2.832×10^1 2.832×10^1 2.832×10^{-2}	liters per second (L/s) cubic decimeters per second (dm ³ /s) cubic meters per second (m ³ /s)
gallons per minute (gal/min)	6.309×10^{-2} 6.309×10^{-2} 6.309×10^{-5}	liters per second (L/s) cubic decimeters per second (dm ³ /s) cubic meters per second (m ³ /s)
million gallons per day	4.381×10^1 4.381×10^{-2}	cubic decimeters per second (dm ³ /s) cubic meters per second (m ³ /s)
<i>Mass</i>		
tons (short)	9.072×10^{-1}	megagrams (Mg) or metric tons

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