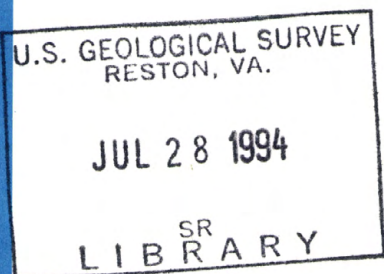


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1993



Water Resources Data West Virginia Water Year 1993



U.S. GEOLOGICAL SURVEY WATER-DATA REPORT WV-93-1
Prepared in cooperation with the State of West Virginia
and with other agencies

CALENDAR FOR WATER YEAR 1993

1992

OCTOBER

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1993

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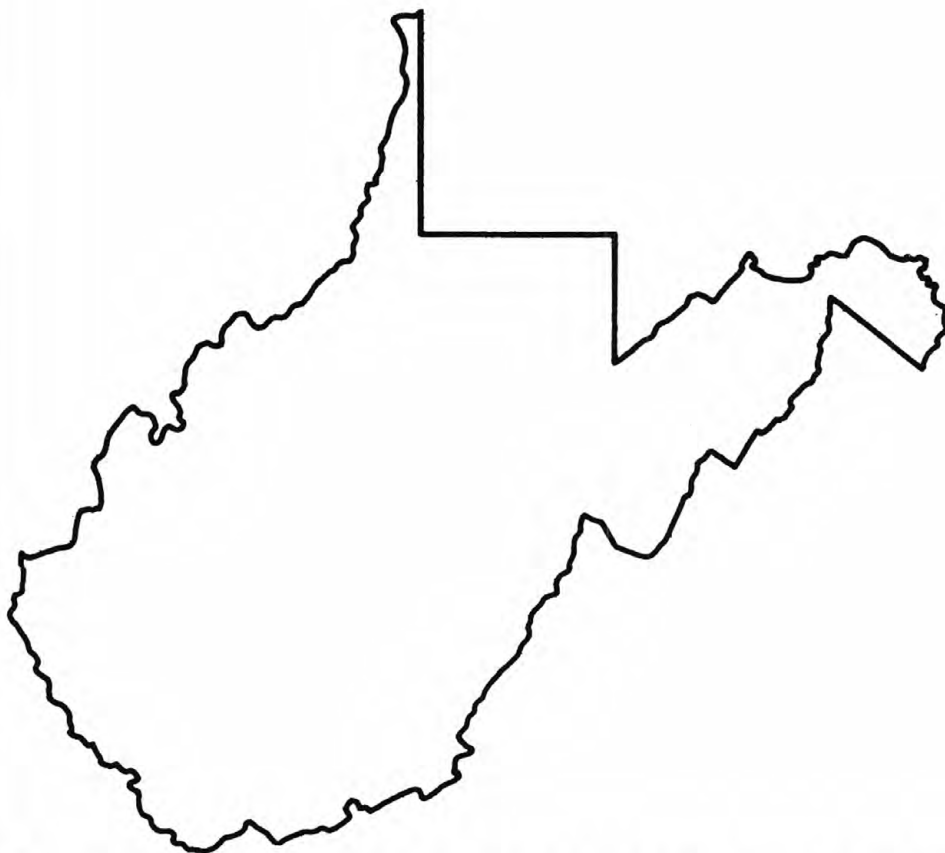
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Water Resources Data West Virginia Water Year 1993

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



U.S. GEOLOGICAL SURVEY WATER-DATA REPORT WV-93-1
Prepared in cooperation with the State of West Virginia
and with other agencies

U.S. DEPARTMENT OF THE INTERIOR

BRUCE BABBITT, Secretary

U.S. GEOLOGICAL SURVEY

Gordon P. Eaton, Director

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

1994

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:

M. K. Cunningham, Computer Operations

H. L. Armentrout	E. A. Hanna
J. T. Atkins, Jr.	M. D. Kozar
R. L. Bragg	L. K. Rogers
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C. W. Faulkenburg	J. B. Wiley

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

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15. Supplementary Notes Prepared in cooperation with the State of West Virginia and other agencies.			
16. Abstract (Limit: 200 words) Water-resources data for the 1993 water year for West Virginia consist of records of stage, discharge, and water quality of streams; contents of reservoirs; and water levels of observations wells. This report contains discharge records for 78 streamflow-gaging stations; stage only records for 11 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 sites. These data represent that part of the National Water Data System collected by the U.S. Geological Survey and cooperating State and Federal agencies in West Virginia.			
17. Document Analysis a. Descriptors *West Virginia, *Hydrologic data, *Surface water, *Ground water, *Water quality, Flow rate, Gaging stations, Chemical analyses, Sediments, Water temperatures, Sampling sites, Water levels, Water analyses. b. Identifiers/Open-Ended Terms c. COSATI Field/Group			
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SURFACE-WATER STATIONS, IN DOWNSTREAM ORDER, FOR WHICH RECORDS ARE PUBLISHED IN THIS VOLUME

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

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

	Station number	Page
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Tygart Valley River near Elkins (d).....	03050500	90
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Sand Run near Buckhannon (d).....	03052500	96
Buckhannon River at Hall (d).....	03053500	98
Tygart Valley River at Philippi (d).....	03054500	100
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* Records furnished by Maryland District, U.S. Geological Survey.

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

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

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

	Station number	Page
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Shavers Fork at Parsons (d)	03069000	126
Cheat River (continuation of Black Fork) near Parsons (d)	03069500	128
Cheat River at Rowlesburg (d)	03070000	130
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SURFACE-WATER STATIONS, IN DOWNSTREAM ORDER, FOR WHICH RECORDS ARE PUBLISHED IN THIS VOLUME

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

	Station number	Page
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<u>KANAWHA RIVER BASIN--Continued</u>		
Kanawha River at Kanawha Falls (d).....	03193000	200
Elk River below Webster Springs (d).....	03194700	202
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GROUND-WATER WELLS, BY COUNTY, FOR WHICH RECORDS ARE PUBLISHED IN THIS VOLUME

County	Well number	Local number	Location	Page
BERKELEY	392725077582401	20-5-7	Martinsburg	*278
BROOKE	401216080362703		Bethany	279
FAYETTE	380154080571301		Clifftop	280
GILMER	385604080495901	33-3-1	Glenville	281
GRANT	391652079181401		Mount Storm	*282
GREENBRIER	374804080174001	45-8-2	White Sulphur Springs	283
HAMPSHIRE	391257078404601	23-6-46	Augusta	*284
HARDY	385714078441301	25-4-5	Trout Pond Recreation Area	*285
JEFFERSON	391142077551701		Rippon	*286
	392104077554801		Leetown	*287
LEWIS	390553080280802	16-1-9	Jackson's Mill	288
MARION	393101080150501		Farmington	289
MERCER	372149081055001	48-5-1	Princeton	290
MINERAL	392114079081101	22-5-23	Sulphur City	*291
MINGO	373554081493401		Justice	292
MONONGALIA	392923079571801	9-7-33	Halleck	293
	394006080194801	9-1-47	Wadestown	294
MORGAN	393043078174001	19-5-14	Berkeley Springs	*295
NICHOLAS	381513081094201		Belva	296
POCAHONTAS	380653080155301		Droop Mountain State Park	297
PRESTON	393306079474501	11-3-8	Masontown	298
RANDOLPH	385100079522901		Beverly	299
	385341079575401	18-3-110	Coalton	300
RITCHIE	391226081024901	28-3-3	Harrisville	301
TUCKER	390135079275601	15-6-17	Canaan Valley State Park	302
TYLER	393211081021201		Sistersville	303
WAYNE	375827082211501	50-6-5	Cabwaylingo State Forest	304
WEBSTER	382008080292801		Dyer	305
WYOMING	373839081255201	54-2-12	Twin Falls State Park	306

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

County	Well Number	Location	Page
BERKELEY	393319077560801	NAWQA GCV18-1	*307
	391950078032900	Lefevre Spring	323
BROOKE	402003080360501	City of Follansbee	325
FAYETTE	380318081062701	City of Fayetteville	320
GREENBRIER	374810080173001	White Sulphur Springs Hatchery	320
	374525080324501	Davis Spring	319
HANCOCK	403038080332401	Oakland Public Service District	325
HARDY	385332078553601	Lost River State Park	322
HARRISON	391019080243301	Waters Smith State Park	323
JEFFERSON	392929077530201	NAWQA GVC19-4	*309
	392033077530301	NAWQA GVC 20-3	*312
	391317077555801	NAWQA GVC 21-4	*314
	391200077520401	NAWQA GVC29	*317
	392010077455201	Harpers Ferry Spring	324
KANAWHA	381432081391501	Kanawha State Forest	321
LOGAN	375416082005301	Chief Logan State Park	320
MASON	385422082072201	City of Point Pleasant Well #4	322
MCDOWELL	372552081364301	City of Welch #7	319
MONONGALIA	394047079463801	Chestnut Ridge Park	324
MORGAN	393738078134601	Berkeley Springs State Park	324
POCAHONTAS	381625080063001	McLaughlin Spring	321
PUTNAM	383038081505201	Cannery Lane Well	321
RANDOLPH	03068690	North Spring at Bowden	319
ROANE	383409081080801	Wallback Public Hunting Area	321
SUMMERS	373213081003301	Pipestem State Park	319
TUCKER	390324079232501	Sand Spring	323
WAYNE	375811082212401	Cabwaylingo State Park	320
WEBSTER	383912080224801	Holly River State Park	322
WETZEL	394050080514201	City of New Martinsville Well #1	324
WIRT	390202081234201	Palestine Hatchery	322
WOOD	391718081333101	City of Parkersburg Well #3	323

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

DISCONTINUED SURFACE-WATER DISCHARGE STATIONS, LISTED IN DOWNSTREAM ORDER

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

	Station number	Drainage area (mi ²)	Period of record
<u>NORTH ATLANTIC SLOPE BASINS</u>			
<u>POTOMAC RIVER BASIN</u>			
Abram Creek at Oakmont.....	01595300	42.6	1956-82
New Creek near Keyser.....	01599500	45.7	1930-31 1948-63
South Branch Potomac River:			
Friends Run near Franklin	01605600	4.55	1969-77
North Fork South Branch Potomac River at Cabins.....	01606000	314	1940-61 1979-80
South Mill Creek:			
Spring Run:			
Big Spring at Masonville.....	01607000	---	1946-59 1968-69
Fort Run near Moorefield	01608050	4.92	1969-77
Buffalo Creek near Romney	01608400	4.37	1969-77
Potomac River:			
Little Cacapon River near Levels	01609800	108	1967-77
Lost River at McCauley near Baker	01610200	155	1972-80
Cacapon River above Wardensville	01610300	181	1972-73
Cacapon River at Yellow Spring.....	01610500	306	1940-52
Back Creek near Jones Springs	01614000	243	1929-31 1939-75
Tuscarora Creek above Martinsburg.....	01617000	11.3	1949-63 1968-77
<u>OHIO RIVER BASIN</u>			
<u>MONONGAHELA RIVER BASIN</u>			
Roaring Creek at Norton	03050800	29.2	1965-69
Grassy Run at Norton	03050900	2.86	1965-69
Middle Fork River at Midvale	03051500	122	1915-42
Tygart Valley River at Tygart Dam near Grafton	03056000	1,184	1938-83 1987-91
Tygart Valley River at Fetterman.....	03056500	1,304	1907-39
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

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

	Station number	Drainage area (mi ²)	Period of record
<u>OHIO RIVER BASIN</u>--Continued			
<u>MONONGAHELA RIVER BASIN</u>--Continued			
Monongahela River--Continued			
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
Blackwater River at Canaan Valley State Park.....	03065050	9.48	1992
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
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

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

	Station number	Drainage area (mi ²)	Period of record
<u>OHIO RIVER BASIN</u> --Continued			
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

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

	Station number	Drainage area (mi ²)	Period of record
<u>OHIO RIVER BASIN</u> --Continued			
<u>KANAWHA RIVER BASIN</u> --Continued			
Cranberry River:			
North Fork Cranberry River near Hillsboro	03187300	9.78	1969-82
Cherry River at Richwood	03188500	85.0	1908-16
Cherry River at Fenwick	03189000	150	1930-69 1980-82
Gauley River near Summersville	03189500	680	1909-16 1929-65
Collison Creek near Nallen	03189650	2.78	1967-77
Meadow River at McRoss	03189890	163	1980-82
Meadow River at Nallen,	03190000	287	1909-16 1929-71
Peters Creek near Lockwood,	03191500	40.2	1946-71 1980-82
Gauley River at Belva	03192500	1,402	1908-16
Slaughter Creek:			
Right Fork Little Creek near Chelyan,	03193776	0.91	1983
Little Creek near Chelyan	03193778	1.44	1982-84
Elk River:			
Gilmer Run near Marlinton,	03193830	1.80	1968-77
Elk River at Webster Springs	03194000	168	1908-16
Elk River Below Back Fork at Webster Springs	03194500	242	1930-34
Elk River at Centralia	03195000	281	1935-63
Right Fork Holly River at Guardian	03195100	51.9	1974-78 1986-87
Left Fork Holly River near Replete	03195250	46.5	1974-78 1986-87
Granny Creek at Sutton	03195600	6.98	1967-77
Elk River at Gassaway	03196000	578	1908-16
Birch River at Herold	03196500	124	1974-75 1976 1979-84
Buffalo Creek at Clay	03196750	114	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
Track Fork downstream Dryden Hollow at Ruth	03198022	4.72	1980-84
Coal River:			
Big Coal River:			
Drawdy Creek near Peytona	03198450	7.75	1969-77
Big Coal River near Alum Creek	03198550	445	1975-82
Little Coal River at Danville	03199000	269	1930-84
Rock Creek near Danville	03199300	12.2	1979-84
Little Coal River at Julian	03199400	318	1975-84
Coal River at Alum Creek	03199700	835	1975-79
Coal River at Fuqua	03200000	849	1912-16

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

	Station number	Drainage area (mi ²)	Period of record
<u>OHIO RIVER BASIN</u> --Continued			
<u>KANAWHA RIVER BASIN</u> --Continued			
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
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 1956-66
Twelvepole Creek below Wayne	03207020	300	1915-17 1927-31 1947-54 1956-82
Beech Fork below Beech Fork Dam.....	03207057	79.2	1976-82

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

	Station number	Drainage area (mi ²)	Period of record
<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

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

	Station number	Drainage area (mi ²)	Type of record	Period of record
<u>NORTH ATLANTIC SLOPE BASINS</u>				
<u>POTOMAC RIVER BASIN</u>				
North Fork South Branch Potomac River at Cabins	01606000	314	t	1961
South Branch Potomac River near Petersburg	01606500	642	t	1947-53 1955-73 1968-69
South Branch Potomac River near Springfield	01608500	1,471	sK, t	1968-69
Lost River at McCauley near Baker	01610200	155	t	1975-76
Cacapon River near Great Cacapon.....	01611500	677	t	1949-53 1961
Cacapon River at Great Cacapon.....	01611600	---	t	1959-64
Opequon Creek near Martinsburg	01616500	272	sK, t	1969-70
Shenandoah River at Millville	01636500	3,040	sK, t	1980-83
<u>OHIO RIVER BASIN</u>				
<u>MONONGAHELA RIVER BASIN</u>				
Tygart Valley River at Elkins.....	03050400	268	t	1947-92
Roaring Creek at Norton	03050800	29.2	t, s	1965-67
Grassy Run at Norton	03050900	2.86	t, s	1965-67
Tenmile Creek:				
Salem Fork:				
Salem F Subwatershed #11A Varner Hollow near Salem	03060000	---	t, s	1961
Salem Fork at Salem	03060500	8.32	s	1956-58 1962
Monongahela River:				
Buffalo Creek at Barrackville.....	03061500	115	sK, t, s	1979-81
Black Fork (continuation of Dry Fork):				
Shavers Fork above Bowden	03068600	138	sK, s, U pH t	1975-80 1978-79 1976-79
Taylor Run at Bowden	03068610	5.06	sK pH	1973-80 1973-74 1978-79
North Spring at Bowden	03068690	---	t	1973-74 1976-79 s, U 1975-80 1977-81
South Spring at Bowden	03068710	---	U t	1975-80 1977-80
Shavers Fork below Bowden.....	03068800	151	U sK pH t	1975-80 1973-81 1973-74 1973-79 1981
Shavers Fork at Parsons.....	03069000	214	s, U t	1975-81 1956-64 1974-75

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

OHIO RIVER BASIN--Continued

MONONGAHELA RIVER BASIN--Continued

	Station number	Drainage area (mi ²)	Type of record	Period of record
Cheat River at Lake Lynn, Pa.....	03071600	1,411	t	1949-57 1959-92

LITTLE KANAWHA RIVER BASIN

Little Kanawha River near Wildcat.....	03151400	112	sK, t, s	1979-81
Little Kanawha River near Burnsville.....	03151500	155	t	1971-74
Little Kanawha River at Glenville	03152000	386	t	1956-63
Leading Creek:				
Leading Creek near Glenville	03152500	144	sK, t	1971-74
West Fork Little Kanawha River at Rocksedale	03154000	205	t	1970-74
Little Kanawha River at Parkersburg	03155600	---	t	1960-61

KANAWHA RIVER BASIN

New River at Bluestone Dam	03180000	4,602	t	1956-67 1971-83
Knapp Creek at Marlinton	03182000	108	t	1956-83 1985-87
Piney Creek at Raleigh	03185000	52.2	sK s	1979-81 1981
Cranberry River:				
Cranberry River near Richwood.....	03187500	80.4	sK pH t s	1979-80 1989 1982 1980-81
Gauley River:				
Gauley River near Craigsville	03189100	529	sK t	1981-82 1975-77 1981-82
Gauley River below Summersville Dam	03189600	806	sK t	1981-82 1975-77 1981-82
Kanawha River at Kanawha Falls	03193000	8,371	t	1958-66 1968-83
Kanawha River at Glasgow.....	03193742	8,631	t	1977-92
Kanawha River at Cabin Creek	03193770	8,661	t	1956 1958-77
Elk River below Webster Springs	03194700	266	t U	1974-83 1974-75
Right Fork Holly River at Guardian	03195100	51.9	t U	1974 1974-75
Left Fork Holly River near Replete	03195250	46.5	t U	1974 1974-75
Elk River at Sutton	03195500	542	sK t s U	1985-87 1960-83 1985-87 1985-87 1974-75 1985-87
Elk River near Frametown.....	03196600	751	t	1961-67 1972-75

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

	Station number	Drainage area (mi ²)	Type of record	Period of record
<u>OHIO RIVER BASIN</u> --Continued				
<u>KANAWHA RIVER BASIN</u> --Continued				
Elk River at Clay	03196800	992	t	1961-70
Elk River at Queen Shoals.....	03197000	1,145	sK, s, U	1985-86
			t	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	1980-83
			t, s	1980-84
Trace Fork downstream Dryden Hollow at Ruth.....	03198022	4.72	sK	1980-83
			t, s	1980-84
Coal River:				
Big Coal River near Alum Creek	03198550	445	sK, s	1975-82
			t	1975-80
Little Coal River at Danville.....	03199000	269	sK	1973-83
			t, s	1973-84
Rock Creek near Danville	03199300	12.2	sK, t	1979-82
			s	1979-81
Rock Creek at Rock Creek.....	03199320	13.3	sK, t	1979-82
			s	1979-81
Little Coal River at Julian.....	03199400	318	sK, t	1975-82
			s	1975-81
Coal River at Alum Creek	03199700	835	sK, t	1975-81
			s	1975-80
Coal River at Tornado	03200500	862	sK	1973-83
			t	1974-84
			s	1973-84
			U	1981-91
Kanawha River at Poca	03200650	11,435	t	1976-92
Kanawha River at Winfield.....	03201300	11,809	sK	1965-70
				1974-80
			pH, DO	1976-80
			t	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	1978-80
			pH	1978-79
Slab Fork:				
Marsh Fork at Maben.....	03202245	4.85	sK,t,s,U	1978-80
			pH	1978-79
Still Run at Itmann.....	03202255	7.12	sK,t,s,U	1978-80
			pH	1978-79
Rockcastle Creek:				
Bearhole Fork at Pineville	03202310	6.27	sK,t,s,U	1978-80
			pH	1978-79

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

	Station number	Drainage area (mi ²)	Type of record	Period of record
<u>OHIO RIVER BASIN--Continued</u>				
<u>GUYANDOTTE RIVER BASIN--Continued</u>				
Guyandotte River near Baileysville	03202400	306	sK t s	1971-79 1971-82 1973-79
Indian Creek at Fanrock	03202490	41.3	sK, s t	1974-78 1975-81
Clear Fork:				
Laurel Fork:				
Milam Fork at McGraws.....	03202695	6.64	sK, U pH, t s	1978-80 1978-79 1979-80
Clear Fork at Clear Fork.....	03202750	124	sK, s t	1974-78 1975-81
Guyandotte River at Logan	03203600	833	sK, t s	1976 1975-76
Island Creek:				
Island Creek at Logan.....	03203700	---	sK,pH,t,U s	1976-77 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 s	1976-77 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 t s	1979-80 1980 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 t s	1979-80 1974-76 1979-81
Elkhorn Creek at Maitland.....	03212700	69.9	sK s	1979 1979-80
Elkhorn Creek Tributary at Welch.....	03212703	0.63	s	1981
Dry Fork at Avondale	03212985	225	sK, s t	1979-81 1979
Tug Fork at Litwar.....	03213000	504	sK	1980
Panther Creek:				
Crane Creek near Panther	03213495	0.54	s	1981

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

	Station number	Drainage area (mi ²)	Type of record	Period of record
<u>OHIO RIVER BASIN</u> --Continued				
<u>BIG SANDY RIVER BASIN</u> --Continued				
Panther Creek near Panther.....	03213500	31.0	sK	1975 1980-81
			t	1973-75
Pigeon Creek near Lenore.....	03213800	93.9	sK, t, s	1979-81
Tug Fork near Kermit.....	03214000	1,188	t	1956
Tug Fork at Kermit.....	03214500	1,280	t	1947-81
Rockcastle Creek at Inex, Ky	03214700	63.1	s	1980-81
Tug Fork at Glenhayes	03214900	1,507	sK, s	1977-80
			t	1979-80

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 78 streamflow-gaging stations; stage only records for 11 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 sites. These data represent that part of the National Water Data System collected by the U.S. Geological Survey and cooperating State and Federal agencies in West Virginia.

This series of annual reports for West Virginia began with the 1961 water year with a report that contained only data relating to the quantities of surface water. For the 1964 water year, a similar report was introduced that contained only data relating to water quality. Beginning with the 1975 water year, the report format was changed to present, in one volume, data on quantities of surface water, quality of surface and ground water, and ground-water levels.

Prior to introduction of this series and for several water years concurrent with it, water resources data for West Virginia were published in U.S. Geological Survey Water-Supply Papers. Data on stream discharge and stage and on lake or reservoir contents and stage, through September 1960, were published annually under the title "Surface-Water Supply of the United States, Parts 6A and 6B." For the 1961 through 1970 water years, the data were published in two 5-year reports. Data on chemical quality, temperature, and suspended sediment for the 1941 through 1970 water years were published annually under the title "Quality of Surface Waters of the United States," and water levels for the 1935 through 1974 water years were published under the title "Ground-Water Levels in the United States." The above mentioned Water-Supply Papers may be consulted in the libraries of the principal cities of the United States and may be purchased from the U. S. Geological Survey, Books and Open-File Reports, Federal Center, Box 25425, Denver, Colorado 80225.

Publications similar to this report are published annually by the Geological Survey for all States. These official Survey reports have an identification number consisting of the two-letter State abbreviation, the last two digits of the water year, and the volume number. For example, this volume is identified as "U.S. Geological Survey Water-Data Report WV-93-1." 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, Eli McCoy, Chief.

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

WATER RESOURCES DATA - WEST VIRGINIA, 1993

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, Federal Power Commission, and U.S. Environmental Protection Agency.

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

Organizations that provided data are acknowledged in station descriptions.

SUMMARY OF HYDROLOGIC CONDITIONS

Streamflow during the 1993 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 1993 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 1992 to September 1993, National Weather Service, Charleston, West Virginia.

Streamflow and precipitation in October 1992 were below normal (1961-90) throughout the State. Dry conditions for August and September 1992 continued into October across the State. Streamflow was below normal in November throughout the State, whereas precipitation was above normal. Streamflow was below normal in December throughout the State, whereas precipitation was above normal. Minor flooding of less than one-half foot above flood stage occurred December 17-18 in the Tygart Valley basin. Streamflow and precipitation in January and February were below normal throughout the State. Streamflow and precipitation were above normal in March and April throughout the State. Rainfall between 1.5 to 2.0 inches on March 4-5, heavy snowfall across the State on March 12-14 ranging from 12-36 inches and rainfall between 1.0 to 2.0 inches on March 23-25, caused small streams and creeks to come out of their banks on several occasions. Minor flooding (less than 1 foot above flood stages) occurred in the lower Greenbrier and upper Tug basins during March. No flood warnings were issued during April to September across the State. Spring runoff from snowmelt kept streams above normal in April especially in the eastern portions of the State. Streamflow and precipitation in May were below normal across the State and were both above normal in June across the State. Streamflow and precipitation were below normal in July and August across the State. Streamflow and precipitation were above normal in September across the State. No record low flows were observed during the year.

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 1993 water year. (Periods of record for the observed wells range from 6 to 53 years.) In October, water levels rose and were below average throughout most of the State. Water levels generally rose from November to March throughout the State and were generally above average for these months. Water levels declined in April, May, and June but were above average. Water levels declined in July and rose in August and September and were below 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 1993 water year. The index well, for which 39 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 affected the degree of water-level fluctuation at this well. A new index well will be selected and used next year.

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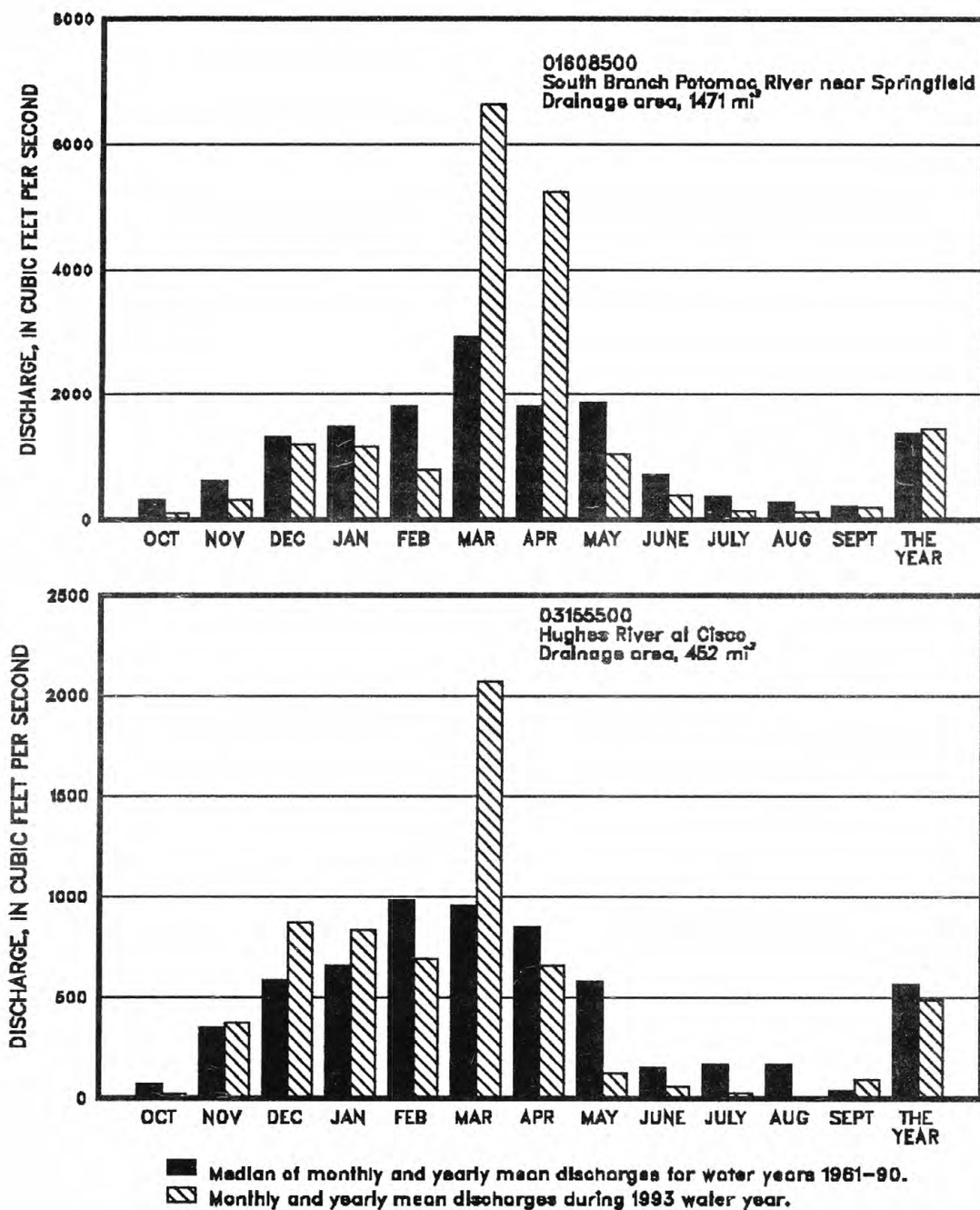


Figure 1.--Discharge at the South Branch Potomac River and the Hughes River index gaging stations during the 1993 water year compared to median discharge for the period 1961-1990.

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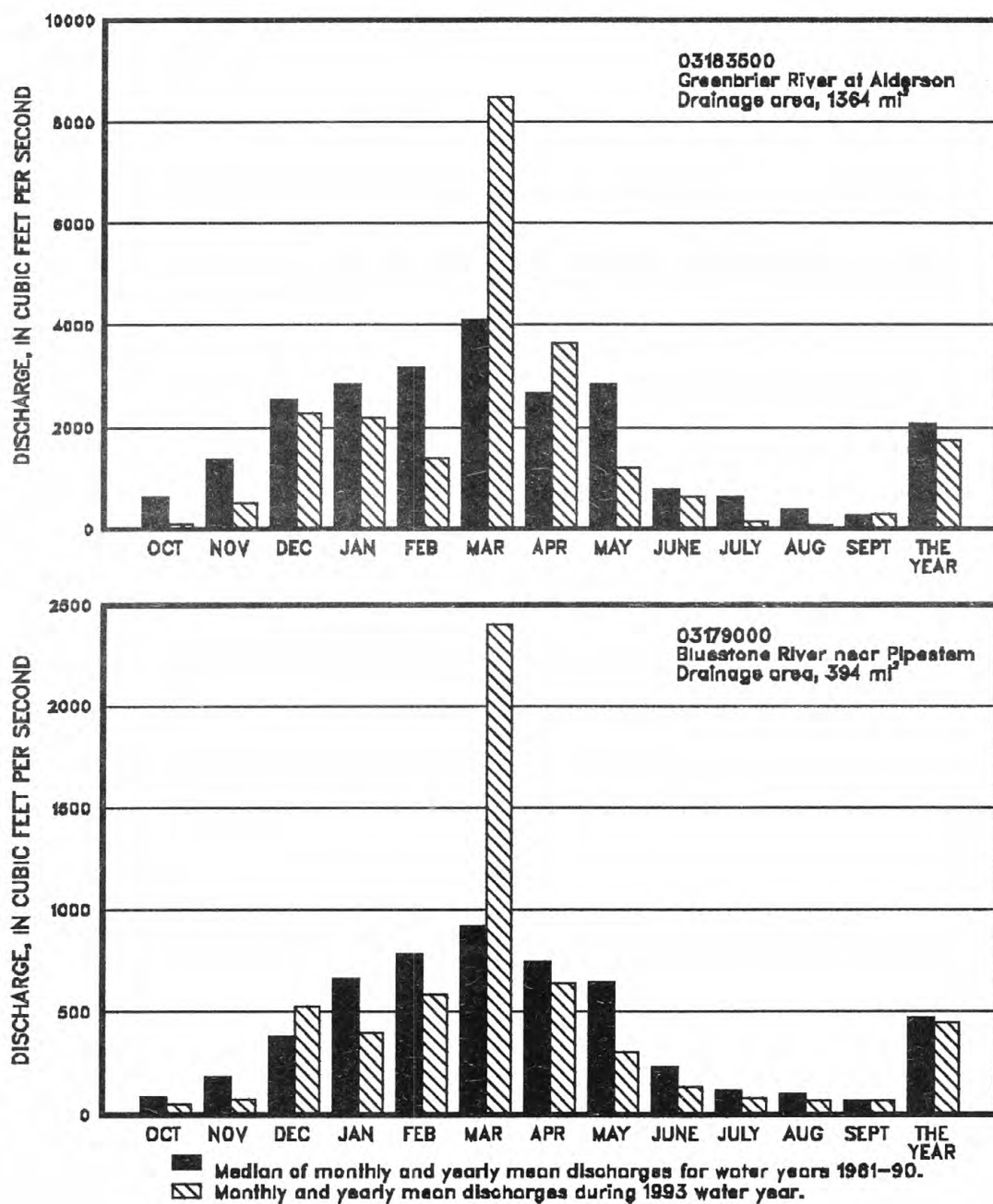


Figure 2.-- Discharge at the Greenbrier River and the Bluestone River index gaging stations during the 1993 water year compared to median discharge for the period 1961-1990.

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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.

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.)

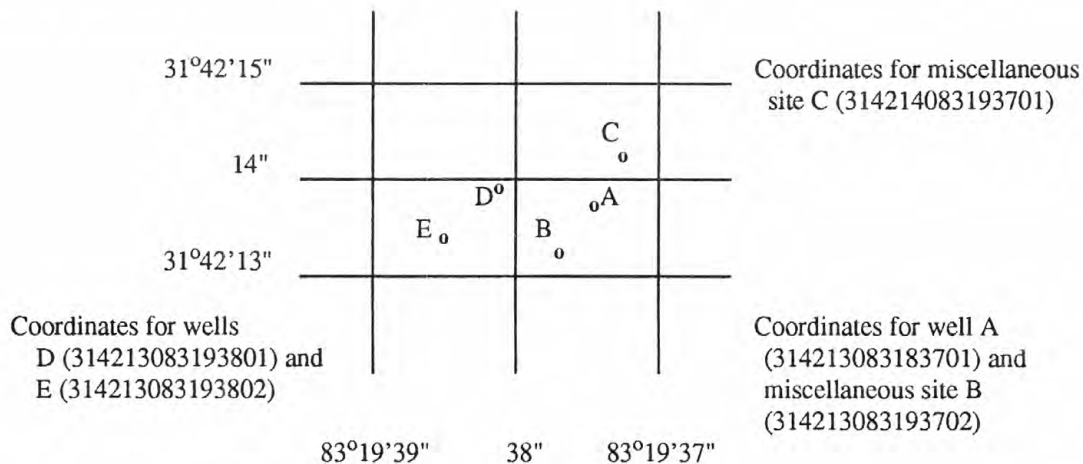


Figure 3. System for numbering wells and miscellaneous sites (latitude and longitude).

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.

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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.

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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.

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

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

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

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

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

PEAK DISCHARGES FOR CURRENT YEAR.--Extremes given here are similar to those for the period of record, except the peak discharge listing may include secondary peaks. For stations meeting certain criteria, all peak discharges and stages occurring during the water year and equal to or greater than a selected base discharge are presented under this heading. The peaks equal to or greater than the base discharge, excluding the highest one, are referred to as secondary peaks. Peak discharges are not published for canals, ditches, drains, or streams for which the peaks are subject to substantial control by man. The time of occurrence for peaks is expressed in 24-hour local standard time. For example, 12:30 a.m. is 0030, and 1:30 p.m. is 1330. The minimum for the current water year appears below the table of peak data.

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

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

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

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

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.

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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.

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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.

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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.

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.

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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) sea level; it is reported with a precision depending on the method of determination.

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

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

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

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

Records of Ground-Water Quality

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

Data Collection and Computation

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

Most methods for collecting and analyzing water samples are described in the "U.S. Geological Survey 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 **STOR**age and **RE**trieval System (**WATSTORE**) was established in 1972 to provide an effective and efficient means for the processing and maintenance of water data collected through the activities of the U.S. Geological Survey and to facilitate release of the data to the public. A variety of useful products, ranging from data tables to complex statistical analyses such as Log Pearson Type III, can be produced using **WATSTORE**. The system resides on the central computer facilities of the U.S. Geological Survey at its National Center in Reston, Virginia, and consists of related files and data bases.

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

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

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

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

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DEFINITION OF TERMS

Terms related to streamflow, water-quality, and other hydrologic data, as used in this report, are defined below. See also 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.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Organism is any living entity.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Solute is any substance that is dissolved in water.

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

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

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

Substrate is the physical surface upon which an organism lives.

Natural substrate refers to any naturally occurring emerged 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 mm membrane filter has been digested by a method (usually using a dilute acid solution) that results in dissolution of only readily soluble substances. Complete dissolution of all the particulate matter is not achieved by the digestion treatment and thus the determination represents something less than the "total" amount (that is, less than 95 percent) of the constituent present in the sample. To achieve comparability of analytical data, equivalent digestion procedures are required of all laboratories performing such analyses because different digestion procedures are likely to produce different analytical results.

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

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

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

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

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

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

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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, Earth Science Information Center, Federal Center, Box 25286, MS 517, Denver, Colorado 80225 (authorized agent of the Superintendent of Documents, Government Printing Office). Prepayment is required. Remittance should be sent by check or money order payable to the U.S. Geological Survey. Prices are not included because they are subject to change. Current prices can be obtained by writing to the above address. When ordering or inquiring about prices for any of these publications, please give the title, book number, chapter number, and "U.S. Geological Survey Techniques of Water-Resources Investigations."

- 1-D1. *Water temperature--influential factors, field measurement, and data presentation*, by H. H. Stevens, Jr., J. F. Ficken, and G. F. Smoot: USGS--TWRI Book 1, Chapter D1. 1975. 65 pages.
- 1-D2. *Guidelines for collection and field analysis of ground-water samples for selected unstable constituents*, by W. W. Wood: USGS--TWRI Book 1, Chapter D2. 1976. 24 pages.
- 2-D1. *Application of surface geophysics to ground-water investigations*, by A. A. R. Zohdy, G. P. Eaton, and D. R. Mabey: USGS--TWRI Book 2, Chapter D1. 1974. 116 pages.
- 2-D2. *Application of seismic-refraction techniques to hydrologic studies*, by F. P. Haeni: USGS--TWRI Book 2, Chapter D2. 1988. 86 pages.
- 2-E1. *Application of borehole geophysics to water-resources investigations*, by W. S. Keys and L.M. McCary: USGS--TWRI Book 2, Chapter E1. 1971. 126 pages.
- 2-E2. *Borehole geophysics applied to ground-water investigations*, by W. S. Keys: USGS--TWRI Book 2, Chapter E2. 1990. 150 pages.
- 2-F1. *Application of drilling, coring, and sampling techniques to test holes and wells*, by Eugene Shuter and W. E. Teasdale: USGS--TWRI Book 2, Chapter F1. 1989. 97 pages.
- 3-A1. *General field and office procedures for indirect discharge measurements*, by M. A. Benson and Tate Dalrymple: USGS--TWRI Book 3, Chapter A1. 1967. 30 pages.
- 3-A2. *Measurement of peak discharge by the slope-area method*, by Tate Dalrymple and M. A. Benson: USGS--TWRI Book 3, Chapter A2. 1967. 12 pages.
- 3-A3. *Measurement of peak discharge at culverts by indirect methods*, by G. L. Bodhaine: USGS--TWRI Book 3, Chapter A3. 1968. 60 pages.
- 3-A4. *Measurement of peak discharge at width contractions by indirect methods*, by H. F. Matthai: USGS--TWRI Book 3, Chapter A4. 1967. 44 pages.
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- 3-A6. *General procedure for gaging streams*, by R. W. Carter and Jacob Davidian: USGS--TWRI Book 3, Chapter A6. 1968. 13 pages.
- 3-A7. *Stage measurements at gaging stations*, by T. J. Buchanan and W. P. Somers: USGS--TWRI Book 3, Chapter A7. 1968. 28 pages.
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PUBLICATIONS ON TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS--Continued

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- 3-A10. *Discharge ratings at gaging stations*, by E. J. Kennedy: USGS--TWRI Book 3, Chapter A10. 1984. 59 pages.
- 3-A11. *Measurement of discharge by moving-boat method*, by G. F. Smoot and C. E. Novak: USGS--TWRI Book 3, Chapter A11. 1969. 22 pages.
- 3-A12. *Fluorometric procedures for dye tracing*, by J. F. Wilson, Jr., E. D. Cobb, and F. A. Kilpatrick: USGS--TWRI Book 3, Chapter A12. 1986. 41 pages.
- 3-A13. *Computation of continuous records of streamflow*, by E. J. Kennedy: USGS--TWRI Book 3, Chapter A13. 1983. 53 pages.
- 3-A14. *Use of flumes in measuring discharge*, by F. A. Kilpatrick and V. R. Schneider: USGS--TWRI Book 3, Chapter A14. 1983. 46 pages.
- 3-A15. *Computation of water-surface profiles in open channels*, by Jacob Davidian: USGS--TWRI Book 3, Chapter A15. 1984. 48 pages.
- 3-A16. *Measurement of discharge using tracers*, by F. A. Kilpatrick and E. D. Cobb: USGS--TWRI Book 3, Chapter A16. 1985. 52 pages.
- 3-A17. *Acoustic velocity meter systems*, by Antonius Laenen: USGS--TWRI Book 3, Chapter A17. 1985. 38 pages.
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- 3-A19. *Levels of streamflow gaging stations*, by E. J. Kennedy: USGS--TWRI Book 3, Chapter A19. 1990. 27 pages.
- 3-B1. *Aquifer-test design, observation, and data analysis*, by R. W. Stallman: USGS--TWRI Book 3, Chapter B1. 1971. 26 pages.
- 3-B2. *Introduction to ground-water hydraulics, a programmed text for self-instruction*, by G. D. Bennett: USGS--TWRI Book 3, Chapter B2. 1976. 172 pages.
- 3-B3. *Type curves for selected problems of flow to wells in confined aquifers*, by J. E. Reed: USGS--TWRI Book 3, Chapter B3. 1980. 106 pages.
- 3-B4. *Regression modeling of ground-water flow*, by R. L. Cooley and R. L. Naff: USGS--TWRI Book 3, Chapter B4. 1990. 232 pages.
- 3-B4. *Supplement 1. Regression modeling of ground-water flow - Modifications to the computer code for nonlinear regression solution of steady-state ground-water flow problems*, by R. L. Cooley: USGS--TWRI Book 3, Chapter B4. 1993. 8 pages.
- 3-B5. *Definition of boundary and initial conditions in the analysis of saturated ground-water flow systems--An introduction*, by O. L. Franke, T. E. Reilly, and G. D. Bennett: USGS--TWRI Book 3, Chapter B5. 1987. 15 pages.
- 3-B6. *The principle of superposition and its application in ground-water hydraulics*, by T. E. Reilly, O. L. Franke, and G. D. Bennett: USGS--TWRI Book 3, Chapter B6. 1987. 28 pages.
- 3-B7. *Analytical solutions for one-, two-, and three-dimensional solute transport in ground-water systems with uniform flow*, by E. J. Wexler: USGS--TWRI Book 3, Chapter B7. 1992. 90 pages.
- 3-C1. *Fluvial sediment concepts*, by H. P. Guy: USGS--TWRI Book 3, Chapter C1. 1970. 55 pages.
- 3-C2. *Field methods for measurement of fluvial sediment*, by H. P. Guy and V. W. Norman: USGS--TWRI Book 3, Chapter C2. 1970. 59 pages.

- 3-C3. *Computation of fluvial-sediment discharge*, by George Porterfield: USGS--TWRI Book 3, Chapter C3. 1972. 66 pages.
- 4-A1. *Some statistical tools in hydrology*, by H. C. Riggs: USGS--TWRI Book 4, Chapter A1. 1968. 39 pages.
- 4-A2. *Frequency curves*, by H. C. Riggs: USGS--TWRI Book 4, Chapter A2. 1968. 15 pages.
- 4-B1. *Low-flow investigations*, by H. C. Riggs: USGS--TWRI Book 4, Chapter B1. 1972. 18 pages.
- 4-B2. *Storage analyses for water supply*, by H. C. Riggs and C. H. Hardison: USGS--TWRI Book 4, Chapter B2. 1973. 20 pages.
- 4-B3. *Regional analyses of streamflow characteristics*, by H. C. Riggs: USGS--TWRI Book 4, Chapter B3. 1973. 15 pages.
- 4-D1. *Computation of rate and volume of stream depletion by wells*, by C. T. Jenkins: USGS--TWRI Book 4, Chapter D1. 1970. 17 pages.
- 5-A1. *Methods for determination of inorganic substances in water and fluvial sediments*, by M.J. Fishman and L. C. Friedman: USGS--TWRI Book 5, Chapter A1. 1989. 545 pages.
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- 5-A5. *Methods for determination of radioactive substances in water and fluvial sediments*, by L.L. Thatcher, V. J. Janzer, and K. W. Edwards: USGS--TWRI Book 5, Chapter A5. 1977. 95 pages.
- 5-A6. *Quality assurance practices for the chemical and biological analyses of water and fluvial sediments*, by L. C. Friedman and D. E. Erdmann: USGS--TWRI Book 5, Chapter A6. 1982. 181 pages.
- 5-C1. *Laboratory theory and methods for sediment analysis*, by H. P. Guy: USGS--TWRI Book 5, Chapter C1. 1969. 58 pages.
- 6-A1. *A modular three-dimensional finite-difference ground-water flow model*, by M. G. McDonald and A. W. Harbaugh: USGS--TWRI Book 6, Chapter A1. 1988. 586 pages.
- 6-A2. *Documentation of a computer program to simulate aquifer-system compaction using the modular finite-difference ground-water flow model*, by S. A. Leake and D. E. Prudic: USGS--TWRI Book 6, Chapter A2. 1991. 68 pages.
- 6-A3. *A modular finite-element model (MODFE) for areal and axisymmetric ground-water-flow problems. Part 1: Model Description and User's Manual*, by L. J. Torak: USGS--TWRI Book 6, Chapter A3. 1993. 136 pages.
- 6-A4. *A modular finite-element model (MODFE) for areal and axisymmetric ground-water-flow problems, Part 2: Derivation of finite-element equations and comparisons with analytical solutions*, by R. L. Cooley: USGS--TWRI Book 6, Chapter A4. 1992. 108 pages.
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- 7-C1. *Finite difference model for aquifer simulation in two dimensions with results of numerical experiments*, by P. C. Trescott, G. F. Pinder, and S. P. Larson: USGS--TWRI Book 7, Chapter C1. 1976. 116 pages.

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- 7-C3. *A model for simulation of flow in singular and interconnected channels*, by R. W. Schaffranek, R. A. Baltzer, and D. E. Goldberg: USGS--TWRI Book 7, Chapter C3. 1981. 110 pages.
- 8-A1. *Methods of measuring water levels in deep wells*, by M. S. Garber and F. C. Koopman: USGS--TWRI Book 8, Chapter A1. 1968. 23 pages.
- 8-A2. *Installation and service manual for U.S. Geological Survey manometers*, by J. D. Craig: USGS--TWRI Book 8, Chapter A2. 1983. 57 pages.
- 8-B2. *Calibration and maintenance of vertical-axis type current meters*, by G. F. Smoot and C. E. Novak: USGS--TWRI Book 8, Chapter B2. 1968. 15 pages.

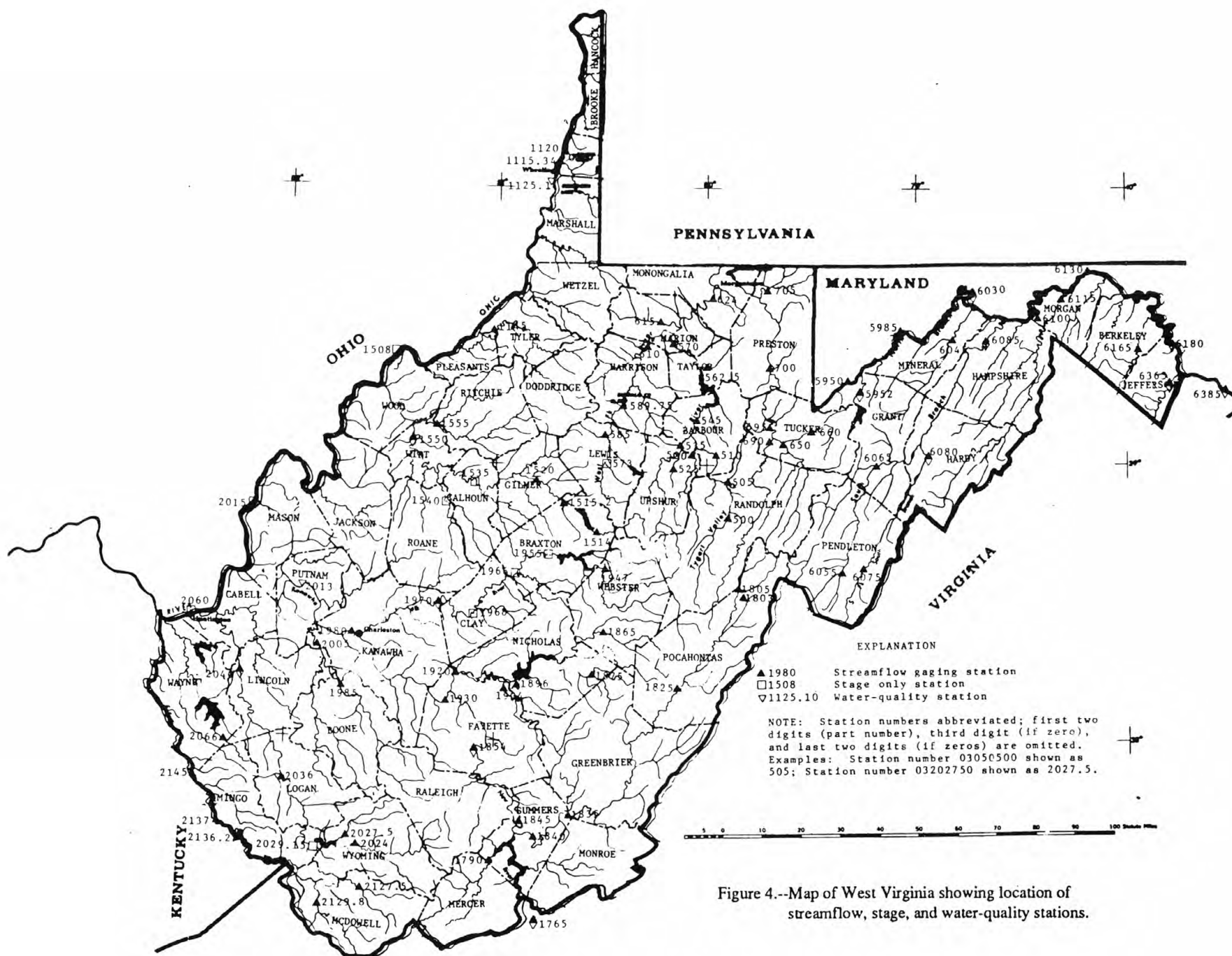


Figure 4.--Map of West Virginia showing location of streamflow, stage, and water-quality stations.

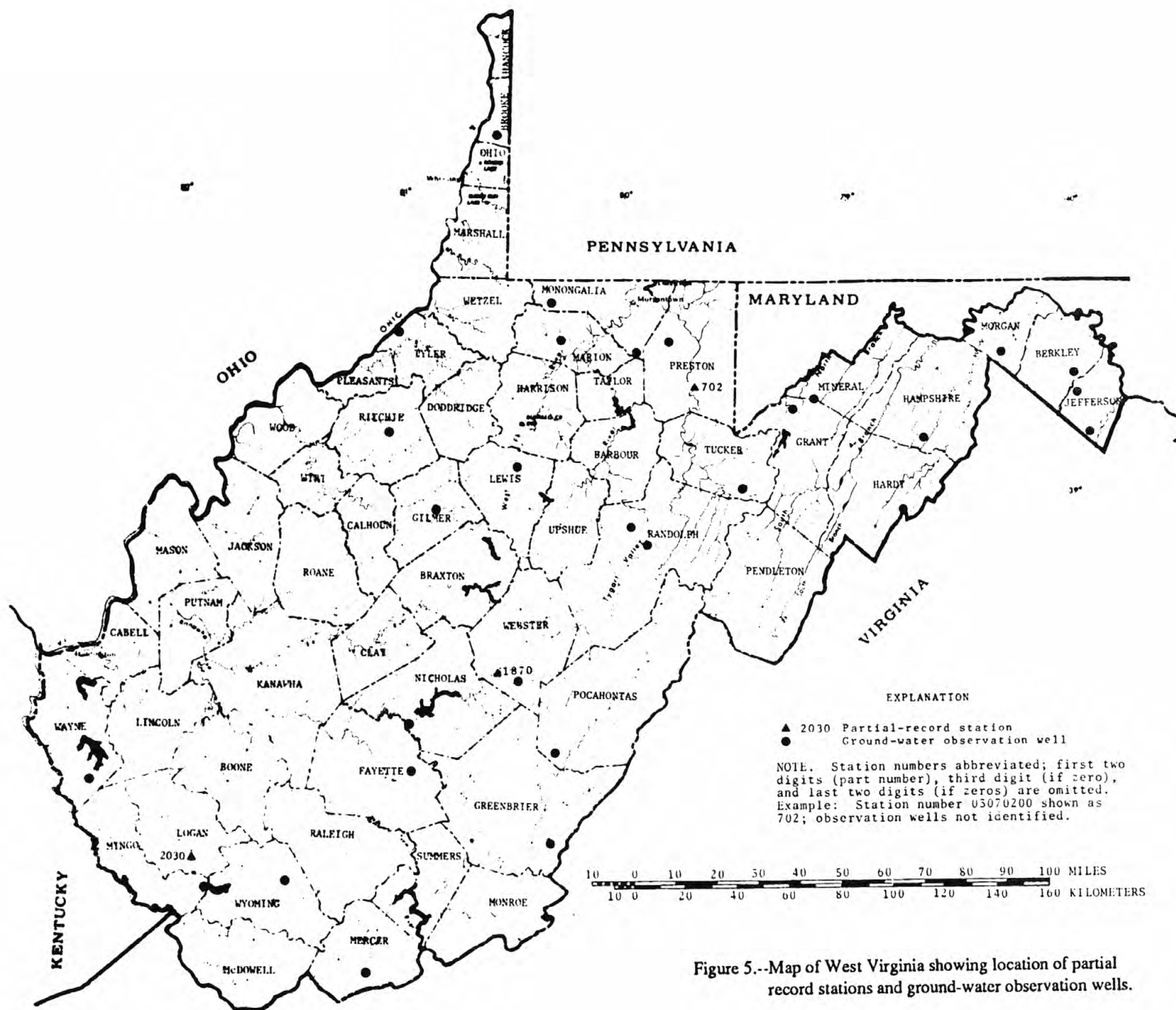


Figure 5.--Map of West Virginia showing location of partial record stations and ground-water observation wells.

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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.

MBAS Determinations

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

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

where:

MBASCOR = corrected MBAS concentration, in mg/L ;
 M = reported MBAS concentration, in mg/L ;
 N = dissolved nitrate plus nitrite, as nitrogen, concentration, in mg/L ; and
 C = dissolved chloride concentration, in mg/L .

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

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 sea level.

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

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

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

Date	Time	Discharge (ft ³ /s)	Gage Height (ft)	Date	Time	Discharge (ft ³ /s)	Gage Height (ft)
Mar. 25	1930	*2,060	*6.06	No peak greater than base discharge.			

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	35	30	e47	507	e94	e64	e1300	e150	49	44	13	10
2	37	36	e44	301	e98	e64	954	e140	45	72	16	11
3	33	52	e43	250	e92	e110	600	e130	45	54	20	17
4	29	37	e42	222	e84	e200	430	e120	49	44	25	38
5	24	36	e76	310	e76	e180	338	e110	68	30	25	27
6	27	54	e61	254	e68	e160	281	e100	49	33	49	24
7	27	44	e55	207	e63	e150	240	e90	48	40	60	18
8	26	40	e51	194	e58	e150	219	e85	162	35	36	9.8
9	23	34	e47	173	e54	e160	197	e80	89	34	28	11
10	24	47	e57	157	e52	e160	510	e77	66	27	23	20
11	23	40	e165	148	e56	e150	398	e73	96	36	21	19
12	25	101	e131	187	e56	e150	329	e71	68	36	16	23
13	24	132	e102	226	e54	e150	265	e100	56	40	10	23
14	13	78	e83	200	e50	e150	230	86	50	35	11	20
15	12	61	e135	178	e48	e160	203	74	48	34	7.8	17
16	13	51	e220	168	e56	e180	819	67	48	33	11	39
17	20	53	e740	154	e67	e200	771	76	46	30	18	47
18	30	43	671	123	e52	e240	435	74	46	31	22	70
19	31	58	374	119	e62	e210	318	140	43	30	20	37
20	35	56	553	e90	e70	e180	e260	101	41	20	16	29
21	31	45	442	e130	e70	e200	e390	85	43	23	14	27
22	30	75	333	e160	e68	e300	e340	79	47	22	12	25
23	41	137	667	e150	e68	e600	e300	74	44	25	9.8	25
24	38	104	507	e150	e68	1420	e260	67	40	26	9.0	24
25	26	97	330	e180	e66	1420	e230	58	40	25	11	20
26	22	88	259	e130	e66	1420	e310	54	39	25	9.8	124
27	23	68	251	e140	e64	e1050	e260	50	43	27	7.2	126
28	26	59	215	e120	e64	e1000	e220	46	42	23	11	97
29	26	53	177	e110	---	e950	e190	48	46	57	10	53
30	29	e49	408	e110	---	e1300	e170	51	52	28	12	44
31	31	---	629	e100	---	e900	---	48	---	17	13	---
TOTAL	834	1858	7915	5648	1844	13728	11767	2604	1648	1036	566.6	1074.8
MEAN	26.9	61.9	255	182	65.9	443	392	84.0	54.9	33.4	18.3	35.8
MAX	41	137	740	507	98	1420	1300	150	162	72	60	126
MIN	12	30	42	90	48	64	170	46	39	17	7.2	9.8
CFSM	.37	.85	3.50	2.50	.90	6.07	5.37	1.15	.75	.46	.25	.49
IN.	.42	.95	4.03	2.88	.94	7.00	6.00	1.33	.84	.53	.29	.55

e Estimated

POTOMAC RIVER BASIN

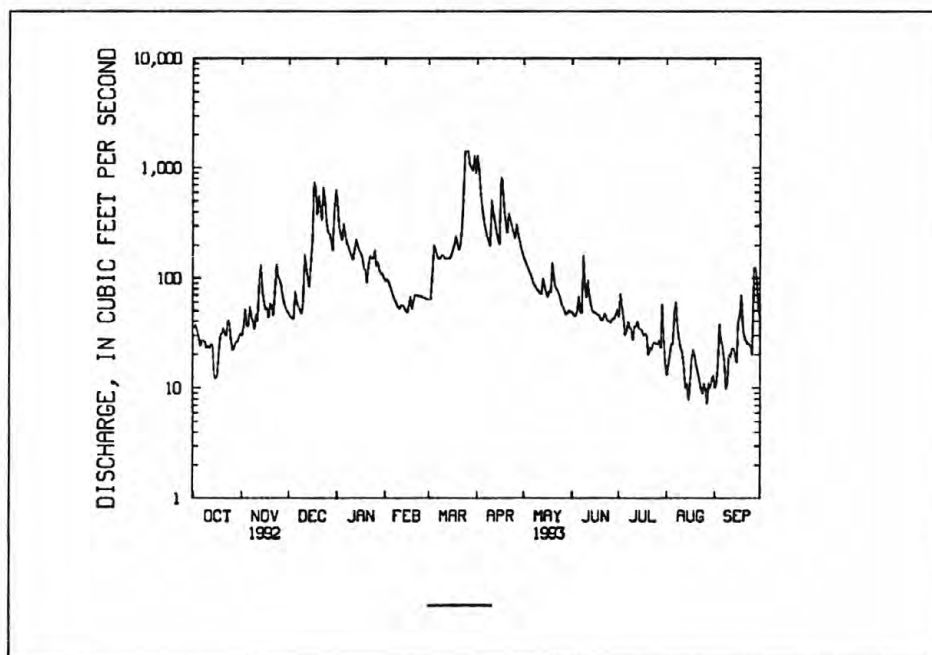
01595000 NORTH BRANCH POTOMAC RIVER AT STEYER, MD--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1956 - 1993, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	74.3	137	232	230	253	339	284	190	120	89.1	69.6	49.5
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	65.9	112	106	62.5	15.5	14.3	6.72	5.99
(WY)	1964	1966	1966	1977	1993	1990	1968	1965	1965	1965	1965	1959

SUMMARY STATISTICS	FOR 1992 CALENDAR YEAR		FOR 1993 WATER YEAR		WATER YEARS 1956 - 1993	
ANNUAL TOTAL	56900		50523.4			
ANNUAL MEAN	155		138		171	
HIGHEST ANNUAL MEAN					225	1978
LOWEST ANNUAL MEAN					115	1959
HIGHEST DAILY MEAN	1180	Jul 27	1420	(a)	4410	Nov 5 1985
LOWEST DAILY MEAN	12	Oct 15	7.2	Aug 27	3.1	Sep 9 1965
ANNUAL SEVEN-DAY MINIMUM	19	Oct 11	9.7	Aug 23	3.6	Sep 23 1959
INSTANTANEOUS PEAK FLOW			2060	Mar 25	(b) 11500	Nov 5 1985
INSTANTANEOUS PEAK STAGE			6.06	Mar 25	13.14	Nov 5 1985
INSTANTANEOUS LOW FLOW			3.1	Aug 29	2.9	Sep 10 1965
ANNUAL RUNOFF (CFSM)	2.13		1.90		2.34	
ANNUAL RUNOFF (INCHES)	29.00		25.75		31.85	
10 PERCENT EXCEEDS	349		310		380	
50 PERCENT EXCEEDS	110		58		100	
90 PERCENT EXCEEDS	35		20		20	

a Mar. 24-26.

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

POTOMAC RIVER BASIN

01595200 STONY RIVER NEAR MOUNT STORM, WV

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

DRAINAGE AREA.--48.8 mi².

WATER-DISCHARGE RECORDS

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

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

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

PEAK DISCHARGE FOR CURRENT YEAR.--Peak discharge, 2,210 ft³/s, Apr. 16, gage height, 7.36 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e8.5	14	e14	437	25	31	1320	58	20	6.5	8.0	4.3
2	e8.2	18	e14	203	31	32	1430	62	22	21	4.2	4.7
3	e7.8	33	e13	81	25	38	471	140	19	14	e6.0	15
4	e8.2	20	e13	78	27	69	142	113	17	8.9	e8.0	30
5	e8.0	18	e13	96	26	192	130	272	24	8.3	11	11
6	e7.5	19	e12	85	20	154	137	254	27	e7.0	19	7.3
7	e7.5	17	e12	78	18	31	292	126	24	e5.6	21	4.1
8	e8.0	15	e12	88	20	32	179	34	197	5.1	e6.0	9.6
9	e7.5	14	e11	121	20	42	108	38	281	5.2	e3.8	11
10	e7.5	e13	e11	168	24	42	299	50	163	4.2	e6.0	12
11	e8.0	e13	e11	144	20	44	299	46	56	2.3	9.8	9.7
12	e7.5	e13	32	91	20	38	1380	47	16	2.0	8.0	7.4
13	e7.8	e14	28	363	19	125	128	55	12	3.1	7.2	4.1
14	e8.2	e14	26	53	19	261	74	45	12	4.1	7.3	e4.0
15	e8.2	e15	37	42	17	243	66	36	16	4.3	3.3	e4.2
16	e7.0	e14	118	44	23	164	1200	34	12	2.0	3.0	e6.0
17	e6.8	e14	293	43	38	377	624	31	10	2.9	8.2	7.6
18	e6.5	e13	246	39	36	329	247	35	6.6	3.5	8.0	14
19	e7.5	e13	182	36	34	117	103	54	6.2	2.1	8.3	12
20	e8.0	e12	264	36	28	62	75	54	4.8	3.4	7.8	5.0
21	e9.0	e14	213	44	30	89	145	103	4.0	3.4	7.6	8.2
22	e10	e16	104	59	79	103	241	45	6.2	3.2	4.3	9.2
23	e11	e18	164	47	61	212	209	38	8.6	3.2	4.5	8.3
24	e12	e19	139	51	57	910	187	37	e10	1.7	12	8.2
25	e13	e18	190	54	51	746	119	38	10	5.4	12	11
26	14	e17	229	46	44	716	105	34	8.4	5.3	15	20
27	19	e16	68	47	37	1460	195	30	5.7	6.5	14	36
28	18	e16	48	44	33	847	176	24	9.1	7.9	14	21
29	17	e15	72	39	---	975	128	19	e14	14	10	14
30	16	e15	189	35	---	1130	59	17	7.6	7.5	e6.0	e12
31	15	---	249	37	---	1050	---	17	---	7.4	e5.0	---
TOTAL	308.2	480	3027	2829	882	10661	10268	1986	1029.2	181.0	268.3	330.9
MEAN	9.94	16.0	97.6	91.3	31.5	344	342	64.1	34.3	5.84	8.65	11.0
MAX	19	33	293	437	79	1460	1430	272	281	21	21	36
MIN	6.5	12	11	35	17	31	59	17	4.0	1.7	3.0	4.0

e Estimated

POTOMAC RIVER BASIN

01595200 STONY RIVER NEAR MOUNT STORM, WV--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1962 - 1993, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	51.3	91.0	113	112	135	216	161	115	71.1	46.1	28.4	30.1
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 1992 CALENDAR YEAR		FOR 1993 WATER YEAR		WATER YEARS 1962 - 1993	
ANNUAL TOTAL	29099.8		32250.6			
ANNUAL MEAN	(a) 79.5		(a) 88.4		(a) 97.4	
HIGHEST ANNUAL MEAN					134	
LOWEST ANNUAL MEAN					42.0	
HIGHEST DAILY MEAN	596	Feb 26	1460	Mar 27	9880	Nov 5 1985
LOWEST DAILY MEAN	6.5	Oct 18	1.7	Jul 24	1.3	Aug 28 1988
ANNUAL SEVEN-DAY MINIMUM	7.4	Oct 12	2.9	Jul 16	1.7	Aug 28 1988
INSTANTANEOUS PEAK FLOW			2210	Apr 16	(b) 14000	Nov 5 1985
INSTANTANEOUS PEAK STAGE			7.36	Apr 16	(c) 16.41	Nov 5 1985
INSTANTANEOUS LOW FLOW			1.7	(d)	1.3	(f)
10 PERCENT EXCEEDS	225		205		229	
50 PERCENT EXCEEDS	39		19		48	
90 PERCENT EXCEEDS	11		5.7		8.5	

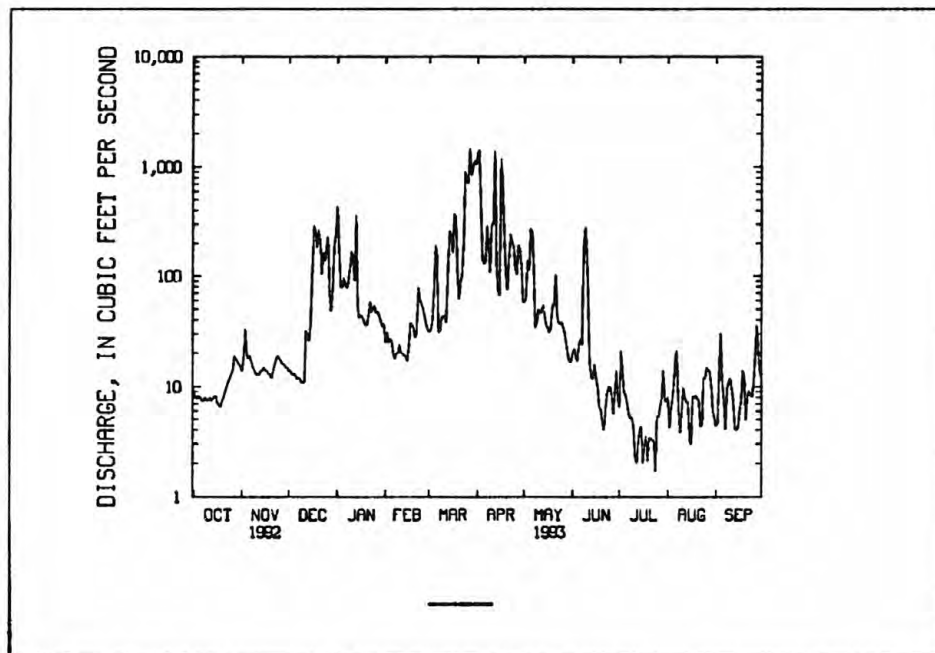
a Unadjusted.

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

c From floodmarks.

d July 24, 25.

f 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, 26.0°C, July 6; minimum, 1.5°C, Dec. 15-16.

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12.5	9.0	4.0	10.0	2.5	3.0	11.0	14.5	17.5	20.5	21.0	24.0
2	13.0	8.5	3.5	10.0	2.5	4.0	11.0	16.5	16.0	21.0	20.5	24.0
3	14.5	9.0	3.0	6.5	2.5	5.0	11.0	17.0	17.5	22.5	22.5	23.5
4	14.0	9.0	3.0	7.0	3.0	4.5	7.0	16.5	17.0	24.5	21.0	22.5
5	13.5	9.0	3.0	7.5	3.0	8.5	7.0	17.5	17.5	25.5	19.5	20.5
6	12.0	8.0	3.0	7.0	3.0	8.5	8.0	18.5	16.5	26.0	19.0	20.0
7	11.5	7.0	3.0	7.0	3.0	6.0	11.5	19.5	19.0	25.5	19.0	20.0
8	12.0	6.5	3.0	7.0	3.0	5.0	12.0	18.0	23.0	25.0	19.5	20.5
9	14.0	6.0	3.0	8.0	3.5	4.0	11.0	20.0	24.5	25.5	19.5	20.5
10	14.0	6.0	3.0	8.5	3.5	4.0	9.5	19.5	24.0	25.0	19.5	20.0
11	13.5	7.0	3.0	10.0	5.0	4.0	10.5	20.5	23.5	25.5	21.0	18.5
12	13.5	9.0	3.0	9.5	4.0	3.0	11.5	19.5	21.5	25.0	21.5	17.0
13	13.0	9.0	3.0	14.0	3.5	3.0	11.5	18.5	19.5	25.5	21.5	19.5
14	13.5	6.0	3.0	8.5	3.0	3.0	9.0	17.0	20.5	24.5	21.5	20.0
15	15.0	4.5	2.0	5.5	3.0	3.0	12.0	18.5	20.5	23.5	22.5	20.0
16	14.0	4.0	2.0	5.0	3.0	2.0	14.0	17.5	21.5	24.0	22.0	20.0
17	13.0	4.0	4.5	5.0	3.0	8.0	14.0	17.5	22.5	24.0	22.0	18.0
18	10.0	5.0	6.5	4.5	3.0	8.0	12.0	16.5	23.0	24.0	22.0	18.0
19	8.0	7.0	8.0	4.0	3.0	6.0	11.0	14.5	24.0	23.0	22.0	17.0
20	7.0	6.5	8.5	3.0	3.0	4.5	12.0	14.5	24.0	25.0	21.5	16.0
21	8.0	7.0	9.0	3.0	3.0	5.0	11.5	16.5	23.0	23.5	21.5	17.0
22	9.0	9.0	6.5	3.5	3.0	6.0	10.5	15.5	22.0	23.5	20.5	17.0
23	8.5	9.0	6.5	3.5	3.0	5.5	11.5	14.5	22.5	21.0	21.5	16.5
24	10.0	9.0	6.5	4.5	3.0	8.5	10.5	17.0	22.0	22.0	21.5	16.5
25	10.0	8.0	7.5	4.0	3.0	9.5	13.5	17.0	21.5	23.0	23.5	16.0
26	9.0	9.0	7.5	3.0	3.0	10	15.0	17.0	21.0	22.5	23.5	17.0
27	9.5	8.5	7.5	3.0	3.0	11	13.0	18.0	22.5	24.5	23.5	17.0
28	10.5	6.0	4.0	3.5	3.0	---	14.5	19.5	23.0	24.5	24.5	14.0
29	9.5	6.0	4.5	3.5	---	---	15.5	20.0	21.5	24.5	24.5	13.0
30	9.5	4.5	5.5	3.0	---	---	14.0	19.0	20.5	22.5	24.5	12.0
31	9.0	---	9.0	2.5	---	---	---	18.0	---	19.5	24.5	---
MAX	15.0	9.0	9.0	14.0	5.0	11.0	15.5	20.5	24.5	26.0	24.5	24.0

WTR YR 1993 MAX 26.0

POTOMAC RIVER BASIN

01595200 STONY RIVER NEAR MOUNT STORM, WV--Continued

WATER-QUALITY RECORDS

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MINIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11.0	8.5	3.5	9.0	2.5	3.0	11.0	12.5	15.0	19.5	18.0	21.5
2	10.5	8.0	3.0	6.5	2.5	3.0	11.0	13.5	13.5	19.5	18.5	20.5
3	12.0	8.5	3.0	6.0	2.5	4.5	7.0	15.5	14.5	19.5	18.5	21.5
4	13.0	8.0	3.0	6.5	2.5	4.5	5.5	16.0	16.0	20.5	18.5	20.5
5	12.0	8.0	3.0	7.0	3.0	2.5	6.0	16.0	15.5	21.0	18.5	18.5
6	10.0	7.0	3.0	7.0	3.0	6.0	6.0	17.5	15.5	23.0	17.5	18.5
7	10.0	6.5	3.0	7.0	3.0	4.0	7.5	17.0	15.0	22.5	17.0	18.0
8	10.0	6.0	3.0	7.0	3.0	4.0	11.0	15.0	18.0	22.0	17.0	19.0
9	12.0	4.0	3.0	7.0	3.0	4.0	9.0	16.5	23.0	21.5	17.0	18.5
10	13.0	4.0	3.0	8.0	3.0	3.0	9.0	17.0	23.5	22.5	18.0	18.5
11	13.0	5.5	3.0	8.5	3.5	3.0	9.0	18.0	21.5	22.0	18.0	15.5
12	12.0	7.0	3.0	8.5	3.5	3.0	10.5	18.0	18.5	22.5	18.5	13.5
13	11.5	6.0	3.0	8.5	3.0	3.0	9.0	17.0	18.5	22.0	19.0	15.5
14	11.0	4.5	2.0	5.5	3.0	3.0	8.5	13.5	16.0	21.5	18.5	17.0
15	13.5	3.0	1.5	5.0	3.0	2.0	9.0	15.0	17.5	22.5	19.0	18.5
16	12.0	3.0	1.5	5.0	3.0	2.0	10.5	16.5	17.0	19.0	19.5	18.0
17	10.0	3.0	2.0	4.5	3.0	2.0	10.0	15.0	17.5	18.5	20.0	17.0
18	8.0	4.0	4.5	4.0	3.0	6.0	10.0	14.5	18.5	18.5	20.0	17.0
19	7.0	5.0	6.5	3.0	3.0	4.5	9.5	14.5	21.0	21.0	19.0	15.0
20	5.0	5.5	7.5	2.5	3.0	4.0	10.0	13.5	20.5	21.5	19.0	14.5
21	5.5	5.5	6.5	2.5	3.0	5.0	10.5	14.0	20.5	21.0	19.0	15.0
22	7.5	7.0	6.5	2.5	3.0	4.5	10.0	14.0	19.5	19.5	18.0	16.0
23	7.0	9.0	6.5	3.0	3.0	5.0	9.5	13.5	18.5	18.0	18.0	16.0
24	8.0	7.5	4.5	3.5	3.0	5.0	10.0	14.0	17.0	17.5	18.5	15.0
25	8.5	7.5	4.5	2.5	3.0	5.0	11.0	16.5	18.0	19.0	20.5	14.5
26	7.0	8.0	7.5	2.5	3.0	5.0	10.5	16.0	18.0	20.5	21.0	14.5
27	9.0	6.0	3.5	2.5	3.0	7.0	10.5	14.5	16.5	21.5	21.0	14.0
28	9.5	6.0	3.5	2.5	3.0	---	11.5	17.0	18.0	21.0	21.5	12.0
29	8.0	4.5	3.5	3.0	---	---	13.0	19.0	19.0	22.5	21.5	12.0
30	9.0	4.0	4.5	2.5	---	---	12.5	14.5	18.0	19.5	21.5	11.0
31	9.0	---	5.5	2.5	---	---	---	16.5	---	18.5	20.5	---
MIN	5.0	3.0	1.5	2.5	2.5	2.0	5.5	12.5	13.5	17.5	17.0	11.0
WTR YR 1993	MIN 1.5											

POTOMAC RIVER BASIN

01598500 NORTH BRANCH POTOMAC RIVER AT LUKE, MD

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

DRAINAGE AREA.--404 mi².

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

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

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

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

PEAK DISCHARGE FOR CURRENT YEAR.--Peak discharge, 10,700 ft³/s, Apr. 1, gage height, 9.83 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	364	214	216	1340	606	481	9820	1020	336	281	216	223
2	363	226	230	1280	537	492	9260	944	333	319	217	218
3	362	240	256	1250	511	519	7350	793	332	287	215	221
4	360	220	262	1290	509	794	5520	792	330	282	214	232
5	347	219	268	1430	506	712	4090	795	338	280	214	219
6	324	219	263	1480	505	629	2050	889	329	278	231	218
7	314	216	262	1460	502	606	1520	925	330	259	222	217
8	315	215	261	1450	497	646	1330	782	356	233	216	223
9	316	214	261	1440	495	672	1290	693	329	236	215	220
10	314	214	277	1420	492	668	2070	663	330	236	215	221
11	314	214	266	1410	493	677	2980	611	350	235	219	217
12	312	217	264	1410	501	823	3330	611	332	228	222	216
13	311	219	264	1370	494	1020	3280	568	328	222	216	216
14	311	209	264	1430	491	995	1970	534	326	222	215	216
15	282	208	264	1420	488	1170	1450	682	325	222	215	219
16	254	208	352	1410	501	1450	4630	683	323	220	214	229
17	686	208	796	1390	508	1480	5340	467	320	219	215	222
18	792	208	1050	1380	494	1480	5180	412	319	219	214	222
19	250	209	1020	1090	477	1460	4170	422	317	219	223	218
20	248	208	1050	833	467	1450	2310	407	317	217	216	216
21	248	212	1060	841	474	1450	1800	402	317	216	216	222
22	248	219	1060	851	493	1480	1730	400	317	216	216	216
23	248	227	1120	861	490	1790	1690	399	300	216	223	216
24	249	221	1130	861	484	2720	1640	397	278	215	216	214
25	248	226	1100	859	486	3400	1540	394	277	215	216	213
26	247	221	1080	850	489	4440	1290	391	277	219	215	219
27	248	219	1070	847	484	6210	1020	390	277	215	216	236
28	238	218	1060	839	482	8200	1090	389	278	214	216	219
29	221	216	1060	788	---	7740	1180	514	279	254	216	215
30	214	216	1150	706	---	8240	1030	434	279	218	218	213
31	214	---	1350	650	---	8680	---	338	---	216	224	---
TOTAL	9762	6500	20386	35936	13956	72574	92950	18141	9479	7328	6736	6586
MEAN	315	217	658	1159	498	2341	3098	585	316	236	217	220
MAX	792	240	1350	1480	606	8680	9820	1020	356	319	231	236
MIN	214	208	216	650	467	481	1020	338	277	214	214	213

POTOMAC RIVER BASIN

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

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1950 - 1993, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	365	480	825	897	1100	1517	1191	902	507	321	307	267
MAX	1423	2806	2536	2276	2421	3414	3098	2238	1493	1294	1401	737
(WY)	1955	1986	1973	1952	1956	1963	1993	1988	1981	1990	1955	1971
MIN	45.5	91.8	131	166	322	467	374	165	108	91.4	61.4	66.9
(WY)	1952	1954	1954	1977	1978	1988	1990	1982	1969	1953	1951	1951

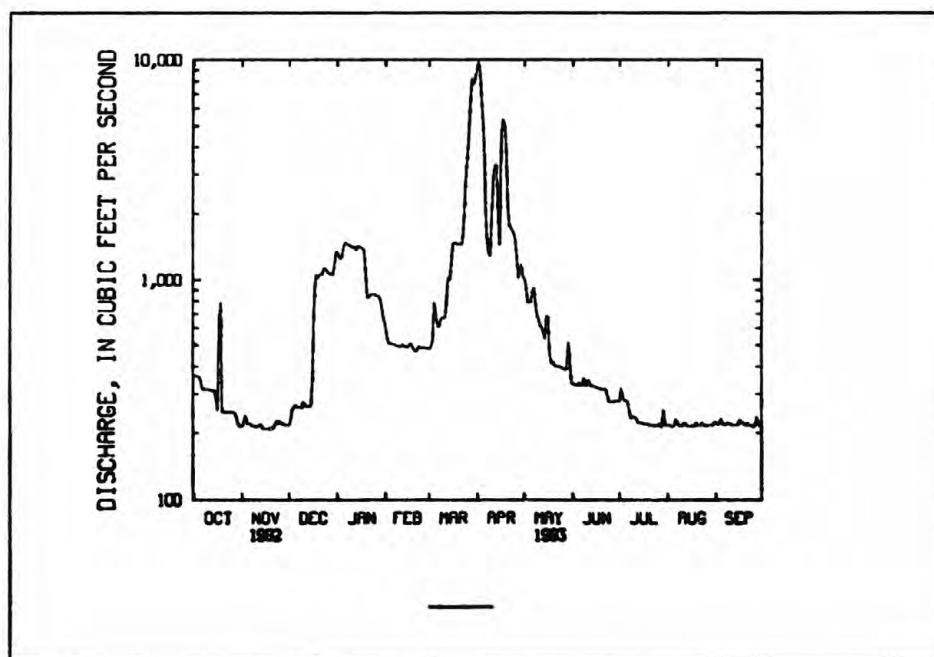
SUMMARY STATISTICS	FOR 1992 CALENDAR YEAR		FOR 1993 WATER YEAR		WATER YEARS 1950 - 1993	
ANNUAL TOTAL	226492		300334			
ANNUAL MEAN	619		823		722	
ANNUAL MEANZ	641		812		717	
HIGHEST ANNUAL MEAN					943	1972
LOWEST ANNUAL MEAN					412	1969
HIGHEST DAILY MEAN	3250	Jul 28	9820	Apr 1	18400	Aug 18 1955
LOWEST DAILY MEAN	208	(a)	208	(a)	36	Oct 20 1951
ANNUAL SEVEN-DAY MINIMUM	208	Nov 14	208	Nov 14	38	Oct 18 1951
INSTANTANEOUS PEAK FLOW			10700	Apr 1	(b) 39400	Oct 15 1954
INSTANTANEOUS PEAK STAGE			9.83	Apr 1	17.15	Oct 15 1954
INSTANTANEOUS LOW FLOW			162	(c)	UNKNOWN	
ANNUAL RUNOFF (CFSM)	1.53		2.04		1.79	
ANNUAL RUNOFF (CFSM)Z	1.59		2.01		1.77	
ANNUAL RUNOFF (INCHES)	20.86		27.65		24.27	
ANNUAL RUNOFF (INCHES)Z	21.53		27.28		24.10	
10 PERCENT EXCEEDS	1260		1460		1610	
50 PERCENT EXCEEDS	425		330		410	
90 PERCENT EXCEEDS	245		216		113	

Z Adjusted for change in reservoir contents since October 1949.

a Nov. 15-18, 20.

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

c Oct. 7, Aug. 23.



POTOMAC RIVER BASIN

01603000 NORTH BRANCH POTOMAC RIVER NEAR CUMBERLAND, MD

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

DRAINAGE AREA.--875 mi².

WATER-DISCHARGE RECORDS

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

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

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

REMARKS.--No estimated daily discharges. Water-discharge records good. Prior to July 1981 some regulation at low flow by Stony River Reservoir, 79 mi upstream from station. Low-flow regulation since December 1950 by Savage River Reservoir, 39 mi upstream from station (see station 01597500). Flow regulated by Jennings Randolph Lake, 43 mi upstream from station since July 1981. Prior to July 1957, small amount of inflow from industrial wastes and sewage from city of Cumberland from water diverted from Evitts Creek, mouth of which is downstream from station. Diversion to Chesapeake and Ohio Canal prior to 1935. National Weather Service gage height telemeter at station. U.S. Army Corps of Engineers satellite telemeter at gage. 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, 25,900 ft³/s, Apr. 16, gage height, 19.05 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	414	284	521	4470	1130	842	16900	1830	667	371	280	286
2	409	335	498	2960	951	906	15800	1710	620	713	289	278
3	406	805	510	2380	914	1180	11800	1560	608	647	283	280
4	404	580	508	2110	915	4690	7630	1490	595	466	279	371
5	401	463	541	2170	872	5090	6270	1600	649	413	270	317
6	378	441	524	2110	866	3000	3560	1500	621	387	309	277
7	359	408	511	1980	840	2260	2700	1530	566	368	389	261
8	353	377	490	1910	811	2460	2230	1430	1640	334	318	261
9	363	359	473	1850	801	3160	2090	1280	1510	311	285	281
10	359	346	496	1770	794	2730	4590	1240	1170	308	277	273
11	359	341	554	1730	792	2660	6000	1150	1020	302	394	274
12	358	372	658	1770	821	2160	5170	1100	833	302	434	263
13	355	877	683	1960	831	2310	4960	1120	715	291	353	257
14	352	744	658	2210	813	2090	3450	998	648	281	308	253
15	354	619	631	2130	782	1950	2540	972	601	281	290	256
16	318	538	682	2020	815	2170	12300	1060	566	278	281	315
17	304	484	1740	1920	928	2450	17700	1040	531	272	277	307
18	932	453	3420	1810	897	2640	9790	852	509	270	274	290
19	537	434	2520	1680	786	2470	6770	1140	489	272	268	279
20	303	422	2200	1260	809	2420	4110	974	467	274	271	267
21	302	416	2310	1360	818	2410	3610	890	457	272	263	267
22	308	526	2090	1610	865	2680	3980	850	454	268	258	273
23	298	731	2160	1710	999	4410	3520	809	439	264	255	264
24	303	729	2670	1670	911	9790	3080	783	404	260	258	263
25	302	776	2210	1660	837	9640	2740	759	381	261	251	272
26	297	731	1950	1540	866	10900	3000	731	373	270	249	343
27	299	687	1680	1510	862	12000	2800	710	367	345	247	530
28	300	640	1640	1450	845	15300	2460	692	359	285	245	594
29	288	593	1570	1390	---	14400	2320	678	370	434	246	390
30	280	549	1960	1220	---	13700	2110	767	374	376	245	335
31	284	---	5200	1160	---	13800	---	729	---	291	251	---
TOTAL	11279	16060	44258	58480	24171	158668	175980	33974	19003	10467	8897	9177
MEAN	364	535	1428	1886	863	5118	5866	1096	633	338	287	306
MAX	932	877	5200	4470	1130	15300	17700	1830	1640	713	434	594
MIN	280	284	473	1160	782	842	2090	678	359	260	245	253
CFSM	.42	.61	1.63	2.16	.99	5.85	6.70	1.25	.72	.39	.33	.35
IN.	.48	.68	1.88	2.49	1.03	6.75	7.48	1.44	.81	.44	.38	.39

POTOMAC RIVER BASIN

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

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1929 - 1993, BY WATER YEAR (WY)

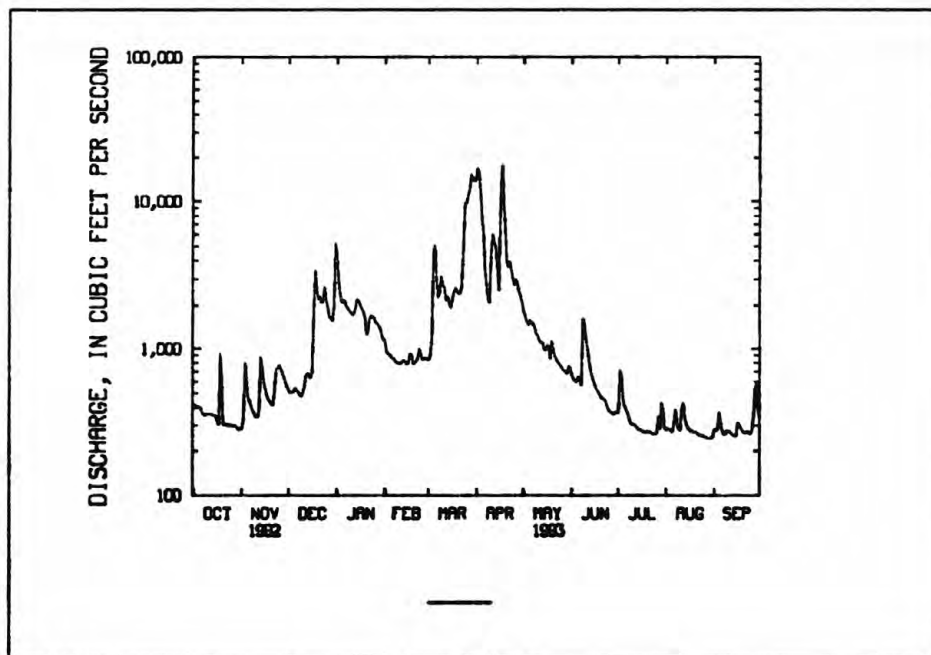
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	606	753	1293	1541	1966	2872	2388	1705	882	513	432	386
MAX	3791	5350	4652	5115	4125	8763	5866	3902	2375	2270	2028	2036
(WY)	1943	1986	1973	1937	1961	1936	1993	1988	1981	1989	1955	1945
MIN	28.9	44.8	134	269	393	789	723	374	209	89.7	57.7	40.3
(WY)	1931	1931	1931	1940	1934	1990	1968	1934	1965	1930	1930	1932

SUMMARY STATISTICS	FOR 1992 CALENDAR YEAR		FOR 1993 WATER YEAR		WATER YEARS 1929 - 1993	
ANNUAL TOTAL	384417		570414			
ANNUAL MEAN	1050		1563		1276	
ANNUAL MEANZ	1072		1552		1277	
HIGHEST ANNUAL MEAN					1801	
LOWEST ANNUAL MEAN					632	
HIGHEST DAILY MEAN	5400	Feb 27	17700	Apr 17	47400	Mar 18 1936
LOWEST DAILY MEAN	280	Oct 30	245	(a)	13	(b)
ANNUAL SEVEN-DAY MINIMUM	290	Oct 26	248	Aug 25	16	Sep 20 1932
INSTANTANEOUS PEAK FLOW			25900	Apr 16	(c) 88200	Mar 17 1936
INSTANTANEOUS PEAK STAGE			19.05	Apr 16	29.10	Mar 17 1936
INSTANTANEOUS LOW FLOW			242	Aug 30	12	Sep 22 1932
ANNUAL RUNOFF (CFSM)	1.20		1.79		1.46	
ANNUAL RUNOFF (CFSM) Z	1.26		1.77		1.46	
ANNUAL RUNOFF (INCHES)	16.34		24.25		19.82	
ANNUAL RUNOFF (INCHES) Z	16.63		24.08		19.82	
10 PERCENT EXCEEDS	2330		3000		2950	
50 PERCENT EXCEEDS	649		682		664	
90 PERCENT EXCEEDS	412		274		163	

Z Adjusted for change in reservoir contents since October 1981.

a Aug. 28, 30.

b Sept. 21-24, 1932.

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

POTOMAC RIVER BASIN

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

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1965-83, October 1992 to September 1993.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: October 1964 to September 1982.

SUSPENDED SEDIMENT DISCHARGE: October 1964 to September 1982.

REMARKS.--Water temperatures were measured in field at time of sampling.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURE (water years 1965-81): Maximum daily, 33.0°C, July 13, 14, 1966, July 16, 18, Aug. 19, 23, 1968, July 17, 1977; minimum daily, 0.0°C on many days during winter periods.

SEDIMENT CONCENTRATION: Maximum daily mean, 1,600 mg/L, Feb. 13, 1966, July 4, 1978; minimum daily mean, 1 mg/L, Jan. 17, 1975.

SEDIMENT LOAD: Maximum daily, 66,300 tons, July 4, 1978; minimum daily, 2.0 tons, Jan. 28, 1982.

WATER QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

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)	TEMPER- ATURE AIR (DEG C)	BARO- METRIC PRES- SURE (MM OF HG)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	HARD- NESS TOTAL (MG/L AS CAO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)
APR 1993												
08...	1230	2220	329	7.1	9.0	15.0	785	12.0	101	130	34	10
MAY												
06...	0930	1500	368	7.3	15.5	21.0	765	9.8	98	150	40	12
JUN												
07...	1100	562	582	7.6	18.0	25.0	765	9.5	100	240	68	18
JUL												
12...	1115	302	595	7.3	25.5	32.0	758	7.5	92	220	62	15
AUG												
10...	1300	272	656	7.7	23.0	29.0	766	9.0	105	250	72	16
SEP												
01...	1030	263	613	7.3	24.5	24.5	760	6.5	78	230	69	13

DATE	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY 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)	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, NITRATE DIS- SOLVED (MG/L AS NO3)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)
APR 1993											
08...	8.0	1.6	21	26	100	12	<0.10	5.5	198	4.8	<0.010
MAY											
06...	9.1	2.3	30	37	120	11	<0.10	5.5	222	--	<0.010
JUN											
07...	22	3.7	52	63	190	31	0.20	4.6	378	--	<0.010
JUL											
12...	31	4.6	52	63	170	43	0.20	3.5	384	--	<0.010
AUG											
10...	30	4.9	47	57	180	45	0.20	4.2	425	--	<0.010
SEP											
01...	37	4.0	54	65	180	52	0.20	4.1	404	--	<0.010

POTOMAC RIVER BASIN

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

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)	NITRO- GEN, AM- MONIA + ORGANIC DIS. (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)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDED TOTAL (MG/L AS C)
APR 1993											
08...	1.10	0.070	0.20	<0.20	<0.010	<0.010	<0.010	52	370	2.8	0.8
MAY											
06...	0.810	0.050	<0.20	<0.20	<0.010	<0.010	<0.010	27	320	2.7	0.6
JUN											
07...	0.670	0.030	0.20	<0.20	0.080	<0.010	<0.010	48	400	6.3	0.4
JUL											
12...	0.540	0.030	0.20	<0.20	0.020	<0.010	<0.010	39	170	7.0	0.2
AUG											
10...	0.620	0.010	0.20	0.20	0.110	0.060	0.060	42	230	7.5	--
SEP											
01...	0.640	0.060	0.30	0.20	0.060	0.040	0.030	62	300	9.6	0.4

SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

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)
APR 1993				
08...	1230	2220	16	96
MAY				
06...	0930	1500	6	24
JUN				
07...	1100	562	5	7.6
JUL				
12...	1115	302	2	1.6
AUG				
10...	1300	272	5	3.7
SEP				
01...	1030	263	12	8.5

POTOMAC RIVER BASIN

01604500 PATTERSON CREEK NEAR HEADSVILLE, WV

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

DRAINAGE AREA.--219 mi².

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

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

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

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

PEAK DISCHARGE FOR CURRENT YEAR.--Peak discharge, 8,730 ft³/s, Apr. 16, gage height, 11.25 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.9	e8.8	25	524	105	168	1060	386	31	14	12	6.5
2	7.7	e9.5	24	360	87	203	1440	325	30	20	10	8.8
3	7.5	e11	23	282	84	325	992	271	29	24	9.3	8.1
4	7.7	e12	22	231	80	2360	783	236	28	25	8.2	20
5	7.6	e13	23	204	72	2230	685	224	33	20	7.1	19
6	7.1	e18	21	173	68	1270	609	193	33	16	11	15
7	7.1	e16	22	149	64	993	533	161	30	13	24	13
8	7.6	e14	22	135	60	1050	470	139	49	12	21	12
9	7.2	e13	21	128	56	1010	416	124	47	9.9	18	12
10	7.1	e12	21	119	53	858	1190	112	45	8.4	15	12
11	7.6	e12	19	111	51	933	1090	102	44	7.8	14	10
12	7.1	e11	39	139	56	859	790	96	33	7.3	13	8.7
13	7.7	e11	66	213	61	755	658	95	29	6.9	15	8.2
14	7.7	e11	71	246	59	686	570	92	26	6.4	14	7.5
15	e7.7	e17	67	230	56	611	499	84	23	5.9	12	7.1
16	5.5	e16	88	206	66	562	5080	79	21	6.0	10	e7.0
17	5.3	e16	300	182	139	761	4620	75	19	5.6	9.5	e6.8
18	5.0	e15	545	154	189	904	1900	73	18	5.4	9.2	e7.8
19	5.9	e16	479	131	180	728	1140	91	17	5.6	8.3	e9.0
20	6.3	e15	405	110	167	653	846	86	17	6.1	7.6	e10
21	6.7	e15	465	121	145	707	852	76	17	6.1	7.4	e9.5
22	6.9	e16	391	218	268	962	1060	68	16	6.0	6.9	e11
23	e6.9	e17	410	349	485	1370	856	61	15	5.2	6.5	e13
24	e7.2	e27	582	334	381	2340	705	56	14	4.9	6.6	e14
25	e7.3	41	449	281	315	1590	615	53	13	4.9	5.5	e15
26	e7.5	35	356	230	261	1300	759	48	12	6.1	5.5	e20
27	e7.8	32	279	198	224	1130	750	44	13	12	5.2	e46
28	e8.0	31	230	173	191	1150	607	39	12	6.7	5.4	e67
29	e8.0	30	210	153	---	1130	521	36	12	22	4.8	e42
30	e8.0	27	279	128	---	988	451	32	13	13	4.9	e30
31	e8.5	---	748	113	---	838	---	31	---	13	5.1	---
TOTAL	223.1	538.3	6702	6325	4023	31424	32547	3588	739	325.2	312.0	476.0
MEAN	7.20	17.9	216	204	144	1014	1085	116	24.6	10.5	10.1	15.9
MAX	8.5	41	748	524	485	2360	5080	386	49	25	24	67
MIN	5.0	8.8	19	110	51	168	416	31	12	4.9	4.8	6.5
CFSM	.03	.08	.99	.93	.66	4.63	4.95	.53	.11	.05	.05	.07
IN.	.04	.09	1.14	1.07	.68	5.34	5.53	.61	.13	.06	.05	.08

e Estimated

POTOMAC RIVER BASIN

01604500 PATTERSON CREEK NEAR HEADSVILLE, WV--Continued

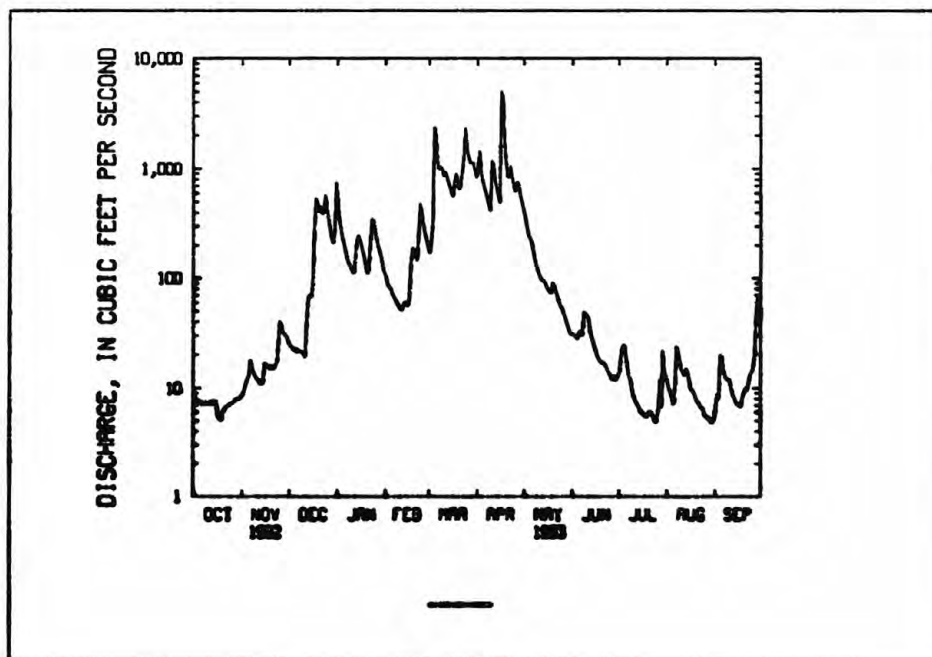
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1938 - 1993, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	78.1	80.3	161	195	297	420	321	219	107	59.5	49.0	39.3
MAX	745	901	825	558	752	1346	1085	763	379	415	475	395
(WY)	1943	1986	1973	1991	1971	1963	1993	1988	1940	1989	1955	1945
MIN	2.24	4.39	9.70	22.0	30.7	58.3	54.1	21.2	13.4	4.45	5.20	2.80
(WY)	1992	1992	1944	1981	1954	1990	1969	1969	1969	1966	1966	1991

SUMMARY STATISTICS	FOR 1992 CALENDAR YEAR		FOR 1993 WATER YEAR		WATER YEARS 1938 - 1993	
ANNUAL TOTAL	46788.3		87222.6			
ANNUAL MEAN	128		239		168	
HIGHEST ANNUAL MEAN					299	
LOWEST ANNUAL MEAN					35.1	
HIGHEST DAILY MEAN	983	Feb 26	5080	Apr 16	11100	Oct 15 1942
LOWEST DAILY MEAN	5.0	Oct 18	4.8	Aug 29	1.2	Aug 18 1988
ANNUAL SEVEN-DAY MINIMUM	5.9	Oct 16	5.2	Aug 25	1.7	Sep 5 1965
INSTANTANEOUS PEAK FLOW			8730	Apr 16	(a) 16000	Aug 19 1955
INSTANTANEOUS PEAK STAGE			11.25	Apr 16	12.20	Aug 19 1955
INSTANTANEOUS LOW FLOW			3.8	Aug 29	1.1	(b)
ANNUAL RUNOFF (CFSM)	.58		1.09		.77	
ANNUAL RUNOFF (INCHES)	7.95		14.82		10.44	
10 PERCENT EXCEEDS	376		760		426	
50 PERCENT EXCEEDS	52		32		58	
90 PERCENT EXCEEDS	9.8		7.1		9.6	

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

b Aug. 18, 19, 1988.



POTOMAC RIVER BASIN

01605500 SOUTH BRANCH POTOMAC RIVER AT FRANKLIN, WV

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

DRAINAGE AREA.--182 mi².

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

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

REMARKS.--Records good.

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)
Mar. 4	1100	4,080	5.97	Apr. 16	0900	*11,200	*9.71
Mar. 24	0100	4,520	6.23				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	31	35	78	132	101	90	1340	205	82	40	31	29
2	30	34	72	119	86	103	1110	193	73	44	30	28
3	30	67	67	111	87	143	809	178	71	42	31	27
4	31	50	62	105	84	1750	629	183	74	39	29	69
5	42	43	64	180	78	1020	535	191	111	38	29	51
6	35	47	55	191	79	662	473	169	83	37	48	36
7	32	42	57	175	75	512	395	157	70	35	67	32
8	31	37	54	183	73	530	340	146	66	33	40	31
9	32	35	48	191	71	520	307	138	63	32	35	31
10	33	33	53	180	69	453	574	134	61	32	33	34
11	31	32	63	170	67	396	593	131	58	31	31	30
12	30	35	58	193	75	331	512	127	56	31	31	28
13	30	135	54	204	74	296	423	181	55	30	40	27
14	29	83	53	196	69	258	362	146	56	30	34	26
15	29	67	55	181	65	263	315	131	53	33	31	27
16	29	57	103	166	70	219	4340	122	51	32	29	34
17	28	52	915	153	88	359	1720	138	49	30	32	46
18	28	49	678	136	83	546	960	122	48	29	34	66
19	29	46	390	122	70	411	693	186	47	30	31	53
20	29	44	358	107	75	358	545	156	46	34	29	41
21	29	43	300	115	81	439	504	142	46	30	29	67
22	29	61	245	194	141	662	489	129	46	29	27	67
23	29	461	232	176	164	1300	398	117	44	28	27	50
24	30	200	208	166	135	3120	341	109	41	29	27	45
25	30	164	174	162	116	2280	305	101	40	42	26	41
26	30	135	162	143	112	1730	331	96	39	37	29	51
27	29	126	134	139	105	1450	291	89	43	45	48	92
28	29	106	137	131	95	1290	252	85	40	36	37	123
29	29	93	148	125	---	1340	237	80	39	33	32	76
30	29	84	147	107	---	1040	222	77	38	30	32	61
31	34	---	140	102	---	849	---	75	---	30	30	---
TOTAL	946	2496	5364	4755	2488	24720	20345	4234	1689	1051	1039	1419
MEAN	30.5	83.2	173	153	88.9	797	678	137	56.3	33.9	33.5	47.3
MAX	42	461	915	204	164	3120	4340	205	111	45	67	123
MIN	28	32	48	102	65	90	222	75	38	28	26	26
CFSM	.17	.46	.95	.84	.49	4.38	3.73	.75	.31	.19	.18	.26
IN.	.19	.51	1.10	.97	.51	5.05	4.16	.87	.35	.21	.21	.29

POTOMAC RIVER BASIN

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

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 1993, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	82.5	137	156	192	246	393	293	218	134	69.6	75.7	66.2
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 1992 CALENDAR YEAR			FOR 1993 WATER YEAR			WATER YEARS 1940 - 1993		
ANNUAL TOTAL	57003			70546					
ANNUAL MEAN	156			193			170		
HIGHEST ANNUAL MEAN							304		
LOWEST ANNUAL MEAN							88.8		
HIGHEST DAILY MEAN	2530			Apr 22			25000		
LOWEST DAILY MEAN	28			(a)			14		
ANNUAL SEVEN-DAY MINIMUM	29			Oct 14			14		
INSTANTANEOUS PEAK FLOW							d44000		
INSTANTANEOUS PEAK STAGE							f22.58		
INSTANTANEOUS LOW FLOW							13		
ANNUAL RUNOFF (CFSM)	.86			1.06			.94		
ANNUAL RUNOFF (INCHES)	11.65			14.42			12.71		
10 PERCENT EXCEEDS	337			456			360		
50 PERCENT EXCEEDS	91			70			86		
90 PERCENT EXCEEDS	34			30			31		

a Oct. 17, 18.

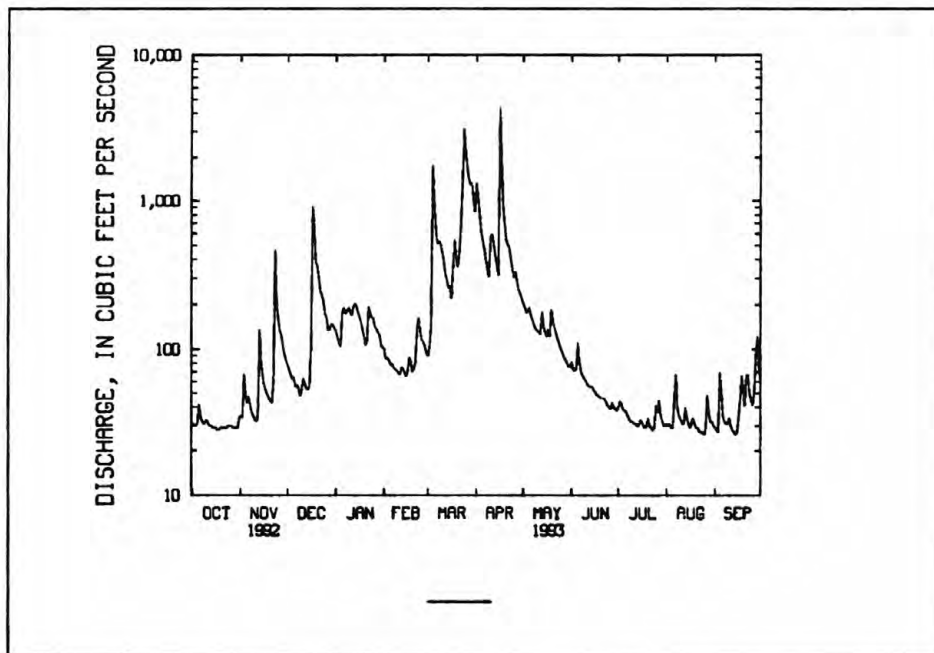
b Aug. 25, Sept. 14.

c Sept. 7-12, 1966.

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

f From floodmarks.

g Aug. 23-25, Sept. 3, 13-15.



POTOMAC RIVER BASIN

01606500 SOUTH BRANCH POTOMAC RIVER NEAR PETERSBURG, WV

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

DRAINAGE AREA.--642 mi².

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 sea level. Prior to Dec. 4, 1928, nonrecording gage at site 700 ft downstream and at different datum. June 1928 to Nov. 5, 1985, water-stage recorder at site 700 ft downstream at datum 6.34 ft lower.

REMARKS.--Records good. National Weather Service gage-height telemeter at station. Several measurements of water temperature were made during the year.

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

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

Date	Time	Discharge (ft ³ /s)	Gage Height (ft)	Date	Time	Discharge (ft ³ /s)	Gage Height (ft)
Mar. 24	0730	12,300	7.96	Apr. 1	1630	6,430	5.78
Mar. 29	0930	8,090	6.44	Apr. 16	1230	*20,800	*10.28

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	94	85	222	846	410	401	5960	1190	232	117	74	66
2	91	99	209	717	376	400	5660	1110	229	129	74	61
3	88	119	198	601	296	450	4090	1020	217	133	66	61
4	86	173	183	545	326	e2200	2910	970	220	129	55	71
5	84	167	180	525	320	e4250	2260	1010	318	117	51	114
6	88	143	186	725	288	2760	1970	938	427	111	67	134
7	92	137	174	677	285	2070	1660	815	248	103	117	98
8	90	133	173	635	271	2160	1440	740	849	95	170	81
9	89	121	162	672	251	2490	1360	674	662	87	120	75
10	86	111	152	663	238	2080	2310	614	383	80	95	74
11	84	104	169	616	228	1970	3210	615	284	79	87	73
12	80	105	188	707	233	1630	2570	602	231	77	108	71
13	79	126	189	904	247	1540	2090	894	209	76	96	63
14	78	317	180	952	249	1180	1730	928	198	72	90	56
15	76	234	174	869	233	1120	1480	795	194	71	76	53
16	75	191	197	781	226	951	11000	685	185	74	68	55
17	76	175	2200	715	297	1230	8380	677	171	72	68	67
18	74	161	3940	604	358	2470	4770	623	165	70	73	96
19	74	154	2190	531	304	1970	3110	867	156	69	75	156
20	74	148	1570	462	288	1700	2390	942	151	79	72	143
21	76	143	1700	427	326	1840	2080	834	148	78	70	122
22	77	148	1250	473	626	2860	2050	729	147	74	66	156
23	77	449	1100	558	978	4600	1840	608	144	68	58	168
24	78	568	1240	557	803	10200	1660	508	135	66	52	132
25	79	457	979	576	581	9590	1550	433	127	70	50	113
26	80	400	845	558	534	8240	1530	370	127	82	46	138
27	80	351	651	513	478	7040	1560	320	128	93	59	205
28	80	317	580	514	442	6520	1410	320	122	89	73	716
29	80	280	588	493	---	7320	1340	289	122	95	71	398
30	80	247	659	455	---	6140	1270	258	121	84	66	221
31	82	---	829	412	---	5070	---	240	---	77	66	---
TOTAL	2527	6363	23257	19283	10492	104442	86640	21618	7050	2716	2379	4037
MEAN	81.5	212	750	622	375	3369	2888	697	235	87.6	76.7	135
MAX	94	568	3940	952	978	10200	11000	1190	849	133	170	716
MIN	74	85	152	412	226	400	1270	240	121	66	46	53
CFSM	.13	.33	1.17	.97	.58	5.25	4.50	1.09	.37	.14	.12	.21
IN.	.15	.37	1.35	1.12	.61	6.05	5.02	1.25	.41	.16	.14	.23

e Estimated

POTOMAC RIVER BASIN

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

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1928 - 1993, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	337	477	700	873	1110	1592	1288	960	531	283	270	223
MAX	1863	5569	2511	2355	2880	4090	2888	2374	2175	1479	1290	1196
(WY)	1977	1986	1973	1937	1939	1936	1993	1989	1949	1949	1955	1950
MIN	49.3	62.7	95.1	143	212	543	398	233	128	70.5	54.1	52.3
(WY)	1931	1931	1966	1981	1934	1990	1986	1930	1991	1930	1930	1930

SUMMARY STATISTICS	FOR 1992 CALENDAR YEAR		FOR 1993 WATER YEAR		WATER YEARS 1928 - 1993	
ANNUAL TOTAL	231052		290804			
ANNUAL MEAN	631		797		718	
HIGHEST ANNUAL MEAN					1181	
LOWEST ANNUAL MEAN					365	
HIGHEST DAILY MEAN	8050	Apr 22	11000	Apr 16	77000	Nov 5 1985
LOWEST DAILY MEAN	74	(a)	46	Aug 26	43	(b)
ANNUAL SEVEN-DAY MINIMUM	75	Oct 15	57	Aug 21	44	Sep 6 1966
INSTANTANEOUS PEAK FLOW			20800	Apr 16	(c) 130000	Nov 5 1985
INSTANTANEOUS PEAK STAGE			10.28	Apr 16	(d) 21.80	Nov 5 1985
INSTANTANEOUS LOW FLOW			44	(f)	42	(g)
ANNUAL RUNOFF (CFSM)	.98		1.24		1.12	
ANNUAL RUNOFF (INCHES)	13.39		16.85		15.20	
10 PERCENT EXCEEDS	1450		2060		1610	
50 PERCENT EXCEEDS	386		233		370	
90 PERCENT EXCEEDS	104		73		95	

a Oct. 18-20.

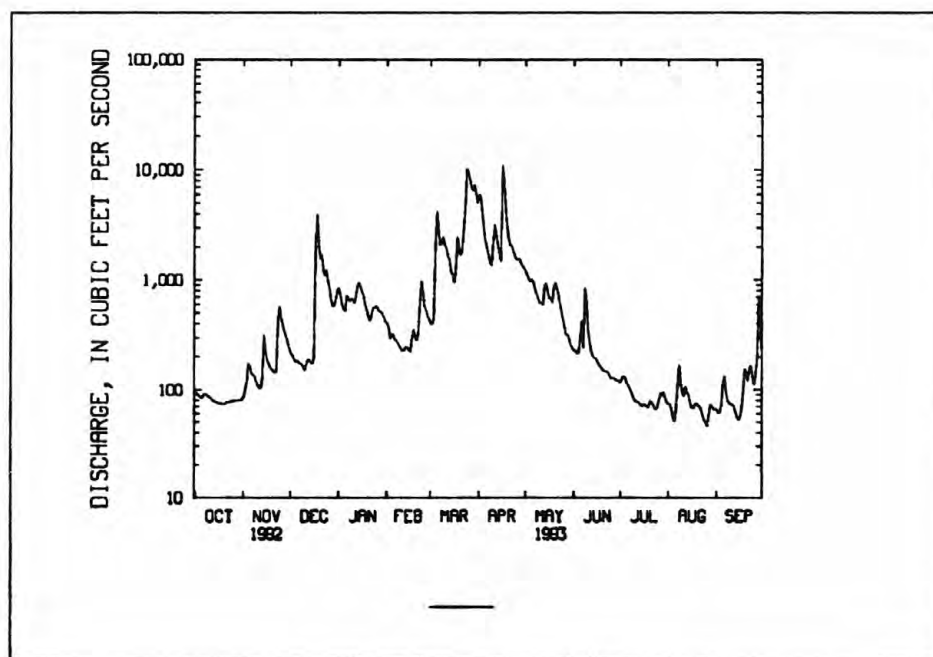
b Sept. 27-29, 1959, Sept. 11, 12, 1966.

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

d From floodmarks.

f Aug. 5, 26.

g 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 sea level. Prior to Sept. 24, 1956, nonrecording gage at highway bridge 50 ft downstream at same datum.

REMARKS.--Records good. 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, 3,660 ft³/s, Mar. 4, gage height, 5.91 ft.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.2	8.0	26	42	39	43	1270	120	37	8.7	5.9	5.0
2	5.9	8.4	23	40	30	46	947	108	32	9.9	5.8	4.8
3	5.9	11	20	37	29	56	448	98	29	9.7	5.7	4.6
4	6.0	12	18	36	28	1880	276	93	32	9.0	5.4	9.4
5	6.9	10	17	58	24	1700	209	100	51	9.6	5.4	10
6	7.0	12	15	94	24	1100	180	108	46	9.7	12	7.9
7	6.3	12	14	85	22	448	153	111	35	9.1	20	6.5
8	6.0	10	13	87	20	270	137	101	29	7.7	11	6.7
9	6.0	9.3	12	107	19	229	126	89	24	7.1	10	9.3
10	6.3	9.2	23	125	18	200	186	79	22	6.3	9.1	10
11	6.2	8.8	18	116	18	186	303	71	19	6.1	8.3	8.4
12	6.0	9.6	17	115	20	169	244	65	18	5.8	7.8	7.2
13	6.1	27	15	139	20	171	190	86	17	5.7	8.7	6.5
14	5.9	28	14	136	18	163	158	77	16	5.8	9.3	5.9
15	5.9	21	14	115	17	135	136	67	15	6.6	7.4	5.6
16	6.0	18	42	99	18	116	824	60	14	6.9	6.5	7.6
17	6.1	18	987	84	27	316	734	62	13	5.9	8.4	9.4
18	6.1	17	762	71	35	597	341	55	12	5.4	9.5	11
19	6.4	15	258	59	33	329	222	94	11	5.9	7.8	9.5
20	6.6	14	190	46	38	244	175	142	11	7.9	7.1	8.8
21	6.8	13	162	48	42	309	159	136	11	6.5	6.7	11
22	6.8	15	126	71	82	624	182	115	10	5.6	6.0	12
23	6.8	247	103	84	140	1040	191	95	9.5	5.1	5.6	11
24	7.1	162	85	88	108	1920	173	83	8.5	5.1	5.3	10
25	7.1	101	66	85	81	1290	152	72	7.9	10	5.1	10
26	7.1	72	59	70	73	770	161	65	7.6	9.0	5.8	11
27	7.1	55	45	66	63	471	185	57	8.5	11	5.7	24
28	7.1	44	46	61	51	566	176	50	7.7	9.3	5.2	40
29	7.0	36	43	55	---	1060	156	44	7.7	7.6	4.9	18
30	7.1	30	41	45	---	661	137	38	7.9	6.3	4.9	14
31	8.3	---	40	44	---	375	---	36	---	5.9	5.0	---
TOTAL	202.1	1053.3	3314	2408	1137	17484	8931	2577	569.3	230.2	231.3	315.1
MEAN	6.52	35.1	107	77.7	40.6	564	298	83.1	19.0	7.43	7.46	10.5
MAX	8.3	247	987	139	140	1920	1270	142	51	11	20	40
MIN	5.9	8.0	12	36	17	43	126	36	7.6	5.1	4.9	4.6
CFSM	.06	.34	1.05	.76	.40	5.53	2.92	.81	.19	.07	.07	.10
IN.	.07	.38	1.21	.88	.41	6.38	3.26	.94	.21	.08	.08	.11

POTOMAC RIVER BASIN

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

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1943 - 1993, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	62.2	84.9	108	117	144	224	168	124	72.7	30.9	37.1	38.9
MAX	340	965	473	311	351	564	583	324	570	220	301	242
(WY)	1973	1986	1974	1979	1979	1993	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 1992 CALENDAR YEAR		FOR 1993 WATER YEAR		WATER YEARS 1943 - 1993	
ANNUAL TOTAL	36287.9		38452.3			
ANNUAL MEAN	99.1		105		101	
HIGHEST ANNUAL MEAN					197	
LOWEST ANNUAL MEAN					38.6	
HIGHEST DAILY MEAN	2430	Apr 22	1920	Mar 24	7500	Nov 4 1985
LOWEST DAILY MEAN	5.9	(a)	4.6	Sep 3	1.3	Sep 10 1965
ANNUAL SEVEN-DAY MINIMUM	6.0	Oct 12	4.9	Aug 28	1.6	Sep 4 1965
INSTANTANEOUS PEAK FLOW			3660	Mar 4	b41200	Jun 17 1949
INSTANTANEOUS PEAK STAGE			5.91	Mar 4	c18.42	Nov 4 1985
INSTANTANEOUS LOW FLOW			4.3	(d)	.30	(f)
ANNUAL RUNOFF (CFSM)	.97		1.03		.99	
ANNUAL RUNOFF (INCHES)	13.23		14.02		13.43	
10 PERCENT EXCEEDS	206		204		215	
50 PERCENT EXCEEDS	37		22		39	
90 PERCENT EXCEEDS	7.1		6.0		7.2	

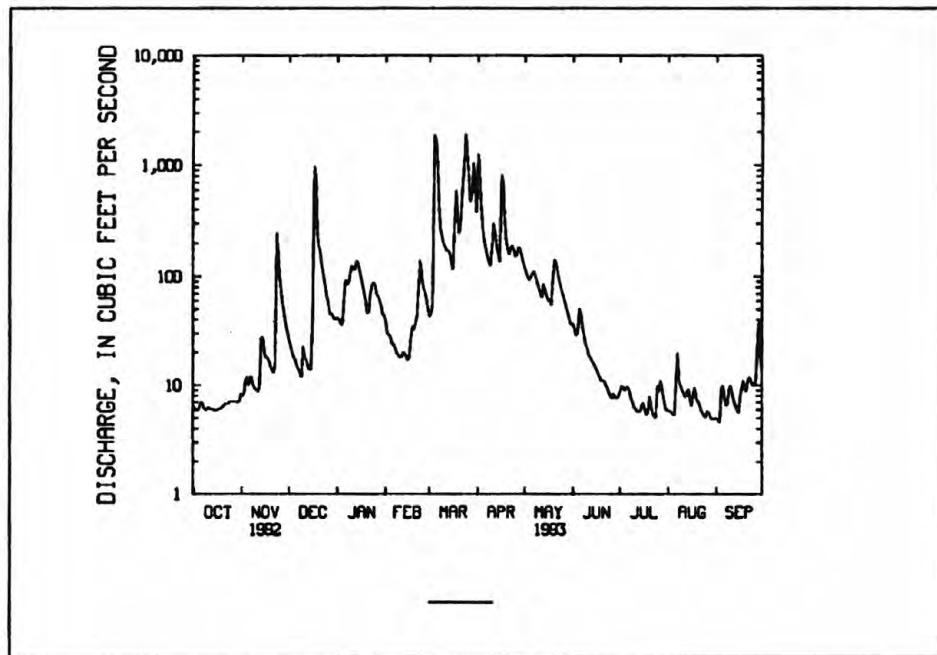
a Oct. 2, 3, 14, 15.

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

c From floodmarks.

d Sept. 2, 3.

f Dec. 1, 10, 1958.



POTOMAC RIVER BASIN

01608000 SOUTH FORK SOUTH BRANCH POTOMAC RIVER NEAR MOOREFIELD, WV

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

DRAINAGE AREA.--283 mi².

WATER-DISCHARGE RECORDS

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

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

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

REMARKS.--No estimated daily discharges. Water-discharge records good. 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, 4,400 ft³/s, Mar. 5, gage height, 6.09 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20	20	72	135	101	117	1990	373	56	23	21	15
2	19	21	61	122	90	106	2590	308	55	26	19	15
3	19	24	55	113	77	106	1520	262	52	25	19	16
4	19	23	51	104	73	1550	1020	230	51	26	18	28
5	18	23	48	103	70	3770	778	231	60	30	18	20
6	18	29	44	119	62	2300	639	216	61	23	24	18
7	18	26	43	145	57	1400	513	209	58	24	31	19
8	18	25	40	142	55	1000	430	199	292	22	32	19
9	18	27	37	152	54	903	376	182	225	21	35	21
10	17	25	40	182	51	787	512	166	111	20	27	20
11	17	24	55	202	51	716	904	156	79	19	24	18
12	17	23	66	204	52	650	842	149	65	18	23	18
13	17	26	50	258	54	636	676	157	57	18	21	19
14	17	26	45	301	54	678	542	158	49	18	21	18
15	16	49	44	274	50	465	449	142	45	17	19	17
16	16	47	44	234	50	396	1140	131	43	17	19	18
17	16	43	908	213	50	591	1990	123	41	17	20	20
18	16	40	1790	175	59	1420	1170	121	38	17	19	21
19	17	41	884	150	77	1090	820	124	37	18	19	23
20	17	39	690	129	77	845	627	152	35	19	19	22
21	17	40	648	117	93	864	546	155	36	18	20	24
22	17	38	449	124	124	1470	774	138	36	17	19	25
23	17	85	360	143	250	1980	816	124	32	17	18	25
24	18	311	348	160	279	3630	703	113	28	16	17	25
25	18	222	256	166	205	3010	578	102	26	16	17	25
26	17	162	196	155	174	2080	582	92	27	21	17	28
27	17	130	158	140	153	1470	657	84	26	32	16	33
28	18	110	137	133	134	1570	603	76	23	23	16	38
29	18	94	128	128	---	2290	526	69	23	24	18	48
30	18	81	126	116	---	1980	448	63	24	26	17	45
31	19	---	141	104	---	1280	---	60	---	22	16	---
TOTAL	544	1874	8014	4943	2676	41150	25761	4865	1791	650	639	701
MEAN	17.5	62.5	259	159	95.6	1327	859	157	59.7	21.0	20.6	23.4
MAX	20	311	1790	301	279	3770	2590	373	292	32	35	48
MIN	16	20	37	103	50	106	376	60	23	16	16	15
CFSM	.06	.22	.91	.56	.34	4.69	3.03	.55	.21	.07	.07	.08
IN.	.07	.25	1.05	.65	.35	5.41	3.39	.64	.24	.09	.08	.09

POTOMAC RIVER BASIN

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

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1928 - 1993, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	135	177	208	242	317	476	414	322	166	82.9	101	76.5
MAX	776	2951	879	716	892	1327	1787	946	1071	510	801	497
(WY)	1977	1986	1974	1991	1939	1993	1987	1988	1949	1949	1955	1945
MIN	12.8	17.1	17.4	21.3	25.2	72.2	91.7	51.2	28.1	13.7	10.4	10.2
(WY)	1992	1932	1966	1981	1934	1981	1981	1930	1977	1966	1965	1968

SUMMARY STATISTICS	FOR 1992 CALENDAR YEAR		FOR 1993 WATER YEAR		WATER YEARS 1928 - 1993	
ANNUAL TOTAL	67223		93608			
ANNUAL MEAN	184		256		226	
HIGHEST ANNUAL MEAN					418	
LOWEST ANNUAL MEAN					85.9	
HIGHEST DAILY MEAN	5330	Apr 22	3770	Mar 5	28000	Nov 5 1985
LOWEST DAILY MEAN	16	(a)	15	(b)	4.4	Sep 10 1966
ANNUAL SEVEN-DAY MINIMUM	16	Oct 12	16	Aug 27	5.3	Sep 5 1966
INSTANTANEOUS PEAK FLOW			4400	Mar 5	(c) 110000	Nov 5 1985
INSTANTANEOUS PEAK STAGE			6.09	Mar 5	(d) 19.99	Nov 5 1985
INSTANTANEOUS LOW FLOW			15	(f)	4.4	(g)
ANNUAL RUNOFF (CFSM)	.65		.91		.80	
ANNUAL RUNOFF (INCHES)	8.84		12.30		10.84	
10 PERCENT EXCEEDS	393		776		493	
50 PERCENT EXCEEDS	81		54		94	
90 PERCENT EXCEEDS	20		18		21	

a Oct. 15-18.

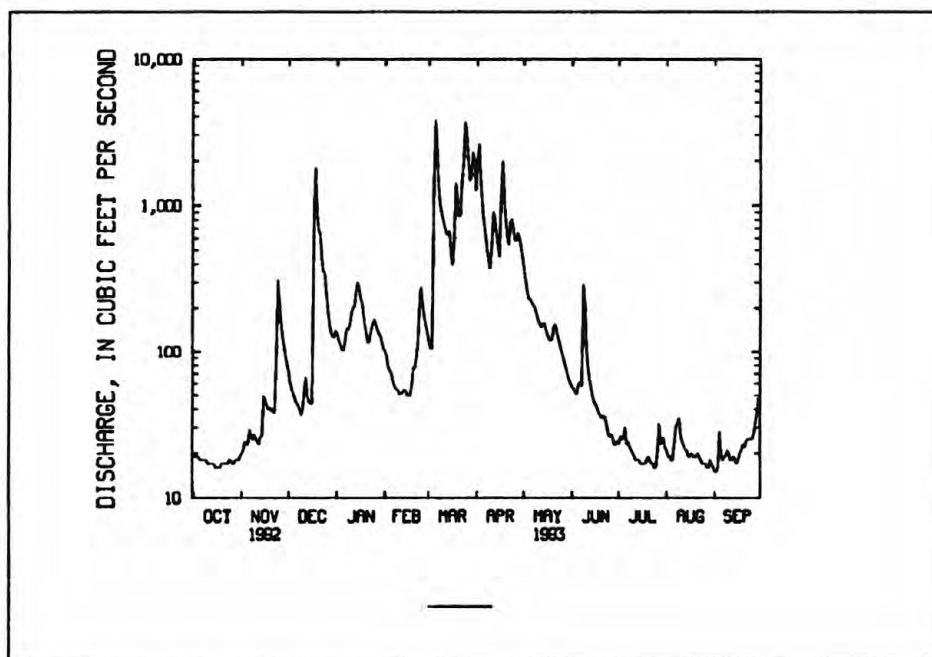
b Sept. 1, 2.

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

d From floodmarks.

f Sept. 1-3.

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



POTOMAC RIVER BASIN

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

WATER-QUALITY RECORDS

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1992 TO SPETEMBER 1993

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)	TEMPER- ATURE AIR (DEG C)	BARO- METRIC PRES- SURE (MM OF HG)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED SATUR- ATION)	HARD- NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)
JAN 1993												
14...	1230	303	121	5.9	5.5	--	747	11.9	96	--	--	--
APR												
07...	1100	514	141	7.5	8.5	10.0	760	11.3	97	68	21	3.8
MAY												
03...	1030	260	166	7.2	15.5	24.0	761	9.7	97	74	23	4.0
JUN												
02...	1315	54	206	8.0	19.5	22.0	753	9.1	100	92	29	4.8
JUL												
07...	1115	25	218	7.7	27.0	35.0	756	7.8	99	94	29	5.3
27...	1100	30	199	8.2	27.5	34.0	755	9.3	119	84	26	4.7
AUG												
11...	1215	24	238	8.6	27.0	31.0	758	10.5	133	92	28	5.3
30...	1130	18	225	8.1	25.5	30.0	756	9.0	111	100	31	5.7

DATE	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY WAT DIS TOT IT FIELD (MG/L AS CACO3)	BICAR- BONATE WATER DIS IT FIELD (MG/L AS HCO3)	CAR- BONATE WATER DIS IT FIELD (MG/L AS CO3)	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, NITRATE DIS- SOLVED (MG/L AS NO3)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)
JAN 1993												
14...	--	--	--	--	--	--	--	--	--	--	--	--
APR												
07...	2.0	1.1	60	73	--	15	2.9	<0.10	5.1	101	--	<0.010
MAY												
03...	2.1	1.3	49	60	--	16	2.5	<0.10	4.5	93	--	<0.010
JUN												
02...	2.4	1.4	68	83	--	18	2.9	<0.10	5.3	116	4.8	0.020
JUL												
07...	2.6	1.6	78	95	--	20	2.8	<0.10	6.7	122	--	<0.010
27...	2.1	1.5	76	93	--	20	2.5	<0.10	6.0	118	0.75	0.020
AUG												
11...	2.4	1.6	79	94	1	22	2.7	0.10	6.4	119	--	<0.010
30...	2.9	1.8	84	97	2	21	2.4	<0.10	7.5	127	--	<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)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (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)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDED TOTAL (MG/L AS C)
JAN 1993											
14...	--	--	--	--	--	--	--	--	--	--	--
APR											
07...	1.70	0.020	<0.20	<0.20	<0.010	<0.010	<0.010	10	3	1.7	0.2
MAY											
03...	1.10	0.010	0.30	<0.20	0.010	<0.010	<0.010	18	3	1.6	0.2
JUN											
02...	1.10	0.020	<0.20	<0.20	<0.010	<0.010	<0.010	10	3	1.4	0.1
JUL											
07...	0.400	0.030	<0.20	<0.20	<0.010	<0.010	<0.010	12	5	1.3	0.2
27...	0.190	0.020	<0.20	<0.20	<0.010	<0.010	<0.010	9	4	1.8	0.1
AUG											
11...	0.150	0.020	<0.20	<0.20	<0.010	0.020	<0.010	10	5	1.5	0.1
30...	0.078	0.020	<0.20	<0.20	0.010	<0.010	<0.010	11	5	1.6	0.2

POTOMAC RIVER BASIN

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

SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)
APR 1993				
07...	1100	514	1	1.4
MAY				
03...	1030	260	1	0.70
JUN				
02...	1315	54	1	0.15
JUL				
07...	1115	25	1	0.07
27...	1100	30	1	0.08
AUG				
11...	1215	24	1	0.06
30...	1130	18	3	0.15

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.

WATER-DISCHARGE RECORDS

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

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

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

REMARKS.--No estimated daily discharges. Records good. 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)
Mar. 5	0715	21,100	14.39	Apr. 2	0830	15,300	12.08
Mar. 25	0215	19,400	13.73	Apr. 17	0645	*34,500	*18.26
Mar. 29	2300	14,700	11.76				

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	127	120	416	2190	903	953	8250	1900	425	188	128	124
2	120	130	376	1510	870	888	13800	1710	401	190	113	119
3	117	154	342	1250	824	907	8910	1540	393	204	106	118
4	114	172	314	1080	750	5870	5630	1420	384	218	98	187
5	111	192	299	1000	707	17100	3990	1410	389	199	95	190
6	106	246	283	951	672	8700	3260	1400	433	181	105	161
7	104	223	272	1050	626	5390	2740	1280	551	181	126	151
8	104	197	269	1050	581	4500	2330	1180	569	157	150	187
9	112	183	250	1020	543	4550	2090	1110	1470	142	187	163
10	107	177	286	1050	506	3910	2880	1060	1000	129	217	140
11	106	169	439	1070	477	3920	6210	994	750	120	175	126
12	103	159	535	1080	451	3580	4930	970	541	113	152	112
13	103	159	633	1250	437	3000	3790	987	438	107	176	102
14	101	152	586	1540	432	2650	3020	1130	376	101	161	98
15	98	222	374	1550	429	2290	2540	1100	337	98	141	94
16	95	357	324	1420	417	2040	5450	1000	312	98	127	94
17	96	300	449	1290	451	2510	24900	955	285	95	121	89
18	95	265	3450	1180	636	5310	10300	934	262	92	111	100
19	92	242	4500	1060	741	4790	6060	990	242	93	109	110
20	93	223	2850	939	702	3570	4160	1080	222	94	103	125
21	96	216	2750	853	656	3370	3440	1090	227	95	107	205
22	101	224	2450	894	707	5850	4950	1020	221	99	112	206
23	101	244	1960	1080	1440	7700	4200	949	221	98	109	174
24	105	372	2090	1240	1880	15300	3240	882	211	94	102	212
25	106	1020	1980	1200	1580	17800	2730	798	197	87	94	222
26	108	839	1590	1160	1270	14300	2910	712	184	87	88	207
27	111	724	1330	1090	1160	11200	3460	641	178	113	85	240
28	110	607	1120	1020	1050	10600	2730	584	195	148	80	395
29	114	538	1040	1020	---	11800	2340	524	187	183	77	577
30	114	469	1050	997	---	12400	2090	474	174	142	88	566
31	117	---	2110	953	---	8920	---	458	---	141	112	---
TOTAL	3287	9295	36717	36037	21898	205668	157330	32282	11775	4087	3755	5594
MEAN	106	310	1184	1162	782	6634	5244	1041	392	132	121	186
MAX	127	1020	4500	2190	1880	17800	24900	1900	1470	218	217	577
MIN	92	120	250	853	417	888	2090	458	174	87	77	89
CFSM	.07	.21	.81	.79	.53	4.51	3.57	.71	.27	.09	.08	.13
IN.	.08	.24	.93	.91	.55	5.20	3.98	.82	.30	.10	.09	.14

POTOMAC RIVER BASIN

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

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1899 - 1993, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	642	844	1230	1537	1970	2946	2408	1759	1022	516	500	394
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

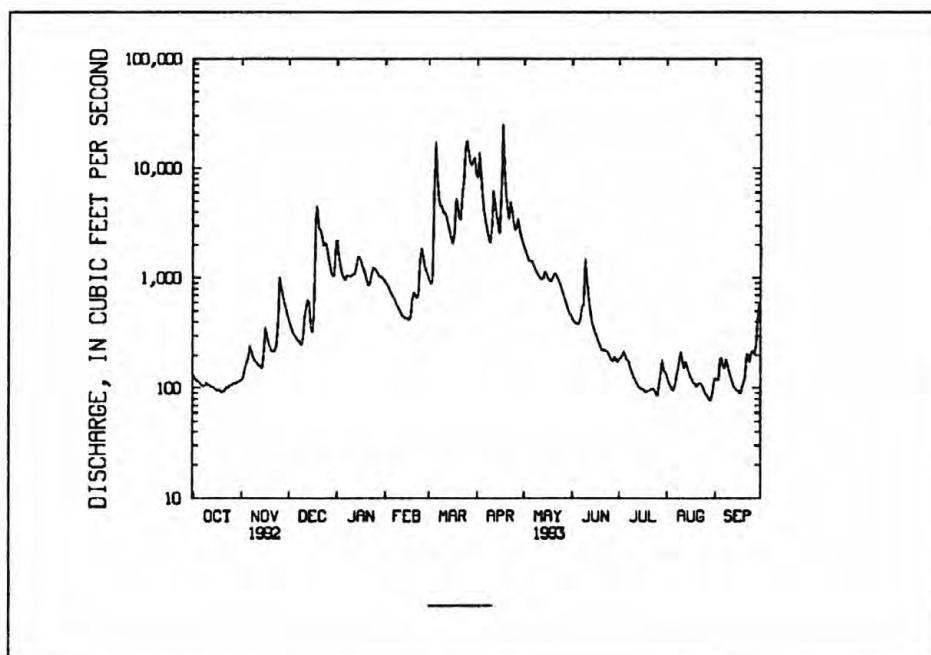
SUMMARY STATISTICS	FOR 1992 CALENDAR YEAR				FOR 1993 WATER YEAR				WATER YEARS 1899 - 1993			
ANNUAL TOTAL	370705				527725				1310			
ANNUAL MEAN	1013				1446				2232			
HIGHEST ANNUAL MEAN									1973			
LOWEST ANNUAL MEAN									566			
HIGHEST DAILY MEAN	11200				24900				145000			
LOWEST DAILY MEAN	92				77				52			
ANNUAL SEVEN-DAY MINIMUM	95				88				54			
INSTANTANEOUS PEAK FLOW					34500				(b) 240000			
INSTANTANEOUS PEAK STAGE					18.26				(c) 44.22			
INSTANTANEOUS LOW FLOW					72				29			
ANNUAL RUNOFF (CFSM)	.69				.98				.89			
ANNUAL RUNOFF (INCHES)	9.37				13.35				12.10			
10 PERCENT EXCEEDS	2250				3660				2970			
50 PERCENT EXCEEDS	605				433				632			
90 PERCENT EXCEEDS	135				102				151			
040	1020	---	11800	2340	524	187	183	77	577			

a Sept. 11, 12, 1966.

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

c From floodmarks.

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



POTOMAC RIVER BASIN

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

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1960-61, 1963, 1965, 1969, 1976-80, 1993.

WATER QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

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)	TEMPER- ATURE AIR (DEG C)	BARO- METRIC PRES- SURE (MM OF HG)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, (PER- CENT SATUR- ATION)	HARD- NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)
APR 1993												
12...	1330	4860	154	7.5	11.0	13.0	757	10.4	95	64	20	3.4
MAY												
05...	0930	1400	206	7.6	18.0	23.0	765	8.4	88	93	30	4.5
JUN												
03...	1315	392	247	7.9	20.5	24.0	759	9.6	107	110	36	5.2
JUL												
08...	1045	159	231	8.4	29.5	35.0	762	8.1	106	97	29	5.9
AUG												
12...	1400	152	--	8.7	28.5	32.0	763	11.3	--	110	34	6.4
31...	1245	114	243	8.0	28.5	31.0	763	7.0	90	110	32	6.6

DATE	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 CACO3	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3	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, NITRATE DIS- SOLVED (MG/L AS NO3)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)
APR 1993												
12...	2.2	1.3	44	54	--	19	2.7	<0.10	5.6	95	--	<0.010
MAY												
05...	2.7	1.3	68	83	--	23	3.8	<0.10	2.5	114	--	<0.010
JUN												
03...	2.9	1.5	86	105	--	24	4.2	<0.10	2.6	149	--	<0.010
JUL												
08...	4.6	2.1	64	78	--	32	6.5	<0.10	6.7	141	--	<0.010
AUG												
12...	5.5	2.6	85	94	5	32	8.1	0.10	5.6	158	2.5	0.010
31...	5.5	2.3	78	95	--	33	7.0	0.10	6.2	148	--	<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)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N)	PHOS- PHORUS TOTAL PHORUS (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)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDE TOTAL (MG/L AS C)
APR 1993											
12...	0.810	0.010	0.20	<0.20	0.020	<0.010	<0.010	29	6	2.5	0.7
MAY											
05...	0.860	<0.010	<0.20	<0.20	<0.010	<0.010	<0.010	15	4	1.7	0.3
JUN											
03...	0.890	0.040	0.20	<0.20	<0.010	<0.010	<0.010	9	5	1.6	0.2
JUL											
08...	0.540	0.020	0.20	<0.20	<0.010	<0.010	<0.010	14	4	2.0	0.2
AUG											
12...	0.580	0.040	<0.20	0.30	0.030	0.010	0.010	9	8	2.2	0.1
31...	<0.050	0.030	0.30	0.20	0.020	<0.010	<0.010	14	15	2.6	0.2

POTOMAC RIVER BASIN

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

SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

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)
APR 1993				
12...	1330	4860	23	302
MAY				
05...	0930	1400	4	15
JUN				
03...	1315	392	1	1.1
JUL				
08...	1045	159	2	0.86
AUG				
12...	1400	152	1	0.41
31...	1245	114	5	1.5

POTOMAC RIVER BASIN

01610000 POTOMAC RIVER AT PAW PAW, WV

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

DRAINAGE AREA.--3,109 mi².

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

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

REMARKS.--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)
Mar. 5	0500	42,300	22.90	Apr. 2	0915	39,000	21.90
Mar. 25	0145	36,400	21.08	Apr. 11	0515	20,700	15.82
Mar. 30	0015	31,300	19.44	Apr. 17	1245	*71,300	*30.62

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	698	487	1220	11600	2520	2290	26300	5630	1390	695	526	404
2	685	517	1140	7210	2240	2300	36700	5090	1300	817	501	487
3	675	888	1070	5560	2020	3040	26200	4550	1220	1370	529	514
4	667	1310	1050	4730	1990	13700	17300	4120	1200	1020	494	738
5	655	930	1030	4490	1860	35400	13400	4190	1210	864	487	753
6	643	859	1040	4360	1830	18400	9880	4160	1270	789	491	614
7	610	867	979	4110	1760	12200	7760	3840	1260	722	639	544
8	600	775	957	3960	1670	10700	6530	3550	2500	672	641	535
9	596	709	915	3810	1600	11300	5860	3230	2930	593	585	544
10	611	673	890	3690	1570	10300	10300	2990	3050	558	587	544
11	599	650	e1100	3600	1540	9690	18800	2820	2410	533	593	498
12	590	642	e1900	3700	1580	8890	14300	2640	1990	511	779	492
13	575	1010	1870	4390	1650	7880	11900	2690	1580	505	709	483
14	562	1400	1850	5390	1620	7210	9470	2660	1390	495	632	461
15	554	1130	1690	5260	1560	6220	7460	2590	1260	491	565	445
16	546	1130	1620	4850	1620	5910	21100	2520	1150	484	522	448
17	491	1060	3150	4460	2070	7060	62700	2470	1080	477	498	540
18	691	966	10500	4100	2450	10800	30900	2210	1010	472	495	512
19	1150	905	10100	3720	2220	10200	17700	2630	972	466	492	492
20	560	859	7080	3080	2150	8510	12500	2660	911	464	474	491
21	479	835	7170	2790	2100	8240	10400	2480	896	460	456	492
22	480	947	6520	4070	2210	11600	15700	2290	873	458	449	586
23	485	1510	5760	4690	3790	15500	13500	2130	836	455	442	560
24	491	1680	6780	4760	4020	32800	10200	2000	807	453	441	521
25	509	2140	6240	4450	3300	33500	8530	1890	752	453	438	578
26	494	2110	5210	4000	2930	29300	9170	1760	724	450	425	642
27	493	1840	4300	3720	2700	26100	11500	1650	707	454	412	778
28	497	1640	3860	3490	2480	27600	8680	1550	697	541	406	1270
29	497	1470	3660	3310	---	30000	7350	1480	713	634	396	1170
30	486	1340	3880	2940	---	29200	6470	1490	700	772	395	1160
31	481	---	10500	2680	---	25500	---	1400	---	588	395	---
TOTAL	18150	33279	115031	136970	61050	471340	468560	87360	39788	18716	15894	18296
MEAN	585	1109	3711	4418	2180	15200	15620	2818	1326	604	513	610
MAX	1150	2140	10500	11600	4020	35400	62700	5630	3930	1370	779	1270
MIN	479	487	890	2680	1540	2290	5860	1400	697	450	395	404
CFSM	.19	.36	1.19	1.42	.70	4.89	5.02	.91	.43	.19	.16	.20
IN.	.22	.40	1.38	1.64	.73	5.64	5.61	1.05	.48	.22	.19	.22

e Estimated

POTOMAC RIVER BASIN

01610000 POTOMAC RIVER AT PAW PAW, WV--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 1993, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1570	1967	3288	3799	5178	7340	6107	4393	2549	1331	1165	984
MAX	9709	17180	12300	9099	11440	17120	15620	10450	7612	5071	6458	5012
(WY)	1977	1986	1973	1991	1939	1963	1993	1988	1972	1949	1955	1945
MIN	261	327	388	679	1116	2043	2258	1074	544	303	278	252
(WY)	1952	1966	1966	1981	1954	1990	1968	1941	1965	1966	1944	1959

SUMMARY STATISTICS	FOR 1992 CALENDAR YEAR		FOR 1993 WATER YEAR		WATER YEARS 1939 - 1993	
ANNUAL TOTAL	971660		1484434			
ANNUAL MEAN	2655		4067		3297	
HIGHEST ANNUAL MEAN					5080	1973
LOWEST ANNUAL MEAN					1499	1969
HIGHEST DAILY MEAN	17600	Apr 23	62700	Apr 17	125000	Nov 6 1985
LOWEST DAILY MEAN	479	Oct 21	395	(a)	172	(b)
ANNUAL SEVEN-DAY MINIMUM	490	Oct 21	405	Aug 26	179	Sep 7 1966
INSTANTANEOUS PEAK FLOW			71300	Apr 17	(c) 235000	Nov 5 1985
INSTANTANEOUS PEAK STAGE			30.62	Apr 17	53.58	Nov 5 1985
INSTANTANEOUS LOW FLOW			395	(d)	164	(f)
ANNUAL RUNOFF (CFSM)	.85		1.31		1.06	
ANNUAL RUNOFF (INCHES)	11.63		17.76		14.41	
10 PERCENT EXCEEDS	6250		10400		7470	

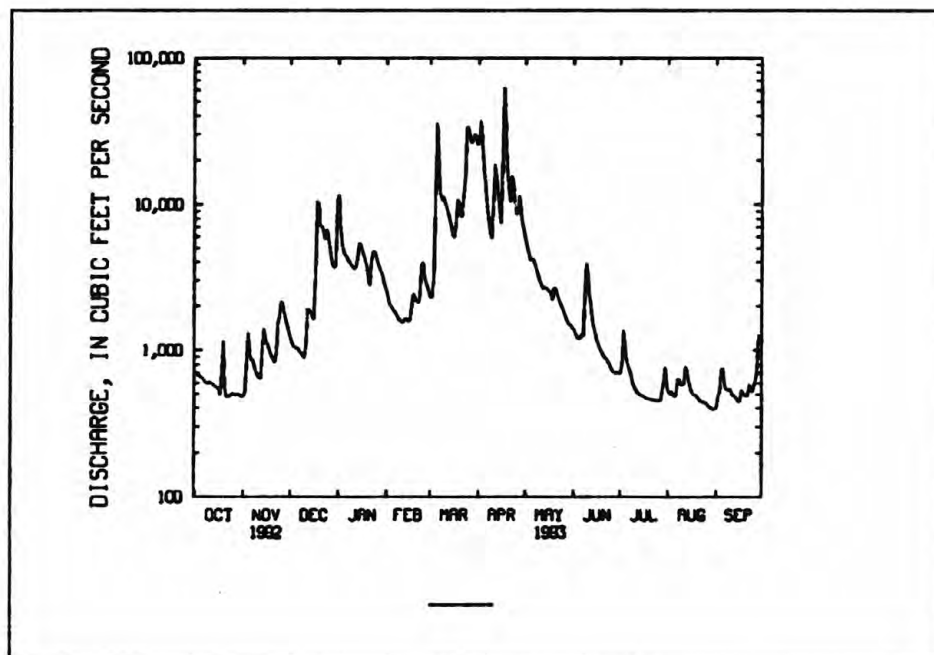
a Aug. 30, 31.

b Sept. 10, 12, 13, 1966.

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

d Aug. 30, 31.

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 sea level. (U.S. Army Corps of Engineers bench mark). Prior to Nov. 10, 1933, nonrecording gage at same site and datum. National Weather Service gage-height telemeter at the station.

REMARKS.--No estimated daily discharges. Records good. 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)
Dec. 18	1630	4,270	7.12	Mar. 29	2300	5,740	8.16
Jan. 1	0500	6,620	8.75	Apr. 2	1415	11,900	11.70
Mar. 5	0730	*26,000	*16.96	Apr. 17	0400	9,680	10.58
Mar. 18	1500	3,920	6.85	Apr. 22	1845	6,590	8.73
Mar. 22	1530	4,740	7.47	Apr. 27	0815	4,750	7.48
Mar. 24	1630	9,870	10.68				

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	142	79	267	5340	395	366	3030	1480	192	111	112	108
2	126	86	242	2460	374	352	9130	1260	175	125	105	106
3	115	106	224	1620	322	554	5460	1090	168	165	100	85
4	108	142	209	1250	295	4890	3000	956	165	150	89	315
5	101	259	198	1050	311	19000	2240	923	170	188	83	438
6	95	236	185	965	294	6350	1820	901	171	176	88	269
7	90	182	173	806	279	3740	1560	815	171	154	97	186
8	86	161	163	692	266	2930	1330	706	237	147	100	148
9	82	148	156	650	251	2730	1160	637	315	152	99	122
10	81	137	166	645	242	2400	1310	587	251	135	108	109
11	79	128	171	591	238	2260	2780	539	267	114	101	117
12	84	124	247	567	247	2110	2630	501	248	101	92	130
13	83	124	311	866	261	1890	2170	630	192	92	86	109
14	78	121	353	1350	264	1650	1750	595	164	88	88	96
15	74	135	359	1220	259	1470	1490	545	149	84	82	86
16	71	171	331	1030	257	1390	2650	459	138	80	78	82
17	70	152	443	896	278	1490	7460	413	130	78	77	82
18	67	144	2870	783	429	3270	3620	413	126	76	76	88
19	65	140	2860	664	465	2800	2440	438	122	82	75	81
20	63	137	2000	557	379	2100	1920	472	116	83	70	77
21	63	135	2470	483	373	2070	1680	450	110	80	71	80
22	66	141	2280	571	398	4130	4560	369	126	86	71	81
23	67	170	1700	862	454	4970	4830	329	120	80	69	84
24	68	1250	2070	863	716	8620	3010	306	109	80	66	80
25	71	805	2160	785	567	7610	2270	286	105	80	63	79
26	71	594	1530	701	478	4880	2130	265	100	79	61	91
27	73	478	1140	591	456	3420	4080	245	106	77	61	107
28	77	397	886	545	416	4440	2730	227	110	77	59	110
29	85	340	848	538	---	5220	2120	211	112	214	57	112
30	79	298	1040	486	---	5030	1750	194	114	183	59	115
31	79	---	3910	426	---	3430	---	190	---	131	60	---
TOTAL	2559	7520	31962	30853	9964	117562	88110	17432	4779	3548	2503	3773
MEAN	82.5	251	1031	995	356	3792	2937	562	159	114	80.7	126
MAX	142	1250	3910	5340	716	19000	9130	1480	315	214	112	438
MIN	63	79	156	426	238	352	1160	190	100	76	57	77
CFSM	.12	.37	1.52	1.47	.53	5.60	4.34	.83	.24	.17	.12	.19
IN.	.14	.41	1.76	1.70	.55	6.46	4.84	.96	.26	.19	.14	.21

POTOMAC RIVER BASIN

01611500 CACAPON RIVER NEAR GREAT CACAPON, WV--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1923 - 1993, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	336	354	507	624	865	1263	1139	873	436	195	234	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

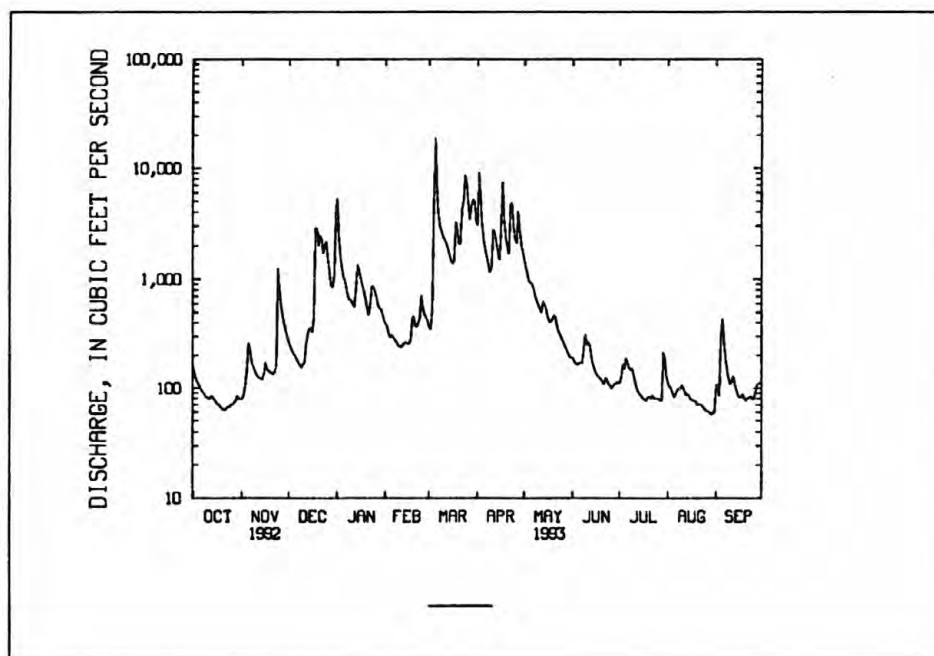
SUMMARY STATISTICS	FOR 1992 CALENDAR YEAR		FOR 1993 WATER YEAR		WATER YEARS 1923 - 1993	
ANNUAL TOTAL	169916		320565			
ANNUAL MEAN	464		878		586	
HIGHEST ANNUAL MEAN					1135	
LOWEST ANNUAL MEAN					180	
HIGHEST DAILY MEAN	4820	Apr 23	19000	Mar 5	67900	Mar 18 1936
LOWEST DAILY MEAN	63	(a)	57	Aug 29	26	Sep 12 1966
ANNUAL SEVEN-DAY MINIMUM	66	Oct 18	60	Aug 25	28	Sep 7 1966
INSTANTANEOUS PEAK FLOW			26000	Mar 5	(b) 87600	Mar 18 1936
INSTANTANEOUS PEAK STAGE			16.96	Mar 5	30.10	Mar 18 1936
INSTANTANEOUS LOW FLOW			55	(c)	26	(d)
ANNUAL RUNOFF (CFSM)	.69		1.30		.87	
ANNUAL RUNOFF (INCHES)	9.34		17.61		11.76	
10 PERCENT EXCEEDS	1140		2530		1320	
50 PERCENT EXCEEDS	233		242		240	
90 PERCENT EXCEEDS	86		79		66	

a Oct. 20, 21.

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

c Aug. 29, 30.

d 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 sea level. Oct. 1, 1932, to Jan. 5, 1935, Mar. 18, 1936, to Jan. 20, 1937, nonrecording gage, on former highway bridge just upstream at same datum.

REMARKS.--No estimated daily discharges. Records good. 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)
Mar. 5	1345	67,900	23.58	Apr. 11	1230	24,100	13.46
Mar. 24	2230	45,800	19.13	Apr. 17	2000	*76,400	*25.10
Mar. 29	0615	35,900	16.75	Apr. 22	2145	24,300	13.53
Apr. 2	1645	51,900	20.44				

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1000	708	1750	19300	3080	2770	27400	7710	1690	933	842	546
2	965	748	1630	11600	2870	2630	45800	6700	1610	963	758	676
3	939	825	1520	7990	2600	3000	35900	5910	1500	1110	731	752
4	924	1300	1430	6420	2390	10900	22600	5240	1430	1570	720	875
5	912	1590	1400	5750	2310	58100	16400	4910	1430	1260	681	1420
6	890	1370	1360	5690	2220	29600	12900	5020	1440	1200	687	1170
7	873	1220	1350	5150	2160	18100	9840	4770	1490	1180	726	982
8	837	1190	1280	4860	2040	14500	8200	4410	2050	1020	826	869
9	831	1080	1250	4610	1960	14600	7130	4050	3850	951	863	801
10	816	1010	1240	4400	1910	14200	8660	3710	4080	882	811	803
11	828	958	1470	4250	1880	12200	22200	3450	3070	812	814	768
12	819	938	2330	4190	1890	11700	18500	3240	2560	761	803	748
13	810	937	2810	4760	1950	10100	14800	3150	2100	728	940	723
14	797	1380	2680	6660	1970	9400	12100	3220	1760	712	904	679
15	783	1590	2530	6950	1940	8030	9620	3150	1580	689	841	648
16	771	1410	2370	6300	1930	7450	15200	2970	1460	673	765	634
17	754	1420	3190	5680	2080	7700	65200	2870	1370	654	716	635
18	705	1330	10300	5130	2650	13100	45900	2790	1290	641	688	764
19	853	1250	15100	4610	2860	14200	22600	2660	1230	633	666	736
20	1270	1180	10300	4060	2610	11300	16100	3110	1180	640	644	688
21	795	1150	9510	3370	2560	10300	12300	3020	1120	631	631	676
22	670	1190	9660	4130	2540	14900	18600	2760	1090	625	623	691
23	669	1780	7910	5680	3010	20000	20800	2530	1090	615	606	766
24	681	3170	8100	6190	4730	39000	14700	2360	1060	609	595	786
25	695	2900	9120	5760	4180	43300	11500	2230	1010	613	593	751
26	706	3090	7270	5150	3510	35200	10900	2120	956	613	587	857
27	704	2660	5920	4610	3250	29800	17200	1970	936	607	567	955
28	703	2350	4940	4280	3040	30400	13000	1850	929	602	555	1150
29	712	2090	4610	4010	---	35000	10200	1750	924	804	539	1520
30	721	1910	4640	3760	---	34200	8850	1650	927	947	527	1410
31	718	---	10300	3340	---	29000	---	1710	---	994	528	---
TOTAL	25151	45724	149270	178640	72120	594680	575100	106990	48212	25672	21777	25479
MEAN	811	1524	4815	5763	2576	19180	19170	3451	1607	828	702	849
MAX	1270	3170	15100	19300	4730	58100	65200	7710	4080	1570	940	1520
MIN	669	708	1240	3340	1880	2630	7130	1650	924	602	527	546
CFSM	.20	.37	1.18	1.41	.63	4.71	4.71	.85	.39	.20	.17	.21
IN.	.23	.42	1.36	1.63	.66	5.43	5.25	.98	.44	.23	.20	.23

POTOMAC RIVER BASIN

01613000 POTOMAC RIVER AT HANCOCK, MD--Continued

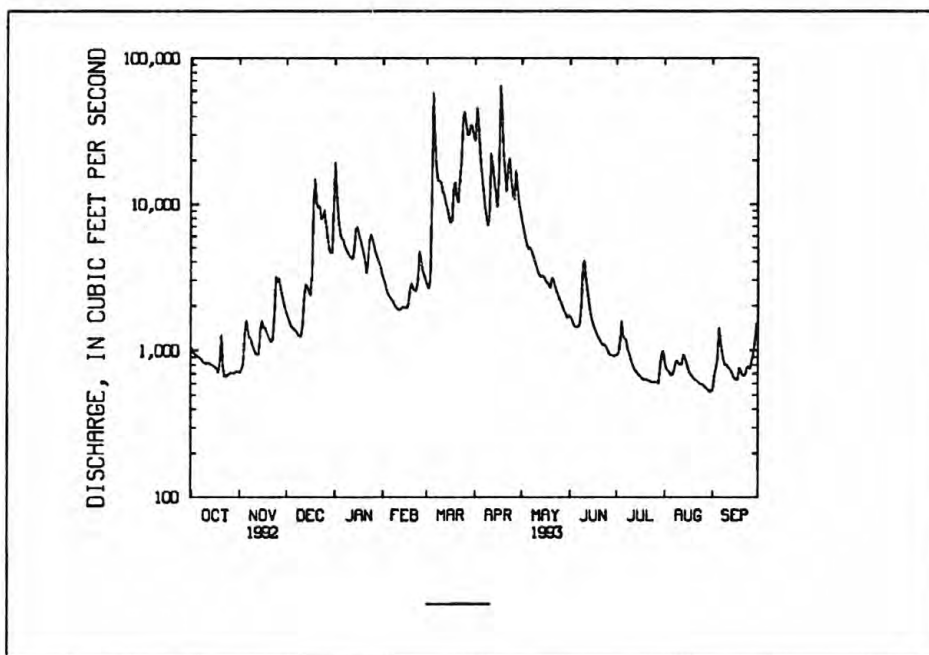
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1933 - 1993, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	2076	2422	3974	4940	6438	9268	7801	5462	3092	1562	1491	1258
MAX	13270	20090	15160	15450	16720	32280	19170	13260	13390	6677	9479	6756
(WY)	1977	1986	1973	1937	1971	1936	1993	1988	1972	1949	1955	1945
MIN	309	399	463	751	1041	2311	2857	1344	622	357	342	329
(WY)	1942	1966	1966	1956	1934	1990	1968	1941	1969	1966	1944	1946

SUMMARY STATISTICS	FOR 1992 CALENDAR YEAR		FOR 1993 WATER YEAR		WATER YEARS 1933 - 1993	
ANNUAL TOTAL	1169332		1868815			
ANNUAL MEAN	3195		5120		4137	
HIGHEST ANNUAL MEAN					6319	1973
LOWEST ANNUAL MEAN					1770	1969
HIGHEST DAILY MEAN	24200	Apr 23	65200	Apr 17	261000	Mar 18 1936
LOWEST DAILY MEAN	669	Oct 23	527	Aug 30	184	Oct 3 1932
ANNUAL SEVEN-DAY MINIMUM	690	Oct 22	550	Aug 26	215	Sep 7 1966
INSTANTANEOUS PEAK FLOW			76400	Apr 17	(a) 340000	Mar 18 1936
INSTANTANEOUS PEAK STAGE			25.10	Apr 17	47.60	Mar 18 1936
INSTANTANEOUS LOW FLOW			526	(b)	180	Oct 4 1932
ANNUAL RUNOFF (CFSM)	.78		1.26		1.02	
ANNUAL RUNOFF (INCHES)	10.68		17.07		13.80	
10 PERCENT EXCEEDS	7330		13500		9410	
50 PERCENT EXCEEDS	1970		1760		2140	
90 PERCENT EXCEEDS	958		681		525	

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

b Aug. 30, 31.



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 sea level. Prior to July 1906, nonrecording gage at approximately the same site at different datum. July 23, 1947 to July 22, 1948, nonrecording gage at present site and datum. National Weather Service gage-height telemeter at the station.

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

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

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

Date	Time	Discharge (ft ³ /s)	Gage Height (ft)	Date	Time	Discharge (ft ³ /s)	Gage Height (ft)
Dec. 11	1745	4,500	11.59	Apr. 2	1215	3,040	10.42
Mar. 5	0800	*12,600	*15.38	Apr. 11	0545	1,920	8.30
Mar. 18	0745	2,440	9.59	Apr. 17	0315	4,810	11.79
Mar. 22	0700	2,930	10.31	Apr. 22	1200	2,990	10.37
Mar. 24	1200	3,760	11.07	Apr. 26	2345	2,140	8.85
Mar. 28	1700	3,080	10.46				

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	83	76	67	304	189	194	1230	613	162	148	100	78
2	80	83	63	254	178	238	2380	563	156	191	103	78
3	76	174	60	233	169	408	1380	517	153	203	102	84
4	74	189	58	224	171	2730	996	489	150	178	96	230
5	72	105	58	249	166	8730	830	536	158	158	98	124
6	69	86	54	280	165	1680	730	666	150	142	107	99
7	70	79	53	240	160	1030	647	506	139	147	131	92
8	72	68	53	232	154	822	589	450	240	140	121	86
9	87	64	52	248	151	672	538	420	249	131	104	86
10	114	61	136	259	147	583	867	394	193	127	103	99
11	73	56	3320	247	142	606	1470	375	196	123	97	83
12	57	56	2690	317	153	542	935	364	180	121	99	79
13	56	64	1370	681	165	539	744	386	176	119	94	78
14	56	68	765	592	167	490	636	357	170	119	92	78
15	59	64	533	414	166	465	577	330	166	116	91	98
16	56	59	434	341	199	463	2070	311	161	119	90	132
17	58	58	784	302	312	854	3060	311	157	115	93	128
18	59	58	844	267	344	2020	1170	301	156	113	107	109
19	61	59	532	237	252	1100	907	337	150	116	97	101
20	62	58	433	219	218	859	773	306	186	124	91	91
21	65	59	365	219	210	1340	784	281	407	124	87	114
22	69	68	320	299	221	2350	2300	270	280	116	84	172
23	67	890	295	359	458	1900	1320	260	192	108	86	119
24	70	444	270	311	318	3250	934	254	166	105	87	105
25	71	232	239	284	234	1800	805	250	157	105	81	105
26	68	177	227	248	219	1200	1190	238	153	107	86	168
27	74	134	211	231	205	1040	1490	187	156	108	84	217
28	63	104	212	223	198	2480	922	180	149	98	80	321
29	64	88	325	215	---	2080	768	172	149	111	77	164
30	64	75	426	200	---	1640	680	165	147	109	78	133
31	71	---	367	191	---	1190	---	162	---	101	81	---
TOTAL	2140	3856	15616	8920	5831	45295	33722	10951	5404	3942	2927	3651
MEAN	69.0	129	504	288	208	1461	1124	353	180	127	94.4	122
MAX	114	890	3320	681	458	8730	3060	666	407	203	131	321
MIN	56	56	52	191	142	194	538	162	139	98	77	78
CFSM	.25	.47	1.85	1.06	.77	5.37	4.13	1.30	.66	.47	.35	.45
IN.	.29	.53	2.14	1.22	.80	6.19	4.61	1.50	.74	.54	.40	.50

POTOMAC RIVER BASIN

01616500 OPEQUON CREEK NEAR MARTINSBURG, WV--Continued

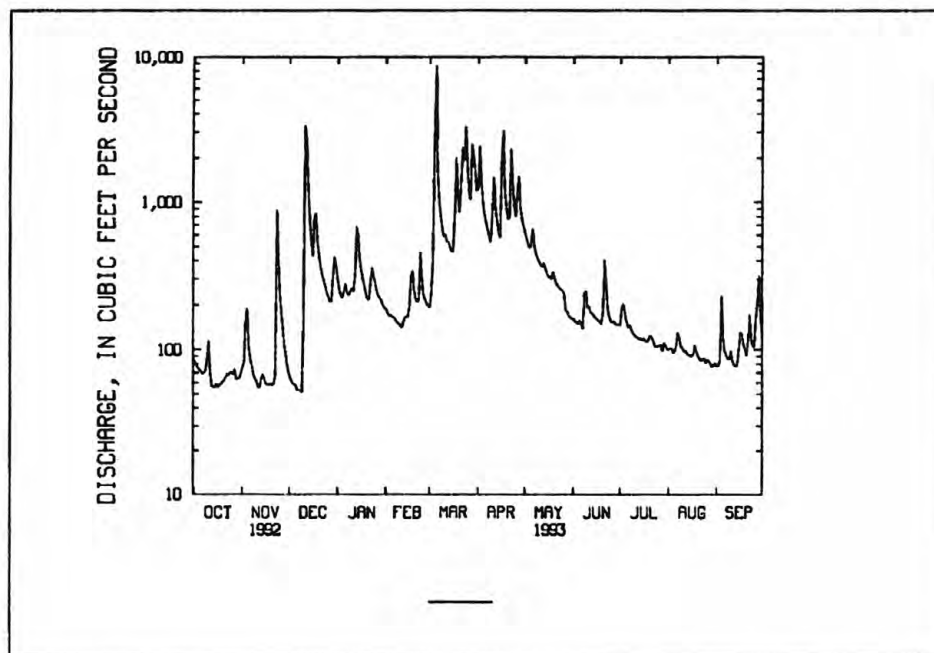
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1947 - 1993, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	144	157	230	256	330	420	382	279	213	136	126	115
MAX	788	504	821	700	1022	1461	1199	1091	1190	456	543	911
(WY)	1977	1971	1973	1979	1984	1993	1984	1988	1972	1972	1978	1975
MIN	30.5	35.1	33.7	39.6	76.6	119	97.8	86.0	65.4	49.4	36.6	35.2
(WY)	1948	1966	1966	1966	1954	1959	1954	1969	1969	1966	1966	1947

SUMMARY STATISTICS	FOR 1992 CALENDAR YEAR		FOR 1993 WATER YEAR		WATER YEARS 1947 - 1993	
ANNUAL TOTAL	81002		142255			
ANNUAL MEAN	221		390		232	
HIGHEST ANNUAL MEAN					464	1984
LOWEST ANNUAL MEAN					85.7	1954
HIGHEST DAILY MEAN	8470	Apr 22	8730	Mar 5	8890	Jun 22 1972
LOWEST DAILY MEAN	52	Dec 9	52	Dec 9	26	Oct 25 1947
ANNUAL SEVEN-DAY MINIMUM	55	Feb 7	55	Dec 3	27	Sep 7 1966
INSTANTANEOUS PEAK FLOW			12600	Mar 5	(a) 19000	Jun 22 1972
INSTANTANEOUS PEAK STAGE			15.38	Mar 5	17.45	Jun 22 1972
INSTANTANEOUS LOW FLOW			50	Dec 9	(b) 25	Oct 25 1947
ANNUAL RUNOFF (CFSM)	.81		1.43		.85	
ANNUAL RUNOFF (INCHES)	11.08		19.46		11.59	
10 PERCENT EXCEEDS	373		897		450	
50 PERCENT EXCEEDS	115		169		136	
90 PERCENT EXCEEDS	61		68		55	

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

b 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 sea level.

REMARKS.--No estimated daily discharges. Water-discharge records good. 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)
Dec. 19	1330	26,200	9.58	Apr. 2	2400	77,200	18.96
Jan. 1	1830	28,900	10.18	Apr. 11	2330	36,200	11.71
Mar. 5	2100	*99,100	*22.15	Apr. 18	0430	90,500	20.97
Mar. 19	0800	25,300	9.37	Apr. 23	0830	39,500	12.38
Mar. 25	0430	70,200	17.86	Apr. 27	1900	32,800	10.99
Mar. 29	1630	56,800	15.64				

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2090	953	3010	24300	5090	4470	42400	14000	2960	1660	1520	1310
2	1930	1030	2880	22000	4730	4290	62000	12300	2790	2230	1600	1050
3	1900	1260	2650	14200	4260	4600	66000	10800	2620	2800	1590	1340
4	1920	1950	2430	11000	3930	9560	41900	9630	2450	2970	1610	2160
5	1900	3200	2300	9400	3780	75300	29300	8820	2400	3120	1600	3170
6	1760	3570	2220	9360	3680	66300	23200	9240	2350	3020	1710	2960
7	1650	3050	2100	8790	3570	35200	18000	8970	2310	2930	1860	2740
8	1870	2940	2030	7870	3400	26300	15000	7920	2680	2740	1960	2480
9	1900	2910	1910	7450	3200	25000	13100	7260	3720	2510	1930	2290
10	2070	2780	2040	7040	3100	25000	12300	6610	5630	2360	1870	2140
11	1880	2750	6010	6700	3010	21800	27500	6150	5050	2350	1790	2160
12	1930	2540	18600	6520	3070	19300	32100	5780	3990	2330	1740	1910
13	1900	2570	16000	7190	3170	17200	24800	5610	3470	2350	1950	1960
14	1740	2860	10800	10100	3200	15400	20300	5690	2950	2300	1960	1950
15	1870	3410	8320	11700	3230	13600	16600	5400	2570	2220	1830	1560
16	1830	3430	7170	10700	3260	12600	16200	5140	2350	2190	1540	2640
17	1770	3100	6880	9500	3460	12300	64200	4860	2160	1950	1430	2930
18	1680	3130	15000	8430	3880	19100	78600	4740	2050	1910	1530	2680
19	1460	3090	24200	7530	4320	24500	41100	4700	1980	1730	2550	2580
20	1220	2990	20000	6700	4240	20200	27700	4810	1920	1770	2020	2130
21	1450	2900	16700	5890	4110	17600	20900	4910	2120	2090	1380	1720
22	1320	3070	16500	5710	4080	23400	26000	4460	2140	1740	1190	1480
23	1520	5340	14200	8170	4250	31800	37400	4130	1970	1690	1160	1680
24	1790	8160	12500	9860	5190	52500	28000	3880	1810	1660	1390	1380
25	2240	7480	13600	9730	6070	68100	21000	3660	1730	1620	1830	1500
26	2330	6520	12400	8750	5510	56000	18100	3450	1660	1390	1610	2100
27	2260	6220	10200	7700	4970	46600	28600	3260	1630	1350	1770	2850
28	2260	5710	8420	7000	4670	46100	26600	3060	1640	1290	1980	3080
29	1060	4240	7640	6510	---	55600	19600	2890	1690	1380	1280	3140
30	1020	3410	7580	6070	---	54100	16200	2700	1650	1530	1370	3050
31	892	---	8970	5510	---	47100	---	2620	---	1610	946	---
TOTAL	54412	106563	285260	287380	112430	950920	914700	187450	76440	64790	51496	66120
MEAN	1755	3552	9202	9270	4015	30670	30490	6047	2548	2090	1661	2204
MAX	2330	8160	24200	24300	6070	75300	78600	14000	5630	3120	2550	3170
MIN	892	953	1910	5510	3010	4290	12300	2620	1630	1290	946	1050
CFSM	.30	.60	1.55	1.56	.68	5.17	5.14	1.02	.43	.35	.28	.37
IN.	.34	.67	1.79	1.80	.70	5.96	5.73	1.17	.48	.41	.32	.41

POTOMAC RIVER BASIN

01618000 POTOMAC RIVER AT SHEPHERDSTOWN, WV--Continued

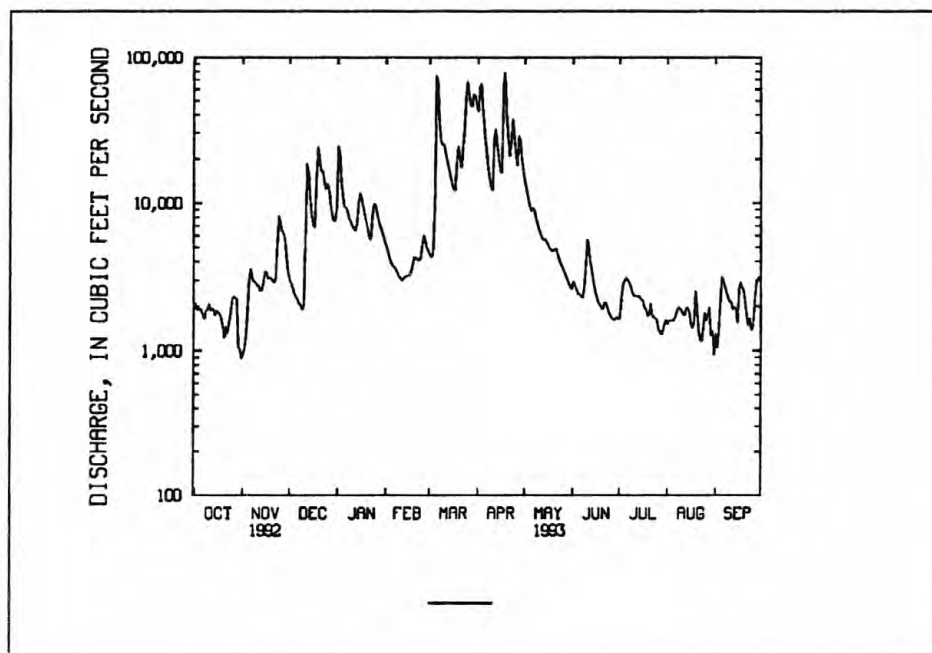
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1928 - 1993, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	3164	3665	5673	6903	8991	12950	11400	8055	4555	2472	2238	1977
MAX	20080	24780	22070	20480	23770	45990	30490	20450	22600	9529	12140	11750
(WY)	1977	1986	1973	1937	1971	1936	1993	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 1992 CALENDAR YEAR		FOR 1993 WATER YEAR		WATER YEARS 1928 - 1993	
ANNUAL TOTAL	1888685		3157961			
ANNUAL MEAN	5160		8652		5986	
HIGHEST ANNUAL MEAN					9988	1972
LOWEST ANNUAL MEAN					2607	1969
HIGHEST DAILY MEAN	35600	Apr 23	78600	Apr 18	287000	Mar 19 1936
LOWEST DAILY MEAN	892	Oct 31	892	Oct 31	185	Jul 31 1966
ANNUAL SEVEN-DAY MINIMUM	1170	Oct 29	1170	Oct 29	294	Sep 4 1966
INSTANTANEOUS PEAK FLOW			99100	Mar 5	(a) 335000	Mar 19 1936
INSTANTANEOUS PEAK STAGE			22.15	Mar 5	(b) 42.10	Mar 19 1936
INSTANTANEOUS LOW FLOW			731	Oct 29	170	Aug 1 1966
ANNUAL RUNOFF (CFSM)	.87		1.46		1.01	
ANNUAL RUNOFF (INCHES)	11.84		19.79		13.70	
10 PERCENT EXCEEDS	11500		23300		13400	
50 PERCENT EXCEEDS	3250		3170		3200	
90 PERCENT EXCEEDS	1800		1600		873	

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 1993, discontinued.

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 1992 TO SEPTEMBER 1993

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)	TEMPER- ATURE AIR (DEG C)	BARO- METRIC PRES- SURE (MM OF HG)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, SATUR- ATION	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)
DEC 1992											
02...	0915	2830	310	--	6.0	10.0	753	2.0	9.3	76	K14
MAR 1993											
08...	0910	26600	215	7.4	6.0	15.0	749	20	11.0	90	150
JUN											
07...	1040	2270	419	7.8	24.0	21.0	754	--	8.2	99	32
JUL											
19...	1240	1880	423	8.1	28.0	29.0	752	0.40	6.3	82	--
SEP											
13...	1100	1840	420	--	23.0	22.0	762	0.40	7.2	84	K10

DATE	STREP- TOCOCCHI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY 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)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)
DEC 1992											
02...	K11	110	35	6.6	8.2	2.7	--	--	35	12	0.10
MAR 1993											
08...	280	68	20	4.3	5.1	1.9	47	N57	22	8.8	<0.10
JUN											
07...	110	--	--	--	--	--	122	149	--	--	--
JUL											
19...	--	180	53	12	12	2.9	123	150	52	17	0.20
SEP											
13...	360	180	53	11	16	3.5	--	--	59	23	0.10

DATE	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS NO3)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	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)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)
DEC 1992											
02...	5.6	166	--	--	--	--	--	--	--	--	30
MAR 1993											
08...	6.4	112	6.6	0.020	1.50	0.070	0.50	0.150	0.040	0.050	30
JUN											
07...	--	--	7.5	0.010	1.70	0.020	0.30	0.050	0.020	<0.010	--
JUL											
19...	5.4	241	6.1	0.020	1.40	0.030	0.40	0.040	<0.010	<0.010	--
SEP											
13...	5.3	235	6.2	0.010	1.40	0.040	0.30	0.050	0.050	0.040	<10

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

N: Presumptive evidence of presence of material.

POTOMAC RIVER BASIN

01618000 POTOMAC RIVER AT SHEPHERDSTOWN, WV--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	BARIUM, DIS- SOLVED (UG/L AS BA)	COBALT, DIS- SOLVED (UG/L AS CO)	IRON, DIS- SOLVED (UG/L AS FE)	LITHIUM DIS- SOLVED (UG/L AS LI)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	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)
DEC 1992										
02...	39	<3	33	<4	15	<1	<1	<1.0	190	<6
MAR 1993										
08...	32	<3	35	<4	16	2	<1	<1.0	94	<6
JUN										
07...	--	--	--	--	--	--	--	--	--	--
JUL										
19...	--	--	--	--	--	--	--	--	--	--
SEP										
13...	52	<3	7	6	16	<1	<1	<1.0	300	<6

SUSPENDED SEDIMENT DISCHARGE

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SEDI- MENT, CHARGE, SUS- PENDE (MG/L)	SEDI- MENT, CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
DEC 1992					
02...	0915	2830	3	23	100
MAR 1993					
08...	0910	26600	58	4160	92
JUN					
07...	1040	2270	6	37	82
JUL					
19...	1240	1880	3	15	93
SEP					
13...	1100	1840	6	30	84

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 sea level. Apr. 15, 1895, to Mar. 31, 1909, nonrecording gage at site 0.8 mi downstream at datum 0.32 ft higher.

REMARKS.--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)
Dec. 19	0800	16,200	8.54	Mar. 30	1015	22,600	10.09
Mar. 6	0500	*60,900	*16.60	Apr. 2	2200	24,100	10.41
Mar. 23	0930	16,400	8.59	Apr. 17	1915	33,200	12.22
Mar. 25	1345	27,700	11.17				

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1320	665	2670	4110	2710	3090	13900	5690	1940	1370	928	730
2	1250	709	2330	3920	2530	2870	19300	5240	1890	1560	847	712
3	1100	855	2090	3600	2320	2850	21500	4820	1900	1550	802	745
4	968	1070	1930	3270	2230	8260	15300	4510	1910	1510	763	786
5	898	1240	1760	3140	2110	44200	11600	4380	1880	1480	743	794
6	861	1620	1610	3200	2020	46800	9690	4420	1860	1390	830	928
7	843	1510	1510	3550	1950	e20000	8630	4590	1880	1340	950	841
8	834	1340	1440	3720	1880	e13500	7610	4350	2220	1300	1050	764
9	854	1220	1350	3780	1830	e10500	6660	4130	2060	1230	1090	762
10	838	1150	1560	4080	1770	e8800	6420	3910	2080	1200	1240	761
11	845	1080	4690	4610	1730	e7800	9830	3680	2090	1100	1080	741
12	826	1030	10700	4650	1750	e7300	10800	3590	1780	1060	947	797
13	892	1060	7650	5160	1830	e6900	9320	3470	1630	1030	894	882
14	881	1120	5660	6020	1820	e6600	7940	3450	1570	1040	826	811
15	853	3170	4730	6030	1880	e6100	6960	3390	1520	1030	793	788
16	795	3360	4200	5470	1930	e5500	7650	3200	1530	1010	818	874
17	751	2590	4390	4830	2180	e5800	25400	3110	1500	971	889	842
18	702	2100	10100	4380	2490	e11000	22100	3030	1380	936	901	886
19	697	1810	15200	3940	2770	e14500	13700	3100	1370	916	879	890
20	689	1560	11100	3510	2600	e11500	10600	3160	1440	922	831	893
21	662	1430	9000	3140	2440	e10000	9020	3560	2510	921	823	1010
22	665	1290	7950	3120	2470	e14000	12300	3340	1890	962	783	1010
23	639	2020	6560	3540	3350	15700	13700	3050	1620	962	745	900
24	645	6880	5530	4170	5560	18300	11000	2870	1390	944	754	887
25	627	10500	4820	4060	5180	25800	9000	2700	1310	876	712	869
26	617	6730	4380	3930	4210	21700	7880	2550	1280	830	700	935
27	614	5240	3860	3790	3700	16300	8380	2370	1280	825	689	944
28	595	4330	3560	3530	3360	18100	8270	2250	1280	1080	674	980
29	579	3610	3700	3300	---	20600	6990	2220	1240	1730	693	1080
30	575	3030	4010	3110	---	21400	6210	2070	1250	1300	751	1040
31	639	---	4260	2880	---	17200	---	1980	---	1040	744	---
TOTAL	24554	75319	154300	123540	72600	442970	337660	108180	50480	35415	26169	25882
MEAN	792	2511	4977	3985	2593	14290	11260	3490	1683	1142	844	863
MAX	1320	10500	15200	6030	5560	46800	25400	5690	2510	1730	1240	1080
MIN	575	665	1350	2880	1730	2850	6210	1980	1240	825	674	712
CFSM	.26	.83	1.64	1.31	.85	4.70	3.70	1.15	.55	.38	.28	.28
IN.	.30	.92	1.89	1.51	.89	5.42	4.13	1.32	.62	.43	.32	.32

e Estimated

POTOMAC RIVER BASIN

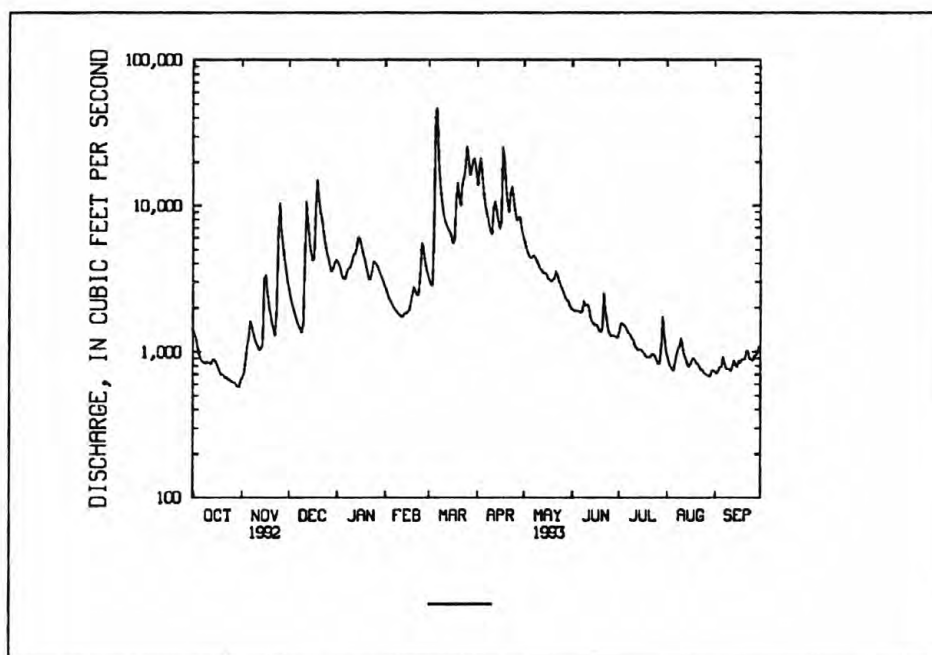
01636500 SHENANDOAH RIVER AT MILLVILLE, WV--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1895 - 1993, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1965	1823	2448	3031	3762	4916	4413	3354	2372	1427	1614	1320
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 1992 CALENDAR YEAR		FOR 1993 WATER YEAR		WATER YEARS 1895 - 1993	
ANNUAL TOTAL	996436		1477069			
ANNUAL MEAN	2723		4047		2697	
HIGHEST ANNUAL MEAN					4838	
LOWEST ANNUAL MEAN					1111	
HIGHEST DAILY MEAN	48200	Apr 23	46800	Mar 6	192000	Oct 16 1942
LOWEST DAILY MEAN	563	Aug 28	575	Oct 30	194	Jul 24 1930
ANNUAL SEVEN-DAY MINIMUM	607	Oct 25	607	Oct 25	240	Sep 7 1966
INSTANTANEOUS PEAK FLOW			60900	Mar 6	230000	Oct 16 1942
INSTANTANEOUS PEAK STAGE			16.60	Mar 6	(a) 32.40	Oct 16 1942
INSTANTANEOUS LOW FLOW			564	Oct 30	59	Oct 4 1930
ANNUAL RUNOFF (CFSM)	.90		1.33		.89	
ANNUAL RUNOFF (INCHES)	12.19		18.07		12.05	
10 PERCENT EXCEEDS	5480		10000		5440	
50 PERCENT EXCEEDS	1560		1950		1590	
90 PERCENT EXCEEDS	748		785		610	

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 1992 TO SEPTEMBER 1993

		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)	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)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./100 ML)	STREP-TOCOCCI, KF AGAR (COLS. PER 100 ML)	
DEC 1992													
02...	1300	2330	202	--	6.0	10.0	749	1.6	10.8	88	K19	K14	
MAR 1993													
08...	1200	12200	205	7.5	5.0	14.0	746	27	11.4	91	780	390	
30...	1300	22500	185	7.5	10.0	21.0	758	--	10.6	94	--	--	
APR													
14...	1045	7970	238	7.8	12.0	16.0	769	--	10.8	99	--	--	
28...	1030	8400	231	7.9	13.0	20.0	779	--	10.9	101	--	--	
MAY													
11...	0915	3800	264	8.8	22.5	28.0	769	--	10.3	118	--	--	
25...	1000	2710	317	8.2	20.0	27.0	769	--	9.6	105	--	--	
JUN													
10...	1000	2090	351	8.0	26.5	29.0	768	--	7.7	95	--	--	
29...	0945	1240	350	8.2	26.0	27.0	768	--	7.7	94	--	--	
JUL													
13...	0900	1040	343	8.1	29.0	34.0	769	--	7.2	93	--	--	
19...	1530	1700	350	8.7	28.0	30.0	751	0.30	8.0	104	--	--	
29...	1315	1610	331	8.2	29.0	33.0	765	--	9.1	118	--	--	
AUG													
17...	1015	834	333	8.6	27.5	35.0	748	--	4.9	63	--	--	
SEP													
02...	1000	705	324	8.6	27.5	32.5	751	--	6.4	82	--	--	
13...	1315	732	340	--	22.0	25.0	761	0.30	7.3	84	K15	65	
DATE		HARD-NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WAT DIS TOT IT FIELD (MG/L AS CACO3)	BICAR-BONATE WATER DIS IT FIELD (MG/L AS HCO3)	CAR-BONATE WATER DIS IT FIELD (MG/L AS CO3)	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)
DEC 1992													
02...	81	23	5.8	3.8	1.9	--	--	--	11	5.6	<0.10	6.5	
MAR 1993													
08...	81	24	5.2	3.2	2.0	63	77	--	12	5.6	<0.10	6.5	
30...	79	23	5.3	3.2	2.0	55	67	--	12	5.3	0.10	6.4	
APR													
14...	110	33	7.9	4.1	1.8	86	105	--	13	6.8	<0.10	6.7	
28...	110	31	7.5	3.9	1.6	88	107	--	13	6.1	<0.10	6.3	
MAY													
11...	130	37	10	4.9	2.0	116	132	5	13	7.8	0.10	0.81	
25...	140	38	11	5.9	2.3	126	139	7	14	9.1	0.10	1.5	
JUN													
10...	150	40	12	7.1	2.4	138	168	--	16	9.8	0.20	5.1	
29...	170	43	15	10	2.7	128	156	--	19	12	0.20	8.5	
JUL													
13...	160	39	14	9.6	2.5	138	168	--	18	12	<0.10	9.4	
19...	150	36	15	9.5	2.5	137	167	--	16	12	0.10	8.8	
29...	140	33	15	10	2.3	132	161	--	17	13	0.20	6.4	
AUG													
17...	140	33	14	12	2.1	133	150	6	20	13	0.20	3.3	
SEP													
02...	130	29	15	14	2.1	--	--	--	20	15	0.20	3.2	
13...	150	33	16	14	3.0	--	--	--	21	17	0.20	2.8	

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 OCTOBER 1992 TO SEPTEMBER 1993

DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS NO3)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	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)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N)	PHOS- PHORUS DIS- SOLVED (MG/L AS P)	PHOS- PHORUS DIS- SOLVED (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)
DEC 1992												
02...	102	--	--	--	--	--	--	--	--	--	20	23
MAR 1993												
08...	123	7.4	0.020	1.70	0.050	0.50	--	0.070	0.010	0.010	40	21
30...	106	5.2	0.020	1.20	0.040	0.50	0.30	0.110	0.030	0.040	--	--
APR												
14...	128	6.6	0.010	1.50	0.030	0.40	0.50	0.090	0.040	0.030	--	--
28...	--	--	<0.010	1.40	0.020	<0.20	<0.20	0.040	0.030	0.030	--	--
MAY												
11...	161	--	<0.010	1.20	0.020	0.30	0.30	0.070	<0.010	<0.010	--	--
25...	167	7.4	0.020	1.70	0.030	<0.20	<0.20	0.030	0.020	0.020	--	--
JUN												
10...	198	6.6	0.020	1.50	0.060	0.50	<0.20	0.110	0.070	0.060	--	--
29...	206	5.2	0.020	1.20	0.050	0.30	0.30	0.080	0.060	0.060	--	--
JUL												
13...	199	4.0	0.010	0.910	0.060	0.40	0.20	0.090	0.070	0.060	--	--
19...	187	2.3	0.010	0.540	0.050	0.30	--	0.070	0.050	0.040	--	--
29...	192	2.9	0.010	0.660	0.050	0.40	0.30	0.080	0.050	0.070	--	--
AUG												
17...	181	--	<0.010	0.570	0.040	0.30	0.30	0.060	0.040	0.030	--	--
SEP												
02...	173	1.9	0.010	0.430	0.040	0.40	0.20	0.050	0.040	0.030	--	--
13...	188	--	<0.010	0.430	0.020	0.40	--	0.050	0.030	0.020	<10	34

DATE	COBALT, DIS- SOLVED (UG/L AS CO)	IRON, DIS- SOLVED (UG/L AS FE)	LITHIUM DIS- SOLVED (UG/L AS LI)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	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)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDE TOTAL (MG/L AS C)
DEC 1992											
02...	<3	27	<4	4	<1	<1	<1.0	81	<6	--	--
MAR 1993											
08...	<3	40	<4	3	<1	<1	<1.0	68	<6	--	--
30...	--	52	--	3	--	--	--	--	--	--	--
APR											
14...	--	27	--	3	--	--	--	--	--	2.5	0.8
28...	--	19	--	3	--	--	--	--	--	2.1	0.4
MAY											
11...	--	4	--	2	--	--	--	--	--	2.1	0.3
25...	--	8	--	3	--	--	--	--	--	2.3	0.3
JUN											
10...	--	10	--	4	--	--	--	--	--	2.4	0.4
29...	--	6	--	7	--	--	--	--	--	2.4	0.3
JUL											
13...	--	6	--	7	--	--	--	--	--	2.6	0.3
19...	--	--	--	--	--	--	--	--	--	--	--
29...	--	7	--	5	--	--	--	--	--	2.7	0.4
AUG											
17...	--	6	--	5	--	--	--	--	--	3.8	0.2
SEP											
02...	--	<3	--	4	--	--	--	--	--	3.3	0.3
13...	<3	11	6	5	<1	<1	<1.0	170	<6	--	--

POTOMAC RIVER BASIN

01636500 SHENANDOAH RIVER AT MILLVILLE, WV--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

[illegible]

	CARBO- FURAN WATER FLTRD 0.7 U	CHLOR- PYRIFOS DIS- SOLVED	CYANA- ZINE, WATER, DISS, REC	P, P' DDE DISSOLV	DEETHYL ATRA- ZINE, WATER, DISS, REC	DI- AZINON, DIS- SOLVED	DI- ELDRIN DIS- SOLVED	DISUL- FOTON WATER FLTRD 0.7 U	ETHO- PROP WATER FLTRD 0.7 U	FONOFOFOS WATER DISS REC	LINDANE DIS- SOLVED
DATE	GF, REC (UG/L)	SOLVED (UG/L)	REC (UG/L)	DISSOLV (UG/L)	REC (UG/L)	SOLVED (UG/L)	SOLVED (UG/L)	GF, REC (UG/L)	GF, REC (UG/L)	REC (UG/L)	SOLVED (UG/L)
DEC 1992	--	--	--	--	--	--	--	--	--	--	--
MAR 1993	--	--	--	--	--	--	--	--	--	--	--
08... 30...	<0.01	<0.00	<0.01	<0.01	<0.02	<0.01	<0.02	<0.02	<0.01	<0.01	<0.01
APR	--	--	--	--	--	--	--	--	--	--	--
14... 28...	<0.01	<0.00	<0.01	<0.01	0.03	<0.01	<0.02	<0.02	<0.01	<0.01	<0.01
MAY	--	--	--	--	--	--	--	--	--	--	--
11... 25...	<0.01	<0.00	0.02	<0.01	0.05	<0.01	<0.02	<0.02	<0.01	<0.01	<0.01
JUN	--	--	--	--	--	--	--	--	--	--	--
10... 29...	<0.01	<0.00	0.01	<0.01	0.03	<0.01	<0.02	<0.02	<0.01	<0.01	<0.01
JUL	--	--	--	--	--	--	--	--	--	--	--
13... 19... 29...	<0.01	<0.00	<0.01	<0.01	0.02	<0.01	<0.02	<0.02	<0.01	<0.01	<0.01
AUG	--	--	--	--	--	--	--	--	--	--	--
17...	<0.01	<0.00	<0.01	<0.01	0.04	<0.01	<0.02	<0.02	<0.01	<0.01	<0.01
SEP	--	--	--	--	--	--	--	--	--	--	--
02... 13...	<0.01	<0.00	<0.01	<0.01	<0.02	<0.01	<0.02	<0.02	<0.01	<0.01	<0.01

WATER QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	LIN- URON WATER FLTRD 0.7 U GF, REC (UG/L)	MALA- THION, DIS- SOLVED (UG/L)	METHYL AZIN- PHOS WAT FLT 0.7 U GF, REC (UG/L)	METHYL PARA- THION WAT FLT 0.7 U GF, REC (UG/L)	METO- LACHLOR WATER DISSOLV (UG/L)	METRI- BUZIN SENCOR WATER DISSOLV (UG/L)	MOL- INATE WATER FLTRD 0.7 U GF, REC (UG/L)	NAPROP- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L)	PEB- ULATE WATER FILTRD 0.7 U GF, REC (UG/L)	PARA- THION, DIS- SOLVED (UG/L)	PENDI- METH- ALIN WAT FLT 0.7 U GF, REC (UG/L)
DEC 1992											
02...	--	--	--	--	--	--	--	--	--	--	--
MAR 1993											
08...	--	--	--	--	--	--	--	--	--	--	--
30...	<0.04	<0.01	<0.04	<0.03	0.03	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02
APR											
14...	<0.04	<0.01	<0.04	<0.03	0.03	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02
28...	--	<0.01	--	--	0.03	--	--	--	--	<0.02	--
MAY											
11...	<0.04	<0.01	<0.04	<0.03	0.08	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02
25...	<0.04	<0.01	<0.04	<0.03	0.40	<0.02	<0.01	<0.01	<0.01	<0.02	<0.02
JUN											
10...	<0.04	<0.01	<0.04	<0.03	0.07	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02
29...	<0.04	<0.01	<0.04	<0.03	0.15	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02
JUL											
13...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--
29...	<0.04	<0.01	<0.04	<0.03	0.04	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02
AUG											
17...	<0.04	<0.01	<0.04	<0.03	0.06	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02
SEP											
02...	<0.04	<0.01	<0.04	<0.03	0.02	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02
13...	--	--	--	--	--	--	--	--	--	--	--
DATE	PER- METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L)	PRO- METON, WATER, DISS, REC (UG/L)	PRON- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L)	PROP- CHLOR, WATER, DISS, REC (UG/L)	PRO- PARGITE WATER FLTRD 0.7 U GF, REC (UG/L)	PRO- PANIL WATER FLTRD 0.7 U GF, REC (UG/L)	SI- MAZINE, WATER, DISS, REC (UG/L)	TEBU- THIURON WATER FLTRD 0.7 U GF, REC (UG/L)	TER- BUFOS WATER FLTRD 0.7 U GF, REC (UG/L)	THIO- BENCARB WATER FLTRD 0.7 U GF, REC (UG/L)	TRIAL- LATE WATER FLTRD 0.7 U GF, REC (UG/L)
DEC 1992											
02...	--	--	--	--	--	--	--	--	--	--	--
MAR 1993											
08...	--	--	--	--	--	--	--	--	--	--	--
30...	<0.02	0.01	<0.01	<0.02	<0.01	<0.02	0.02	<0.02	<0.01	<0.01	<0.01
APR											
14...	<0.02	0.02	<0.01	<0.02	<0.01	<0.02	0.03	<0.02	<0.01	<0.01	<0.01
28...	--	0.01	--	<0.02	--	--	0.02	--	--	--	--
MAY											
11...	<0.02	0.02	<0.01	<0.02	<0.01	<0.02	0.06	0.01	<0.01	<0.01	<0.01
25...	<0.02	0.03	<0.01	<0.02	<0.01	<0.02	0.60	0.01	<0.01	<0.01	<0.01
JUN											
10...	<0.02	0.02	<0.01	<0.02	<0.01	<0.02	0.09	0.01	<0.01	<0.01	<0.01
29...	<0.02	0.04	<0.01	<0.02	<0.01	<0.02	0.06	0.01	<0.01	<0.01	<0.01
JUL											
13...	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--
29...	<0.02	0.03	<0.01	<0.02	<0.01	<0.02	0.05	<0.02	<0.01	<0.01	<0.01
AUG											
17...	<0.02	0.04	<0.01	<0.02	<0.01	<0.02	0.03	<0.02	<0.01	<0.01	<0.01
SEP											
02...	<0.02	0.03	<0.01	<0.02	<0.01	<0.02	<0.01	<0.02	<0.01	<0.01	<0.01
13...	--	--	--	--	--	--	--	--	--	--	--

POTOMAC RIVER BASIN

01636500 SHENANDOAH RIVER AT MILLVILLE, WV--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

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
DEC 1992					
02...	1300	2330	3	19	97
MAR 1993					
08...	1200	12200	109	3590	78
30...	1300	22500	86	5220	--
APR					
14...	1045	7970	24	516	--
MAY					
11...	0915	3800	7	72	--
25...	1000	2710	7	51	--
JUN					
10...	1000	2090	24	135	--
29...	0945	1240	7	23	--
JUL					
13...	0900	1040	4	11	--
19...	1530	1700	2	9.2	95
29...	1315	1610	7	30	--
AUG					
17...	1015	834	5	11	--
SEP					
02...	1000	705	4	7.6	--
13...	1315	732	3	5.9	95

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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 sea level. Prior to Oct. 28, 1929, nonrecording gage at same site. Prior to Sept. 2, 1902, at datum about 0.45 ft higher.

REMARKS.--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)
Dec. 19	1600	38,100	9.02	Apr. 3	0530	106,000	18.19
Mar. 6	0500	*167,000	*24.94	Apr. 12	0500	46,600	10.35
Mar. 9	1030	36,300	8.73	Apr. 18	0400	123,000	20.17
Mar. 19	1130	40,600	9.43	Apr. 23	1230	56,800	11.86
Mar. 25	1430	105,000	18.12	Apr. 28	0030	41,100	9.51
Mar. 29	1330	81,800	15.23				

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
MEAN DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3680	1750	6440	22400	8350	7550	60500	20700	5270	3190	e2400	e1500
2	3330	1870	5790	26900	7770	7250	79700	18200	5090	3570	e2400	e1500
3	3040	2970	5390	20000	7190	7300	97800	16300	4800	3780	e2700	e1500
4	2760	2950	4920	15700	6670	18500	64700	14600	4660	4320	e2500	e1500
5	2630	3990	4560	13800	6380	105000	44700	13800	4530	4710	3050	e3300
6	2500	4600	4370	13200	6150	141000	35200	13700	4460	4440	3170	e3100
7	2340	4290	4090	13100	5890	64300	28800	13900	4380	4030	e3000	e2900
8	2330	3790	3930	12500	5680	42800	24100	12600	5090	3880	e2800	e2700
9	2470	3310	3740	12000	5430	36500	20800	11600	5470	e3500	e2600	e2800
10	2810	3190	4010	11700	5250	34500	19700	10800	7240	e3100	e2600	e2800
11	2530	3070	21600	11800	5140	31000	32000	10000	7840	e2900	e3000	e2500
12	2200	2860	28400	11900	5220	27100	44600	9660	6400	e2800	e2900	e2400
13	2490	2910	26300	12700	5480	25100	36300	9410	5480	e2700	e3000	e2300
14	2350	3020	20100	15700	5450	22800	30000	9290	4920	e2600	e2700	e2200
15	2110	4860	15500	18300	5420	20500	25300	9060	4420	e2450	e2500	e2200
16	2270	6440	13100	17400	5590	18500	24800	8620	4170	e2200	e2400	e2350
17	1960	5420	12800	15500	5930	18900	76400	8190	3970	e2150	e2350	e2900
18	1940	4630	21500	13900	6340	28200	114000	7940	3800	e2250	e2550	e2650
19	1740	4290	35500	12400	6980	39200	63600	8000	3700	e2100	e2200	e2600
20	1830	3870	31800	11100	7150	33500	41000	7850	3630	e2400	e2050	e2600
21	1920	3610	27400	9920	6880	29100	32400	8510	4510	e2500	e1950	e2650
22	2180	3490	25800	9390	6810	35500	38600	8180	4700	e2300	e1850	e2500
23	1840	6490	23000	11100	7410	48200	54100	7530	3960	e2200	e1800	e2450
24	1710	12300	19400	14200	9760	71200	42900	7070	3550	e2200	e1750	e2400
25	1730	19400	18900	14500	11700	102000	32500	6700	3310	e2200	e1750	e2400
26	1610	14000	18300	13600	10200	86700	27300	6340	3210	e2100	e1700	e2500
27	1750	11600	15400	12300	8970	68100	34200	5910	3180	e2050	e1700	e2800
28	1680	9820	13200	11200	8100	68000	37200	5630	3140	e2000	e1700	e3600
29	1650	8320	12200	10500	---	80400	28400	5350	3120	e2200	e1650	e4500
30	1610	7210	12300	9790	---	79900	23600	5040	3060	e2600	e1600	e4100
31	1780	---	13000	9640	---	69700	---	4840	---	e2500	e1550	---
TOTAL	68770	170320	472740	427540	193290	1468300	1315200	305320	135060	87920	71870	78200
MEAN	2218	5677	15250	13790	6903	47360	43840	9849	4502	2836	2318	2607
MAX	3680	19400	35500	26900	11700	141000	114000	20700	7840	4710	3170	4500
MIN	1610	1750	3740	9040	5140	7250	19700	4840	3060	2000	1550	1500
CFSM	.23	.59	1.58	1.43	.72	4.91	4.54	1.02	.47	.29	.24	.27
IN.	.27	.66	1.82	1.65	.75	5.66	5.07	1.18	.52	.34	.28	.30

e Estimated

POTOMAC RIVER BASIN

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

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1895 - 1993, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	5064	5487	8412	11110	14140	19440	16640	12290	7981	4501	4173	3487
MAX	37030	39000	32610	31350	42640	68360	43840	41970	40400	16000	23580	17820
(WY)	1943	1986	1973	1937	1897	1936	1993	1924	1972	1949	1955	1975
MIN	706	840	1253	1703	2661	5400	4368	3276	1932	1056	771	834
(WY)	1931	1931	1966	1981	1934	1931	1915	1930	1969	1966	1930	1930

SUMMARY STATISTICS	FOR 1992 CALENDAR YEAR		FOR 1993 WATER YEAR		WATER YEARS 1895 - 1993	
ANNUAL TOTAL	3002110		4794530			
ANNUAL MEAN	8202		13140		9379	
HIGHEST ANNUAL MEAN					15840	
LOWEST ANNUAL MEAN					4366	
HIGHEST DAILY MEAN	82300		141000		434000	
LOWEST DAILY MEAN	1610		(e) 1500		540	
ANNUAL SEVEN-DAY MINIMUM	1680		1540		593	
INSTANTANEOUS PEAK FLOW			167000		(c) 480000	
INSTANTANEOUS PEAK STAGE			24.94		41.03	
INSTANTANEOUS LOW FLOW			UNKNOWN		530	
ANNUAL RUNOFF (CFSM)	.85		1.36		.97	
ANNUAL RUNOFF (INCHES)	11.57		18.48		13.20	
10 PERCENT EXCEEDS	17500		32900		20400	
50 PERCENT EXCEEDS	5300		5420		5380	
90 PERCENT EXCEEDS	2670		2110		1660	

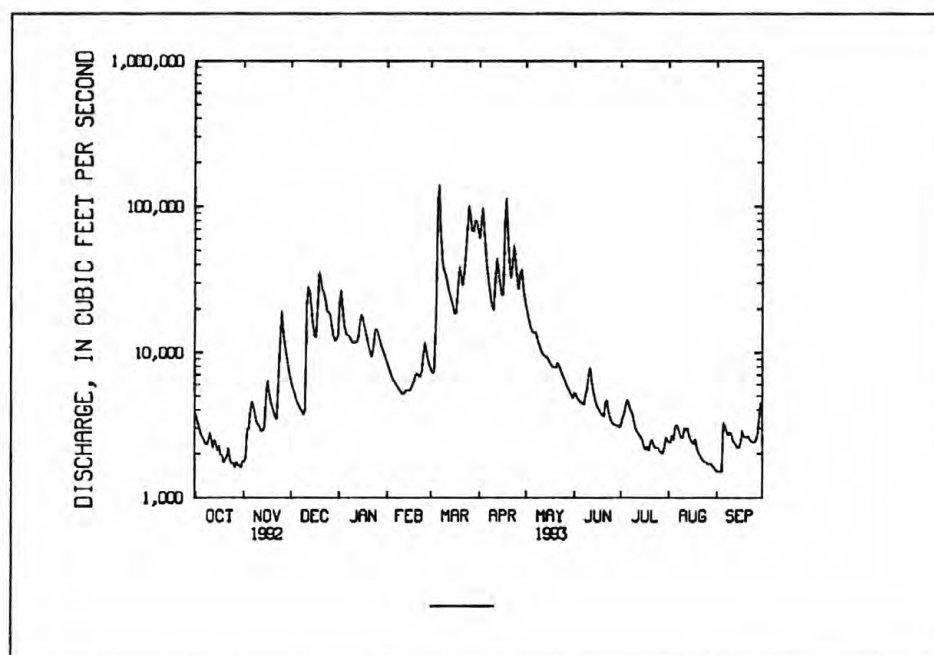
a Oct. 26, 30.

b Sept. 1-4.

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

d September 11, 12, 1966.

e Estimated.



[illegible]

POTOMAC RIVER BASIN

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

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MEAN CONCENTRATION (MG/L)		LOAD (TONS/ DAY)	MEAN CONCENTRATION (MG/L)		LOAD (TONS/ DAY)	MEAN CONCENTRATION (MG/L)		LOAD (TONS/ DAY)	MEAN CONCENTRATION (MG/L)		LOAD (TONS/ DAY)	MEAN CONCENTRATION (MG/L)		LOAD (TONS/ DAY)	MEAN CONCENTRATION (MG/L)		LOAD (TONS/ DAY)
	OCTOBER			NOVEMBER			DECEMBER			JANUARY			FEBRUARY			MARCH		
1	4	40		3	14		6	104		33	2000		8	180		4	82	
2	4	36		3	15		5	78		61	4430		6	126		3	59	
3	4	33		3	24		4	58		58	3130		4	78		3	59	
4	4	30		3	24		2	27		35	1480		6	108		122	8980	
5	3	21		3	32		4	49		19	708		4	69		662	277000	
6	3	20		3	37		5	59		15	535		3	50		612	245000	
7	3	19		3	35		4	44		13	460		3	48		212	39100	
8	2	13		3	31		3	32		13	439		2	31		105	12100	
9	2	13		3	27		2	20		13	421		1	15		55	5420	
10	2	15		4	34		3	32		11	347		e1	14		42	3910	
11	2	14		4	33		55	3210		9	287		e1	14		35	2930	
12	2	12		3	23		186	14300		9	289		e1	14		e30	2200	
13	2	13		3	24		112	7950		10	343		e2	30		e25	1690	
14	2	13		3	24		82	4450		10	424		e2	29		e20	1230	
15	3	17		4	52		25	1050		9	445		e2	29		e15	930	
16	3	18		5	87		25	884		9	423		e3	45		e10	499	
17	3	16		5	73		25	864		9	377		e3	48		e15	765	
18	3	16		4	50		52	3020		9	338		e3	51		e30	2280	
19	3	14		3	35		142	13600		7	234		e3	57		e50	5290	
20	3	15		2	21		105	9020		7	210		e2	39		e40	3620	
21	2	10		2	19		65	4810		6	161		e2	37		e30	2360	
22	2	12		2	19		43	3000		6	152		e2	37		35	3350	
23	2	9.9		11	193		34	2110		5	150		e3	60		70	9110	
24	2	9.2		38	1260		30	1570		7	268		e6	158		170	32700	
25	2	9.3		104	5450		23	1170		11	431		e8	253		255	70200	
26	2	8.7		74	2800		18	889		11	404		e6	165		210	42200	
27	5	24		41	1280		12	499		12	399		e5	121		145	26700	
28	7	32		26	689		e10	356		13	393		e4	87		95	17400	
29	7	31		14	314		e8	264		13	369		---	---		115	20000	
30	5	22		9	175		e6	199		13	344		---	---		120	25900	
31	4	19		---	---		e10	351		11	268		---	---		95	17900	
TOTAL	---	575.1		---	12894		---	74069		---	20659		---	1993		---	892864	
	APRIL			MAY			JUNE			JULY			AUGUST			SEPTEMBER		
1	70	11400		---	---		---	---		---	---		---	---		---	---	
2	170	36600		---	---		---	---		---	---		---	---		---	---	
3	265	70000		---	---		---	---		---	---		---	---		---	---	
4	165	28800		---	---		---	---		---	---		---	---		---	---	
5	65	7840		---	---		---	---		---	---		---	---		---	---	
6	40	3800		---	---		---	---		---	---		---	---		---	---	
7	33	2570		---	---		---	---		---	---		---	---		---	---	
8	e30	1950		---	---		---	---		---	---		---	---		---	---	
9	e25	1400		---	---		---	---		---	---		---	---		---	---	
10	e25	1330		---	---		---	---		---	---		---	---		---	---	
11	45	3890		---	---		---	---		---	---		---	---		---	---	
12	95	11400		---	---		---	---		---	---		---	---		---	---	
13	55	5390		---	---		---	---		---	---		---	---		---	---	
14	40	3240		---	---		---	---		---	---		---	---		---	---	
15	25	1710		---	---		---	---		---	---		---	---		---	---	
16	30	2010		---	---		---	---		---	---		---	---		---	---	
17	428	112000		---	---		---	---		---	---		---	---		---	---	
18	780	240000		---	---		---	---		---	---		---	---		---	---	
19	---	---		---	---		---	---		---	---		---	---		---	---	
20	---	---		---	---		---	---		---	---		---	---		---	---	
21	---	---		---	---		---	---		---	---		---	---		---	---	
22	---	---		---	---		---	---		---	---		---	---		---	---	
23	---	---		---	---		---	---		---	---		---	---		---	---	
24	---	---		---	---		---	---		---	---		---	---		---	---	
25	---	---		---	---		---	---		---	---		---	---		---	---	
26	---	---		---	---		---	---		---	---		---	---		---	---	
27	---	---		---	---		---	---		---	---		---	---		---	---	
28	---	---		---	---		---	---		---	---		---	---		---	---	
29	---	---		---	---		---	---		---	---		---	---		---	---	
30	---	---		---	---		---	---		---	---		---	---		---	---	
31	---	---		---	---		---	---		---	---		---	---		---	---	
TOTAL	---	---		---	---		---	---		---	---		---	---		---	---	

e Estimated

MONONGAHELA RIVER BASIN

03050000 TYGART VALLEY RIVER NEAR DAILEY, WV

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

DRAINAGE AREA.--187 mi².

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

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

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

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

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

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 4,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage Height (ft)	Date	Time	Discharge (ft ³ /s)	Gage Height (ft)
Mar. 5	0230	4,110	9.31	Mar. 24	1215	*5,750	*10.72

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	6.1	33	e330	e100	e145	1560	300	71	21	.47	.33
2	11	6.4	31	285	e88	e220	1750	236	62	18	.31	.32
3	9.5	23	32	244	e80	325	1080	206	50	19	.34	.39
4	8.5	46	31	216	e68	1910	707	187	45	18	.29	19
5	7.4	42	58	222	e58	2890	512	165	210	15	.25	53
6	7.2	30	82	257	e51	1150	421	146	220	12	.62	26
7	6.3	30	70	240	e46	671	342	135	128	9.5	25	15
8	5.4	30	59	233	e41	580	304	120	102	6.8	36	9.1
9	4.8	23	52	258	e38	666	274	107	83	5.2	17	6.3
10	4.7	19	72	257	e34	609	707	91	68	3.9	11	6.7
11	3.9	18	147	238	e32	689	1040	87	60	3.1	7.6	5.7
12	4.3	23	122	242	e29	e500	666	84	49	2.4	5.6	4.9
13	4.0	65	100	279	e27	e400	467	344	44	2.1	4.8	4.9
14	3.7	110	89	314	e25	e300	368	292	143	2.0	4.1	3.7
15	3.5	67	97	283	e23	e250	317	204	92	2.2	2.9	2.7
16	3.2	49	653	247	e21	e230	763	162	64	33	2.2	3.5
17	3.2	38	2720	213	306	828	1280	207	49	18	4.9	31
18	7.7	34	2060	178	e220	1420	807	200	39	11	9.5	46
19	3.9	32	785	148	e150	853	531	628	31	8.9	19	45
20	1.2	29	806	e110	e125	643	398	547	26	7.1	11	26
21	2.6	26	994	e100	386	1020	407	369	23	15	8.1	74
22	4.4	28	566	158	2090	1520	611	271	29	12	5.9	178
23	4.1	88	851	225	1210	2360	665	207	27	7.1	4.1	71
24	5.8	132	1130	250	638	4790	528	170	22	4.3	3.7	53
25	4.9	90	601	365	e400	2300	426	145	18	3.0	2.3	70
26	3.5	70	401	e300	e240	1720	554	111	14	2.2	1.8	315
27	9.6	58	265	e250	e200	1410	952	98	12	2.2	2.0	431
28	8.2	49	256	e200	e165	1170	650	86	11	1.9	1.5	440
29	3.0	43	266	e170	---	1460	474	75	11	1.3	1.1	194
30	4.1	37	306	e140	---	1200	384	67	18	.97	.68	122
31	6.1	---	e325	e120	---	907	---	61	---	.75	.38	---
TOTAL	171.7	1341.5	14060	7072	6891	35136	19945	6108	1821	268.92	194.44	2257.54
MEAN	5.54	44.7	454	228	246	1133	665	197	60.7	8.67	6.27	75.3
MAX	12	132	2720	365	2090	4790	1750	628	220	33	36	440
MIN	1.2	6.1	31	100	21	145	274	61	11	.75	.25	.32
CFSM	.03	.24	2.43	1.22	1.32	6.06	3.56	1.05	.32	.05	.03	.40
IN.	.03	.27	2.80	1.41	1.37	6.99	3.97	1.22	.36	.05	.04	.45

e Estimated

MONONGAHELA RIVER BASIN

03050000 TYGART VALLEY RIVER NEAR DAILEY, WV--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1915-1975, 1988-1993, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	126	232	457	542	584	719	520	417	234	153	153	81.0
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 1992 CALENDAR YEAR

FOR 1993 WATER YEAR

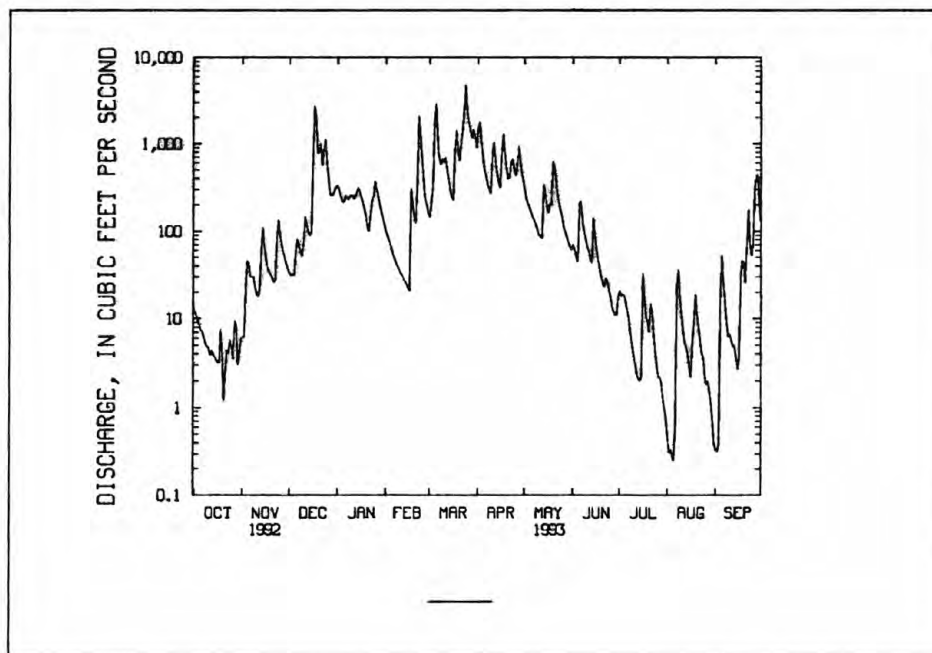
WATER YEARS 1915 - 1993

ANNUAL TOTAL	117583.2	95267.10	
ANNUAL MEAN	321	261	351
HIGHEST ANNUAL MEAN			526
LOWEST ANNUAL MEAN			182
HIGHEST DAILY MEAN	4050	Jul 28	4790
LOWEST DAILY MEAN	1.2	Oct 20	.25
ANNUAL SEVEN-DAY MINIMUM	3.6	Oct 15	.43
INSTANTANEOUS PEAK FLOW			5750
INSTANTANEOUS PEAK STAGE			10.72
INSTANTANEOUS LOW FLOW			.21
ANNUAL RUNOFF (CFSM)	1.72		1.40
ANNUAL RUNOFF (INCHES)	23.39		18.95
10 PERCENT EXCEEDS	760		696
50 PERCENT EXCEEDS	189		68
90 PERCENT EXCEEDS	13		3.4

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

b From floodmarks.

c Aug. 5, 6.



MONONGAHELA RIVER BASIN

03050500 TYGART VALLEY RIVER NEAR ELKINS, WV

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

DRAINAGE AREA.--272 mi².

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

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

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

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

Date	Time	Discharge (ft ³ /s)	Gage Height (ft)	Date	Time	Discharge (ft ³ /s)	Gage Height (ft)
Dec. 18	0145	5,650	11.85	Mar. 24	2130	*6,160	*12.36

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.9	8.4	67	e491	e170	e260	1930	415	83	8.5	15	6.4
2	45	6.5	57	462	e140	e240	2570	331	83	17	7.4	6.6
3	31	5.5	68	393	e120	470	1580	272	77	25	3.5	7.7
4	21	5.5	72	335	e105	2250	1020	228	74	24	2.7	24
5	19	111	122	351	e92	4230	744	208	172	23	15	49
6	16	69	157	394	e82	1810	596	187	313	24	8.4	48
7	13	60	157	372	e73	986	476	165	173	12	6.5	25
8	11	52	130	346	e65	852	402	143	241	4.3	5.9	17
9	11	49	107	351	e60	952	359	128	156	5.6	11	12
10	8.1	39	132	345	e54	894	955	114	107	9.6	14	22
11	6.3	38	319	324	e49	1010	1700	104	95	25	16	11
12	5.3	88	276	328	e45	776	1020	107	79	52	13	11
13	2.6	191	218	384	e42	e520	695	310	70	9.9	14	41
14	.58	194	199	468	e38	e420	522	408	87	6.7	12	15
15	.37	148	206	439	e35	e360	426	270	122	4.0	9.7	9.0
16	1.7	106	847	380	e33	e340	900	208	84	3.2	9.2	15
17	3.1	91	4160	324	498	1100	1870	213	70	2.8	14	12
18	2.7	60	4540	273	e350	2140	1180	244	48	2.4	8.7	41
19	2.8	51	1400	221	e250	1240	789	646	33	17	9.2	75
20	2.8	82	1060	182	e190	950	576	756	33	34	11	45
21	3.1	62	1520	176	e500	1340	638	510	31	30	12	56
22	3.5	65	915	226	3050	2140	1000	369	33	17	12	171
23	3.5	97	932	354	1990	3210	1030	276	35	16	12	119
24	3.6	210	1650	408	969	5710	797	216	32	16	11	78
25	3.5	172	939	535	e560	4240	608	174	29	15	10	88
26	4.0	135	624	525	e450	2350	770	143	34	15	9.3	418
27	5.6	113	402	e450	e350	1720	1460	119	21	12	8.9	698
28	11	97	369	e370	e300	1520	1000	100	22	4.0	8.4	714
29	12	90	381	e300	---	1970	698	87	21	3.1	7.2	307
30	9.6	83	412	e250	---	1640	525	79	16	6.7	7.4	175
31	9.7	---	e452	e200	---	1230	---	78	---	18	6.5	---
TOTAL	278.35	2578.9	22890	10957	10660	48870	28836	7608	2474	462.8	310.9	3316.7
MEAN	8.98	86.0	738	353	381	1576	961	245	82.5	14.9	10.0	111
MAX	45	210	4540	535	3050	5710	2570	756	313	52	16	714
MIN	.37	5.5	57	176	33	240	359	78	16	2.4	2.7	6.4
CF5M	.03	.32	2.71	1.30	1.40	5.80	3.53	.90	.30	.05	.04	.41
IN.	.04	.35	3.13	1.50	1.46	6.68	3.94	1.04	.34	.06	.04	.45

e Estimated

MONONGAHELA RIVER BASIN

03050500 TYGART VALLEY RIVER NEAR ELKINS, WV--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1945 - 1993, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	196	407	696	748	878	1039	789	561	341	235	203	126
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	14.9	6.01	2.58
(WY)	1954	1954	1966	1977	1978	1957	1955	1991	1965	1993	1965	1953

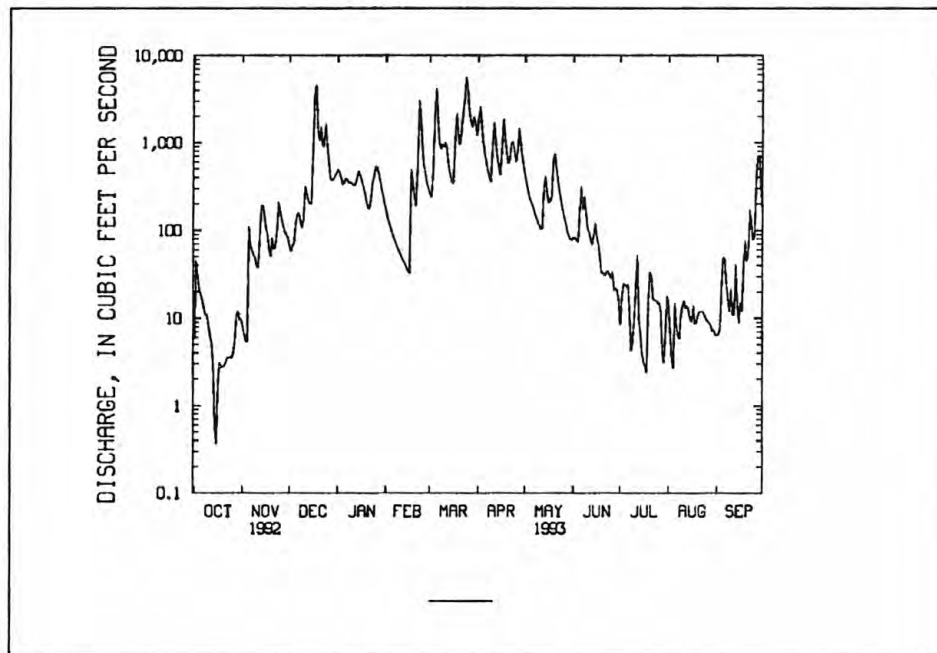
SUMMARY STATISTICS	FOR 1992 CALENDAR YEAR			FOR 1993 WATER YEAR			WATER YEARS 1945 - 1993		
ANNUAL TOTAL	173985.15			139242.65					
ANNUAL MEAN	475			381			517		
HIGHEST ANNUAL MEAN							750		
LOWEST ANNUAL MEAN							312		
HIGHEST DAILY MEAN	7250			Jul 28			5710		
LOWEST DAILY MEAN	.37			Oct 15			Mar 24		
ANNUAL SEVEN-DAY MINIMUM	2.0			Oct 13			16000		
INSTANTANEOUS PEAK FLOW							Nov 5 1985		
INSTANTANEOUS PEAK STAGE							b23500		
INSTANTANEOUS LOW FLOW							c22.81		
ANNUAL RUNOFF (CFSM)	1.75			1.40			e.10		
ANNUAL RUNOFF (INCHES)	23.80			19.04			1.90		
10 PERCENT EXCEEDS	1020			1000			25.81		
50 PERCENT EXCEEDS	280			106			1220		
90 PERCENT EXCEEDS	21			6.7			244		
							27		

a Sept. 20-29, 1959.

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

c From floodmarks.

e Estimated.



MONONGAHELA RIVER BASIN

03051000 TYGART VALLEY RIVER AT BELINGTON, WV

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

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

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

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

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

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

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

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

Date	Time	Discharge (ft ³ /s)	Gage Height (ft)	Date	Time	Discharge (ft ³ /s)	Gage Height (ft)
Dec. 18	0100	9,120	13.15	Mar. 24	1400	*9,180	*13.19
Mar. 5	0900	6,700	11.25				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	41	30	144	815	e320	e400	2460	648	137	33	8.5	9.3
2	25	30	122	802	e280	e330	3680	512	142	27	23	13
3	47	49	126	674	e250	702	2580	422	130	30	22	11
4	46	94	135	571	e210	3310	1690	373	118	54	15	23
5	36	78	326	629	e190	6340	1200	336	161	43	9.6	55
6	32	159	413	805	e170	3200	949	305	379	37	9.8	83
7	29	130	364	708	e150	1710	748	269	268	42	17	62
8	27	107	290	610	e140	1490	611	232	431	26	16	40
9	24	92	242	561	e125	1810	531	209	324	20	21	31
10	20	82	333	521	e115	1660	1580	189	216	12	14	27
11	21	73	729	488	e105	2010	3130	166	146	8.5	18	39
12	20	223	624	502	e98	e1300	1820	161	134	7.2	24	26
13	17	493	485	661	e90	e900	1180	336	108	55	21	25
14	16	431	435	909	e84	e740	865	700	102	28	18	49
15	13	315	453	799	e78	e620	692	448	129	15	19	38
16	9.2	227	1330	655	e74	e550	1170	341	130	10	16	49
17	7.5	179	6710	546	984	1810	2840	325	103	8.0	16	88
18	6.6	158	7540	457	e800	3680	1960	332	91	6.2	17	77
19	6.5	116	2600	379	e600	2210	1270	697	64	12	19	118
20	11	130	1800	311	e430	1640	919	1150	47	30	13	109
21	11	133	2470	295	705	2350	1030	783	48	52	15	88
22	12	133	1570	383	4390	3460	1910	569	50	49	19	176
23	12	225	1550	617	3400	4990	1950	428	48	31	18	232
24	11	346	2590	771	1670	8790	1420	346	47	23	18	157
25	15	337	1550	931	961	6620	1040	281	44	21	17	136
26	17	264	1020	892	e660	3560	1120	232	41	24	16	497
27	16	220	675	e750	e500	2540	2350	192	48	29	14	1360
28	14	190	600	e600	e450	2300	1710	162	30	21	12	1510
29	21	170	643	e520	---	3440	1150	141	36	18	12	597
30	34	156	670	e430	---	2640	844	129	38	10	11	308
31	32	---	701	e360	---	1970	---	122	---	7.0	10	---
TOTAL	649.8	5370	39240	18952	18029	79072	46399	11536	3790	788.9	498.9	6033.3
MEAN	21.0	179	1266	611	644	2551	1547	372	126	25.4	16.1	201
MAX	47	493	7540	931	4390	8790	3680	1150	431	55	24	1510
MIN	6.5	30	122	295	74	330	531	122	30	6.2	8.5	9.3
CFSM	.05	.44	3.10	1.50	1.58	6.25	3.79	.91	.31	.06	.04	.49
IN.	.06	.49	3.58	1.73	1.64	7.21	4.23	1.05	.35	.07	.05	.55

e Estimated

MONONGAHELA RIVER BASIN

03051000 TYGART VALLEY RIVER AT BELINGTON, WV--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1907 - 1993, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	338	624	1029	1255	1352	1557	1197	961	557	417	337	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

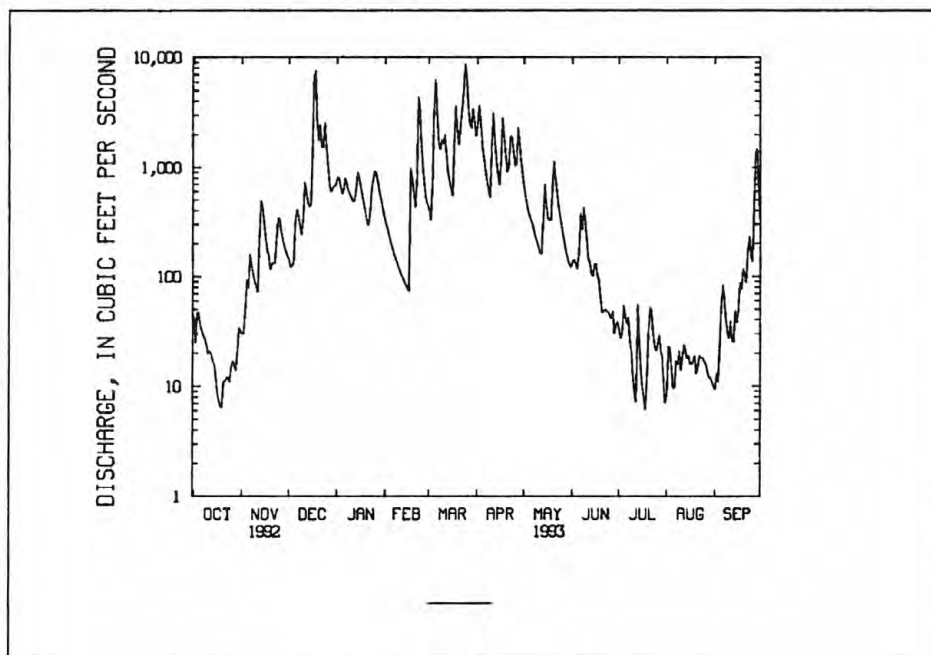
SUMMARY STATISTICS	FOR 1992 CALENDAR YEAR		FOR 1993 WATER YEAR		WATER YEARS 1907 - 1993	
ANNUAL TOTAL	271626.8		230358.9			
ANNUAL MEAN	742		631		815	
HIGHEST ANNUAL MEAN					1203	
LOWEST ANNUAL MEAN					506	
HIGHEST DAILY MEAN	10100	Jul 28	8790	Mar 24	27400	Nov 5 1985
LOWEST DAILY MEAN	6.5	Oct 19	6.2	Jul 18	.10	(a)
ANNUAL SEVEN-DAY MINIMUM	9.1	Oct 16	9.1	Oct 16	.17	Sep 13 1930
INSTANTANEOUS PEAK FLOW			9180	Mar 24	b29500	Nov 5 1985
INSTANTANEOUS PEAK STAGE			13.19	Mar 24	c23.65	Nov 5 1985
INSTANTANEOUS LOW FLOW			5.1	(d)	.10	Sep 13 1930
ANNUAL RUNOFF (CFSM)	1.82		1.55		2.00	
ANNUAL RUNOFF (INCHES)	24.77		21.00		27.15	
10 PERCENT EXCEEDS	1640		1800		1970	
50 PERCENT EXCEEDS	443		189		404	
90 PERCENT EXCEEDS	48		15		46	

a Sept. 13, 16, 1930.

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

c From floodmarks.

d July 18, 19.



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, recorder malfunction), which are poor. U.S. Army Corps of Engineers satellite telemeter at station.

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

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage Height (ft)	Date	Time	Discharge (ft ³ /s)	Gage Height (ft)
Dec. 17	1615	*5,770	*9.41	Mar. 24	0430	4,590	8.53

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	35	15	91	417	e150	e200	909	364	93	22	.81	2.2
2	32	16	89	418	e130	e180	916	295	89	26	e.91	2.3
3	30	21	89	388	e115	285	797	238	60	44	e1.6	2.8
4	27	61	83	345	e100	1500	655	197	53	33	1.4	4.5
5	24	40	229	382	e90	2030	531	176	162	23	1.0	4.3
6	22	40	276	423	e78	1150	451	158	207	19	1.9	14
7	20	45	248	384	e68	751	369	135	124	15	2.5	13
8	18	42	196	356	e62	733	314	116	109	14	1.8	8.7
9	17	35	168	328	e56	857	275	101	86	12	1.7	7.6
10	14	32	251	284	e50	789	648	88	82	e10	e1.5	7.9
11	15	36	776	251	e47	953	1080	77	77	8.9	e1.6	6.2
12	16	288	570	261	e43	694	774	71	56	7.3	e2.1	4.6
13	21	475	429	330	e40	e450	573	170	47	7.7	2.4	4.2
14	23	388	371	421	e37	e380	445	248	41	8.5	1.8	5.2
15	17	267	385	398	e35	e330	370	158	39	9.7	1.5	5.4
16	14	185	1230	359	e34	e300	440	135	34	7.2	1.7	11
17	13	146	4360	312	e450	e600	640	152	e30	e5.9	2.5	18
18	12	128	2690	262	e320	1440	601	138	e28	5.0	2.4	29
19	12	114	1180	211	e240	924	502	399	e24	7.8	2.4	21
20	12	98	1110	173	e190	733	417	479	e20	8.3	3.6	17
21	13	89	1130	174	381	1170	523	387	19	e4.0	6.3	19
22	14	105	791	226	1690	1350	935	316	19	3.9	6.1	16
23	13	167	1030	311	1150	2110	950	243	19	3.1	5.4	24
24	16	188	1180	356	727	3500	720	191	18	2.8	5.1	21
25	15	177	790	467	465	1990	555	155	17	2.6	3.9	23
26	13	161	577	e420	e320	1510	584	127	15	2.8	3.2	232
27	14	143	399	e350	e260	1180	936	104	15	3.0	2.7	626
28	15	126	379	e300	e220	962	755	86	13	1.5	3.0	505
29	15	114	383	e260	---	2110	581	71	13	1.3	3.4	200
30	15	100	361	e230	---	1330	452	61	16	.80	2.3	125
31	15	---	345	e180	---	942	---	57	---	.78	2.2	---
TOTAL	552	3842	22186	9977	7548	33433	18698	5693	1625	320.88	80.72	1979.9
MEAN	17.8	128	716	322	270	1078	623	184	54.2	10.4	2.60	66.0
MAX	35	475	4360	467	1690	3500	1080	479	207	44	6.3	626
MIN	12	15	83	173	34	180	275	57	13	.78	.81	2.2
CFSM	.12	.86	4.80	2.16	1.81	7.24	4.18	1.23	.36	.07	.02	.44
IN.	.14	.96	5.54	2.49	1.88	8.35	4.67	1.42	.41	.08	.02	.49

e Estimated

MONONGAHELA RIVER BASIN

03052000 MIDDLE FORK RIVER AT AUDRA, WV--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1942-1979, 1989-1993, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	126	264	498	548	576	672	526	388	219	147	136	88.0
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	2.60	1.40
(WY)	1954	1954	1966	1977	1978	1966	1971	1991	1965	1966	1993	1946

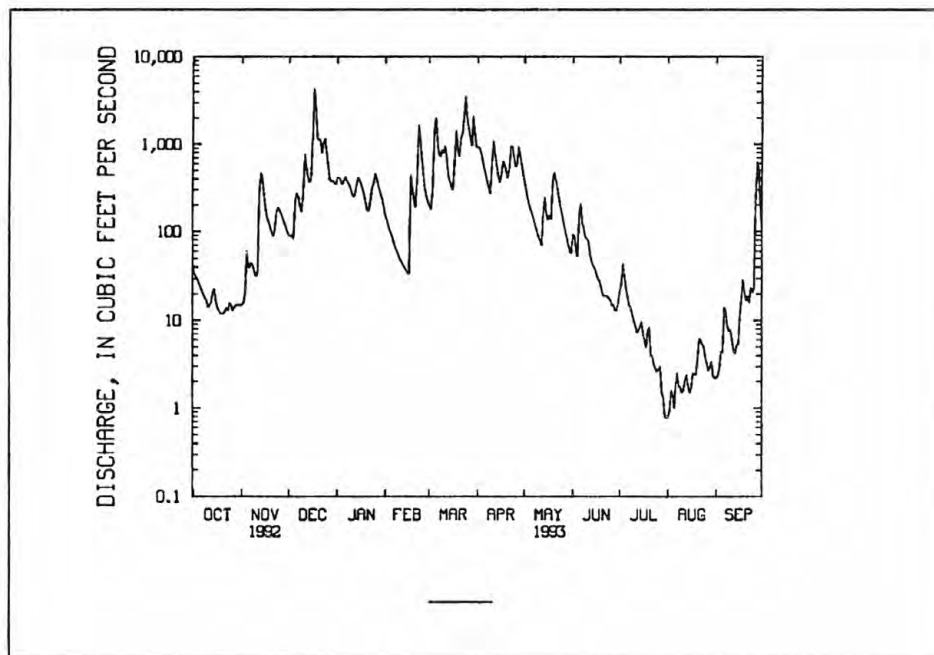
SUMMARY STATISTICS	FOR 1992 CALENDAR YEAR			FOR 1993 WATER YEAR			WATER YEARS 1942 - 1993		
ANNUAL TOTAL	124228			105935.50					
ANNUAL MEAN	339			290			348		
HIGHEST ANNUAL MEAN							505		
LOWEST ANNUAL MEAN							203		
HIGHEST DAILY MEAN	5380			Jul 27			8120		
LOWEST DAILY MEAN	12			(a)			.20		
ANNUAL SEVEN-DAY MINIMUM	13			Oct 17			.20		
INSTANTANEOUS PEAK FLOW				5770			Dec 17		
INSTANTANEOUS PEAK STAGE				9.41			Dec 17		
INSTANTANEOUS LOW FLOW				.78			(d)		
ANNUAL RUNOFF (CFSM)	2.28			1.95			2.34		
ANNUAL RUNOFF (INCHES)	31.02			26.45			31.75		
10 PERCENT EXCEEDS	763			790			815		
50 PERCENT EXCEEDS	199			101			185		
90 PERCENT EXCEEDS	35			3.3			16		

a Oct. 18-20.

b Oct. 11-27, 1953.

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

d July 30 to Aug. 2.



MONONGAHELA RIVER BASIN

03052500 SAND RUN NEAR BUCKHANNON, WV

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

DRAINAGE AREA.--14.5 mi².

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

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

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

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

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

Date	Time	Discharge (ft ³ /s)	Gage Height (ft)	Date	Time	Discharge (ft ³ /s)	Gage Height (ft)
Dec. 17	1145	571	4.54	Mar. 28	2315	*1,680	*6.57

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.4	1.5	8.1	38	e12	e15	72	22	3.2	1.2	.04	.03
2	4.1	1.6	7.6	33	e10	24	74	18	2.7	1.1	.04	.03
3	3.9	3.7	7.5	29	e8.8	46	65	15	2.4	1.5	.11	.09
4	3.8	3.5	7.7	24	e7.8	263	50	13	2.2	2.0	.11	1.7
5	3.7	3.2	43	41	e6.8	223	40	12	2.5	1.4	.09	1.1
6	3.4	6.1	33	39	e6.0	102	33	11	2.9	1.1	.35	.52
7	3.2	5.6	25	33	e5.4	65	25	9.8	2.9	.70	.54	.22
8	3.0	5.1	19	29	e4.9	65	22	8.4	2.7	.49	.18	.14
9	3.2	4.8	15	23	e4.4	64	19	7.4	2.5	.29	.12	.12
10	2.8	4.5	60	20	e4.0	85	109	6.7	2.3	.17	.11	.74
11	2.2	13	96	18	e3.8	104	99	6.0	2.1	.14	.10	.27
12	2.2	46	54	20	e3.5	66	55	6.1	2.0	.12	.11	.13
13	2.2	52	39	44	e3.2	e50	38	20	1.8	.11	.10	.12
14	1.9	26	33	52	e3.0	e38	31	12	1.6	e.10	.08	.11
15	1.7	17	34	40	e2.8	e33	25	8.7	1.4	e.09	.07	.35
16	1.5	12	141	30	e20	e30	27	7.9	1.2	e.09	.05	3.8
17	1.4	9.8	364	24	57	213	31	8.9	1.1	e.08	.42	4.0
18	e1.3	8.7	145	19	e40	161	28	7.4	.71	e.08	.48	2.2
19	e1.2	8.1	61	16	e30	80	25	21	.62	1.4	.25	1.4
20	e1.2	7.0	63	13	e23	69	22	17	.58	1.4	.29	.96
21	e1.3	7.6	57	15	58	171	60	13	.58	.82	.35	1.1
22	e1.3	13	42	20	122	125	109	12	.93	.37	.19	1.3
23	e1.2	26	78	27	67	147	76	9.0	.95	.16	.12	1.3
24	e1.3	23	69	37	41	194	50	7.5	.67	.12	.11	1.3
25	e1.3	19	45	47	e30	127	37	6.1	.47	.11	.09	1.4
26	e1.3	15	32	40	e24	75	48	5.1	.44	.10	.07	21
27	e1.3	12	24	32	e20	53	57	3.9	.68	.09	.05	79
28	e1.4	11	24	25	e17	333	45	3.3	.66	.08	.04	23
29	e1.4	9.8	26	22	---	487	35	2.9	1.1	.08	.03	8.4
30	e1.3	8.5	26	16	---	109	27	2.6	1.4	.06	.03	5.1
31	e1.4	---	26	e14	---	68	---	2.3	---	.05	.03	---
TOTAL	66.8	384.1	1704.9	880	635.4	3685	1434	306.0	47.29	15.60	4.75	160.93
MEAN	2.15	12.8	55.0	28.4	22.7	119	47.8	9.87	1.58	.50	.15	5.36
MAX	4.4	52	364	52	122	487	109	22	3.2	2.0	.54	.79
MIN	1.2	1.5	7.5	13	2.8	15	19	2.3	.44	.05	.03	.03
CFSM	.15	.88	3.79	1.96	1.57	8.20	3.30	.68	.11	.03	.01	.37
IN.	.17	.99	4.37	2.26	1.63	9.45	3.68	.79	.12	.04	.01	.41

e Estimated

MONONGAHELA RIVER BASIN

03052500 SAND RUN NEAR BUCKHANNON, WV--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1947 - 1993, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	10.9	24.4	40.2	40.8	46.3	51.2	40.6	26.9	16.9	13.8	10.4	6.96
MAX	60.3	145	87.3	81.3	92.4	119	83.9	77.6	75.1	59.4	48.5	30.2
(WY)	1977	1986	1973	1952	1986	1993	1973	1989	1989	1958	1977	1979
MIN	.013	.060	3.52	9.44	11.1	12.3	10.2	4.91	.44	.37	.15	.071
(WY)	1954	1954	1966	1977	1978	1987	1971	1982	1965	1966	1993	1953

SUMMARY STATISTICS	FOR 1992 CALENDAR YEAR		FOR 1993 WATER YEAR		WATER YEARS 1947 - 1993	
ANNUAL TOTAL	9996.7		9324.77			
ANNUAL MEAN	27.3		25.5		27.3	
HIGHEST ANNUAL MEAN					38.3	
LOWEST ANNUAL MEAN					14.8	
HIGHEST DAILY MEAN	437		487		1220	
LOWEST DAILY MEAN	e1.2		.03		.00	
ANNUAL SEVEN-DAY MINIMUM	1.3		.03		.00	
INSTANTANEOUS PEAK FLOW			1680		d3200	
INSTANTANEOUS PEAK STAGE			6.57		8.34	
INSTANTANEOUS LOW FLOW			.03		.00	
ANNUAL RUNOFF (CFSM)	1.88		1.76		1.89	
ANNUAL RUNOFF (INCHES)	25.65		23.92		25.63	
10 PERCENT EXCEEDS	58		65		63	
50 PERCENT EXCEEDS	16		7.4		12	
90 PERCENT EXCEEDS	3.5		.11		1.0	

a Oct. 19, 20, 23.

b Aug. 29 to Sept. 2.

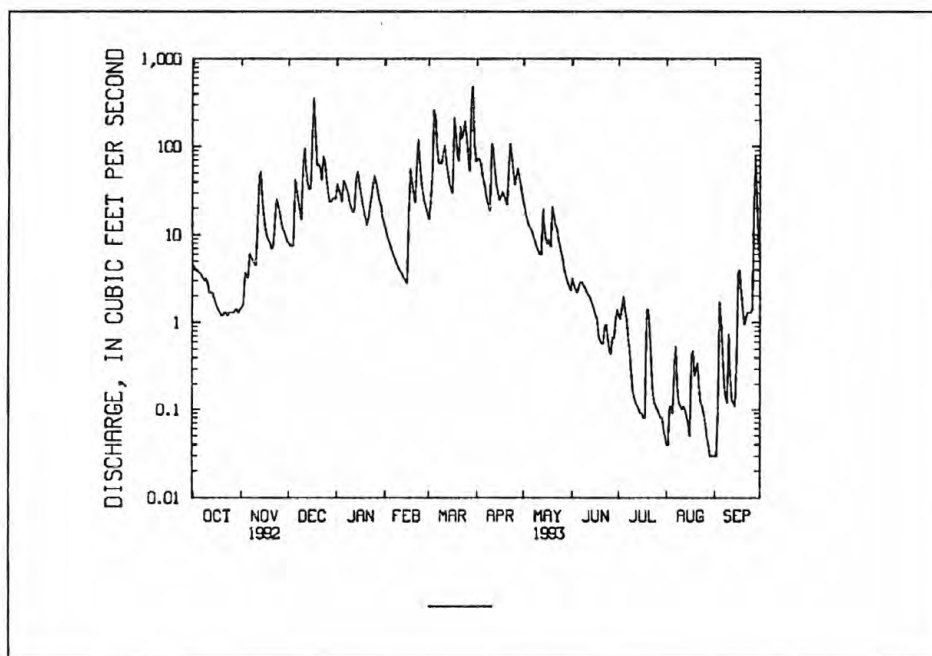
c Several days in 1951-56, 1964-66, and July 19, 1986.

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

e Estimated.

f Aug. 1, 2, Aug. 29 to Sept. 2.

g 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 poor. Some regulation at low flow from mine pumpage above station.

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

Date	Time	Discharge (ft ³ /s)	Gage Height (ft)	Date	Time	Discharge (ft ³ /s)	Gage Height (ft)
Dec. 17	2215	*7,330	*11.17	Mar. 24	1415	5,290	9.66
Mar. 5	1000	4,680	9.21	Mar. 29	1500	5,910	10.12

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	78	31	183	686	e300	e350	1580	576	98	25	6.6	4.4
2	69	36	178	718	e255	e330	1630	454	125	25	6.0	4.5
3	64	70	180	633	e230	556	1510	368	100	35	5.5	4.7
4	59	97	195	561	e200	1830	1210	312	84	87	5.3	10
5	54	105	569	583	e175	4380	949	276	128	51	5.6	26
6	50	131	588	735	e160	2800	783	258	342	47	7.6	47
7	45	141	469	655	e145	1550	633	219	214	30	9.8	42
8	41	124	383	584	e130	1200	515	179	158	21	12	26
9	40	101	319	537	e120	1220	441	162	133	16	9.5	20
10	47	90	771	460	e110	1250	866	145	119	13	10	28
11	45	117	1700	405	e100	1830	1720	129	115	11	14	32
12	46	592	1210	398	e96	1400	1270	119	97	9.2	12	19
13	47	852	875	572	e90	1060	909	221	83	8.0	11	17
14	50	670	732	905	e84	801	691	373	82	7.5	9.8	18
15	39	441	708	826	e80	e600	566	249	91	8.0	8.2	17
16	32	329	1660	674	e78	e530	506	189	74	10	6.7	79
17	28	263	5730	564	787	1660	676	192	66	9.9	6.4	130
18	26	230	5510	467	e600	3290	647	203	46	13	8.0	121
19	25	211	2100	383	e440	1930	575	323	22	30	21	77
20	25	183	1600	321	e350	1420	507	565	30	120	39	55
21	27	173	1800	285	688	2240	644	474	29	55	29	76
22	28	242	1270	355	2570	2760	1380	389	30	58	21	108
23	27	424	1450	478	2060	2520	1540	307	31	35	17	113
24	27	436	1980	576	1210	4840	1190	249	26	23	13	85
25	30	395	1310	860	765	3720	900	203	22	18	10	106
26	30	343	940	876	e580	2320	867	165	20	15	8.5	461
27	30	296	657	718	e470	1680	1670	141	18	13	7.4	1430
28	30	259	570	605	e400	1580	1400	120	17	12	6.8	1660
29	31	227	627	503	---	5390	1000	101	18	10	6.1	622
30	29	201	605	433	---	3570	744	89	21	8.6	5.3	339
31	29	---	577	348	---	1800	---	85	---	7.4	4.8	---
TOTAL	1228	7810	37446	17704	13273	62407	29519	7835	2439	831.6	342.9	5777.6
MEAN	39.6	260	1208	571	474	2013	984	253	81.3	26.8	11.1	193
MAX	78	852	5730	905	2570	5390	1720	576	342	120	39	1660
MIN	25	31	178	285	78	330	441	85	17	7.4	4.8	4.4
CFSM	.14	.94	4.36	2.06	1.71	7.27	3.55	.91	.29	.10	.04	.70
IN.	.16	1.05	5.03	2.38	1.78	8.38	3.96	1.05	.33	.11	.05	.78

e Estimated

MONONGAHELA RIVER BASIN

03053500 BUCKHANNON RIVER AT HALL, WV--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1915 - 1993, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	266	504	834	911	999	1117	828	630	383	290	254	167
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 1992 CALENDAR YEAR		FOR 1993 WATER YEAR		WATER YEARS 1915 - 1993	
ANNUAL TOTAL	214253		186613.1			
ANNUAL MEAN	585		511		598	
HIGHEST ANNUAL MEAN					915	1927
LOWEST ANNUAL MEAN					354	1966
HIGHEST DAILY MEAN	8370	Jul 28	5730	Dec 17	14500	Nov 5 1985
LOWEST DAILY MEAN	25	(a)	4.4	Sep 1	.20	(b)
ANNUAL SEVEN-DAY MINIMUM	26	Oct 18	5.2	Aug 28	.21	Oct 21 1930
INSTANTANEOUS PEAK FLOW			7330	Dec 17	c15000	Nov 5 1985
INSTANTANEOUS PEAK STAGE			11.17	Dec 17	d16.88	Nov 5 1985
INSTANTANEOUS LOW FLOW			4.0	Sep 3	.20	(f)
ANNUAL RUNOFF (CFSM)	2.11		1.85		2.16	
ANNUAL RUNOFF (INCHES)	28.77		25.06		29.31	
10 PERCENT EXCEEDS	1270		1470		1400	
50 PERCENT EXCEEDS	382		180		311	
90 PERCENT EXCEEDS	85		12		36	

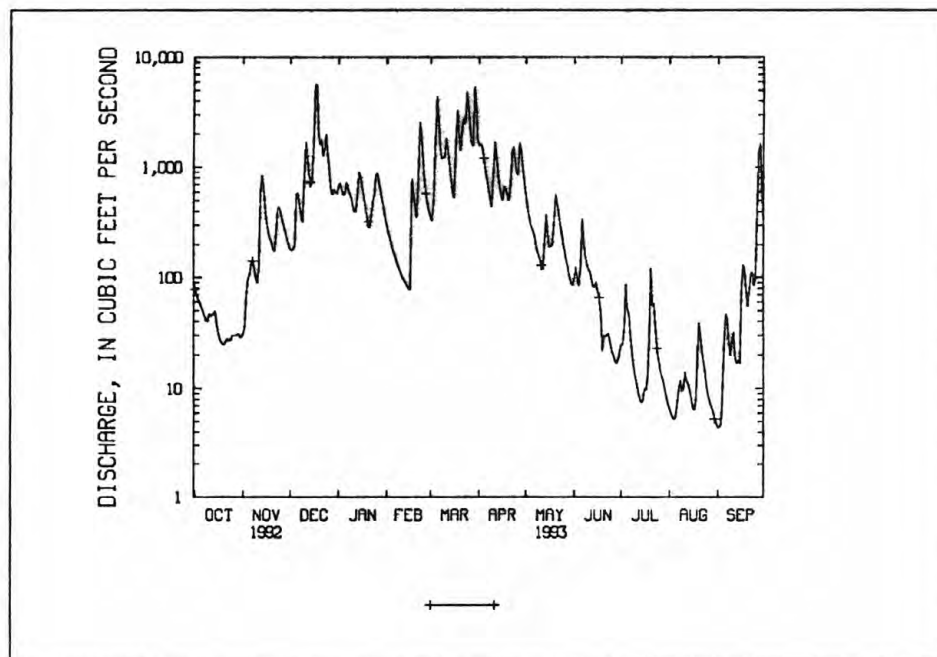
a Oct. 19, 20.

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.

e Oct. 23, 27, 1930.



MONONGAHELA RIVER BASIN

03054500 TYGART VALLEY RIVER AT PHILIPPI, WV

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

DRAINAGE AREA.--916 mi².

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

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

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

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

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

Date	Time	Discharge (ft ³ /s)	Gage Height (ft)	Date	Time	Discharge (ft ³ /s)	Gage Height (ft)
Dec. 18	0100	*22,200	*17.40	Mar. 24	1000	18,900	15.73
Mar. 5	1000	15,200	13.51				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	179	74	490	2040	e800	e1000	4970	1800	296	77	20	16
2	158	75	452	2180	e700	e920	6710	1450	369	85	17	15
3	135	93	443	1940	e600	1590	5470	1180	320	78	20	17
4	151	180	442	1680	e540	6140	4000	988	269	125	31	33
5	139	253	902	1690	e480	14500	3000	887	313	139	31	41
6	124	319	1560	2150	e420	8860	2440	819	880	106	28	83
7	117	338	1310	1980	e380	4710	1980	716	757	89	35	154
8	109	333	1080	1740	e350	3750	1620	615	713	77	35	116
9	109	264	892	1590	e310	4160	1410	541	713	56	34	84
10	99	223	1030	1420	e290	4000	2730	476	470	43	32	88
11	96	217	3340	1290	e260	5270	6510	420	389	32	31	79
12	95	690	3070	1290	e240	4160	4430	387	317	25	28	82
13	88	1870	2200	1750	e230	3230	3040	587	260	19	34	59
14	89	1890	1810	2520	e220	2340	2280	1400	225	40	36	53
15	85	1280	1720	2310	e200	e1600	1850	1030	224	47	30	83
16	69	924	3230	1930	e190	e1400	1910	772	263	29	26	185
17	56	716	15800	1620	2130	4300	4200	719	208	20	33	297
18	46	617	18900	1370	2650	9660	3540	729	179	17	31	291
19	41	546	8130	1120	1850	5960	2610	1170	144	29	26	239
20	37	459	4660	932	1640	4310	2060	2290	105	174	38	220
21	39	459	6110	862	1750	6200	2230	1830	99	144	60	219
22	48	477	4280	1070	8170	8450	4310	1430	105	116	50	257
23	50	752	3720	1550	7960	10000	4820	1110	101	105	45	432
24	50	1060	6190	1990	4210	18200	3750	884	95	72	41	326
25	57	1080	4310	2600	2540	14500	2790	724	89	53	36	257
26	58	928	2950	2460	e2000	8510	2590	593	82	47	31	953
27	58	792	2040	e2000	e1500	5950	4960	486	78	67	26	4040
28	58	691	1690	e1700	e1200	4730	4320	405	77	60	22	4550
29	57	618	1820	e1400	---	11300	3060	344	66	48	19	1850
30	58	547	1830	e1200	---	8820	2300	290	71	43	17	946
31	75	---	1800	e1000	---	5270	---	271	---	29	16	---
TOTAL	2630	18765	108201	52374	43810	193790	101890	27343	8277	2091	959	16065
MEAN	84.8	625	3490	1689	1565	6251	3396	882	276	67.5	30.9	535
MAX	179	1890	18900	2600	8170	18200	6710	2290	880	174	60	4550
MIN	37	74	442	862	190	920	1410	271	66	17	16	15
CFM5M	.09	.68	3.81	1.84	1.71	6.82	3.71	.96	.30	.07	.03	.58
IN.	.11	.76	4.39	2.13	1.78	7.87	4.14	1.11	.34	.08	.04	.65

e Estimated

MONONGAHELA RIVER BASIN

03054500 TYGART VALLEY RIVER AT PHILIPPI, WV--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 1993, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	734	1592	2634	2753	3135	3561	2813	2020	1244	897	780	502
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	67.5	30.9	16.4
(WY)	1954	1954	1966	1977	1978	1987	1971	1991	1965	1993	1993	1946

SUMMARY STATISTICS	FOR 1992 CALENDAR YEAR			FOR 1993 WATER YEAR			WATER YEARS 1940 - 1993		
ANNUAL TOTAL	663521			576195					
ANNUAL MEAN	1813			1579			1878		
HIGHEST ANNUAL MEAN							2581		
LOWEST ANNUAL MEAN							1105		
HIGHEST DAILY MEAN	23900			Jul 28			18900		
LOWEST DAILY MEAN	37			Oct 20			15		
ANNUAL SEVEN-DAY MINIMUM	44			Oct 18			17		
INSTANTANEOUS PEAK FLOW							22200		
INSTANTANEOUS PEAK STAGE							17.40		
INSTANTANEOUS LOW FLOW							14		
ANNUAL RUNOFF (CFSM)	1.98			1.72			2.05		
ANNUAL RUNOFF (INCHES)	26.95			23.40			27.86		
10 PERCENT EXCEEDS	4090			4310			4480		
50 PERCENT EXCEEDS	1120			540			1020		
90 PERCENT EXCEEDS	185			36			114		

a 1972, 1989.

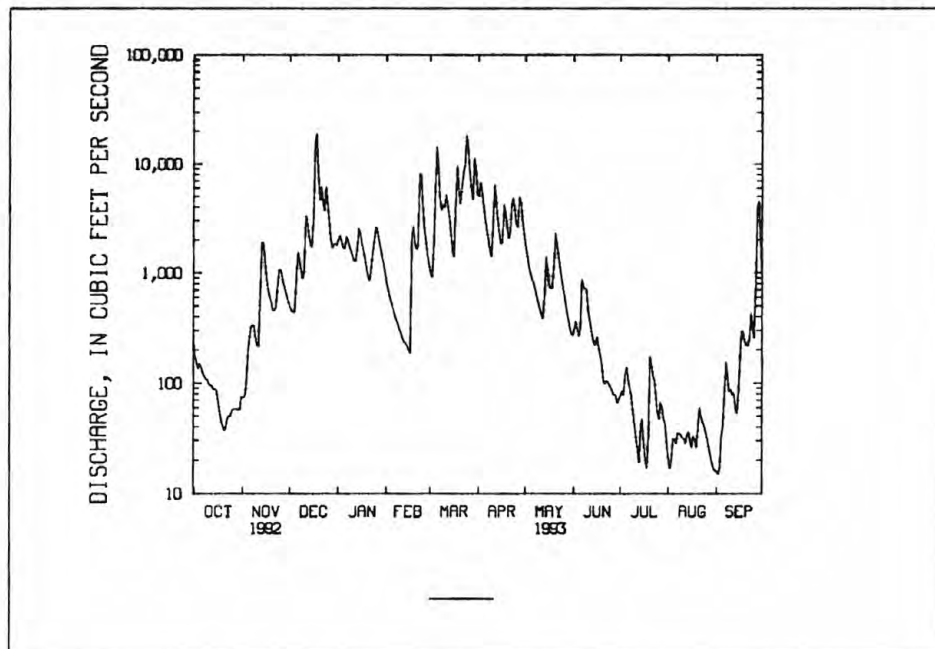
b Oct. 10, 11, 1953.

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

d From floodmarks.

f Aug. 31, Sept. 1, 2, 3.

g Oct. 10-12, 21, 1953.



MONONGAHELA RIVER BASIN

03056250 THREE FORK CREEK NEAR GRAFTON, WV

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

DRAINAGE AREA.--97.4 mi².

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

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

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

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

Date	Time	Discharge (ft ³ /s)	Gage Height (ft)	Date	Time	Discharge (ft ³ /s)	Gage Height (ft)
Dec. 17	1430	3,340	10.70	Mar. 23	2400	*3,730	*11.24

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	10	52	364	e72	e105	347	160	33	15	5.9	.59
2	10	11	45	281	e60	e100	350	128	24	27	6.0	.89
3	9.8	70	43	214	e53	190	287	104	20	42	8.9	11
4	8.6	56	44	184	e46	941	235	88	19	22	8.5	109
5	7.0	38	138	314	e40	1060	197	79	23	20	6.2	42
6	6.5	64	144	360	e36	627	166	73	27	14	5.8	18
7	6.4	60	117	271	e33	409	137	62	18	10	7.6	11
8	5.9	47	92	220	e30	478	117	54	32	7.8	7.0	6.6
9	6.5	38	73	162	e27	576	103	49	31	6.4	5.3	5.5
10	17	31	103	128	e25	467	234	43	19	5.4	4.0	5.6
11	15	42	141	108	e23	671	322	38	236	5.4	3.6	4.5
12	23	238	141	131	e21	459	257	37	97	4.7	3.2	3.7
13	23	359	136	245	e19	e300	195	85	51	4.2	2.8	3.3
14	16	189	138	347	e18	e220	161	59	33	4.0	2.1	2.9
15	13	113	173	259	e17	e170	140	45	25	4.1	1.8	2.9
16	11	77	576	198	e17	e150	245	38	20	4.3	1.5	7.7
17	9.4	61	2230	160	387	835	341	44	16	5.1	1.6	18
18	10	55	1190	123	285	801	285	39	14	3.9	6.5	14
19	9.9	55	550	95	178	472	224	64	12	3.7	6.0	11
20	9.7	50	685	77	e130	411	181	62	10	4.1	4.0	7.5
21	9.0	48	567	100	321	1010	349	51	9.6	3.8	3.0	6.3
22	8.5	115	364	222	1020	832	450	44	23	3.4	2.3	6.5
23	7.8	219	316	265	576	1380	390	38	21	2.9	1.9	7.5
24	11	162	274	331	353	1850	297	35	13	2.6	1.7	6.8
25	10	135	209	501	231	714	228	31	9.8	2.2	1.6	7.0
26	11	109	170	342	e180	450	517	26	8.3	1.8	1.4	77
27	12	89	104	260	e140	336	628	22	8.1	1.7	1.1	236
28	10	75	140	191	e115	266	386	20	8.2	1.5	.87	181
29	8.4	65	143	160	---	208	281	18	12	12	.80	66
30	10	56	189	e110	---	172	209	17	17	21	.88	41
31	8.9	---	229	e90	---	149	---	16	---	8.8	.71	---
TOTAL	335.3	2737	9516	6813	4453	16809	8259	1669	890.0	274.8	114.56	920.78
MEAN	10.8	91.2	307	220	159	542	275	53.8	29.7	8.86	3.70	30.7
MAX	23	359	2230	501	1020	1850	628	160	236	42	8.9	236
MIN	5.9	10	43	77	17	100	103	16	8.1	1.5	.71	.59
CFSM	.11	.94	3.15	2.26	1.63	5.57	2.83	.55	.30	.09	.04	.32
IN.	.13	1.05	3.63	2.60	1.70	6.42	3.15	.64	.34	.10	.04	.35

e Estimated

MONONGAHELA RIVER BASIN

03056250 THREE FORK CREEK NEAR GRAFTON, WV--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1985 - 1993, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	56.9	220	261	235	330	311	225	153	88.9	88.9	25.8	22.1
MAX	160	654	578	378	643	542	367	366	238	187	85.2	58.0
(WY)	1990	1986	1991	1991	1986	1993	1987	1989	1989	1990	1992	1990
MIN	4.49	44.2	122	151	159	80.2	151	44.2	7.07	3.85	3.57	3.72
(WY)	1992	1992	1990	1985	1993	1987	1986	1991	1991	1991	1988	1991

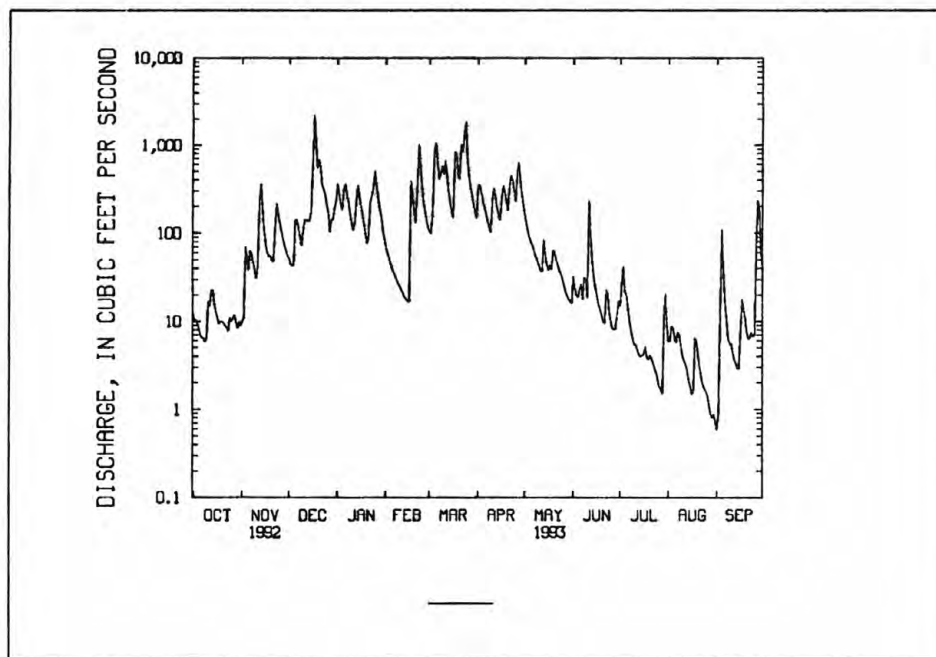
SUMMARY STATISTICS	FOR 1992 CALENDAR YEAR				FOR 1993 WATER YEAR				WATER YEARS 1985 - 1993			
ANNUAL TOTAL	56092.5				52791.44							
ANNUAL MEAN	153				145				167			
HIGHEST ANNUAL MEAN									209			
LOWEST ANNUAL MEAN									112			
HIGHEST DAILY MEAN	2230				2230				5200			
LOWEST DAILY MEAN	5.9				.59				.49			
ANNUAL SEVEN-DAY MINIMUM	7.2				.83				.55			
INSTANTANEOUS PEAK FLOW					3730				b12000			
INSTANTANEOUS PEAK STAGE					11.24				c20.13			
INSTANTANEOUS LOW FLOW					.56				.44			
ANNUAL RUNOFF (CFSM)	1.57				1.48				1.72			
ANNUAL RUNOFF (INCHES)	21.42				20.16				23.33			
10 PERCENT EXCEEDS	356				362				387			
50 PERCENT EXCEEDS	88				45				85			
90 PERCENT EXCEEDS	12				4.0				6.2			

a Aug. 16, 18, 1988.

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

c From floodmarks.

d Aug. 18, 19, 1988.



MONONGAHELA RIVER BASIN

03057000 TYGART VALLEY RIVER AT COLFAX, WV

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

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

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

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

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

REMARKS.--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, 13,000 ft³/s, Mar. 27, gage height, 12.34 ft.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	955	494	708	3510	1460	3930	6950	2870	445	360	322	317
2	946	502	701	3410	1020	2390	4910	1810	446	379	339	311
3	940	586	699	3320	999	1290	6440	1280	380	399	334	347
4	930	567	691	2890	1010	2530	7470	1820	378	392	329	406
5	919	449	796	2450	901	4140	8800	1570	394	363	329	243
6	911	483	885	2590	632	5900	6950	1080	387	359	331	158
7	902	515	970	2840	631	8900	2620	1060	379	348	327	141
8	894	609	1270	3320	626	8700	1680	962	398	343	322	179
9	913	436	1190	3170	622	9650	1670	725	521	342	319	307
10	894	434	1360	3020	617	10500	1890	713	953	339	316	315
11	850	540	1910	2610	612	10500	2650	702	e1140	351	317	306
12	668	844	2720	2090	625	8060	4700	679	e752	339	312	304
13	667	1230	2730	2210	651	4230	5120	615	426	336	311	304
14	652	1780	3150	2460	670	4380	3390	608	e376	336	309	302
15	643	3040	3820	2770	657	5530	3350	576	e313	336	308	306
16	644	3570	4280	3270	794	6740	3410	568	e286	334	305	326
17	632	1810	6390	3160	1480	7450	3550	675	e369	331	294	328
18	624	1030	7230	2720	1990	8870	3520	951	e354	330	281	332
19	622	878	11300	2090	3420	9210	3470	1030	e277	341	282	316
20	617	848	12700	1900	3370	7290	3420	1340	356	343	287	311
21	611	685	12200	1670	3110	8350	3060	2470	e362	330	335	311
22	623	774	11500	1860	3680	8290	2430	3220	374	326	330	311
23	605	929	10800	1950	4960	8580	5000	2640	375	324	328	306
24	604	840	10200	2180	7640	8160	6600	1580	358	323	315	311
25	610	1100	8840	3160	7220	5040	5880	925	357	323	306	319
26	575	1060	7200	3500	6030	8360	5430	673	e354	322	321	379
27	498	1010	5930	3360	4530	11200	5790	620	e354	321	317	641
28	495	980	4130	3240	4310	12600	5940	449	e358	320	315	1560
29	489	954	3440	3120	---	11400	6290	445	375	325	314	2730
30	490	879	3420	2970	---	10500	4400	441	368	338	313	2680
31	489	---	3400	2490	---	9770	---	451	---	330	311	---
TOTAL	21912	29856	146560	85300	64267	232440	136780	35548	12965	10583	9779	15407
MEAN	707	995	4728	2752	2295	7498	4559	1147	432	341	315	514
MAX	955	3570	12700	3510	7640	12600	8800	3220	1140	399	339	2730
MIN	489	434	691	1670	612	1290	1670	441	277	320	281	141

e Estimated

MONONGAHELA RIVER BASIN

03057000 TYGART VALLEY RIVER AT COLFAX, WV--Continued

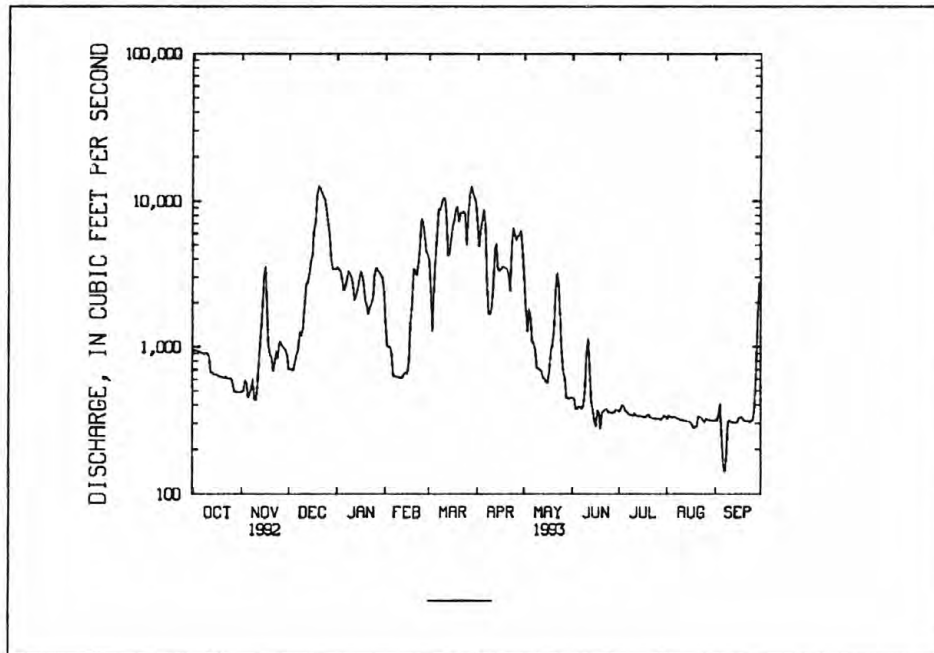
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 1993, BY WATER YEAR (WY)
[REGULATED, UNADJUSTED]

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1310	2333	3874	3918	4475	4999	3108	2558	1790	1293	1313	998
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 1992 CALENDAR YEAR				FOR 1993 WATER YEAR				WATER YEARS 1939 - 1993			
ANNUAL TOTAL	874362				801397							
ANNUAL MEAN	2389				2196							
HIGHEST ANNUAL MEAN									2658			
LOWEST ANNUAL MEAN									3561			
HIGHEST DAILY MEAN	15100				12700				1570			
LOWEST DAILY MEAN	352				141				24900			
ANNUAL SEVEN-DAY MINIMUM	357				236				129			
INSTANTANEOUS PEAK FLOW					13000				132			
INSTANTANEOUS PEAK STAGE					12.34				b19.77			
INSTANTANEOUS LOW FLOW					137				94			
10 PERCENT EXCEEDS	5900				6660				6680			
50 PERCENT EXCEEDS	1420				844				1420			
90 PERCENT EXCEEDS	551				316				405			

a May 5-7, 1941.

b Backwater from West Fork River.



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 September 1992. October 1992 to September 1993 (gage heights, occasional discharge measurements, and annual maximum discharge only).

GAGE.--Water-stage recorder. Datum of gage is 1,070.64 ft above sea level.

REMARKS.--Records for winter periods not adjusted for ice effect. Records fair due to considerable backwater from Stonewall Jackson Lake. U.S. Army Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--8 years (water years 1984-1992), 51.5 ft³/s, 24.20 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,390 ft³/s, Nov. 4, 1985, gage height, 17.87 ft; minimum, no flow several days in September and October 1985, August 1987, and July and August 1988 (extremes for period of discharge record only).

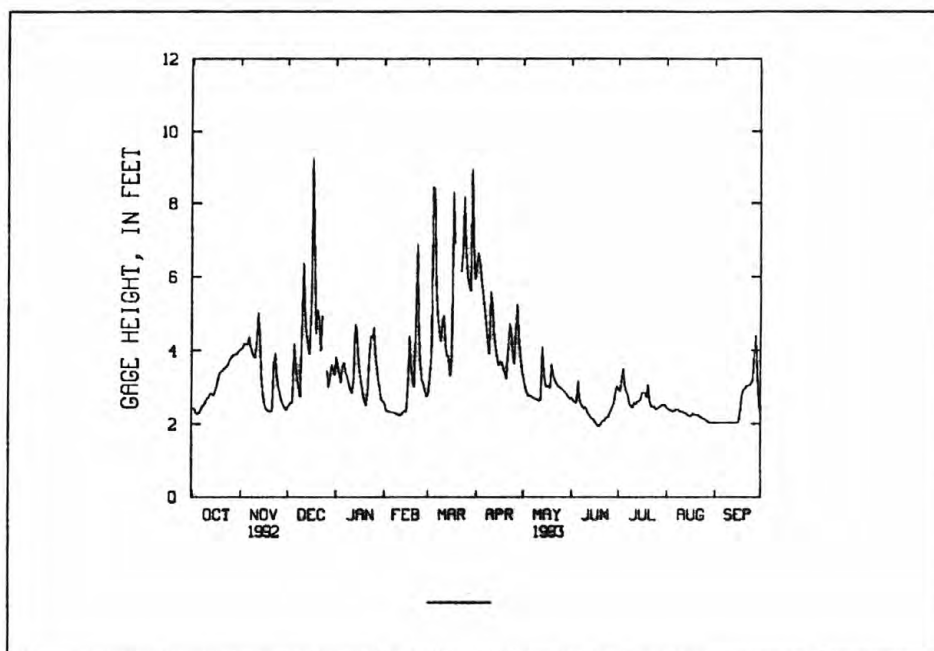
EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,220 ft³/s, Dec. 17, gage height, 11.94 ft; minimum gage height, 1.95 ft, June 18-20.

GAGE HEIGHT, FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.43	4.04	2.46	3.82	2.57	2.82	6.25	3.22	2.70	2.96	2.43	2.03
2	2.42	4.07	2.51	3.58	2.38	3.35	6.67	3.01	2.62	2.87	2.40	2.03
3	2.29	4.19	2.57	3.34	2.34	3.80	6.39	2.85	2.59	3.22	2.38	2.03
4	2.28	4.17	2.59	3.11	2.33	8.45	5.90	2.77	2.57	3.49	2.36	2.03
5	2.29	4.16	4.20	3.58	2.31	8.40	5.53	2.76	3.16	3.02	2.34	2.03
6	2.39	4.36	3.68	3.67	2.31	5.84	5.12	2.76	2.69	2.88	2.36	2.03
7	2.47	4.12	3.26	3.41	2.31	4.88	4.66	2.71	2.52	2.76	2.40	2.03
8	2.51	3.96	2.94	3.28	2.28	4.53	4.24	2.69	2.46	2.54	2.39	2.03
9	2.59	3.86	2.73	3.10	2.27	4.25	3.91	2.67	2.42	2.47	2.36	2.03
10	2.68	3.80	4.68	2.93	2.25	4.80	5.60	2.65	2.46	2.45	2.33	2.03
11	2.71	4.23	6.39	2.83	2.23	4.96	5.28	2.63	2.33	2.57	2.32	2.03
12	2.81	5.03	4.95	3.13	2.26	4.15	4.50	2.64	2.25	2.53	2.31	2.03
13	2.82	4.48	4.41	4.72	2.31	3.84	4.09	4.11	2.20	2.60	2.29	2.03
14	2.77	3.32	4.09	4.58	2.35	3.83	3.83	3.47	2.16	2.61	2.26	2.03
15	2.85	2.82	3.90	3.85	2.32	3.30	3.61	3.08	2.11	2.66	2.23	2.03
16	3.00	2.55	5.42	3.43	3.05	3.81	3.70	3.00	2.05	2.82	2.20	2.05
17	3.20	2.41	9.27	3.12	4.40	8.32	3.69	3.02	1.99	2.84	2.23	2.34
18	3.38	2.37	6.79	2.83	3.59	6.91	3.52	2.98	1.95	2.82	2.27	2.76
19	3.42	2.34	4.46	2.63	3.20	---	3.38	3.63	1.95	2.71	2.25	2.92
20	3.45	2.33	5.10	2.49	3.00	---	3.23	3.35	2.02	3.06	2.24	2.94
21	3.50	2.38	4.88	2.80	4.87	---	3.98	3.19	2.09	2.60	2.24	3.02
22	3.54	3.68	3.99	3.76	6.89	6.15	4.74	3.11	2.08	2.47	2.21	3.04
23	3.58	3.94	4.94	4.39	4.50	6.70	4.55	3.04	2.18	2.46	2.18	3.05
24	3.68	3.29	---	4.36	3.62	8.19	3.97	3.00	2.17	2.47	2.15	3.10
25	3.77	3.02	---	4.63	3.18	6.71	3.64	2.97	2.25	2.39	2.13	3.21
26	3.82	2.80	3.45	3.95	3.07	6.00	4.64	2.93	2.36	2.42	2.10	3.93
27	3.88	2.63	3.00	3.53	2.88	5.78	5.26	2.88	2.46	2.45	2.07	4.41
28	3.89	2.52	3.21	3.17	2.74	5.62	4.31	2.83	2.57	2.48	2.04	3.34
29	3.90	2.44	3.62	2.95	---	8.96	3.82	2.79	2.84	2.51	2.03	2.52
30	3.95	2.38	3.46	2.66	---	6.77	3.47	2.72	3.02	2.52	2.03	2.29
31	4.01	---	3.32	2.61	---	5.93	---	2.68	---	2.50	2.03	---
MEAN	3.11	3.39	---	3.43	2.99	---	4.52	2.97	2.37	2.68	2.24	2.51
MAX	4.01	5.03	---	4.72	6.89	---	6.67	4.11	3.16	3.49	2.43	4.41
MIN	2.28	2.33	---	2.49	2.23	---	3.23	2.63	1.95	2.39	2.03	2.03

MONONGAHELA RIVER BASIN

03057300 WEST FORK RIVER AT WALKERSVILLE, WV--Continued



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 poor. Flow partially regulated since 1973 by Stonecoal Reservoir. Flow regulated since January 1990 by Stonewall Jackson Lake. U.S. Army Corps of Engineers satellite telemeter at station.

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

PEAK DISCHARGE FOR CURRENT YEAR.--Peak discharge, 2,990 ft³/s, Mar. 4, gage height, 6.43 ft.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	82	85	128	308	e130	e140	1170	362	128	106	100	90
2	81	87	129	281	e110	e190	727	325	75	120	100	92
3	80	100	135	269	e80	251	766	228	55	141	99	116
4	82	88	135	260	68	1710	791	126	80	129	100	139
5	81	97	240	296	e64	1030	814	103	111	120	96	74
6	81	107	223	288	e60	632	863	93	87	120	104	67
7	85	91	206	272	e58	789	830	84	74	120	93	66
8	101	87	173	265	e56	916	746	81	77	134	89	66
9	115	86	135	224	e54	886	575	80	76	147	89	72
10	105	89	382	173	e52	936	596	80	77	138	89	88
11	109	100	498	169	e52	1010	579	79	78	137	90	71
12	99	150	426	192	e50	931	531	72	76	139	86	70
13	99	161	351	340	e58	e700	493	129	76	138	86	71
14	97	115	373	356	e56	e500	472	73	76	257	86	83
15	96	134	435	338	e54	e400	417	52	85	220	86	103
16	97	128	474	316	124	e600	398	49	102	150	86	203
17	100	124	1090	296	250	1190	383	64	100	145	99	106
18	100	124	847	278	161	933	364	89	99	142	94	95
19	100	124	858	238	121	670	358	145	100	315	84	78
20	100	122	893	204	113	580	324	96	98	215	78	73
21	99	130	860	265	330	1210	460	96	99	105	76	85
22	98	186	808	323	485	826	431	92	102	115	76	80
23	99	213	853	343	297	1270	414	87	100	124	77	76
24	102	165	828	414	e240	1260	387	84	98	90	78	77
25	103	180	786	492	e210	810	371	82	98	90	95	94
26	98	158	675	431	e180	743	586	80	100	94	90	310
27	84	144	485	389	e160	891	627	86	132	95	90	350
28	83	137	412	e330	e145	862	575	100	110	93	90	190
29	84	132	382	e250	---	1420	520	97	113	101	90	106
30	84	126	289	e210	---	1170	444	96	108	100	89	88
31	85	---	283	e160	---	1060	---	131	---	100	88	---
TOTAL	2909	3770	14792	8970	3818	26516	17012	3441	2790	4240	2773	3279
MEAN	93.8	126	477	289	136	855	567	111	93.0	137	89.5	109
MAX	115	213	1090	492	485	1710	1170	362	132	315	104	350
MIN	80	85	128	160	50	140	324	49	55	90	76	66
CFSM	.52	.69	2.64	1.60	.75	4.73	3.13	.61	.51	.76	.49	.60
IN.	.60	.77	3.04	1.84	.78	5.45	3.50	.71	.57	.87	.57	.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 - 1993, BY WATER YEAR (WY)
[REGULATED, UNADJUSTED]

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	154	332	469	428	482	514	432	280	214	153	117	123
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	136	142	187	49.8	18.2	15.2	33.1	33.0
(WY)	1989	1988	1989	1977	1993	1990	1985	1982	1987	1987	1988	1983

SUMMARY STATISTICS

FOR 1992 CALENDAR YEAR

FOR 1993 WATER YEAR

WATER YEARS 1973 - 1993

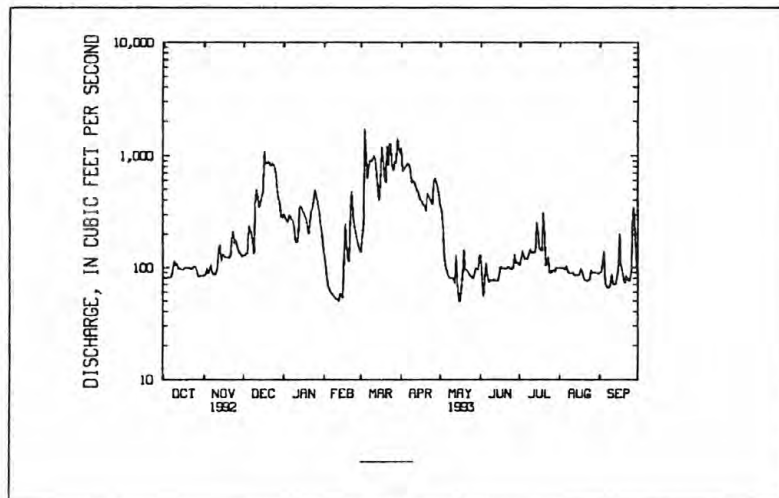
ANNUAL TOTAL	96742	94310	
ANNUAL MEAN	264	258	307
HIGHEST ANNUAL MEAN			444
LOWEST ANNUAL MEAN			159
HIGHEST DAILY MEAN	1370	Jul 27	1710
LOWEST DAILY MEAN	62	Jun 14	49
ANNUAL SEVEN-DAY MINIMUM	79	Aug 31	54
INSTANTANEOUS PEAK FLOW			2990
INSTANTANEOUS PEAK STAGE			6.43
INSTANTANEOUS LOW FLOW			44
ANNUAL RUNOFF (CFSM)	1.46	1.43	1.70
ANNUAL RUNOFF (INCHES)	19.88	19.38	23.06
10 PERCENT EXCEEDS	567	744	732
50 PERCENT EXCEEDS	160	122	140
90 PERCENT EXCEEDS	85	77	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 sea level. U.S. Army Corps of Engineers satellite telemeter at the station.

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

PEAK DISCHARGE FOR CURRENT YEAR.--Peak discharge, 7,060 ft³/s, Mar. 5, gage height, 12.95 ft.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	94	145	198	617	e270	e300	2780	550	241	130	109	107
2	92	151	195	585	e220	e400	1740	491	158	141	113	109
3	90	226	202	524	e180	569	1250	408	106	148	111	133
4	88	241	201	490	e150	2700	1130	282	86	162	109	203
5	88	205	331	559	e130	5300	1030	232	137	142	109	151
6	88	320	467	643	e125	1990	1060	225	162	135	112	79
7	89	279	378	563	e120	1300	1000	188	118	136	123	62
8	96	209	328	517	e115	1320	941	167	107	133	113	59
9	133	182	249	480	e110	1210	795	154	102	144	102	57
10	160	168	552	378	e105	1170	866	145	97	149	99	65
11	154	212	1780	342	e100	1720	1010	138	108	141	103	73
12	151	607	1190	382	e110	1420	854	135	97	142	99	62
13	135	647	922	629	e120	e1100	746	167	93	146	93	59
14	132	377	731	970	e130	e850	677	224	90	150	92	58
15	127	256	725	732	e120	e700	642	129	86	307	92	72
16	130	219	741	622	194	929	606	105	94	163	91	143
17	141	195	1990	544	787	2310	625	103	114	134	118	268
18	150	188	2540	485	582	3130	555	114	114	127	131	158
19	150	186	1340	435	375	1560	523	219	114	170	114	116
20	151	179	1240	338	345	1260	496	199	114	470	101	88
21	150	182	1320	414	425	3410	706	152	115	171	91	82
22	150	318	1090	877	1790	2620	865	145	126	109	87	90
23	152	611	1070	882	899	2580	733	135	122	115	84	87
24	158	446	1120	840	704	4760	629	129	115	108	84	84
25	168	476	1000	1160	551	2440	579	122	114	86	87	91
26	168	418	940	911	e440	1440	973	114	116	84	101	315
27	160	323	704	742	e370	1350	1560	108	124	98	98	516
28	136	265	588	635	e330	1520	988	114	139	110	97	640
29	132	233	673	e540	---	2010	814	123	136	112	101	224
30	132	210	597	e450	---	2080	706	119	140	113	98	139
31	142	---	553	e360	---	1550	---	122	---	109	100	---
TOTAL	4087	8674	25955	18646	9897	56998	27879	5758	3585	4585	3162	4390
MEAN	132	289	837	601	353	1839	929	186	119	148	102	146
MAX	168	647	2540	1160	1790	5300	2780	550	241	470	131	640
MIN	88	145	195	338	100	300	496	103	86	84	84	57

e Estimated

MONONGAHELA RIVER BASIN

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

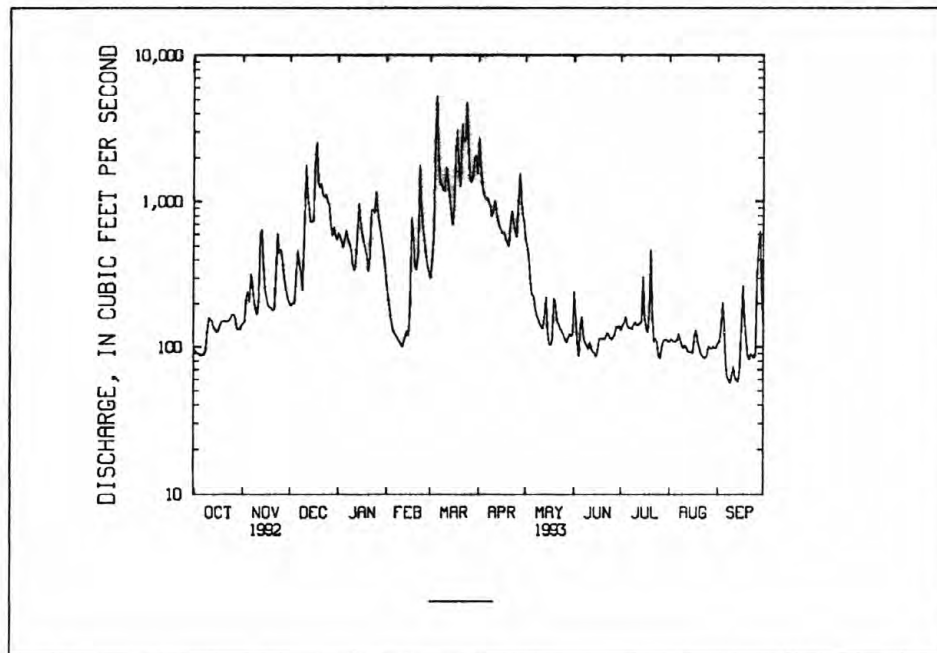
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1987 - 1993, BY WATER YEAR (WY)
[REGULATED, UNADJUSTED]

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	229	350	698	795	935	1173	728	436	339	218	182	182
MAX	758	815	1442	1482	1510	1839	931	1066	1065	471	425	551
(WY)	1990	1990	1991	1991	1989	1993	1991	1989	1989	1992	1992	1989
MIN	48.2	136	265	541	353	417	542	124	119	32.8	46.5	59.5
(WY)	1989	1988	1989	1988	1993	1990	1988	1987	1993	1988	1988	1988

SUMMARY STATISTICS	FOR 1992 CALENDAR YEAR		FOR 1993 WATER YEAR		WATER YEARS 1987 - 1993	
ANNUAL TOTAL	179471		173616			
ANNUAL MEAN	490		476		534	
HIGHEST ANNUAL MEAN					676	
LOWEST ANNUAL MEAN					338	
HIGHEST DAILY MEAN	3640		5300		8850	
LOWEST DAILY MEAN	88		57		7.4	
ANNUAL SEVEN-DAY MINIMUM	90		62		12	
INSTANTANEOUS PEAK FLOW			7060		11300	
INSTANTANEOUS PEAK STAGE			12.95		18.22	
INSTANTANEOUS LOW FLOW			55		6.6	
10 PERCENT EXCEEDS	1010		1160		1170	
50 PERCENT EXCEEDS	325		182		249	
90 PERCENT EXCEEDS	134		93		53	

a Oct. 4-6.

b Sept. 9, 14.



MONONGAHELA RIVER BASIN

03061000 WEST FORK RIVER AT ENTERPRISE, WV

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

DRAINAGE AREA.--759 mi².

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

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

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

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

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

PEAK DISCHARGE FOR CURRENT YEAR.--Peak discharge, 15,400 ft³/s, Mar. 5, gage height, 15.99 ft.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	161	152	370	1290	e660	e660	4950	1110	257	199	143	133
2	155	156	362	1200	e560	e840	4270	906	358	e220	151	138
3	152	261	365	979	e450	1250	2900	779	242	250	181	342
4	e145	287	365	867	e400	5900	2380	657	197	214	144	1350
5	e143	249	442	1020	e340	12600	2080	556	254	209	151	421
6	142	403	761	1360	e320	5250	1980	536	336	181	147	227
7	140	402	630	1130	e290	3100	1810	485	259	168	171	161
8	138	298	532	970	e280	2730	1630	430	214	160	168	140
9	170	226	468	871	e260	2520	1420	398	201	161	150	136
10	197	198	869	736	e250	2300	1660	371	e190	e174	143	151
11	208	208	3500	642	e240	3450	2180	344	e210	175	145	140
12	198	967	2920	688	e240	2990	1770	357	e243	168	143	139
13	182	1640	2230	995	e250	e2100	1470	524	e193	168	135	130
14	168	985	1710	2060	e270	e1700	1290	505	e178	e168	128	124
15	158	528	1420	1560	e250	e1500	1190	394	171	226	125	122
16	153	420	1630	1200	453	1790	1220	311	e166	313	122	164
17	154	354	3650	982	1990	4380	1290	302	e170	195	146	e430
18	157	326	5850	834	1690	6700	1100	295	176	177	182	312
19	159	321	2870	716	955	3700	980	416	e193	221	168	225
20	160	295	2420	608	823	3160	911	473	e174	735	148	175
21	157	295	2700	647	976	6260	1300	372	e170	436	159	151
22	158	596	2100	2120	4890	6210	1980	339	178	212	135	145
23	157	1640	1820	2250	2910	5430	1600	313	182	171	128	e135
24	162	1030	1970	1980	1740	10900	1300	289	172	176	123	e127
25	186	998	1620	2870	1200	5840	1140	261	163	157	118	151
26	181	868	1460	2190	e1000	3620	2110	232	159	144	114	418
27	174	638	1080	1590	e850	2880	3790	218	173	141	118	1100
28	163	507	964	1260	e740	3090	2290	207	180	153	115	1450
29	151	440	984	1050	---	2980	1710	216	200	149	116	578
30	148	395	1140	876	---	3680	1390	211	228	147	114	330
31	152	---	1050	e760	---	2680	---	223	---	148	111	---
TOTAL	5029	16083	50252	38301	25277	122190	57091	13030	6187	6516	4342	9745
MEAN	162	536	1621	1236	903	3942	1903	420	206	210	140	325
MAX	208	1640	5850	2870	4890	12600	4950	1110	358	735	182	1450
MIN	138	152	362	608	240	660	911	207	159	141	111	122
CFSM	.21	.71	2.14	1.63	1.19	5.19	2.51	.55	.27	.28	.18	.43
IN.	.25	.79	2.46	1.88	1.24	5.99	2.80	.64	.30	.32	.21	.48

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 - 1993, BY WATER YEAR (WY)
[REGULATED, UNADJUSTED]

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	538	1123	1740	1715	1993	2077	1627	1200	875	477	430	341
MAX	1762	5040	4494	3712	3872	3942	3181	2786	3796	967	1773	1071
(WY)	1977	1986	1979	1979	1986	1993	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

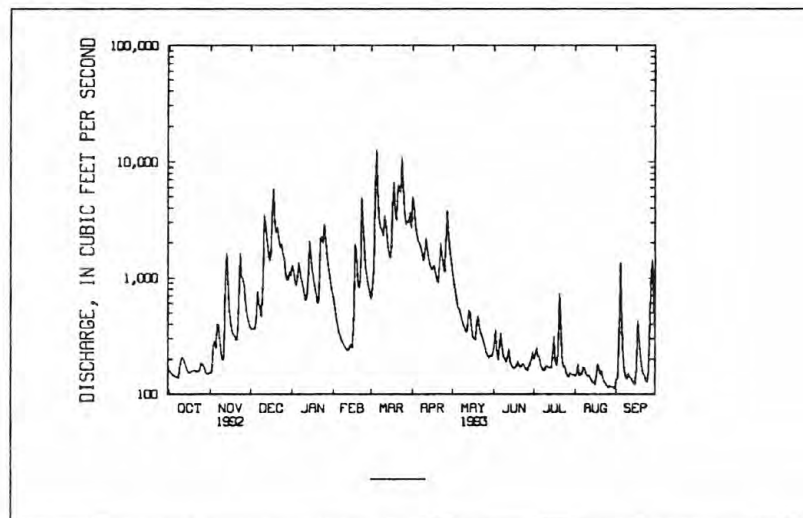
SUMMARY STATISTICS

FOR 1992 CALENDAR YEAR

FOR 1993 WATER YEAR

WATER YEARS 1973 - 1993

ANNUAL TOTAL	325273	354043	
ANNUAL MEAN	889	970	1174
HIGHEST ANNUAL MEAN			1700
LOWEST ANNUAL MEAN			583
HIGHEST DAILY MEAN	8090	Mar 11	37900
LOWEST DAILY MEAN	138	Oct 8	14
ANNUAL SEVEN-DAY MINIMUM	145	Oct 2	20
INSTANTANEOUS PEAK FLOW			15400
INSTANTANEOUS PEAK STAGE			15.99
INSTANTANEOUS LOW FLOW			105
ANNUAL RUNOFF (CFSM)	1.17	1.28	1.55
ANNUAL RUNOFF (INCHES)	15.94	17.35	21.01
10 PERCENT EXCEEDS	2040	2460	2770
50 PERCENT EXCEEDS	547	357	578
90 PERCENT EXCEEDS	185	145	118

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

MONONGAHELA RIVER BASIN

03061500 BUFFALO CREEK AT BARRACKVILLE, WV

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

DRAINAGE AREA.--115 mi².

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

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

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

REMARKS.--Records good except those for periods of estimated daily discharges (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. 4	2100	*5,060	*11.66	No other peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	9.4	51	227	e72	e120	854	148	57	14	5.0	4.2
2	10	12	46	193	e64	e130	586	116	33	70	4.4	3.8
3	9.0	53	44	149	e58	274	365	96	28	56	4.2	4.4
4	8.1	53	41	128	e54	2480	263	83	24	31	4.8	374
5	6.9	35	62	150	e47	2080	208	75	31	22	11	82
6	6.1	63	97	172	e43	871	168	68	32	19	8.8	38
7	5.9	61	82	151	e40	535	136	59	24	14	6.3	19
8	5.7	42	68	133	e37	529	121	53	21	11	5.3	13
9	6.4	30	58	114	e33	678	107	48	22	9.3	4.6	13
10	11	23	115	97	e32	554	125	44	27	9.6	4.3	12
11	19	22	311	89	e30	540	130	40	361	10	3.4	10
12	14	50	300	96	e33	407	141	41	129	10	3.1	6.8
13	14	223	258	163	e35	e300	135	46	62	8.8	2.9	5.2
14	15	116	226	322	e37	e230	127	42	40	7.0	2.8	4.6
15	12	66	216	220	e35	e200	120	36	28	6.1	4.3	4.4
16	11	48	480	161	77	e300	148	33	22	5.9	3.2	6.9
17	9.2	36	1480	129	463	e930	163	50	18	5.3	3.3	12
18	8.7	32	852	106	e350	e1000	143	40	15	4.5	3.2	16
19	7.9	31	385	82	e250	e490	127	46	13	5.1	2.9	12
20	7.9	27	317	66	e200	510	118	40	12	6.9	4.1	9.7
21	8.2	33	297	109	e300	1340	198	32	14	9.6	4.7	7.8
22	9.1	401	220	860	1450	884	244	27	40	6.9	6.8	10
23	10	685	164	586	650	1340	197	23	23	5.0	7.1	7.1
24	9.8	241	127	457	e400	1660	154	22	16	4.2	4.4	5.7
25	9.3	245	100	651	e300	725	134	20	13	4.0	3.3	7.3
26	9.1	182	91	372	e200	484	787	18	12	4.0	2.9	87
27	9.3	119	94	244	e160	370	885	16	13	4.3	2.7	134
28	9.2	85	72	173	e130	363	416	15	12	3.7	2.5	129
29	8.9	66	77	137	---	306	267	15	18	8.8	2.6	57
30	8.9	55	110	105	---	244	197	14	16	11	2.5	37
31	8.3	---	135	e86	---	212	---	18	---	6.5	2.6	---
TOTAL	298.9	3144.4	6976	6728	5580	21086	7764	1424	1176	393.5	134.0	1172.5
MEAN	9.64	105	225	217	199	680	259	45.9	39.2	12.7	4.32	39.1
MAX	19	685	1480	860	1450	2480	885	148	361	70	11	374
MIN	5.7	9.4	41	66	30	120	107	14	12	3.7	2.5	3.8
CFSM	.08	.91	1.96	1.89	1.73	5.91	2.25	.40	.34	.11	.04	.34
IN.	.10	1.02	2.26	2.18	1.81	6.82	2.51	.46	.38	.13	.04	.38

e Estimated

MONONGAHELA RIVER BASIN

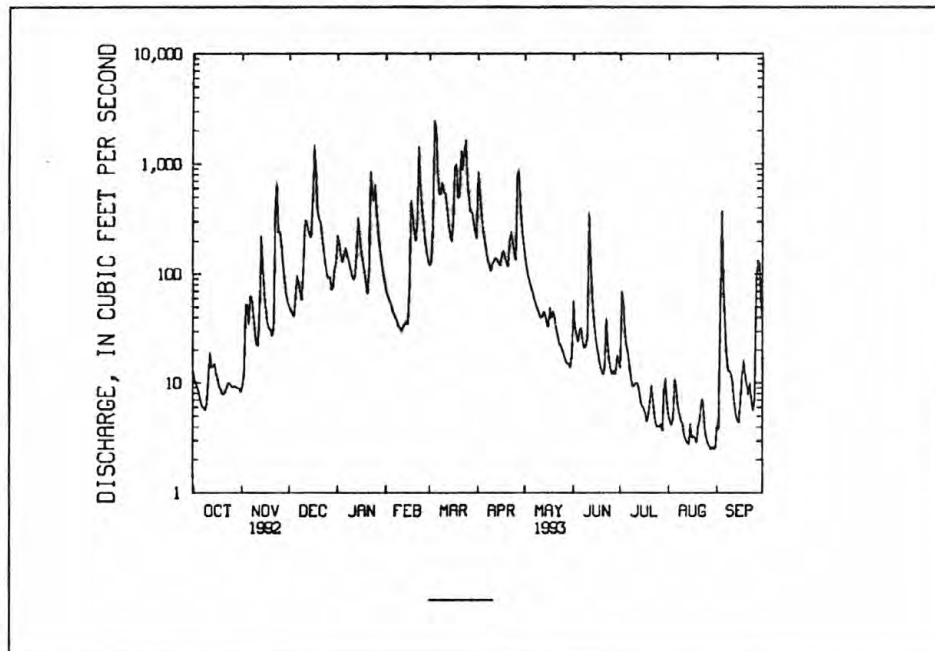
03061500 BUFFALO CREEK AT BARRACKVILLE, WV.--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1907-1909, 1915-1924, 1932-1993, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	47.8	110	219	275	296	349	252	190	111	66.4	56.8	47.1
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 1992 CALENDAR YEAR		FOR 1993 WATER YEAR		WATER YEARS 1907 - 1993	
ANNUAL TOTAL	44804.5		55877.3			
ANNUAL MEAN	122		153		167	
HIGHEST ANNUAL MEAN					275	
LOWEST ANNUAL MEAN					80.3	
HIGHEST DAILY MEAN	3000	Mar 19	2480	Mar 4	5710	Apr 12 1948
LOWEST DAILY MEAN	5.7	(a)	2.5	(b)	.00	(c)
ANNUAL SEVEN-DAY MINIMUM	6.8	Jun 17	2.7	Aug 25	.00	Sep 4 1908
INSTANTANEOUS PEAK FLOW			5060	Mar 4	d9490	Jan 22 1917
INSTANTANEOUS PEAK STAGE			11.66	Mar 4	16.20	Jan 22 1917
INSTANTANEOUS LOW FLOW			2.3	(f)	.00	(g)
ANNUAL RUNOFF (CFSM)	1.06		1.33		1.45	
ANNUAL RUNOFF (INCHES)	14.49		18.08		19.74	
10 PERCENT EXCEEDS	263		400		396	
50 PERCENT EXCEEDS	59		44		58	
90 PERCENT EXCEEDS	9.2		5.1		4.9	

- a June 23, Oct. 8.
b Aug. 28, 30.
c Aug. 13-17, Sept. 4-28, Sept. 30 to Dec. 6, 1908.
d Observed.
f Aug. 30, 31.
g 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 sea level, 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)
Dec. 17	1345	288	4.78	No other peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.8	1.2	8.1	21	e10	e12	41	15	7.4	.66	.47	.00
2	1.6	3.6	7.6	19	e9.0	e15	41	12	4.2	1.9	.47	.00
3	1.5	13	7.9	18	e8.2	19	31	9.9	3.7	.78	.88	2.1
4	1.3	7.0	7.1	16	e7.6	123	24	8.4	3.1	.27	1.6	6.2
5	1.1	7.8	15	23	e7.0	102	20	8.2	5.1	.12	2.1	1.4
6	.89	11	12	21	e6.4	60	17	6.9	3.6	.05	2.8	.50
7	.77	8.7	11	20	e6.0	40	14	5.9	2.9	.01	3.1	.25
8	.70	7.6	9.6	18	e5.5	50	12	5.0	7.2	.00	2.6	.15
9	3.7	6.4	8.5	16	e5.1	53	11	4.3	5.2	.00	2.0	.10
10	2.4	5.7	16	14	e4.8	44	20	3.7	8.4	.00	1.4	.10
11	1.8	7.7	19	13	e4.5	43	19	3.2	40	.08	1.0	.11
12	2.2	22	19	14	e4.8	33	19	5.6	15	.15	.64	.15
13	2.1	43	18	18	e5.2	e26	16	13	8.2	.09	.53	.17
14	1.6	25	18	19	e5.4	e22	15	7.9	5.7	.10	.33	.09
15	1.2	17	23	17	e5.0	e20	13	5.8	4.3	.27	.18	.32
16	1.2	12	102	16	29	e25	20	4.7	3.2	.89	.08	.47
17	.85	10	214	15	46	83	23	5.7	2.5	.73	2.2	.56
18	1.1	9.4	97	13	29	59	20	5.3	2.0	.36	2.5	.86
19	1.5	9.0	50	11	23	44	17	12	1.6	.45	2.8	.72
20	1.4	7.8	55	10	19	40	15	10	1.8	.35	2.0	.50
21	3.4	10	42	14	27	88	31	8.4	2.6	.24	1.4	.86
22	.99	19	31	22	55	69	29	7.4	2.9	.11	.67	.43
23	.98	22	27	24	39	129	25	6.1	1.7	.05	.34	.36
24	1.0	18	22	31	27	123	21	5.3	1.1	.01	.26	.51
25	1.5	17	20	34	24	63	18	4.3	.93	.00	2.6	2.2
26	1.5	15	16	26	19	41	49	3.4	.56	.45	.67	9.6
27	1.3	12	18	22	e15	32	50	2.9	.54	.42	.01	13
28	1.2	10	14	19	e13	26	34	2.4	.47	.13	.00	7.4
29	1.1	9.1	14	16	---	21	24	2.2	.74	3.3	.00	3.8
30	1.1	7.9	16	14	---	17	19	1.9	.96	.60	.00	2.4
31	1.2	---	18	e12	---	16	---	7.4	---	.51	.00	---
TOTAL	45.98	374.9	955.8	566	459.5	1538	708	204.2	147.60	13.08	35.63	55.31
MEAN	1.48	12.5	30.8	18.3	16.4	49.6	23.6	6.59	4.92	.42	1.15	1.84
MAX	3.7	43	214	34	55	129	50	15	40	3.3	3.1	13
MIN	.70	1.2	7.1	10	4.5	12	11	1.9	.47	.00	.00	.00
CFSM	.14	1.15	2.83	1.68	1.51	4.55	2.17	.60	.45	.04	.11	.17
IN.	.16	1.28	3.26	1.93	1.57	5.25	2.42	.70	.50	.04	.12	.19

e Estimated

MONONGAHELA RIVER BASIN

03062400 COBUN CREEK AT MORGANTOWN, WV--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1965 - 1993, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	5.95	12.7	23.7	21.9	28.2	30.3	25.6	20.5	10.9	7.66	6.05	4.10
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

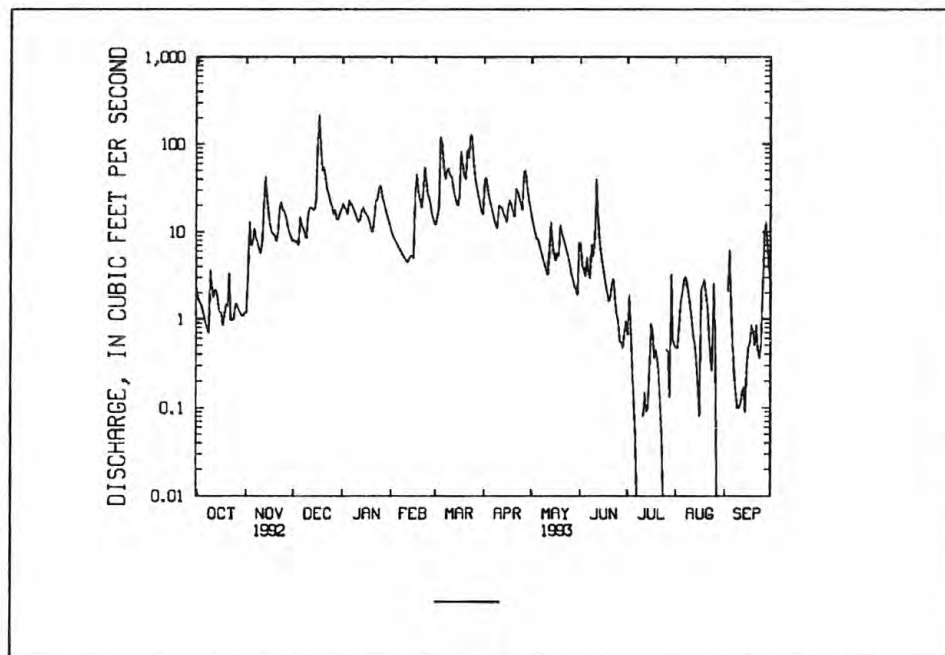
SUMMARY STATISTICS	FOR 1992 CALENDAR YEAR		FOR 1993 WATER YEAR		WATER YEARS 1965 - 1993	
ANNUAL TOTAL	5429.79		5104.00			
ANNUAL MEAN	14.8		14.0		16.5	
HIGHEST ANNUAL MEAN					24.1	
LOWEST ANNUAL MEAN					7.75	
HIGHEST DAILY MEAN	214		214		1200	
LOWEST DAILY MEAN	.21		.00		.00	
ANNUAL SEVEN-DAY MINIMUM	.35		.00		.00	
INSTANTANEOUS PEAK FLOW			288		c3100	
INSTANTANEOUS PEAK STAGE			4.78		d19.94	
INSTANTANEOUS LOW FLOW			.00		.00	
ANNUAL RUNOFF (CFSM)	1.36		1.28		1.52	
ANNUAL RUNOFF (INCHES)	18.53		17.42		20.61	
10 PERCENT EXCEEDS	30		32		39	
50 PERCENT EXCEEDS	10		7.4		8.4	
90 PERCENT EXCEEDS	1.3		.30		.26	

a Several days (July to September).

b At times most year.

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

d From floodmarks.



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 sea level, adjustment of 1912. Prior to Dec. 21, 1941, nonrecording gage at same site and datum.

REMARKS.--Records fair 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. 17	1830	8,340	6.78	Mar. 25	2300	7,950	6.65
Mar. 24	0430	*8,760	*6.92	Apr. 1	0930	8,040	6.68

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	54	e41	178	e2020	e300	e320	6900	647	e154	57	e22	2.4
2	46	52	167	e1510	e260	445	e5020	546	e165	70	e18	2.4
3	41	e325	165	e1030	e230	e2700	e3240	468	e146	118	e13	4.0
4	36	e218	e161	e2150	e210	e3220	e2000	413	142	e100	12	e370
5	34	e213	224	e1480	e190	e2230	e1530	400	e362	e88	9.2	211
6	e34	e161	e224	908	e180	e1410	e1150	375	e362	e61	10	e138
7	e30	127	217	747	e170	e988	913	322	236	47	e66	e80
8	e28	105	210	667	e160	e1380	e864	277	e936	33	e103	e48
9	e26	88	e195	639	e150	e1100	e806	253	e2040	e28	e69	e117
10	e30	e82	184	561	e135	e864	e3010	233	e1040	e19	e43	e96
11	e28	117	e199	515	e140	e852	e2760	213	e494	e17	e30	e59
12	e32	e292	e208	663	e145	e600	e2040	206	e348	e24	20	e45
13	24	e596	204	851	e155	e480	e1360	726	e266	19	e19	28
14	23	434	213	976	e165	e400	e1070	718	198	14	15	e20
15	23	e312	248	808	e180	e370	966	526	169	13	10	e14
16	22	e224	1200	690	e218	e600	e4620	e628	e135	11	7.7	e39
17	e24	e182	e6720	593	e530	e1060	e3680	e548	120	e11	9.7	e50
18	e23	171	e4320	506	e450	e1010	e2590	430	102	e9.6	29	e127
19	e24	174	e2380	e400	e350	969	e1660	1030	88	e8.8	e48	e146
20	e26	165	e2610	e330	e400	e876	1120	952	78	e10	e45	e100
21	e30	150	e2310	e350	511	1080	e936	741	88	e35	36	e138
22	30	339	e1830	e390	e2900	e1440	e1250	590	e124	33	26	e199
23	e26	540	e2610	e470	e1770	3180	1250	e512	119	21	e24	e154
24	e35	470	e2690	e575	e1100	e7370	1080	e426	87	e16	17	e157
25	e52	378	e1640	e975	e800	e6080	909	348	e71	e13	e16	e178
26	e50	e340	1080	741	e600	e5640	e1150	290	53	e12	e14	e988
27	45	278	e726	e620	e450	e5470	e1410	247	e50	e12	9.5	e1300
28	44	244	e738	e500	e360	e5310	1200	e199	45	e9.6	5.6	e898
29	40	217	768	e430	---	e5540	961	188	52	14	e4.0	e476
30	37	195	1370	e370	---	5150	785	169	52	36	3.3	e306
31	38	---	e2020	e330	---	4240	---	158	---	35	2.9	---
TOTAL	1035	7230	38009	23795	13209	72374	58230	13779	8322	995.0	756.9	6490.8
MEAN	33.4	241	1226	768	472	2335	1941	444	277	32.1	24.4	216
MAX	54	596	6720	2150	2900	7370	6900	1030	2040	118	103	1300
MIN	22	41	161	330	135	320	785	158	45	8.8	2.9	2.4
CFSM	.10	.70	3.55	2.22	1.37	6.77	5.63	1.29	.80	.09	.07	.63
IN.	.11	.78	4.10	2.57	1.42	7.80	6.28	1.49	.90	.11	.08	.70

e Estimated

MONONGAHELA RIVER BASIN

03065000 DRY FORK AT HENDRICKS, WV--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 1993, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	372	660	966	1001	1188	1524	1209	854	534	356	334	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	32.1	23.7	11.6
(WY)	1954	1954	1944	1977	1978	1990	1946	1970	1991	1993	1957	1946

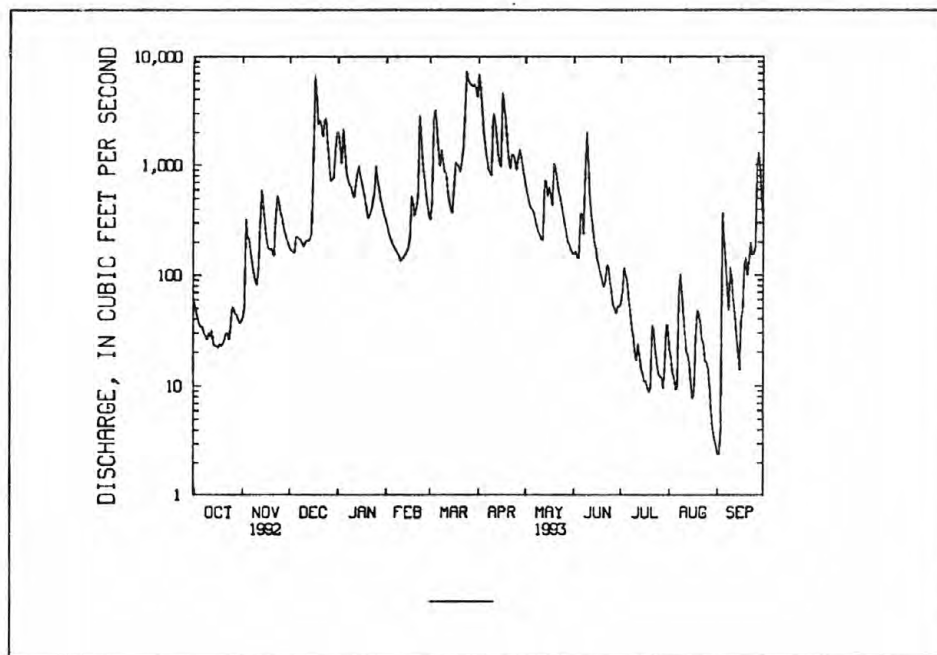
SUMMARY STATISTICS	FOR 1992 CALENDAR YEAR			FOR 1993 WATER YEAR			WATER YEARS 1941 - 1993		
ANNUAL TOTAL	264219			244225.7					
ANNUAL MEAN	722			669			768		
HIGHEST ANNUAL MEAN							1142		
LOWEST ANNUAL MEAN							510		
HIGHEST DAILY MEAN	e6720			Dec 17			34000		
LOWEST DAILY MEAN	22			Oct 16			2.4		
ANNUAL SEVEN-DAY MINIMUM	23			Oct 13			3.5		
INSTANTANEOUS PEAK FLOW				8760			b100000		
INSTANTANEOUS PEAK STAGE				6.92			c20.74		
INSTANTANEOUS LOW FLOW				2.2			2.2		
ANNUAL RUNOFF (CFSM)	2.09			1.94			2.22		
ANNUAL RUNOFF (INCHES)	28.49			26.33			30.23		
10 PERCENT EXCEEDS	1660			1700			1780		
50 PERCENT EXCEEDS	420			217			416		
90 PERCENT EXCEEDS	56			19			64		

a Sept. 1, 2, 1993.

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

c From floodmarks.

e Estimated.



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 sea level.

REMARKS.--Records good except those for periods of estimated daily discharges (ice effect) and those for August and September (backwater from beaver dam), 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. 18	0700	*584	*18.67	Mar. 29	0600	477	18.30
Mar. 26	2100	520	18.45	Apr. 1	2100	506	18.40

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.5	3.1	11	155	e12	e19	443	35	13	4.4	4.8	.66
2	3.3	3.6	11	101	e10	e17	399	31	11	6.8	3.3	.79
3	3.2	7.8	13	63	e9.2	e16	239	26	9.1	6.2	2.6	1.1
4	3.1	8.2	12	57	e8.4	e25	144	25	9.5	4.7	1.8	36
5	2.8	5.9	20	66	e7.6	e62	96	26	20	4.3	2.0	36
6	2.9	5.7	25	65	e6.9	e50	75	23	19	4.7	5.4	12
7	2.7	5.5	19	47	e6.3	e45	64	19	9.5	4.7	14	3.0
8	2.6	4.9	16	42	e5.8	e40	63	16	32	4.6	8.8	1.5
9	2.6	4.3	e14	39	e5.3	e36	69	15	29	4.7	6.4	.94
10	2.9	4.3	e13	32	e4.8	e33	117	14	16	5.0	4.1	4.2
11	2.9	4.9	e12	32	e4.5	e35	146	13	38	4.4	3.4	7.8
12	2.9	14	e11	43	e4.2	e31	101	14	25	4.8	2.4	5.1
13	2.9	34	e11	53	e4.0	e27	78	39	14	4.4	2.3	2.0
14	2.8	22	e16	48	e3.8	e23	62	39	11	3.9	1.9	1.0
15	2.8	13	41	35	e3.6	e20	57	22	9.0	4.7	1.4	.54
16	2.6	11	84	e28	e6.0	e22	167	18	7.8	5.2	1.4	.81
17	2.8	10	238	e24	e20	e50	264	20	7.0	5.4	2.6	1.5
18	2.8	12	327	e21	e16	e105	157	21	6.5	3.3	3.5	4.5
19	3.1	14	193	e19	e14	e90	85	68	6.1	2.6	3.2	6.6
20	3.6	12	135	e17	e13	e80	64	50	5.9	3.3	3.2	6.3
21	4.8	10	128	e18	e25	e90	87	33	7.3	3.0	3.4	9.1
22	3.5	33	85	e28	e110	e110	108	25	7.3	2.4	3.9	33
23	3.1	46	122	e29	e90	e150	77	21	6.9	2.1	3.9	27
24	3.2	30	134	e31	e70	231	56	20	6.2	2.0	2.9	16
25	3.4	26	78	e40	e50	402	48	17	5.7	2.0	2.3	13
26	3.4	22	53	e35	e35	457	70	15	5.5	1.9	1.8	81
27	3.3	18	73	e28	e28	450	96	13	6.4	2.7	1.7	134
28	3.1	15	46	e22	e23	438	59	11	6.3	2.0	1.4	135
29	2.9	13	60	e18	---	441	46	10	5.5	2.4	.87	75
30	2.6	12	105	e16	---	371	40	8.9	5.8	5.1	.67	48
31	2.8	---	134	e14	---	332	---	8.9	---	5.2	.70	---
TOTAL	94.9	425.2	2240	1266	596.4	4298	3577	716.8	361.3	122.9	102.04	703.44
MEAN	3.06	14.2	72.3	40.8	21.3	139	119	23.1	12.0	3.96	3.29	23.4
MAX	4.8	46	327	155	110	457	443	68	38	6.8	14	135
MIN	2.6	3.1	11	14	3.6	16	40	8.9	5.5	1.9	.67	.54
CFSM	.17	.77	3.91	2.21	1.15	7.49	6.45	1.25	.65	.21	.18	1.27
IN.	.19	.85	4.50	2.55	1.20	8.64	7.19	1.44	.73	.25	.21	1.41

e Estimated

MONONGAHELA RIVER BASIN

03065200 BLACKWATER RIVER AT CORTLAND, WV--Continued

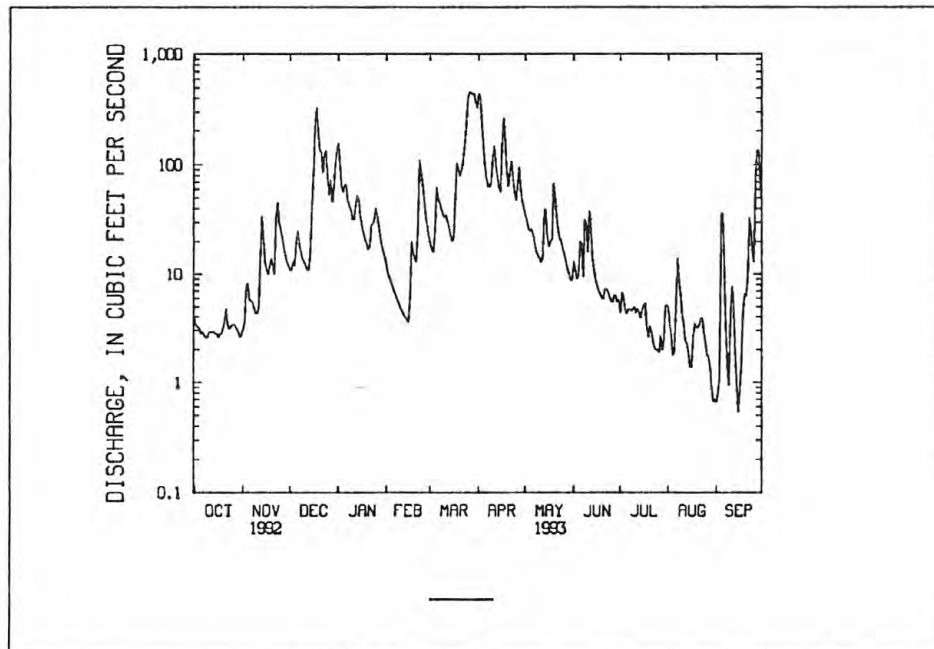
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1992-1993, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	4.23	14.3	76.9	46.5	51.8	110	88.1	29.0	12.0	13.6	12.5	14.3
MAX	5.39	14.5	81.6	52.2	81.2	139	119	35.0	12.0	23.2	21.7	23.4
(WY)	1992	1992	1992	1992	1992	1993	1993	1992	1993	1992	1992	1993
MIN	3.06	14.2	72.3	40.8	21.3	82.0	56.9	23.1	11.9	3.96	3.29	5.21
(WY)	1993	1993	1993	1993	1993	1992	1992	1993	1992	1993	1993	1992

SUMMARY STATISTICS	FOR 1992 CALENDAR YEAR				FOR 1993 WATER YEAR				WATER YEARS 1992 - 1993			
ANNUAL TOTAL	13969.3				14503.98							
ANNUAL MEAN	38.2				39.7				39.5			
HIGHEST ANNUAL MEAN									39.7			
LOWEST ANNUAL MEAN									39.2			
HIGHEST DAILY MEAN	327				457				457			
LOWEST DAILY MEAN	2.6				.54				.54			
ANNUAL SEVEN-DAY MINIMUM	2.8				.88				.88			
INSTANTANEOUS PEAK FLOW					584				584			
INSTANTANEOUS PEAK STAGE					18.67				18.67			
INSTANTANEOUS LOW FLOW					(b)				1.9			
ANNUAL RUNOFF (CFSM)	2.06				2.15				2.13			
ANNUAL RUNOFF (INCHES)	28.09				29.16				28.98			
10 PERCENT EXCEEDS	96				98				96			
50 PERCENT EXCEEDS	22				13				17			
90 PERCENT EXCEEDS	3.6				2.6				3.2			

a Oct. 8, 9, 16, 30.

b Unknown due to beaver dams and extensive shifts, no instantaneous low flow was determined.



MONONGAHELA RIVER BASIN

03065400 BLACKWATER RIVER NEAR DAVIS, WV

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

DRAINAGE AREA.--55.0 mi².

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

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

REMARKS.--Records 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 900 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage Height (ft)	Date	Time	Discharge (ft ³ /s)	Gage Height (ft)
Dec. 18	1900	1,010	5.00	Apr. 1	2000	*1,530	6.14
Mar. 25	1000	UNKNOWN	a*7.10				

a Ice jam.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	12	e36	522	e36	e63	1380	102	39	14	7.9	5.8
2	11	13	e33	320	e31	e58	1330	90	30	21	6.6	5.3
3	10	27	e30	209	e28	e90	808	78	26	27	6.5	4.9
4	10	28	e27	186	e25	e150	449	74	26	18	6.5	39
5	10	21	70	215	e23	e210	285	87	56	15	5.9	46
6	9.4	20	e63	209	e21	e180	229	76	53	13	7.2	21
7	8.8	19	e56	155	e19	e155	196	59	29	11	17	13
8	8.7	17	e50	136	e17	e140	180	48	137	9.1	15	8.5
9	8.9	15	e45	128	e16	e120	180	43	123	7.9	10	7.1
10	9.8	15	e41	108	e15	e105	334	38	60	7.5	8.1	11
11	9.5	17	e38	105	e14	e115	404	35	56	15	8.1	17
12	9.6	41	e35	136	e13	e100	278	33	61	12	7.5	14
13	9.6	105	e33	153	e12	e85	218	103	37	8.9	7.6	11
14	9.5	77	e47	154	e12	e70	174	107	29	7.5	6.1	7.7
15	9.5	46	e70	118	e11	e63	155	63	24	7.2	5.3	7.2
16	9.9	34	159	e100	e28	e70	399	48	22	7.0	4.9	11
17	9.9	32	514	e85	e68	e110	688	58	19	6.5	6.2	12
18	9.8	34	875	e75	e58	e350	466	50	18	6.2	9.1	15
19	11	41	828	e64	e45	e300	247	171	16	6.1	8.7	19
20	12	39	442	e58	e40	e250	184	140	14	7.1	6.9	16
21	13	35	408	e54	e65	e270	236	94	15	6.9	6.7	15
22	14	105	269	e92	382	e310	304	75	19	6.2	6.7	25
23	12	147	378	e90	e300	e400	227	64	18	5.5	6.0	25
24	12	103	465	e100	e220	e900	166	60	14	5.0	5.4	20
25	13	91	270	e130	e160	e1250	146	51	12	5.1	5.9	18
26	13	79	213	e110	e125	e1180	184	42	11	4.3	5.2	83
27	13	64	220	e90	e90	e1100	244	36	10	4.8	5.1	165
28	12	55	159	e75	e73	e1000	164	30	9.2	5.1	4.8	185
29	12	47	192	e60	---	e950	131	27	10	8.1	4.2	98
30	11	40	375	e50	---	e900	114	25	14	8.2	4.0	54
31	12	---	520	e43	---	1200	---	24	---	7.8	5.1	---
TOTAL	335.9	1419	6961	4130	1947	12244	10500	2031	1007.2	294.0	220.2	979.5
MEAN	10.8	47.3	225	133	69.5	395	350	65.5	33.6	9.48	7.10	32.6
MAX	14	147	875	522	382	1250	1380	171	137	27	17	185
MIN	8.7	12	27	43	11	58	114	24	9.2	4.3	4.0	4.9
CFSM	.20	.86	4.08	2.42	1.26	7.18	6.36	1.19	.61	.17	.13	.59
IN.	.23	.96	4.71	2.79	1.32	8.28	7.10	1.37	.68	.20	.15	.66

e Estimated

MONONGAHELA RIVER BASIN

03065400 BLACKWATER RIVER NEAR DAVIS, WV--Continued

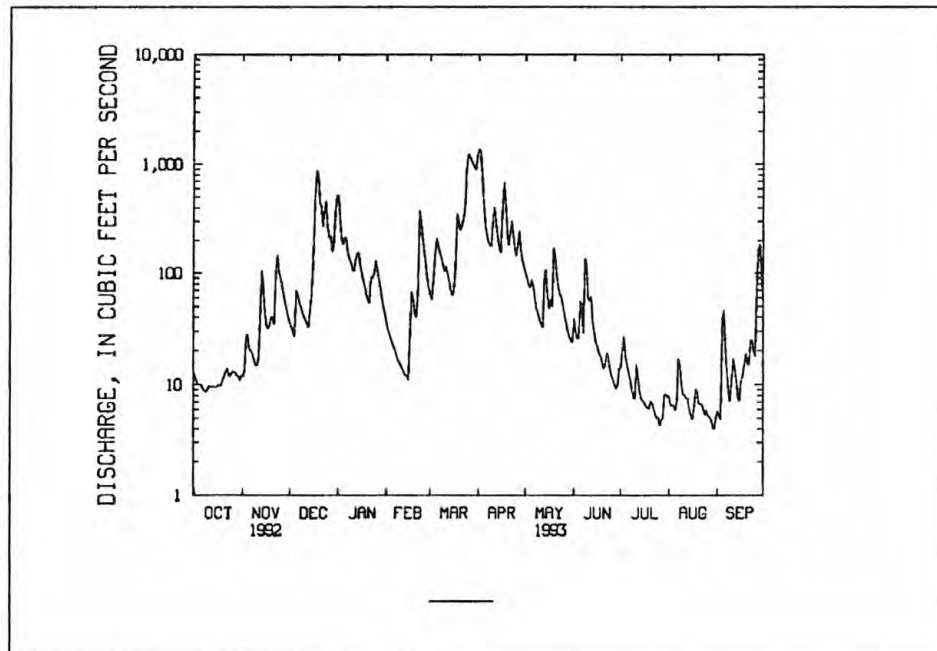
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1992-1993, BY WATER YEAR (WY)

MEAN	10.8	39.0	222	144	165	317	259	89.5	41.3	40.0	30.9	23.8
MAX	10.8	47.3	225	155	257	395	350	113	49.1	70.5	54.7	32.6
(WY)	1993	1993	1993	1992	1992	1993	1993	1992	1992	1992	1992	1993
MIN	10.8	30.8	219	133	69.5	239	168	65.5	33.6	9.48	7.10	14.9
(WY)	1993	1992	1992	1993	1993	1992	1992	1993	1993	1993	1993	1992

SUMMARY STATISTICS	FOR 1992 CALENDAR YEAR		FOR 1993 WATER YEAR		WATER YEARS 1992 - 1993	
ANNUAL TOTAL	42763.9		42068.8			
ANNUAL MEAN	117		115		115	
HIGHEST ANNUAL MEAN					115	
LOWEST ANNUAL MEAN					115	
HIGHEST DAILY MEAN	875	Dec 18	1380	Apr 1	1380	Apr 1 1993
LOWEST DAILY MEAN	8.7	Oct 8	4.0	Aug 30	4.0	Aug 30 1993
ANNUAL SEVEN-DAY MINIMUM	9.2	Oct 6	4.9	Aug 28	4.9	Aug 28 1993
INSTANTANEOUS PEAK FLOW			1530	Apr 1	1530	Apr 1 1993
INSTANTANEOUS PEAK STAGE			a7.10	Mar 25	a7.10	Mar 25 1993
INSTANTANEOUS LOW FLOW			4.0	(b)	4.0	(b)
ANNUAL RUNOFF (CFSM)	2.12		2.10		2.10	
ANNUAL RUNOFF (INCHES)	28.92		28.45		28.47	
10 PERCENT EXCEEDS	279		281		278	
50 PERCENT EXCEEDS	71		38		60	
90 PERCENT EXCEEDS	13		7.1		9.1	

a Ice jam.

b July 25, 26, Aug. 29-31, 1993.



MONONGAHELA RIVER BASIN

03066000 BLACKWATER RIVER AT DAVIS, WV

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

DRAINAGE AREA.--86.2 mi².

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

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

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

REMARKS.--Records good except those for periods of estimated daily discharges (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)
Mar. 25	2200	2,320	7.42	Apr. 16	2400	1,560	6.18
Apr. 1	2000	*2,740	*8.06				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	16	65	878	e50	e88	2610	154	68	26	11	11
2	16	18	58	493	e44	e100	2220	136	52	52	8.3	8.7
3	15	65	e49	329	e40	e110	1200	118	44	55	8.3	8.8
4	14	53	e43	294	e36	e180	677	114	45	33	7.2	115
5	14	37	97	382	e33	319	455	129	103	24	6.8	80
6	13	42	136	340	e30	278	363	116	86	19	17	37
7	12	36	91	245	e28	256	322	94	51	15	43	19
8	12	31	e80	208	e26	217	310	80	321	13	27	12
9	12	27	e70	193	e24	184	320	73	214	11	16	9.0
10	12	28	e62	163	e22	e160	688	66	102	11	11	21
11	12	46	e57	158	e21	e170	690	62	106	26	11	27
12	11	111	e52	221	e19	e180	458	60	100	18	9.3	20
13	11	226	e49	253	e18	e140	353	159	65	13	9.8	14
14	10	127	e56	246	e17	e110	281	153	52	10	7.3	11
15	9.1	78	e80	176	e16	e94	250	94	44	9.0	5.7	12
16	8.8	63	281	155	e30	e105	813	78	39	8.3	4.9	37
17	8.9	56	1000	e135	e110	e130	1170	94	34	7.4	12	28
18	8.8	55	1170	e110	e85	539	671	86	30	6.9	24	53
19	11	78	915	e95	e70	449	379	302	27	7.5	12	45
20	13	73	711	e85	e60	348	286	217	25	8.3	9.2	27
21	15	64	624	e80	e110	400	403	139	25	8.1	8.7	25
22	16	207	414	e150	572	460	497	112	34	7.0	7.6	37
23	13	259	700	e140	418	692	364	98	31	6.0	6.9	37
24	13	160	713	e150	294	1460	262	92	23	5.3	5.9	31
25	15	147	400	e170	e200	1900	224	80	18	4.8	6.0	31
26	15	124	281	e140	e150	e1750	328	70	16	4.3	5.4	213
27	14	102	241	e100	e120	e1650	396	61	15	4.2	4.2	323
28	13	88	245	e84	e100	e1550	256	52	14	6.9	4.3	309
29	12	78	324	e70	---	e1500	196	48	17	14	3.3	142
30	12	68	709	e62	---	e1400	170	45	31	14	2.9	83
31	15	---	945	e54	---	e1300	---	47	---	11	10	---
TOTAL	393.6	2563	10718	6359	2743	18219	17612	3229	1832	459.0	326.0	1826.5
MEAN	12.7	85.4	346	205	98.0	588	587	104	61.1	14.8	10.5	60.9
MAX	17	259	1170	878	572	1900	2610	302	321	55	43	323
MIN	8.8	16	43	54	16	88	170	45	14	4.2	2.9	8.7
CFSM	.15	.99	4.01	2.38	1.14	6.82	6.81	1.21	.71	.17	.12	.71
IN.	.17	1.11	4.63	2.74	1.18	7.86	7.60	1.39	.79	.20	.14	.79

e Estimated

MONONGAHELA RIVER BASIN

03066000 BLACKWATER RIVER AT DAVIS, WV--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1921 - 1993, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	110	167	249	265	310	385	297	212	143	97.5	97.0	68.4
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 1992 CALENDAR YEAR			FOR 1993 WATER YEAR			WATER YEARS 1921 - 1993		
ANNUAL TOTAL	68669.6			66280.1					
ANNUAL MEAN	188			182			199		
HIGHEST ANNUAL MEAN							273		
LOWEST ANNUAL MEAN							125		
HIGHEST DAILY MEAN	1170			Dec 18			2610		
LOWEST DAILY MEAN	8.8			(a)			2.9		
ANNUAL SEVEN-DAY MINIMUM	9.7			Oct 12			4.6		
INSTANTANEOUS PEAK FLOW							2740		
INSTANTANEOUS PEAK STAGE							8.06		
INSTANTANEOUS LOW FLOW							2.8		
ANNUAL RUNOFF (CFSM)	2.18						2.11		
ANNUAL RUNOFF (INCHES)	29.63						28.60		
10 PERCENT EXCEEDS	443						430		
50 PERCENT EXCEEDS	118						62		
90 PERCENT EXCEEDS	19						9.0		

a Oct. 16, 18.

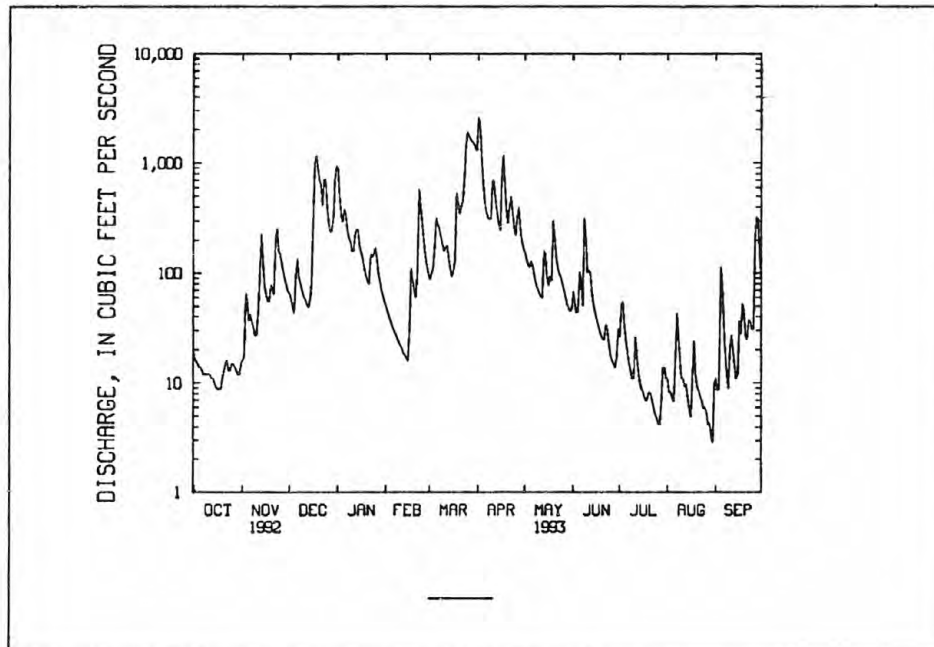
b From rating curve extended above 7,000 ft³/s.

c From floodmarks.

d Aug. 29, 30.

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

g Sept. 11, 12, 1959.



MONONGAHELA RIVER BASIN

03069000 SHAVERS FORK AT PARSONS, WV

LOCATION.--Lat 39°05'45", long 79°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 September 1993 (discontinued). Monthly discharge only for some periods, published in WSP 1305.

REVISED RECORDS.--WSP 583: 1922. WSP 923: Drainage area. WSP 1335: 1911-12, 1915-17, 1918(M), 1921-22(M), 1926(M). WSP 1725: 1955.

GAGE.--Water-stage recorder. Datum of gage is 1,634.87 ft above sea level. 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 (vandalism, ice effect), 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. 17	2130	6,870	7.31	Apr. 1	1200	*9,340	*8.74
Mar. 24	1000	5,300	6.30				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e45	29	193	1840	e170	e220	5340	492	175	106	15	15
2	e41	31	184	1210	e150	e210	4100	416	174	86	16	43
3	e36	87	180	813	e140	308	2130	360	154	75	18	37
4	e32	355	153	644	e125	1400	1350	319	136	73	15	98
5	e30	222	220	682	e115	1730	1000	302	279	66	14	356
6	e29	165	212	959	e105	946	818	297	604	58	20	215
7	e27	167	186	678	e95	623	678	276	320	49	25	114
8	e26	157	195	551	e88	651	687	241	472	37	164	66
9	e25	120	175	542	e80	732	796	213	362	31	97	47
10	e25	95	192	484	e75	593	1700	194	273	28	56	53
11	e26	100	216	415	e70	620	2340	179	232	24	40	48
12	e26	289	189	422	e65	e450	1340	188	193	22	32	38
13	e26	875	188	634	e62	e340	1020	645	164	19	25	32
14	e27	684	201	760	e58	e270	786	673	151	17	20	28
15	e26	374	237	609	e55	e220	685	410	248	18	17	29
16	e24	281	973	494	e100	340	1840	334	166	16	15	57
17	e23	230	5010	424	416	742	2440	344	126	48	21	61
18	e23	213	3650	366	345	998	1350	431	98	50	24	207
19	e23	212	1520	311	245	768	931	788	81	39	111	248
20	24	195	1700	275	281	612	723	871	70	52	80	179
21	25	177	2030	262	382	871	868	567	65	55	52	149
22	26	195	1130	331	1510	1130	1190	437	74	36	37	646
23	26	635	1380	514	1070	2210	996	368	119	38	31	299
24	26	618	1920	489	604	4510	809	319	80	29	26	209
25	30	399	1070	555	421	3170	668	280	63	23	22	237
26	30	340	771	e450	e340	3080	770	246	52	20	66	765
27	30	299	549	e380	e300	2970	1560	217	44	24	87	1110
28	28	267	474	e300	e250	2680	1040	192	39	19	49	1200
29	30	239	528	e250	---	3070	760	170	42	24	33	563
30	29	212	659	e220	---	2550	602	154	58	17	25	365
31	30	---	1320	e190	---	2460	---	151	---	17	19	---
TOTAL	874	8262	27605	17054	7717	41474	41317	11074	5114	1216	1272	7514
MEAN	28.2	275	890	550	276	1338	1377	357	170	39.2	41.0	250
MAX	45	875	5010	1840	1510	4510	5340	871	604	106	164	1200
MIN	23	29	153	190	55	210	602	151	39	16	14	15
CFSM	.13	1.29	4.16	2.57	1.29	6.25	6.44	1.67	.80	.18	.19	1.17
IN.	.15	1.44	4.80	2.96	1.34	7.21	7.18	1.93	.89	.21	.22	1.31

e Estimated

MONONGAHELA RIVER BASIN

03069000 SHAVERS FORK AT PARSONS--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1911-1926, 1941-1993, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	305	474	659	728	780	1034	848	607	402	326	281	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	39.2	31.1	12.2
(WY)	1954	1954	1961	1977	1978	1915	1921	1982	1965	1993	1957	1946

SUMMARY STATISTICS	FOR 1992 CALENDAR YEAR		FOR 1993 WATER YEAR		WATER YEARS 1911 - 1993	
ANNUAL TOTAL	196336		170493			
ANNUAL MEAN	536		467		554	
HIGHEST ANNUAL MEAN					934	
LOWEST ANNUAL MEAN					366	
HIGHEST DAILY MEAN	5010	Dec 17	5340	Apr 1	21000	Nov 5 1985
LOWEST DAILY MEAN	e23	(a)	14	Aug 5	3.0	Oct 7 1914
ANNUAL SEVEN-DAY MINIMUM	24	Oct 15	16	Jul 30	3.4	Oct 6 1953
INSTANTANEOUS PEAK FLOW			9340	Apr 1	b43000	Nov 5 1985
INSTANTANEOUS PEAK STAGE			8.74	Apr 1	c19.86	Nov 5 1985
INSTANTANEOUS LOW FLOW			13	(d)	f1.0	Oct 7 1914
ANNUAL RUNOFF (CFSM)	2.51		2.18		2.59	
ANNUAL RUNOFF (INCHES)	34.13		29.64		35.16	
10 PERCENT EXCEEDS	1210		1130		1260	
50 PERCENT EXCEEDS	352		212		309	
90 PERCENT EXCEEDS	45		25		68	

a Oct. 17-19.

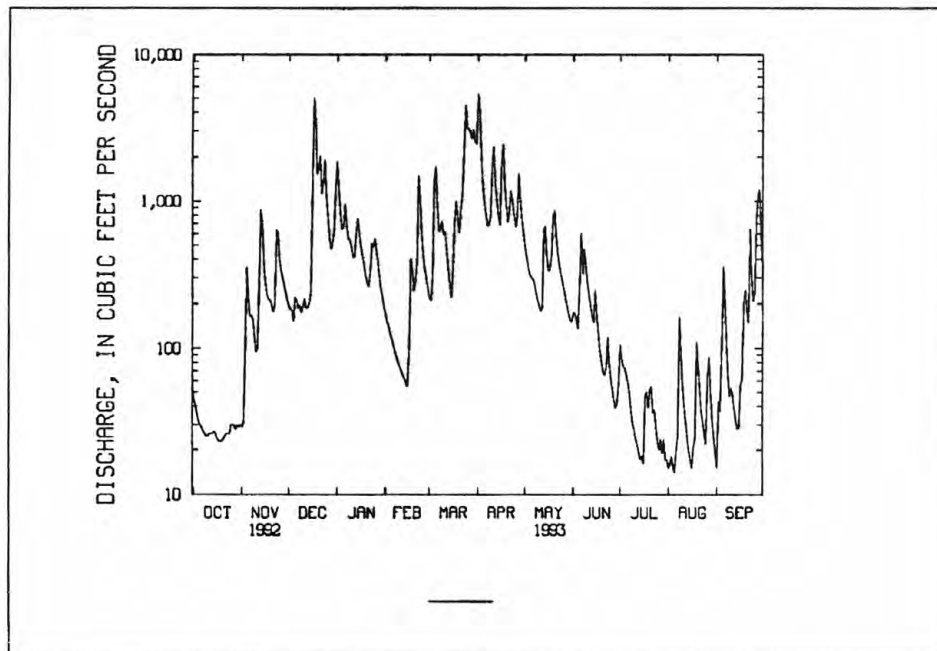
b From rating curve extended above 11,000 ft³/s on basis of slope area measurement of peak flow.

c From floodmarks.

d July 17, Aug. 4-6.

e Estimated.

f 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 sea level, adjustment of 1912. Prior to Aug. 17, 1944, nonrecording gage on Moss Bridge about 1,600 ft upstream at datum 1.13 ft higher. Nov. 21, 1985 to Sept. 30, 1986, recording gage on Moss Bridge at datum 1.27 ft lower.

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

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

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

Date	Time	Discharge (ft ³ /s)	Gage Height (ft)	Date	Time	Discharge (ft ³ /s)	Gage Height (ft)
Dec. 17	2000	19,200	10.84	Apr. 1	1200	*22,300	*11.47
Mar. 24	0500	17,600	10.51				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	137	98	419	5450	e550	e600	16700	1390	441	192	71	40
2	120	104	396	3380	e490	e560	13300	1170	402	219	64	66
3	108	308	392	2330	e430	e520	6990	982	337	282	66	75
4	100	608	356	1930	e390	3720	4340	864	312	219	58	455
5	93	381	512	2260	e350	4390	3170	847	649	186	53	662
6	87	325	503	2480	e330	2670	2480	806	1130	154	62	365
7	82	321	498	1840	e300	1880	2090	698	606	133	135	204
8	78	283	472	1550	e280	1920	2080	599	1500	107	267	140
9	78	233	420	1480	e260	2000	2340	535	1420	90	189	106
10	78	207	437	1290	e230	1680	5230	483	896	81	127	133
11	78	259	487	1140	e215	1760	6370	436	715	88	99	173
12	79	916	478	1390	e200	e1200	4100	432	613	85	84	129
13	79	1810	480	1890	e185	e940	3060	1490	460	86	71	100
14	84	1370	496	2170	e170	e740	2340	1650	382	72	66	82
15	78	770	591	1720	e160	e620	2020	1060	429	71	54	74
16	74	560	2560	1430	e300	e800	6160	842	329	61	46	164
17	71	456	13800	1230	1270	1960	8420	933	270	73	71	195
18	70	430	11000	1030	1090	2980	4730	951	230	88	110	368
19	70	447	4990	863	789	2250	3100	2210	201	75	157	444
20	74	428	5120	688	788	1880	2280	2230	178	92	153	294
21	76	377	5560	747	958	2470	2730	1560	172	102	121	270
22	82	725	3390	1210	4830	3340	3470	1200	263	101	95	857
23	87	1520	4790	1440	3550	6460	2920	969	265	85	80	477
24	85	1330	5740	1410	2090	15500	2350	824	203	70	71	376
25	96	959	3300	1920	1490	12600	1950	699	163	58	61	361
26	99	813	2330	1530	e1000	12900	2370	596	139	50	85	2000
27	96	690	1620	1300	e850	12200	3780	516	124	59	111	2690
28	90	599	1530	e1000	e700	11500	2760	442	114	52	79	2910
29	88	530	1710	e860	---	12100	2100	384	126	69	60	1270
30	85	465	2960	e740	---	10800	1680	347	155	86	50	761
31	90	---	4800	e620	---	9450	---	332	---	84	43	---
TOTAL	2692	18322	82137	50318	24245	144390	127410	28477	13224	3270	2859	16241
MEAN	86.8	611	2650	1623	866	4658	4247	919	441	105	92.2	541
MAX	137	1810	13800	5450	4830	15500	16700	2230	1500	282	267	2910
MIN	70	98	356	620	160	520	1680	332	114	50	43	40
CF5M	.12	.85	3.69	2.26	1.21	6.49	5.92	1.28	.61	.15	.13	.75
IN.	.14	.95	4.26	2.61	1.26	7.48	6.60	1.48	.69	.17	.15	.84

e Estimated

MONONGAHELA RIVER BASIN

03069500 CHEAT RIVER NEAR PARSONS, WV--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1913 - 1993, BY WATER YEAR (WY)

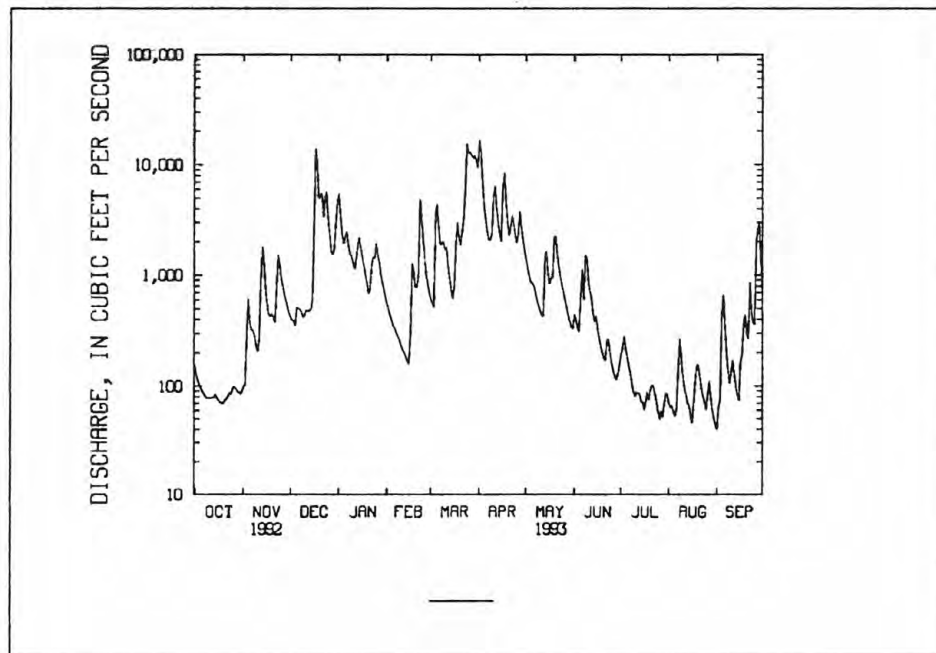
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	913	1395	2104	2299	2542	3209	2561	1925	1245	891	836	574
MAX	3882	7540	4969	4859	5609	8028	6272	4763	4013	2542	3203	2452
{WY}	1977	1986	1973	1952	1939	1963	1958	1924	1974	1958	1942	1971
MIN	18.6	37.5	387	370	459	441	668	443	188	89.3	34.9	23.3
{WY}	1931	1931	1931	1977	1978	1915	1921	1930	1991	1930	1930	1930
SUMMARY STATISTICS	FOR 1992 CALENDAR YEAR					FOR 1993 WATER YEAR			WATER YEARS 1913 - 1993			
ANNUAL TOTAL	563163					513585						
ANNUAL MEAN	1539					1407			1702			
HIGHEST ANNUAL MEAN									2311			
LOWEST ANNUAL MEAN									1111			
HIGHEST DAILY MEAN	13800					16700			70000			
LOWEST DAILY MEAN	70					40			10			
ANNUAL SEVEN-DAY MINIMUM	73					59			11			
INSTANTANEOUS PEAK FLOW						22300			b170000			
INSTANTANEOUS PEAK STAGE						11.47			c24.30			
INSTANTANEOUS LOW FLOW						37			d9.0			
ANNUAL RUNOFF (CFSM)	2.14					1.96			2.37			
ANNUAL RUNOFF (INCHES)	29.18					26.61			32.21			
10 PERCENT EXCEEDS	3480					3360			3920			
50 PERCENT EXCEEDS	976					480			952			
90 PERCENT EXCEEDS	138					76			178			

a Oct. 18, 19.

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

c From floodmarks.

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 sea level. Prior to Sept. 30, 1986, at datum 2.00 ft higher. Prior to Nov. 5, 1985, at site 800 ft downstream at datum 1.56 ft higher. Prior to Nov. 18, 1923, nonrecording gages at several sites within 1,300 ft of present site at various datums.

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

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

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

Date	Time	Discharge (ft ³ /s)	Gage Height (ft)	Date	Time	Discharge (ft ³ /s)	Gage Height (ft)
Dec. 17	2100	23,600	14.03	Apr. 1	1800	22,300	13.38
Mar. 24	0700	*24,400	*13.98				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	199	118	602	5840	e820	e1000	16200	2190	440	212	103	52
2	175	128	555	4340	e740	e900	16700	1790	544	361	100	46
3	156	195	548	3020	e680	e840	10100	1480	466	381	94	46
4	143	529	507	2430	e630	5200	6410	1280	411	378	80	136
5	132	633	746	2500	e580	7840	4650	1180	444	371	83	619
6	124	466	872	3280	e530	4870	3770	1140	1270	419	91	666
7	116	431	827	2590	e480	3260	3120	1010	971	273	115	367
8	110	408	750	2090	e450	3050	2870	849	864	207	163	237
9	113	354	676	1850	e410	3640	3050	745	2550	167	310	172
10	111	304	706	1680	e380	3070	6430	676	1290	137	226	147
11	108	338	841	1470	e350	3110	9870	614	1190	142	165	137
12	113	1190	877	1500	e330	2650	6100	582	907	128	129	198
13	113	2110	741	2420	e310	e1700	4570	e2000	698	128	108	154
14	108	2270	708	3920	e290	e1200	3580	e2200	544	122	92	125
15	109	1280	810	3080	e260	e1050	3040	e1500	489	116	79	120
16	109	887	2000	2390	e500	e1500	6230	e1200	483	96	71	279
17	106	696	15800	1950	2050	3220	11600	e1250	382	88	70	328
18	98	606	15800	1580	2260	5920	7080	e1300	317	76	84	429
19	96	588	6550	1270	1370	4140	4730	e2800	276	107	120	587
20	96	585	5980	1000	1310	3330	3590	e3100	247	116	167	472
21	96	558	7550	946	1530	4230	3840	e2400	226	113	190	359
22	98	620	4480	1530	6970	5850	5420	1700	251	118	150	584
23	101	1530	4670	2440	6420	9530	4910	1350	320	124	119	818
24	112	1880	7150	2550	3810	21600	3930	1140	310	107	100	505
25	122	1410	4290	3170	2420	16500	3240	959	246	96	92	456
26	122	1180	3060	2890	e1700	16200	3200	798	208	80	79	1290
27	129	1000	2090	e2200	e1300	14900	5450	685	187	66	64	4660
28	130	871	1830	e1700	e1100	13400	4410	601	161	55	111	4660
29	127	759	1910	e1400	---	13400	3430	525	160	77	105	2460
30	118	666	2610	e1200	---	12100	2710	459	184	71	78	1310
31	117	---	4660	e940	---	11200	---	425	---	88	63	---
TOTAL	3707	24590	101196	71166	39980	200400	174230	39928	17036	5020	3601	22419
MEAN	120	820	3264	2296	1428	6465	5808	1288	568	162	116	747
MAX	199	2270	15800	5840	6970	21600	16700	3100	2550	419	310	4660
MIN	96	118	507	940	260	840	2710	425	160	55	63	46
CFSM	.13	.87	3.48	2.45	1.52	6.90	6.20	1.37	.61	.17	.12	.80
IN.	.15	.98	4.02	2.83	1.59	7.96	6.92	1.59	.68	.20	.14	.89

e Estimated

MONONGAHELA RIVER BASIN

03070000 CHEAT RIVER AT ROWLESBURG, WV--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1924 - 1993, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1127	1906	2894	3057	3518	4307	3553	2652	1648	1161	1096	717
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

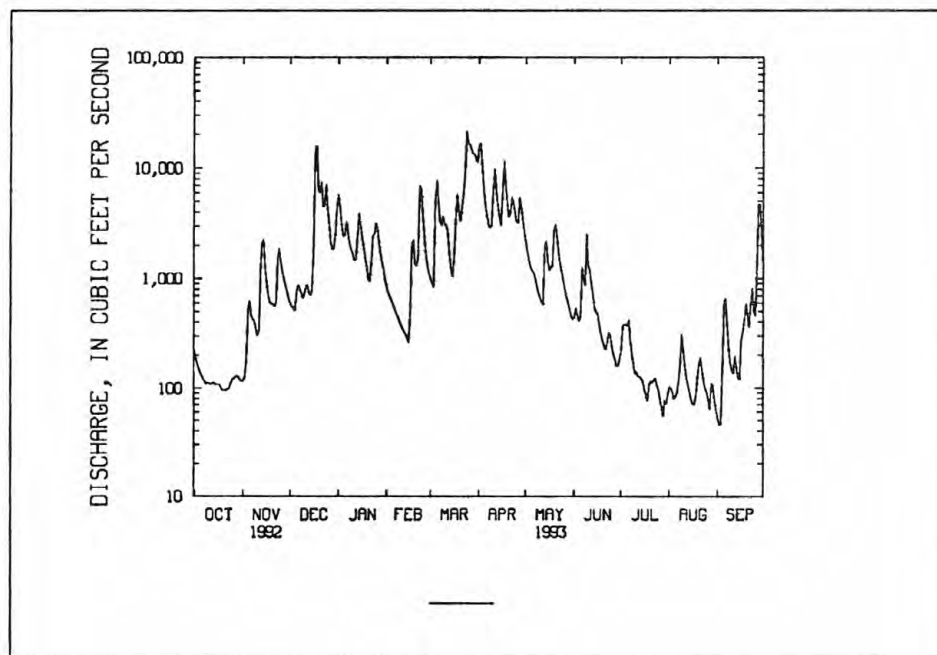
SUMMARY STATISTICS	FOR 1992 CALENDAR YEAR			FOR 1993 WATER YEAR			WATER YEARS 1924 - 1993		
ANNUAL TOTAL	769522			703273					
ANNUAL MEAN	2103			1927			2298		
HIGHEST ANNUAL MEAN							3164		
LOWEST ANNUAL MEAN							1564		
HIGHEST DAILY MEAN	17900			Jul 28			94000		
LOWEST DAILY MEAN	96			(a)			11		
ANNUAL SEVEN-DAY MINIMUM	99			Oct 17			12		
INSTANTANEOUS PEAK FLOW				24400			Mar 24		
INSTANTANEOUS PEAK STAGE				13.98			Mar 24		
INSTANTANEOUS LOW FLOW				41			Sep 3		
ANNUAL RUNOFF (CFSM)	2.24			2.06			2.45		
ANNUAL RUNOFF (INCHES)	30.55			27.92			33.32		
10 PERCENT EXCEEDS	4700			4790			5320		
50 PERCENT EXCEEDS	1360			685			1310		
90 PERCENT EXCEEDS	190			104			217		

a Oct. 19-21.

b Sept. 2, 3.

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

d From floodmarks.



MONONGAHELA RIVER BASIN

03070500 BIG SANDY CREEK AT ROCKVILLE, WV

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

DRAINAGE AREA.--200 mi².

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

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

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

REMARKS.--Records good except those for periods of estimated daily discharges (ice effect, 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. 23	2300	*6,780	*11.52	No other peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	76	33	201	1310	e180	e220	789	433	113	34	26	e6.0
2	68	36	185	849	e160	e195	795	356	73	137	36	e7.0
3	61	223	181	665	e145	e180	687	293	67	156	74	64
4	54	174	157	602	e130	2220	590	255	61	77	47	359
5	49	140	317	711	e120	1970	521	237	102	70	28	152
6	43	187	277	671	e115	1130	451	217	99	154	22	67
7	38	174	246	572	e105	791	382	185	65	70	22	41
8	36	153	213	499	e96	1090	329	160	760	45	19	29
9	44	132	188	417	e90	1380	290	142	395	33	17	23
10	64	118	178	345	e83	1000	511	125	228	26	15	23
11	58	137	209	315	e76	1000	658	113	440	24	16	23
12	57	387	226	340	e70	751	571	131	256	19	16	20
13	51	938	220	471	e65	e540	485	204	175	17	23	16
14	42	559	216	623	e61	e430	420	136	129	17	21	14
15	36	398	247	525	e56	e370	371	110	101	19	15	13
16	33	299	498	461	e150	e450	852	100	82	15	12	19
17	33	246	2710	426	716	1100	1070	112	66	13	14	28
18	33	219	2560	351	502	1300	837	108	55	12	12	33
19	35	197	1390	274	361	866	656	235	48	11	11	31
20	35	178	2150	220	398	709	551	177	44	12	11	23
21	34	187	1840	294	472	1450	873	138	49	14	11	18
22	33	384	1130	553	1600	1730	907	119	92	13	12	32
23	31	505	1080	634	1050	3490	774	103	69	11	13	47
24	31	430	1060	739	692	4680	632	95	45	10	11	42
25	37	422	761	1090	477	3170	542	84	34	e9.0	11	65
26	39	374	609	760	e370	2630	964	71	28	e8.0	10	563
27	36	315	432	e500	e300	1890	1240	63	28	e7.0	11	1130
28	33	268	467	e400	e250	1280	845	56	28	e6.5	10	826
29	32	235	417	e320	---	936	646	53	27	121	e9.0	416
30	31	216	749	e260	---	729	530	48	37	83	e8.0	270
31	32	---	1200	e220	---	605	---	67	---	38	e7.0	---
TOTAL	1315	8264	22314	16417	8890	40282	19769	4726	3796	1281.5	570.0	4400.0
MEAN	42.4	275	720	530	317	1299	659	152	127	41.3	18.4	147
MAX	76	938	2710	1310	1600	4680	1240	433	760	156	74	1130
MIN	31	33	157	220	56	180	290	48	27	6.5	7.0	6.0
CFSM	.21	1.38	3.60	2.65	1.59	6.50	3.29	.76	.63	.21	.09	.73
IN.	.24	1.54	4.15	3.05	1.65	7.49	3.68	.88	.71	.24	.11	.82

e Estimated

MONONGAHELA RIVER BASIN

03070500 BIG SANDY CREEK AT ROCKVILLE, WV--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1909-1918, 1921-1993, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	173	330	561	633	691	801	634	478	285	177	134	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 1992 CALENDAR YEAR		FOR 1993 WATER YEAR		WATER YEARS 1909 - 1993	
ANNUAL TOTAL	131480		132024.5			
ANNUAL MEAN	359		362		417	
HIGHEST ANNUAL MEAN					671	1912
LOWEST ANNUAL MEAN					240	1954
HIGHEST DAILY MEAN	4030	Mar 19	4680	Mar 24	15700	Jan 13 1911
LOWEST DAILY MEAN	31	(a)	e6.0	Sep 1	.10	Oct 21 1953
ANNUAL SEVEN-DAY MINIMUM	33	Oct 18	8.3	Aug 27	.10	Oct 21 1953
INSTANTANEOUS PEAK FLOW			6780	Mar 23	b21300	Jul 24 1912
INSTANTANEOUS PEAK STAGE			11.52	Mar 23	c18.00	Jul 24 1912
INSTANTANEOUS LOW FLOW			UNKNOWN		.10	(d)
ANNUAL RUNOFF (CFSM)	1.80		1.81		2.08	
ANNUAL RUNOFF (INCHES)	24.46		24.56		28.30	
10 PERCENT EXCEEDS	787		919		970	
50 PERCENT EXCEEDS	224		157		209	
90 PERCENT EXCEEDS	45		16		19	

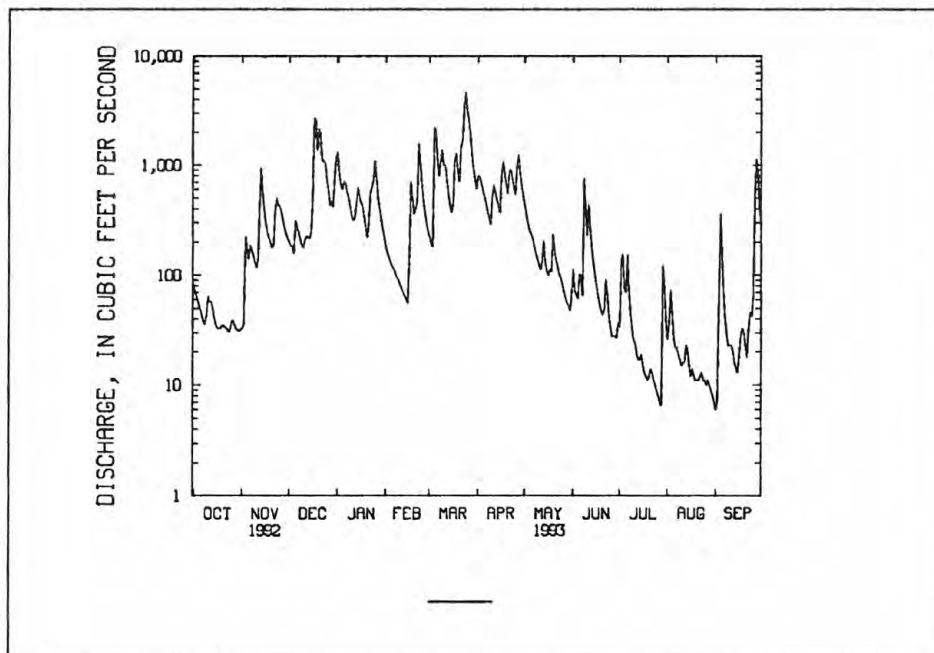
a Oct. 23, 24, 30.

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

c Observed.

d Oct. 21-27, 1953.

e Estimated.



OHIO RIVER MAIN STEM

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

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

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

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

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

REMARKS.--Records good except those below 20,000 ft³/s and those for periods of estimated daily discharge, which are 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, 210,000 ft³/s, Mar. 25, gage height, 29.28 ft.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	34300	e20000	e48800	e130000	35900	26100	170000	70200	12800	9940	10300	9470
2	33400	e25000	40800	e110000	37600	29400	165000	59600	13700	14900	9880	8960
3	32900	30000	33300	95400	30000	30700	161000	47100	15000	13500	12500	16400
4	30100	42400	27300	96800	26300	e52000	149000	45600	13200	10000	10500	24600
5	29100	38300	27000	107000	26500	144000	139000	41300	11000	13800	8190	31000
6	27000	42000	25700	117000	28400	137000	138000	38200	10000	9940	8560	17500
7	26200	44700	26500	112000	24100	95300	125000	32600	10600	9720	8140	15100
8	27800	43200	25500	106000	22100	89000	107000	32500	32200	11000	6830	12400
9	25000	38800	23400	101000	24100	99200	98400	29200	60800	9100	6800	12000
10	26600	35500	26400	85100	23700	105000	83500	24700	67300	9140	7510	8120
11	26600	35100	28200	78000	20800	93400	87100	24000	47000	10600	9740	8550
12	22500	e42000	34300	e75000	23600	86800	91100	22300	36500	8760	9010	7910
13	21500	67300	29400	e80000	25900	70700	82800	19300	29400	9910	6520	8810
14	22000	87300	27300	98900	23500	53600	73700	21300	22200	8880	8480	8900
15	21700	76500	30500	117000	20100	45100	66400	19900	20900	6570	6970	7650
16	24400	64900	e38000	90600	26300	46900	60000	18300	13200	8490	6950	7680
17	28300	59100	e90000	79400	40300	65300	67200	15100	11700	7140	11700	7290
18	34000	47600	e130000	66800	41100	96700	81000	17200	11300	7480	8020	8120
19	31500	46500	e120000	64300	30800	89200	75700	17900	12400	9840	7650	8080
20	32400	40800	96900	51600	27900	74600	72700	17800	11600	8230	8480	6370
21	26800	38300	120000	47900	27900	80100	66600	18000	11200	9670	9300	9050
22	e27000	46900	123000	62200	50300	109000	67300	21100	17900	9550	7630	10500
23	e27000	48200	105000	76800	66700	106000	69500	19300	14800	6600	7140	8380
24	e26000	65900	98100	68600	52200	152000	69400	17000	12600	6810	9150	9800
25	e25000	66300	90800	80700	42100	200000	64300	15100	12900	7800	8380	9150
26	e21000	78300	76200	85900	39100	167000	78200	16700	12500	7690	7260	15300
27	e18000	75500	59500	74700	35400	166000	142000	13600	12200	7810	8660	e23000
28	e17000	70600	42200	64100	31400	171000	121000	9860	9950	9770	7800	e34000
29	e17000	60400	42500	57000	---	173000	94700	17800	8710	12400	8140	e29000
30	e16000	55800	41100	51000	---	179000	84500	9150	8140	11700	7780	24900
31	e16000	---	e75000	39400	---	175000	---	15200	---	14300	7480	---
TOTAL	794100	1533200	1802700	2570200	904100	3208100	2951100	786910	583700	301040	261450	407990
MEAN	25620	51110	58150	82910	32290	103500	98370	25380	19460	9711	8434	13600
MAX	34300	87300	130000	130000	66700	200000	170000	70200	67300	14900	12500	34000
MIN	16000	20000	23400	39400	20100	26100	60000	9150	8140	6570	6520	6370

e Estimated

OHIO RIVER MAIN STEM

03111534 OHIO RIVER AT MARTINS FERRY, OH-Continued

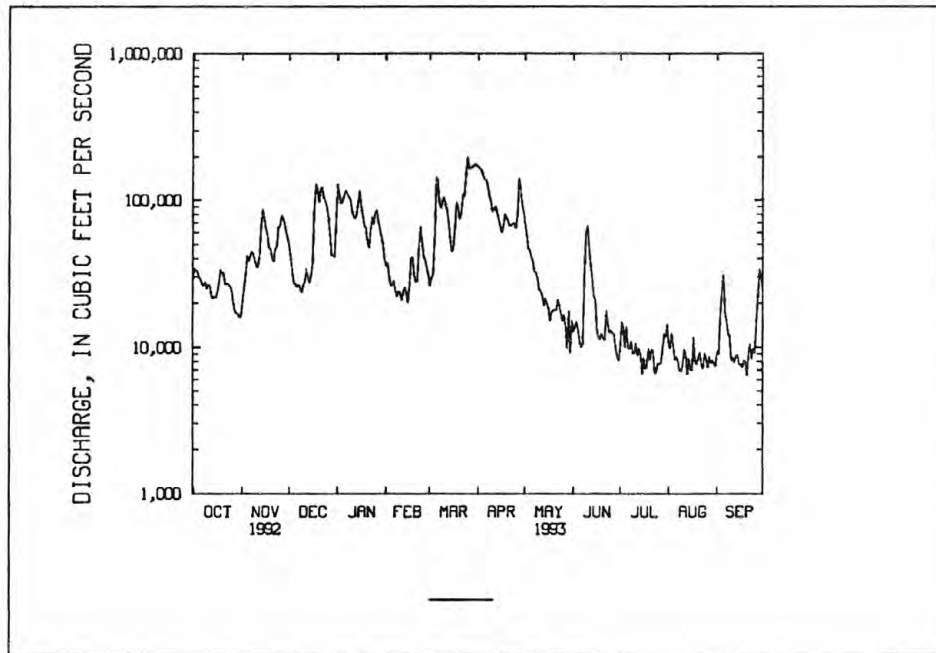
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1978 - 1993, BY WATER YEAR (WY)
[REGULATED, UNADJUSTED]

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	23310	39010	55900	50060	63460	70000	68220	44520	33120	24760	18310	18660
MAX	58930	114900	99850	105800	107300	103500	98370	94750	86840	49950	55930	40140
(WY)	1991	1986	1991	1991	1990	1993	1993	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 1992 CALENDAR YEAR				FOR 1993 WATER YEAR				WATER YEARS 1978 - 1993			
ANNUAL TOTAL	14317010				16104590							
ANNUAL MEAN	39120				44120				42310			
HIGHEST ANNUAL MEAN									50990			1984
LOWEST ANNUAL MEAN									30500			1988
HIGHEST DAILY MEAN	e130000				200000				331000			Jan 1 1991
LOWEST DAILY MEAN	7440				6370				4000			Sep 10 1983
ANNUAL SEVEN-DAY MINIMUM	9360				7730				4440			Aug 12 1988
INSTANTANEOUS PEAK FLOW					210000				466000			Mar 19 1936
INSTANTANEOUS PEAK STAGE					29.28				55.20			Mar 19 1936
10 PERCENT EXCEEDS	75700				99900				90000			
50 PERCENT EXCEEDS	33100				28200				31000			
90 PERCENT EXCEEDS	13000				8380				9930			

e Estimated.

NOTE: Minimum instantaneous not determined.



WHEELING CREEK BASIN

03112000 WHEELING CREEK AT ELM GROVE, WV

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

DRAINAGE AREA.--282 mi².

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

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

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

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

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

Date	Time	Discharge (ft ³ /s)	Gage Height (ft)	Date	Time	Discharge (ft ³ /s)	Gage Height (ft)
Mar. 4	2000	*6,140	*6.23	No other peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	50	38	158	456	e220	e240	693	416	124	36	44	23
2	43	46	146	393	e190	e300	699	345	89	166	84	19
3	39	109	134	346	e170	434	595	294	69	180	182	65
4	37	133	120	320	e150	2740	501	255	73	88	76	453
5	34	87	123	440	e130	3590	437	240	84	93	50	215
6	32	94	120	477	e120	1870	392	210	80	61	38	94
7	30	120	122	402	e110	1310	344	177	68	43	31	56
8	28	92	114	357	e100	1490	307	156	120	33	26	40
9	48	74	105	307	e95	1340	279	142	142	25	23	34
10	67	63	149	267	e90	1090	276	129	93	26	20	68
11	76	59	370	262	e85	1310	252	116	69	27	18	68
12	58	78	417	282	e90	1080	230	121	53	36	17	47
13	46	244	418	458	e95	892	204	142	45	36	16	35
14	38	236	409	589	e105	708	189	125	38	31	14	29
15	35	149	423	488	e100	e580	186	103	33	28	13	28
16	33	113	691	414	405	e500	276	91	29	22	12	26
17	32	91	2310	364	1510	1910	349	84	25	18	36	24
18	31	81	1900	309	840	1790	285	78	23	15	55	25
19	30	71	952	244	525	1130	245	78	22	199	59	24
20	30	65	810	202	e450	1140	223	78	20	118	36	23
21	31	153	687	256	e400	2620	218	72	21	69	213	28
22	32	600	535	976	1360	2250	212	65	24	42	82	72
23	31	846	422	874	1100	2210	182	61	21	31	39	70
24	33	518	345	915	727	2390	165	59	20	25	27	47
25	34	560	259	1500	474	1370	166	57	19	21	21	48
26	34	453	e230	889	e350	974	2460	51	35	22	17	147
27	37	336	e190	677	e300	763	2350	45	37	34	15	207
28	36	262	e160	522	e260	705	1050	41	33	53	15	273
29	36	211	e140	437	---	701	709	52	37	286	62	162
30	37	177	e190	333	---	618	533	42	37	162	53	113
31	36	---	235	e280	---	549	---	81	---	69	30	---
TOTAL	1194	6159	13384	15036	10551	40594	15007	4006	1583	2095	1424	2563
MEAN	38.5	205	432	485	377	1309	500	129	52.8	67.6	45.9	85.4
MAX	76	846	2310	1500	1510	3590	2460	416	142	286	213	453
MIN	28	38	105	202	85	240	165	41	19	15	12	19
CF5M	.14	.73	1.53	1.72	1.34	4.64	1.77	.46	.19	.24	.16	.30
IN.	.16	.81	1.77	1.98	1.39	5.35	1.98	.53	.21	.28	.19	.34

e Estimated

WHEELING CREEK BASIN

03112000 WHEELING CREEK AT ELM GROVE, WV--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 1993, BY WATER YEAR (WY)

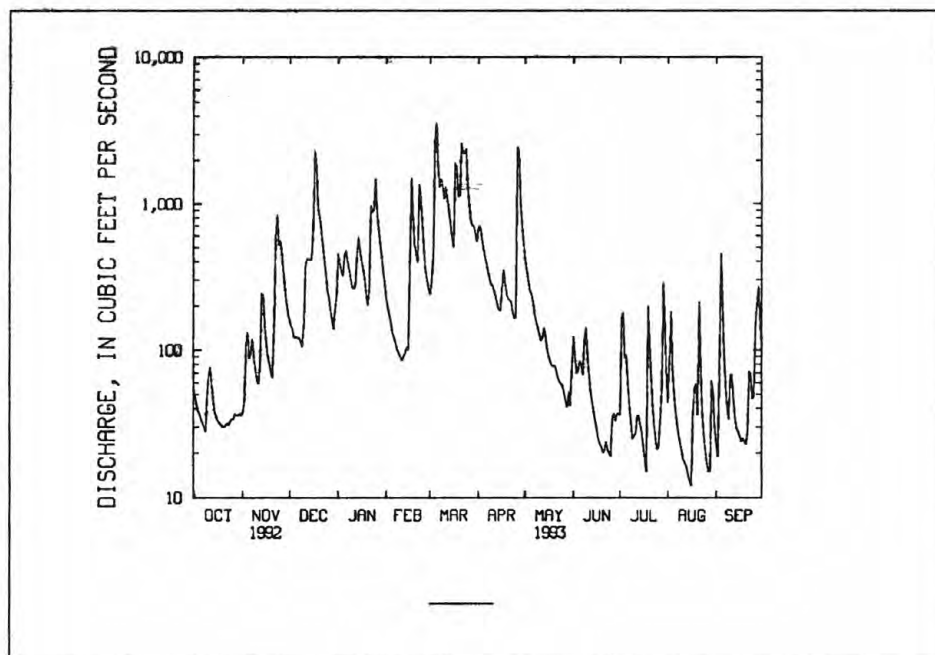
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	81.7	202	389	480	605	713	593	403	217	149	105	87.7
MAX	627	2085	1369	1017	1249	1670	1336	1107	1004	885	1424	1012
(WY)	1991	1986	1991	1979	1975	1963	1961	1967	1981	1956	1980	1975
MIN	.53	1.89	5.45	21.4	85.0	126	115	66.0	16.1	3.90	2.06	.88
(WY)	1964	1964	1964	1967	1964	1969	1971	1986	1962	1962	1957	1966
SUMMARY STATISTICS	FOR 1992 CALENDAR YEAR					FOR 1993 WATER YEAR				WATER YEARS 1941 - 1993		
ANNUAL TOTAL	98127					113596						
ANNUAL MEAN	268					311				334		
HIGHEST ANNUAL MEAN										580		
LOWEST ANNUAL MEAN										112		
HIGHEST DAILY MEAN	4570					Mar 19				13100		
LOWEST DAILY MEAN	15					Jul 4				.10		
ANNUAL SEVEN-DAY MINIMUM	21					Jun 17				.24		
INSTANTANEOUS PEAK FLOW						6140				b22100		
INSTANTANEOUS PEAK STAGE						6.23				Mar 4		
INSTANTANEOUS LOW FLOW						12				(c)		
ANNUAL RUNOFF (CFSM)	.95					1.10				1.18		
ANNUAL RUNOFF (INCHES)	12.94					14.99				16.10		
10 PERCENT EXCEEDS	566					822				824		
50 PERCENT EXCEEDS	142					120				130		
90 PERCENT EXCEEDS	30					26				9.0		

a Sept. 26, 27, 1964.

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

c Aug. 16, 17.

d 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.

REMARKS.--Samples taken at I-470 bridge, 2.5 miles upstream, since March 1992.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	TUR- BID- ITY (NTU) (00076)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)
NOV 1992 05...	1115	38500	325	7.6	12.0	3.5	742	11.1	106	80
MAR 1993 10...	1015	106000	345	7.3	3.5	25	735	16.6	130	K3000
MAY 27...	1345	14300	430	7.3	21.0	1.8	746	8.6	99	56
JUL 28...	1100	9660	525	7.6	30.0	5.1	745	6.5	88	420
SEP 22...	1015	8920	470	7.2	23.0	1.0	748	6.8	81	1400

DATE	STREP- TOCOC 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)
NOV 1992 05...	K40	110	30	7.3	19	2.4	49	0	40	72
MAR 1993 10...	890	110	30	7.9	17	2.1	46	0	38	74
MAY 27...	K4	160	43	12	22	2.3	52	0	43	120
JUL 28...	<2	190	52	14	32	3.6	66	0	54	140
SEP 22...	84	150	42	11	31	2.7	56	0	46	120

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)
NOV 1992 05...	21	0.20	3.8	195	184	0.790	0.030	0.820	0.140	0.150
MAR 1993 10...	27	<0.10	6.0	187	192	1.08	0.020	1.10	--	0.120
MAY 27...	23	0.30	2.4	266	255	0.830	0.030	0.860	--	0.090
JUL 28...	34	0.40	0.41	327	314	0.970	0.030	1.00	--	0.060
SEP 22...	32	0.30	3.0	289	275	1.07	0.030	1.10	--	0.090

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 1992 TO SEPTEMBER 1993

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)
NOV 1992 05...	0.26	0.40	0.080	0.030	0.040	30	39	<3	23	8
MAR 1993 10...	0.48	0.60	0.120	0.020	0.010	--	--	--	--	--
MAY 27...	0.21	0.30	0.030	<0.010	<0.010	10	46	<3	24	11
JUL 28...	0.44	0.50	0.050	<0.010	<0.010	30	53	<3	<3	13
SEP 22...	--	<0.20	0.030	0.020	0.020	20	48	<3	10	11

DATE	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	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)
NOV 1992 05...	78	3	<1	<1.0	180	<6	13	1350	95
MAR 1993 10...	--	--	--	--	--	--	70	20000	95
MAY 27...	11	3	<1	<1.0	250	<6	9	347	97
JUL 28...	2	2	<1	<1.0	290	<6	12	313	96
SEP 22...	10	<1	<1	<1.0	280	<6	9	217	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 sea level, adjustment of 1912. Prior to July 11, 1947, nonrecording gage at same site and datum.

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

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in August 1875 reached a stage of about 33.5 ft.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 9,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage Height (ft)	Date	Time	Discharge (ft ³ /s)	Gage Height (ft)
Mar. 5	0700	*13,900	*17.12	No other peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	51	36	182	965	e260	e320	2570	592	327	39	12	6.5
2	39	49	157	876	e230	527	2570	471	166	114	11	6.8
3	31	68	144	616	e200	989	1440	395	121	207	10	17
4	27	270	144	492	e170	5600	997	340	98	127	11	985
5	22	159	146	591	e150	11700	761	318	92	91	8.7	909
6	18	156	183	999	e135	3950	623	306	117	65	9.0	243
7	17	293	236	793	e125	2060	506	279	155	52	11	112
8	15	208	217	599	e115	1500	421	257	117	41	9.7	59
9	16	140	185	488	e105	1510	375	222	94	39	8.3	39
10	26	95	1750	408	e100	1180	382	196	100	29	8.8	28
11	35	83	4940	366	e95	1410	541	181	1030	29	10	20
12	50	174	3370	394	e100	1550	597	173	657	26	9.0	16
13	49	1120	2140	840	e110	1150	539	206	286	23	7.5	13
14	39	852	1360	1480	e130	e750	454	274	172	23	6.9	12
15	32	387	925	996	e125	e650	421	243	123	20	6.2	11
16	28	245	732	684	573	e750	507	175	92	28	5.7	9.3
17	25	181	1370	519	3210	4140	510	151	68	54	11	8.4
18	24	141	3310	404	1850	4770	423	117	69	40	8.5	8.0
19	19	121	1600	311	872	2280	356	98	54	41	15	7.7
20	19	112	1230	242	701	2250	325	123	52	443	36	7.6
21	23	182	1610	589	875	5910	325	142	69	339	24	18
22	23	1430	1060	4880	5280	4330	550	119	58	166	19	21
23	14	2460	726	3150	2810	3410	626	96	68	82	16	17
24	13	1320	572	2240	1340	7160	531	89	79	51	14	15
25	14	1050	437	3260	748	2770	496	78	62	41	13	17
26	16	869	364	1720	e500	1630	2830	71	49	27	13	17
27	18	547	283	1040	e420	1240	4160	65	44	22	11	240
28	18	368	267	728	e360	2330	1730	54	50	19	11	795
29	21	275	290	549	---	1860	1050	48	40	16	9.6	454
30	29	219	401	413	---	1300	761	43	38	13	9.2	232
31	36	---	557	e310	---	997	---	157	---	13	8.9	---
TOTAL	807	13610	30888	31942	21689	81973	28377	6079	4547	2320	364.0	4344.3
MEAN	26.0	454	996	1030	775	2644	946	196	152	74.8	11.7	145
MAX	51	2460	4940	4880	5280	11700	4160	592	1030	443	36	985
MIN	13	36	144	242	95	320	325	43	38	13	5.7	6.5
CFSM	.06	.99	2.18	2.25	1.69	5.77	2.07	.43	.33	.16	.03	.32
IN.	.07	1.11	2.51	2.59	1.76	6.66	2.30	.49	.37	.19	.03	.35

e Estimated

MIDDLE ISLAND CREEK BASIN

03114500 MIDDLE ISLAND CREEK AT LITTLE, WV--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1916, 1929-1993, BY WATER YEAR (WY)

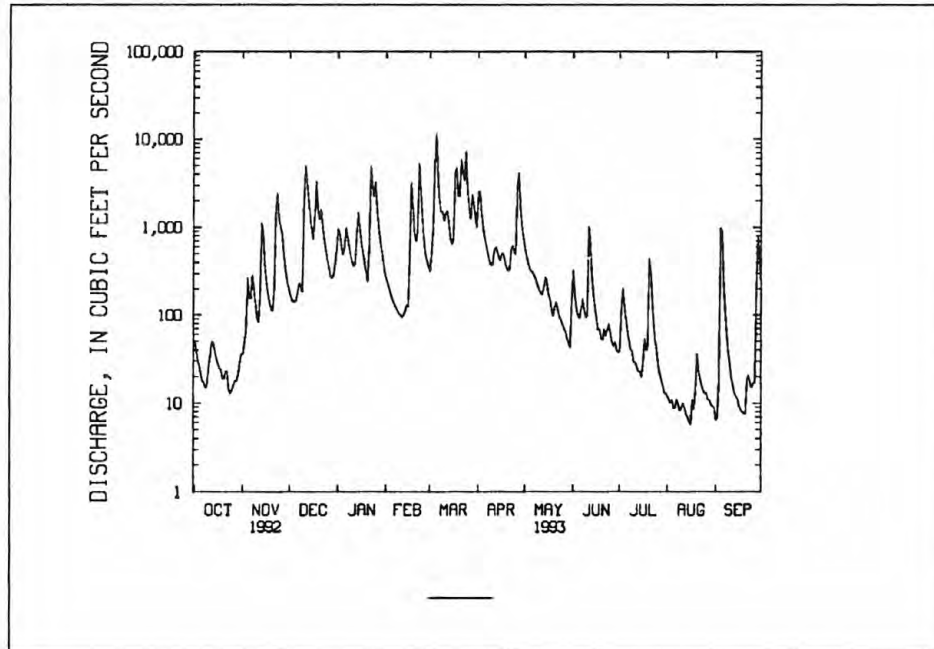
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	180	412	860	1055	1183	1312	1008	704	400	211	231	170
MAX	1252	2611	3004	3501	2381	3681	2690	2385	2431	1562	1396	1449
(WY)	1990	1986	1991	1937	1939	1963	1948	1968	1974	1958	1935	1945
MIN	.000	.12	.47	15.3	107	289	134	54.2	4.55	1.68	.20	.000
(WY)	1931	1931	1931	1931	1934	1969	1971	1930	1936	1930	1930	1930

SUMMARY STATISTICS	FOR 1992 CALENDAR YEAR		FOR 1993 WATER YEAR		WATER YEARS 1916 - 1993	
ANNUAL TOTAL	172450		226940.3			
ANNUAL MEAN	471		622		641	
HIGHEST ANNUAL MEAN					1052	
LOWEST ANNUAL MEAN					247	
HIGHEST DAILY MEAN	7550 Mar 19		11700 Mar 5		22000 Nov 5 1985	
LOWEST DAILY MEAN	13 Oct 24		5.7 Aug 16		.00 (a)	
ANNUAL SEVEN-DAY MINIMUM	16 Oct 23		7.7 Aug 10		.00 Sep 1 1930	
INSTANTANEOUS PEAK FLOW			13900 Mar 5		25000 Jun 26 1950	
INSTANTANEOUS PEAK STAGE			17.12 Mar 5		b28.00 Jun 26 1950	
INSTANTANEOUS LOW FLOW			5.4 (c)		.00 (a)	
ANNUAL RUNOFF (CFSM)	1.03		1.36		1.40	
ANNUAL RUNOFF (INCHES)	14.01		18.43		19.03	
10 PERCENT EXCEEDS	1120		1620		1540	
50 PERCENT EXCEEDS	199		174		197	
90 PERCENT EXCEEDS	25		13		11	

a Many days in 1922, 1929, 1930.

b From floodmarks.

c Aug. 16,17.



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.--Records fair. 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, 28.64 ft, Mar. 5; minimum, 14.97 ft, May 19.

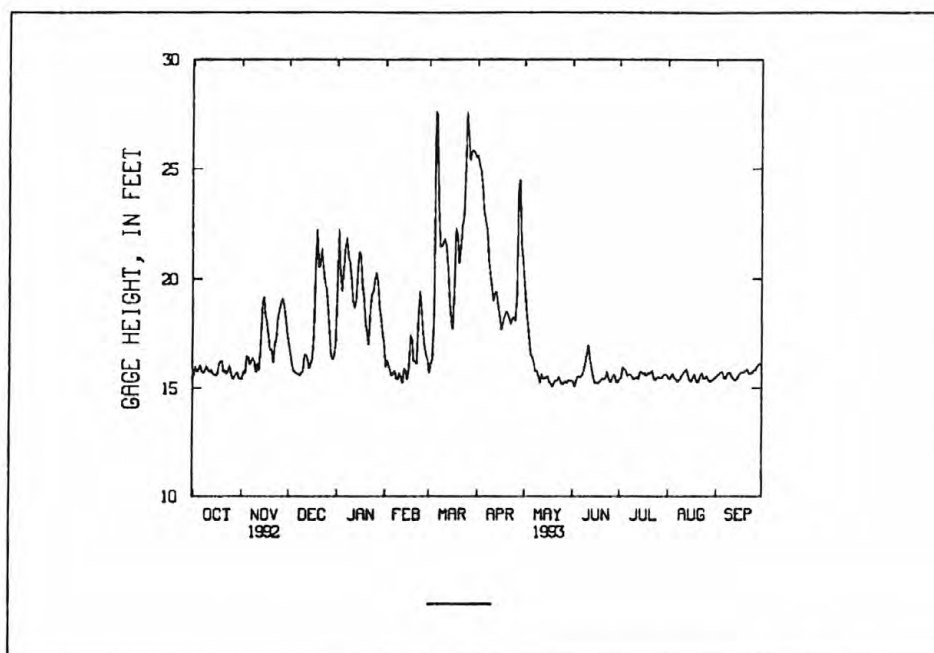
GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15.66	15.43	17.08	19.84	15.98	15.72	25.62	19.72	15.33	15.44	15.52	15.53
2	16.00	15.79	16.63	22.26	16.33	16.14	25.20	18.76	15.09	15.51	15.42	15.60
3	15.75	15.70	16.17	20.21	16.10	16.37	24.93	17.94	15.30	15.98	15.56	15.67
4	15.89	16.51	15.81	19.42	15.81	18.54	24.20	17.21	15.56	15.89	15.68	15.76
5	16.05	16.47	15.77	20.46	15.58	27.60	23.04	16.57	15.54	15.85	15.48	15.77
6	15.82	16.09	15.68	21.45	15.72	27.47	22.64	16.45	15.51	15.58	15.41	15.45
7	15.70	16.29	15.66	21.89	15.81	23.23	22.23	16.16	15.64	15.64	15.29	15.45
8	15.80	16.41	15.59	21.10	15.44	21.48	20.92	15.78	15.86	15.65	15.37	15.67
9	16.05	16.19	15.73	20.76	15.41	21.50	20.21	15.82	16.20	15.54	15.47	15.72
10	15.85	15.75	15.77	19.98	15.70	21.69	19.60	15.58	16.66	15.41	15.62	15.71
11	15.76	16.15	16.54	18.97	15.48	21.84	19.00	15.26	17.02	15.47	15.72	15.52
12	15.86	15.85	16.58	18.69	15.24	21.45	19.39	15.67	16.36	15.51	15.81	15.44
13	15.70	17.16	16.40	18.99	15.94	20.44	19.41	15.44	15.92	15.43	15.89	15.36
14	15.62	18.94	15.93	20.49	15.81	18.94	18.77	15.48	15.57	15.75	15.59	15.41
15	15.60	19.17	16.12	21.26	15.39	18.03	18.32	15.48	15.23	15.80	15.35	15.56
16	15.64	18.34	16.37	21.08	15.94	17.73	17.70	15.56	15.25	15.66	15.31	15.67
17	16.09	17.99	17.55	19.70	17.44	19.71	18.00	15.28	15.22	15.73	15.48	15.74
18	16.25	17.32	20.76	19.11	17.25	22.31	18.28	15.20	15.28	15.57	15.65	15.74
19	16.25	16.77	22.27	18.03	16.27	22.06	18.51	15.08	15.36	15.72	15.38	15.77
20	15.75	16.82	20.56	17.55	16.25	20.73	18.44	15.25	15.47	15.68	15.25	15.85
21	15.83	16.18	20.63	17.03	16.13	21.34	18.24	15.35	15.41	15.76	15.39	15.87
22	15.66	17.07	21.43	18.60	18.29	22.47	17.95	15.35	15.49	15.82	15.60	15.66
23	15.85	17.34	20.52	19.29	19.43	22.74	18.21	15.52	15.79	15.41	15.72	15.71
24	16.05	18.30	19.90	19.43	18.73	24.64	18.26	15.35	15.46	15.38	15.44	15.72
25	15.64	18.61	19.54	20.03	17.57	27.56	18.10	15.17	15.28	15.47	15.45	15.85
26	15.42	18.94	18.69	20.28	16.97	26.62	19.25	15.21	15.41	15.54	15.58	15.84
27	15.53	19.09	17.61	19.88	16.57	25.40	24.22	15.33	15.63	15.46	15.37	15.99
28	15.68	18.73	16.53	18.74	16.29	25.81	24.53	15.24	15.60	15.47	15.31	16.10
29	15.75	18.20	16.37	18.19	---	25.83	21.57	15.37	15.26	15.60	15.33	16.17
30	15.48	17.54	16.48	17.49	---	25.73	20.88	15.34	15.29	15.65	15.39	16.03
31	15.42	---	17.13	17.09	---	25.51	---	15.34	---	15.63	15.46	---
MEAN	15.79	17.17	17.54	19.59	16.39	22.15	20.52	15.88	15.60	15.61	15.49	15.71
MAX	16.25	19.17	22.27	22.26	19.43	27.60	25.62	19.72	17.02	15.98	15.89	16.17
MIN	15.42	15.43	15.59	17.03	15.24	15.72	17.70	15.08	15.09	15.38	15.25	15.36

WTR YR 1993 MEAN 17.29 MAX 27.60 MIN 15.08

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 above sea level.

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

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

Date	Time	Discharge (ft ³ /s)	Gage Height (ft)	Date	Time	Discharge (ft ³ /s)	Gage Height (ft)
Dec. 17	1700	*3,650	*9.85	Mar. 29	0830	2,400	8.56
Mar. 4	2130	2,670	8.86				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	6.8	54	268	120	e120	487	182	40	8.1	.96	.42
2	10	12	53	271	91	145	529	144	31	7.8	1.1	.35
3	9.6	16	54	253	e86	182	524	115	22	6.9	1.0	.30
4	8.8	16	48	215	e82	1290	411	96	28	17	.94	1.2
5	8.2	27	214	226	e78	1750	326	85	162	21	.99	1.7
6	7.5	54	247	221	74	796	265	74	118	11	1.3	3.6
7	6.9	54	193	211	70	497	202	62	71	7.5	1.4	3.3
8	6.3	38	146	207	67	438	170	53	81	5.4	1.7	2.9
9	6.9	30	113	188	61	435	149	45	56	4.1	1.7	2.5
10	7.3	25	224	166	56	470	407	38	58	3.1	1.4	2.3
11	10	33	681	153	53	540	630	33	40	2.5	1.5	1.7
12	20	312	475	171	59	404	420	38	30	2.1	1.3	1.6
13	18	319	346	246	73	e300	295	105	28	1.7	1.1	1.3
14	14	210	289	316	86	e230	224	107	23	1.5	1.1	1.1
15	11	133	287	291	72	e170	181	69	18	4.8	.96	1.2
16	9.0	94	915	243	100	e180	169	55	15	7.5	.85	2.6
17	9.0	74	2620	201	439	1060	166	59	12	5.1	1.4	12
18	8.3	65	1360	163	361	1170	142	51	10	3.9	1.8	13
19	8.3	57	594	131	e210	636	132	224	8.6	3.4	3.3	8.4
20	8.0	48	601	111	e190	494	125	249	7.2	34	3.1	6.0
21	7.7	45	645	113	411	1070	209	178	6.3	24	3.1	7.8
22	8.8	.81	448	152	1250	958	568	125	5.7	11	2.4	11
23	8.3	134	596	219	645	1090	623	93	5.4	6.8	1.8	12
24	7.9	135	690	278	378	1550	418	73	5.0	5.2	1.5	13
25	9.5	121	457	324	e200	850	301	58	4.6	3.6	1.2	21
26	9.0	103	331	289	e170	545	375	46	4.4	2.8	1.1	146
27	8.4	87	229	253	e150	413	681	35	5.0	2.2	.98	516
28	8.4	76	216	205	e130	345	470	29	5.0	1.7	.88	323
29	7.9	66	230	176	---	1680	328	24	5.4	1.4	.79	110
30	6.8	57	227	139	---	906	242	21	7.0	1.1	.62	62
31	6.8	---	216	124	---	543	---	21	---	1.0	.53	---
TOTAL	288.6	2528.8	13799	6524	5762	21257	10169	2587	912.6	219.2	43.80	1289.27
MEAN	9.31	84.3	445	210	206	686	339	83.5	30.4	7.07	1.41	43.0
MAX	20	319	2620	324	1250	1750	681	249	162	34	3.3	516
MIN	6.3	6.8	48	111	53	120	125	21	4.4	1.0	.53	.30
CFSM	.08	.75	3.97	1.88	1.84	6.12	3.03	.75	.27	.06	.01	.38
IN.	.10	.84	4.58	2.17	1.91	7.06	3.38	.86	.30	.07	.01	.43

e Estimated

LITTLE KANAWHA RIVER BASIN

03151400 LITTLE KANAWHA RIVER NEAR WILDCAT, WV--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1974-1983, 1986-1993, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	101	211	341	330	370	408	343	232	142	130	65.9	50.1
MAX	426	841	717	660	668	686	600	573	551	305	218	174
(WY)	1977	1986	1979	1979	1986	1993	1980	1989	1981	1992	1989	1979
MIN	9.31	76.2	148	74.5	61.8	132	150	33.7	5.03	4.31	1.41	3.34
(WY)	1993	1979	1989	1977	1978	1987	1982	1991	1991	1988	1993	1983

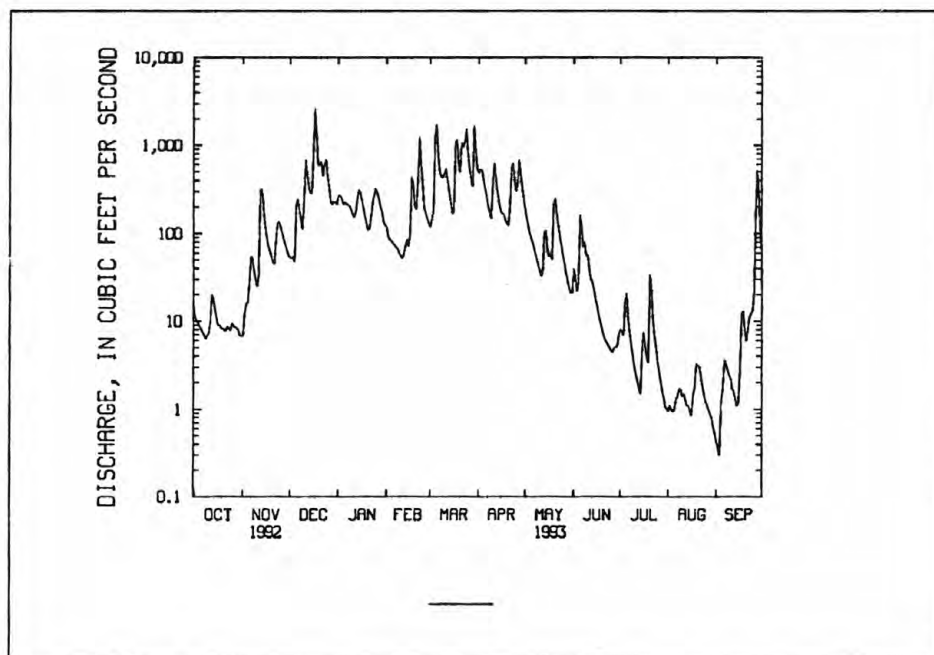
SUMMARY STATISTICS

FOR 1992 CALENDAR YEAR

FOR 1993 WATER YEAR

WATER YEARS 1974 - 1993

ANNUAL TOTAL	78584.4	65380.27	
ANNUAL MEAN	215	179	224
HIGHEST ANNUAL MEAN			306
LOWEST ANNUAL MEAN			142
HIGHEST DAILY MEAN	2620	Dec 17	5720
LOWEST DAILY MEAN	6.3	Oct 8	.11
ANNUAL SEVEN-DAY MINIMUM	7.4	Oct 4	.14
INSTANTANEOUS PEAK FLOW		3650	Dec 17
INSTANTANEOUS PEAK STAGE		9.85	Dec 17
INSTANTANEOUS LOW FLOW		.26	Sep 3
ANNUAL RUNOFF (CFSM)	1.92	1.60	2.00
ANNUAL RUNOFF (INCHES)	26.10	21.72	27.19
10 PERCENT EXCEEDS	493	490	545
50 PERCENT EXCEEDS	127	62	113
90 PERCENT EXCEEDS	16	1.7	8.8



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 sea level (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, 2,160 ft³/s, Dec. 18, gage height, 7.92 ft.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24	112	65	178	139	199	438	388	19	19	19	19
2	24	110	65	351	113	237	17	249	19	19	19	19
3	24	110	64	340	82	246	18	175	19	19	19	19
4	24	131	64	241	67	172	18	126	58	19	19	19
5	24	160	121	242	67	391	18	110	193	19	19	19
6	24	194	372	240	67	890	18	110	210	19	19	19
7	24	218	265	241	67	1410	18	77	117	19	19	19
8	22	204	166	240	80	1930	18	18	71	20	19	19
9	20	187	141	204	86	1910	18	20	101	20	19	19
10	20	155	305	185	63	1440	20	23	110	20	19	19
11	20	140	791	186	51	821	315	28	74	20	19	19
12	20	250	887	171	51	692	506	37	51	21	19	19
13	20	435	510	310	51	485	514	143	51	21	19	19
14	20	448	371	455	51	395	361	284	32	21	19	19
15	20	316	321	328	52	237	266	151	20	22	19	19
16	109	334	644	280	135	257	214	21	20	21	19	19
17	125	281	952	225	442	804	214	20	20	21	20	19
18	108	178	1610	198	540	1160	214	33	20	21	19	19
19	101	81	1840	175	253	1160	214	211	20	21	19	19
20	96	121	1780	107	213	1130	178	389	20	21	19	19
21	96	178	1550	125	242	1130	198	210	20	21	19	19
22	105	206	872	260	838	1160	307	184	20	21	19	19
23	115	222	473	270	1650	922	498	116	20	20	19	19
24	115	280	743	338	1050	612	559	78	20	20	19	19
25	115	330	655	385	339	1550	555	78	20	20	19	19
26	115	336	447	384	275	1940	554	78	20	20	19	21
27	115	328	280	383	254	1880	551	62	20	20	19	21
28	113	267	245	282	164	1370	548	31	21	19	19	20
29	113	178	280	188	---	1060	548	19	20	19	19	20
30	113	105	280	162	---	1130	544	19	19	19	19	20
31	113	---	243	162	---	1100	---	19	---	19	19	---
TOTAL	2097	6595	17402	7836	7482	29820	8459	3507	1445	621	590	577
MEAN	67.6	220	561	253	267	962	282	113	48.2	20.0	19.0	19.2
MAX	125	448	1840	455	1650	1940	559	389	210	22	20	21
MIN	20	81	64	107	51	172	17	18	19	19	19	19

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

1978

1977

Jan 29 1978

May 25 1977

May 20 1977

Oct 9 1976

Oct 9 1976

(b)

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1979-1982, 1987-1993, BY WATER YEAR (WY)
[REGULATED, UNADJUSTED]

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	173	305	448	421	462	552	317	339	204	137	104	69.1
MAX	571	588	875	886	708	962	590	977	807	343	299	223
(WY)	1980	1987	1979	1979	1989	1993	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	1961	1980	1987	1982	1982	1991	1988	1991	1987

SUMMARY STATISTICS

FOR 1992 CALENDAR YEAR

FOR 1993 WATER YEAR

WATER YEARS 1979 - 1993

ANNUAL TOTAL	104308	86431	
ANNUAL MEAN	285	237	294
HIGHEST ANNUAL MEAN			373
LOWEST ANNUAL MEAN			183
HIGHEST DAILY MEAN	1840	Dec 19	1940
LOWEST DAILY MEAN	10	Jul 22	17
ANNUAL SEVEN-DAY MINIMUM	20	Oct 9	18
INSTANTANEOUS PEAK FLOW			2160
INSTANTANEOUS PEAK STAGE			7.92
INSTANTANEOUS LOW FLOW			16
10 PERCENT EXCEEDS	752		580
50 PERCENT EXCEEDS	180		107
90 PERCENT EXCEEDS	24		19

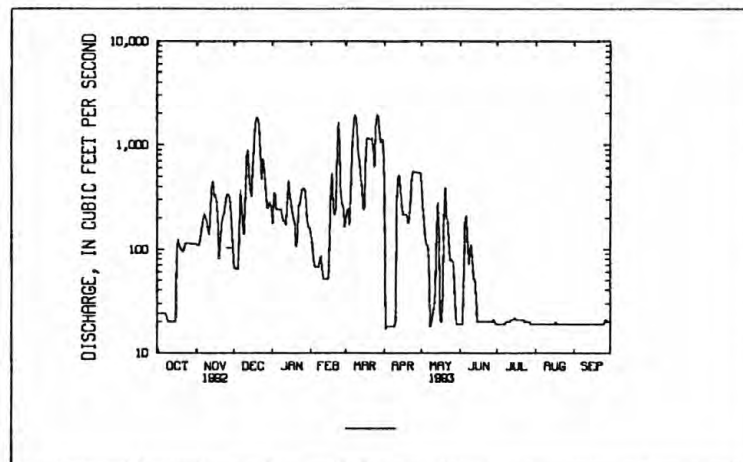
294	
373	1989
183	1988
2200	Jun 8 1981
4.6	Oct 13 1978
5.1	Oct 1 1978
2470	Feb 12 1990
c11.78	Nov 4 1985
4.0	Aug 1 1979

a Datum then in use was 700.00 ft.

b May 25, 26, 1977.

c Datum 750.00 ft. Backwater from downstream tributaries.

d Apr. 1, 2.



LITTLE KANAWHA RIVER BASIN

03152000 LITTLE KANAWHA RIVER AT GLENVILLE, WV

LOCATION.--Lat 38°55'58", long 80°50'19", Gilmer County, Hydrologic Unit 05030203, on right bank at abandoned bridge on Conrad Court Street at Glenville, 1,400 ft upstream from Sycamore Run, and at mile 103.5. Prior to July 1, 1986, at bridge 400 ft downstream.

DRAINAGE AREA.--386 mi².

PERIOD OF RECORD.--June 1915 to September 1922 (gage heights only), October 1928 to September 1983, October 1983 to September 1984 (gage heights, occasional discharge measurements, and annual maximum discharge only), October 1984 to current year. Monthly discharge only October to December 1928, published in WSP 1305.

REVISED RECORDS.--WSP 783: Drainage area. WSP 1305: 1930, 1932(M). WSP 1435: 1954. WSP 1555: 1947(M). WRD WV-82-1: 1979.

GAGE.--Water-stage recorder. Datum of gage is 697.79 ft above sea level. Prior to Dec. 14, 1934, nonrecording gage at same site and datum. Prior to July 1, 1986 at site 400 ft downstream and at the same datum. May 25, 1971 to September 1983, and October 1984 to June 21, 1988, auxiliary water-stage recorder 2.7 mi downstream from base gage at datum 700.23 ft above sea level. Prior to May 25, 1971, auxiliary nonrecording gage at same site and datum.

REMARKS.--Records good except those for periods of estimated daily discharges, (ice effect, missing gage-height records), which are poor. Flow partially regulated since 1968 by five floodwater detention reservoirs affecting 49.5 mi². Flow regulated since March 1979 by Burnsville Lake. National Weather Service gage-height telemeter and U.S. Army Corps of Engineers satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Nov. 16, 1926, reached a stage of 33.6 ft.

PEAK DISCHARGE FOR CURRENT YEAR.--Maximum discharge, 8,150 ft³/s, Mar. 5, gage height, 21.91 ft.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	35	120	132	492	308	363	2490	694	45	33	20	27
2	33	121	114	527	e230	560	996	455	45	33	21	25
3	32	129	114	658	e180	714	647	341	40	34	21	54
4	31	133	111	458	e160	4200	481	272	44	107	21	153
5	30	181	175	610	e140	5600	389	218	240	63	21	63
6	29	255	447	634	143	2330	338	212	323	40	24	35
7	28	301	578	527	139	1850	280	188	257	34	25	27
8	28	272	275	483	136	2380	236	123	141	30	22	24
9	32	228	258	450	148	2230	211	79	193	28	20	22
10	32	211	787	353	143	2220	671	72	183	26	21	24
11	33	188	2330	363	111	1720	763	68	160	25	21	24
12	35	481	2190	394	114	1370	918	68	94	24	23	21
13	34	801	1430	906	121	982	807	298	80	24	21	20
14	33	686	850	1180	133	e650	676	441	79	25	20	20
15	31	521	617	814	124	e500	493	374	57	44	19	26
16	28	374	694	571	207	644	470	125	40	54	19	100
17	136	426	2980	493	719	2960	465	96	36	37	42	104
18	120	294	3110	388	1010	3220	416	85	33	33	80	64
19	114	170	2470	345	565	2080	393	315	32	31	35	47
20	105	103	2330	273	398	2010	361	557	30	79	29	35
21	102	199	2330	333	1000	3680	604	365	30	45	29	33
22	102	338	1530	908	2600	2570	678	289	40	32	26	39
23	116	593	1010	937	2330	2680	847	217	34	27	22	36
24	123	474	1220	880	1800	4000	879	134	32	25	20	35
25	127	557	1190	1250	666	2500	845	118	30	24	23	42
26	125	536	756	905	526	2600	1600	111	29	25	21	410
27	128	479	595	747	486	2470	1710	105	29	25	20	622
28	125	433	412	606	411	2500	1110	82	29	23	20	431
29	122	296	618	440	---	1650	936	56	43	22	19	163
30	121	219	598	331	---	1570	836	39	37	21	19	92
31	121	---	550	314	---	1480	---	38	---	20	19	---
TOTAL	2291	10119	32801	18570	15048	66283	22546	6635	2485	1093	763	2818
MEAN	73.9	337	1058	599	537	2138	752	214	82.8	35.3	24.6	93.9
MAX	136	801	3110	1250	2600	5600	2490	694	323	107	80	622
MIN	28	103	111	273	111	363	211	38	29	20	19	20

e Estimated

LITTLE KANAWHA RIVER BASIN

03152000 LITTLE KANAWHA RIVER AT GLENVILLE, WV--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1929 - 1967, BY WATER YEAR (WY) [UNREGULATED]

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	169	370	733	962	1112	1291	867	609	351	267	271	126
MAX	1239	1236	1790	2749	2206	2831	1969	1983	1663	1498	1175	735
(WY)	1938	1963	1943	1937	1939	1967	1939	1967	1950	1958	1958	1945
MIN	.030	.058	22.7	178	180	529	241	65.6	17.4	5.92	1.75	.010
(WY)	1931	1931	1966	1966	1941	1966	1947	1930	1965	1930	1930	1930

SUMMARY STATISTICS

WATER YEARS 1929 - 1967

ANNUAL MEAN	592
HIGHEST ANNUAL MEAN	1020
LOWEST ANNUAL MEAN	315
HIGHEST DAILY MEAN	20300
LOWEST DAILY	.00
ANNUAL SEVEN-DAY MINIMUM	.00
INSTANTANEOUS PEAK FLOW	21500
INSTANTANEOUS PEAK STAGE	b34.50
INSTANTANEOUS LOW FLOW	.00
10 PERCENT EXCEEDS	1440
50 PERCENT EXC	214
90 PERCENT EXCEEDS	14

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1968-1983, 1985-1993, BY WATER YEAR (WY)
[REGULATED, UNADJUSTED]

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	283	639	997	948	1048	1078	882	651	378	282	207	147
MAX	1173	2627	2507	2087	2089	2138	1989	1672	1879	778	670	867
(WY)	1977	1986	1979	1979	1972	1993	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 1992 CALENDAR YEAR

FOR 1993 WATER YEAR

WATER YEARS 1968 - 1993

ANNUAL TOTAL	224060	181452	
ANNUAL MEAN	612	497	626
HIGHEST ANNUAL MEAN			887
LOWEST ANNUAL MEAN			339
HIGHEST DAILY MEAN	4500	Jul 27	5600
LOWEST DAILY MEAN	28	(d)	19
ANNUAL SEVEN-DAY MINIMUM	30	Oct 3	20
INSTANTANEOUS PEAK FLOW			8150
INSTANTANEOUS PEAK STAGE			21.91
INSTANTANEOUS LOW FLOW			18
10 PERCENT EXCEEDS	1600		1500
50 PERCENT EXCEEDS	386		170
90 PERCENT EXCEEDS	57		24

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.

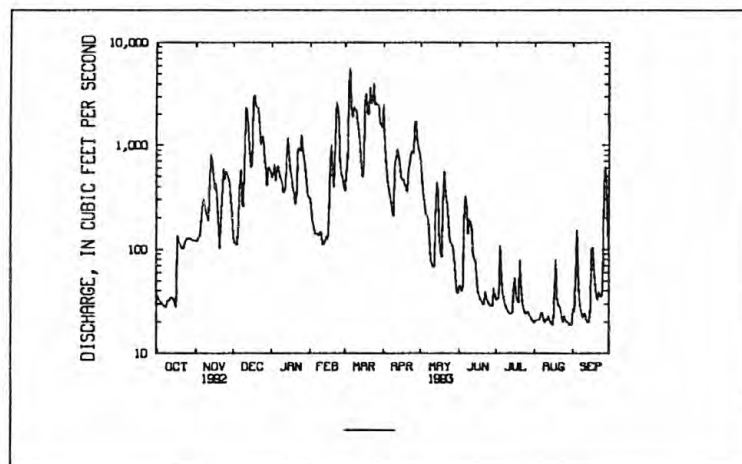
d Oct. 7-8.

f Aug. 15-16, 29-31.

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

h From floodmark.

i Aug. 30, 31, Sept. 15.



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, occasional 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 sea level, 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.

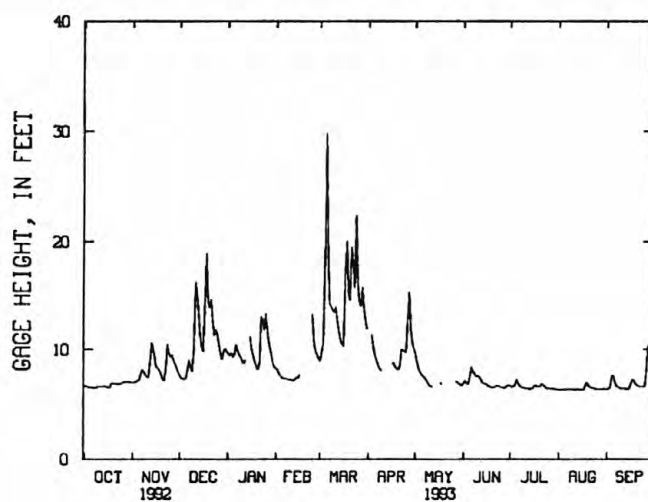
EXTREMES FOR CURRENT YEAR.--Maximum discharge, 20,000 ft³/s, Mar. 5, gage height, 31.53 ft; minimum gage height, 6.24 ft, Aug. 16, 17.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.60	6.93	7.63	9.65	8.27	8.97	---	9.60	6.90	6.63	6.27	6.29
2	6.56	6.95	7.34	9.43	8.02	9.66	---	8.82	7.11	6.55	6.26	6.38
3	6.52	7.03	7.28	9.68	7.67	10.64	11.37	8.29	6.84	6.54	6.25	6.52
4	6.49	7.09	7.26	9.30	7.52	18.61	10.21	7.90	6.79	6.75	6.27	7.54
5	6.47	7.18	7.33	9.57	7.37	29.81	9.47	7.65	7.57	7.24	6.27	7.62
6	6.45	7.76	8.22	10.50	7.32	18.88	9.05	7.58	8.39	6.85	6.29	6.95
7	6.43	8.12	9.06	9.88	7.28	14.25	8.63	7.41	7.97	6.62	6.30	6.64
8	6.42	7.91	8.41	9.53	7.25	13.92	8.29	7.19	7.76	6.52	6.32	6.51
9	6.52	7.68	7.98	9.30	7.21	13.62	8.06	6.88	7.53	6.46	6.31	6.43
10	6.55	7.48	9.93	8.93	7.20	13.44	---	6.67	7.55	6.42	6.28	6.38
11	6.54	7.46	16.25	8.72	7.14	13.90	---	6.58	7.49	6.39	6.26	6.37
12	6.54	9.05	15.27	9.01	7.11	12.58	---	6.51	7.25	6.36	6.27	6.36
13	6.57	10.63	13.41	---	7.25	11.61	---	---	6.97	6.34	6.27	6.33
14	6.57	10.00	11.29	---	7.40	10.85	---	---	6.87	6.34	6.28	6.31
15	6.54	9.13	10.30	11.17	7.40	10.47	---	---	6.81	6.38	6.27	6.35
16	6.50	8.41	9.79	9.97	7.64	10.30	8.65	---	6.71	6.53	6.25	6.77
17	6.47	8.30	14.37	9.42	---	17.38	8.80	6.90	6.59	6.72	6.26	7.19
18	6.85	8.07	18.89	8.87	---	20.08	8.47	6.77	6.53	6.57	6.63	7.20
19	6.88	7.71	14.57	8.45	---	15.41	8.24	---	6.50	6.52	6.95	6.87
20	6.85	7.29	13.83	8.14	---	14.56	8.14	---	6.47	6.60	6.66	6.71
21	6.82	7.12	14.60	8.74	---	19.50	8.45	---	6.47	6.82	6.53	6.61
22	6.80	8.05	12.74	13.02	---	18.15	9.98	---	6.63	6.70	6.45	6.54
23	6.79	10.47	11.30	12.76	---	15.70	9.93	---	6.64	6.53	6.40	6.52
24	6.85	9.67	11.81	11.78	13.20	22.37	9.88	---	6.55	6.44	6.35	6.55
25	6.92	9.34	11.39	13.26	10.78	16.01	9.69	---	6.50	6.38	6.32	6.54
26	6.97	9.48	10.45	11.76	9.88	14.47	12.97	---	6.46	6.36	6.31	7.91
27	6.98	9.04	9.67	10.65	9.51	14.01	15.34	7.05	6.45	6.37	6.31	10.23
28	7.00	8.71	9.11	9.96	9.18	15.76	11.95	6.98	6.45	6.36	6.29	10.56
29	6.97	8.33	9.77	9.26	---	13.73	10.68	6.85	6.64	6.33	6.29	8.44
30	6.99	7.91	10.09	8.62	---	12.66	10.04	6.72	6.69	6.30	6.35	7.56
31	6.94	---	9.82	8.31	---	11.89	---	6.67	---	6.28	6.29	---
MEAN	6.69	8.28	10.94	---	---	14.94	---	---	6.94	6.52	6.35	7.04
MAX	7.00	10.63	18.89	---	---	29.81	---	---	8.39	7.24	6.95	10.56
MIN	6.42	6.93	7.26	---	---	8.97	---	---	6.45	6.28	6.25	6.29

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 Rocksedale, 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 sea level, 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, 7,160 ft³/s, Mar. 4, gage height, 21.27 ft; minimum gage height, 3.12 ft, Aug. 2, 3.

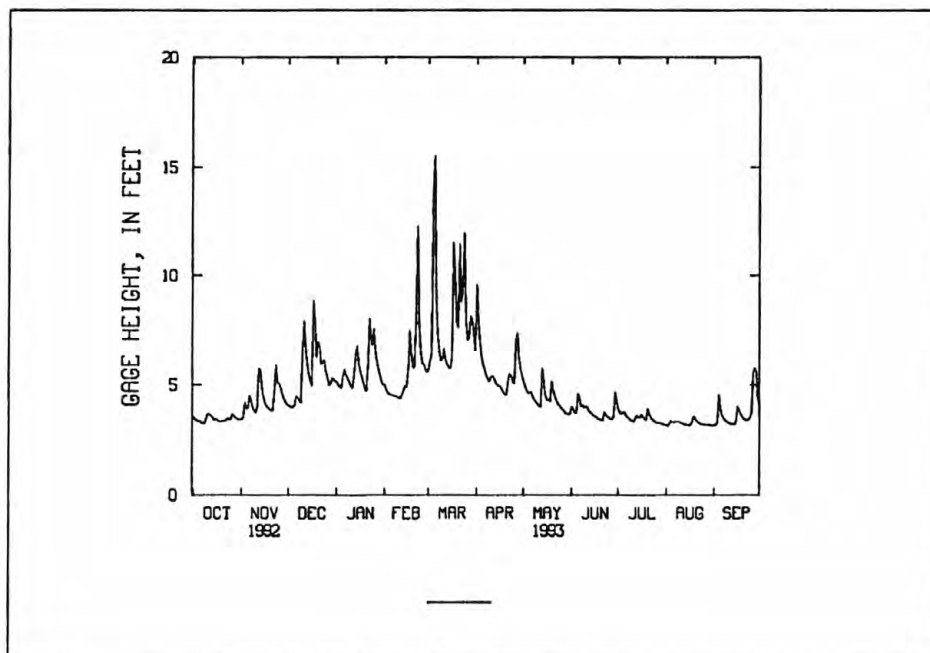
GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.50	3.42	4.06	5.14	4.82	5.26	9.59	5.17	4.02	3.90	3.16	3.16
2	3.42	3.49	4.01	4.99	4.59	5.65	7.99	4.96	3.90	3.75	3.13	3.18
3	3.38	4.20	3.98	4.91	4.41	6.11	6.98	4.77	3.73	3.67	3.25	3.30
4	3.33	3.93	3.97	4.85	4.37	14.15	6.33	4.63	3.73	3.72	3.36	4.56
5	3.34	3.91	4.08	5.34	4.31	15.53	5.94	4.63	4.62	3.76	3.29	3.93
6	3.28	4.49	4.49	5.73	4.29	8.87	5.72	4.69	4.44	3.60	3.29	3.63
7	3.26	4.32	4.40	5.46	4.26	7.19	5.45	4.45	4.02	3.51	3.33	3.48
8	3.25	4.00	4.30	5.30	4.22	6.54	5.26	4.31	4.08	3.44	3.33	3.38
9	3.45	3.83	4.18	5.16	4.18	6.11	5.14	4.21	3.97	3.39	3.33	3.33
10	3.67	3.72	6.47	4.97	4.13	6.22	5.36	4.12	4.02	3.35	3.30	3.29
11	3.69	4.00	7.99	4.87	4.10	6.66	5.41	4.04	4.00	3.31	3.26	3.25
12	3.58	5.75	6.80	5.34	4.27	6.12	5.29	3.99	3.81	3.48	3.22	3.22
13	3.53	5.70	6.07	6.35	4.45	5.93	5.12	5.78	3.74	3.59	3.20	3.20
14	3.41	4.93	5.56	6.77	4.66	5.78	5.01	5.18	3.69	3.49	3.19	3.20
15	3.43	4.44	5.19	6.01	4.59	5.77	4.95	4.54	3.61	3.50	3.18	3.35
16	3.41	4.18	4.99	5.62	5.35	6.19	4.94	4.31	3.55	3.66	3.16	4.03
17	3.35	4.03	8.37	5.33	7.19	11.53	4.81	4.31	3.51	3.53	3.19	3.85
18	3.32	3.94	8.36	5.05	6.10	10.02	4.66	4.26	3.44	3.44	3.40	3.69
19	3.33	3.89	6.34	4.79	5.47	7.91	4.57	5.17	3.42	3.40	3.56	3.54
20	3.35	3.82	6.82	4.62	5.41	7.64	4.54	4.84	3.40	3.91	3.43	3.45
21	3.36	3.81	6.91	5.81	7.75	11.50	5.23	4.50	3.38	3.67	3.33	3.41
22	3.39	4.69	5.99	7.97	11.94	8.83	5.51	4.31	3.76	3.52	3.28	3.39
23	3.47	5.92	5.94	7.04	7.41	9.30	5.41	4.16	3.64	3.42	3.24	3.43
24	3.42	5.13	6.21	6.70	6.20	11.99	5.18	4.06	3.54	3.35	3.21	3.50
25	3.44	5.06	5.63	7.49	5.56	7.94	5.06	3.97	3.50	3.31	3.20	3.75
26	3.68	4.90	5.40	6.44	5.52	7.07	7.06	3.89	3.44	3.27	3.19	5.60
27	3.56	4.61	5.01	5.92	5.30	7.18	7.39	3.80	3.43	3.26	3.18	5.82
28	3.50	4.39	5.02	5.54	5.16	8.15	6.24	3.73	3.58	3.27	3.17	5.59
29	3.46	4.24	5.26	5.28	---	8.02	5.73	3.68	4.66	3.22	3.16	4.51
30	3.42	4.12	5.28	4.96	---	7.39	5.42	3.64	4.27	3.20	3.16	4.10
31	3.41	---	5.17	4.84	---	6.58	---	3.70	---	3.18	3.14	---
MEAN	3.43	4.36	5.56	5.63	5.36	8.04	5.71	4.38	3.80	3.49	3.25	3.77
MAX	3.69	5.92	8.37	7.97	11.94	15.53	9.59	5.78	4.66	3.91	3.56	5.82
MIN	3.25	3.42	3.97	4.62	4.10	5.26	4.54	3.64	3.38	3.18	3.13	3.16

WTR YR 1993 MEAN 4.73 MAX 15.53 MIN 3.13

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 sea level. Prior to Feb. 17, 1950, water-stage recorders or nonrecording gages at old locks 3 and 4 at various datums. Auxiliary water-stage recorder 3.0 mi upstream from base gage at old lock 4 at datum 596.08 ft above sea level.

REMARKS.--Water discharge records good except those for period of estimated daily discharges (ice effect), which is poor. Flow partially regulated since 1968 by five floodwater-detention reservoirs affecting 49.5 mi². Flow regulated since March 1979 by Burnsville Lake. U.S. Army Corps of Engineers satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Apr. 17, 1939, reached a stage of 32.25 ft, from floodmarks at old lock 4, discharge about 53,000 ft³/s.

PEAK DISCHARGE FOR CURRENT YEAR.--Maximum discharge, 32,700 ft³/s, Mar. 5, gage height, 29.68 ft.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	129	186	626	1690	1050	1490	8020	2110	438	200	40	47
2	118	187	514	1570	980	1540	9460	1770	296	180	37	45
3	107	261	419	1430	850	2240	5600	1360	250	161	33	78
4	95	459	355	1510	699	10200	3640	1090	270	143	32	303
5	88	319	333	1700	622	25300	2640	938	441	195	30	488
6	80	326	347	2240	558	22900	2120	892	674	148	30	463
7	72	530	497	2290	510	8560	1790	789	772	224	33	322
8	66	620	921	1840	481	5570	1500	683	803	177	37	201
9	81	567	822	1610	460	5280	1300	575	631	130	37	138
10	140	455	1080	1440	455	4690	1260	465	436	99	37	120
11	151	380	6400	1240	443	5510	1880	370	392	83	37	112
12	137	849	7610	1270	449	4900	2390	315	378	81	39	84
13	122	1930	5910	1870	531	3800	2150	442	355	68	38	65
14	106	2040	3810	3820	639	2940	1860	1200	295	59	34	57
15	97	1450	2350	4050	698	e2300	1670	1190	231	66	31	56
16	94	1040	1740	2720	1040	e2000	1540	892	188	75	28	67
17	91	787	2590	1960	3510	7940	1470	712	164	64	28	142
18	83	648	11300	1600	3870	14700	1370	511	144	64	30	220
19	78	629	8100	1280	2830	10800	1190	597	119	93	37	290
20	89	488	5440	1040	1950	7720	1080	950	100	114	47	255
21	142	405	6310	1340	2080	10800	1120	1090	94	104	131	189
22	133	604	5390	6540	11600	13900	1700	977	237	110	123	148
23	128	1650	3560	6360	10100	10300	2200	703	223	121	93	121
24	124	2110	3030	5090	5920	15400	2080	571	170	132	73	102
25	128	1900	3030	5530	3920	13600	1980	459	143	102	60	97
26	134	1530	2590	5270	2260	7450	4030	363	124	79	50	122
27	148	1340	1900	3440	1850	6580	8370	291	109	64	43	731
28	177	1080	1520	2540	1630	8230	6260	254	96	54	43	2160
29	185	913	1370	2000	---	7950	3730	228	114	48	68	1740
30	189	775	1720	1550	---	6020	2760	205	163	45	72	887
31	187	---	1820	1220	---	4710	---	265	---	42	49	---
TOTAL	3699	26458	93404	79050	61985	255320	88160	23257	8850	3325	1500	9850
MEAN	119	882	3013	2550	2214	8236	2939	750	295	107	48.4	328
MAX	189	2110	11300	6540	11600	25300	9460	2110	803	224	131	2160
MIN	66	186	333	1040	443	1490	1080	205	94	42	28	45

e Estimated

LITTLE KANAWHA RIVER BASIN

03155000 LITTLE KANAWHA RIVER AT PALESTINE, WV--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 1967, BY WATER YEAR (WY) [UNREGULATED]

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	422	1145	2631	3242	4141	4875	3259	1951	1193	855	785	390
MAX	3010	4401	6366	7468	8437	10940	7233	7573	4820	5069	3756	2401
(WY)	1955	1963	1943	1952	1956	1963	1948	1967	1950	1958	1958	1950
MIN	6.14	2.41	84.8	552	499	1428	677	323	50.5	14.7	9.85	14.4
(WY)	1954	1954	1966	1967	1941	1966	1947	1962	1965	1966	1965	1953

SUMMARY STATISTICS

WATER YEARS 1940 - 1967

ANNUAL MEAN	2065
HIGHEST ANNUAL MEAN	3216
LOWEST ANNUAL MEAN	1068
HIGHEST DAILY MEAN	48600
LOWEST DAILY MEAN	.90
ANNUAL SEVEN-DAY MINIMUM	1.3
INSTANTANEOUS PEAK FLOW	a50700
INSTANTANEOUS PEAK STAGE	b39.14
INSTANTANEOUS LOW FLOW	c.60
10 PERCENT EXCEEDS	5440
50 PERCENT EXCEEDS	694
90 PERCENT EXCEEDS	56

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1968 - 1993, BY WATER YEAR (WY)
[REGULATED, UNADJUSTED]

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	809	1938	3311	3320	3972	3986	3343	2375	1185	862	710	510
MAX	3933	8281	9517	7491	7637	8236	7210	6133	5710	2450	1936	2941
(WY)	1977	1986	1979	1979	1989	1993	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 1992 CALENDAR YEAR

FOR 1993 WATER YEAR

WATER YEARS 1968 - 1993

ANNUAL TOTAL	735423	654858	
ANNUAL MEAN	2009	1794	2185
HIGHEST ANNUAL MEAN			3246
LOWEST ANNUAL MEAN			1119
HIGHEST DAILY MEAN	15100	Jul 28	25300
LOWEST DAILY MEAN	66	Oct 8	28
ANNUAL SEVEN-DAY MINIMUM	84	Oct 3	32
INSTANTANEOUS PEAK FLOW			32700
INSTANTANEOUS PEAK STAGE			29.68
INSTANTANEOUS LOW FLOW			26
10 PERCENT EXCEEDS	4840		5520
50 PERCENT EXCEEDS	1100		567
90 PERCENT EXCEEDS	152		64

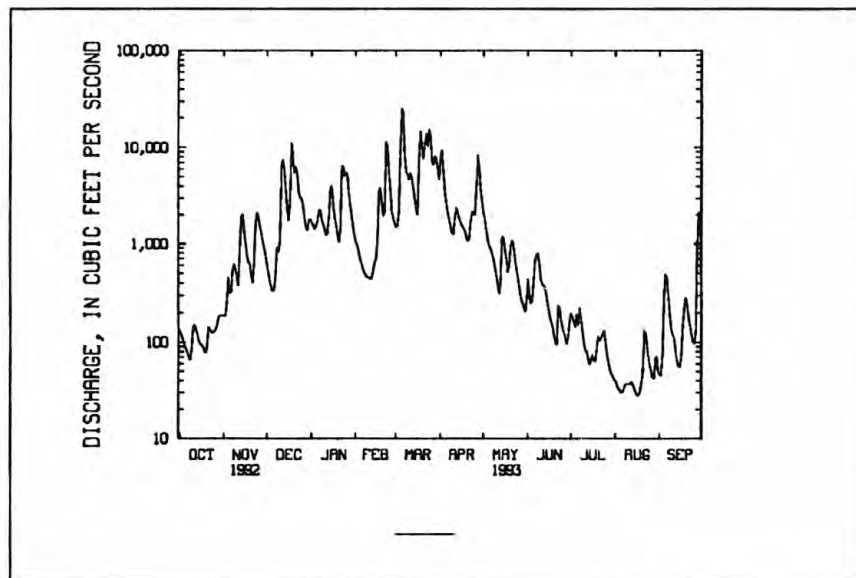
a From rating curve extended above 39,000 ft³/s.

b Backwater.

c Filling pool above old lock 3.

d Aug. 16, 17.

f 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 1992 TO SEPTEMBER 1993

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) (0040C)	TEMPER- ATURE WATER (DEG C) (00010)	TUR- BID- ITY (NTU) (00076)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (MG/L) (00301)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOC CI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)
NOV 1992												
27...	1245	1330	142	7.2	9.0	19	746	9.7	86	E670	210	52
MAR 1993												
11...	1300	5520	89	6.9	5.0	28	748	12.0	96	330	98	32
MAY												
26...	1445	348	145	6.8	19.5	9.0	747	7.5	83	K18	K4	52
JUL												
29...	1330	42	179	6.8	27.0	5.1	742	3.6	47	K20	K10	61
SEP												
24...	1330	102	193	6.8	20.5	2.7	746	6.0	68	37	K9	58

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)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)
NOV 1992												
27...	15	3.4	6.2	1.9	44	0	36	18	8.9	<0.10	5.3	84
MAR 1993												
11...	8.9	2.3	3.3	1.1	24	0	20	16	4.1	<0.10	5.5	53
MAY												
26...	15	3.6	6.4	1.5	45	0	37	19	7.5	<0.10	4.1	88
JUL												
29...	17	4.5	10	2.5	55	0	45	22	9.5	<0.10	2.7	98
SEP												
24...	16	4.3	11	2.3	44	0	36	25	16	0.10	2.9	113

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

E: Estimated.

LITTLE KANAWHA RIVER BASIN

03155000 LITTLE KANAWHA RIVER AT PALESTINE, WV--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L) AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L) AS N) (00631)	NITRO- GEN, AMMONIA 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)	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)
NOV 1992												
27...	82	<0.010	0.210	0.020	<0.010	0.28	0.30	0.060	<0.010	<0.010	20	44
MAR 1993												
11...	55	<0.010	0.370	--	0.010	--	<0.20	0.050	<0.010	<0.010	--	--
MAY												
26...	80	<0.010	0.200	--	0.030	0.17	0.20	0.040	<0.010	<0.010	<10	46
JUL												
29...	96	<0.010	<0.050	--	0.060	0.24	0.30	0.020	0.030	<0.010	<10	57
SEP												
24...	101	<0.010	0.260	--	0.020	--	<0.20	0.020	<0.010	<0.010	<10	64
DATE	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)	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)
NOV 1992												
27...	<3	66	<4	22	<1	<1	<1.0	92	<6	23	83	99
MAR 1993												
11...	--	--	--	--	--	--	--	--	--	37	551	98
MAY												
26...	<3	49	<4	51	<1	<1	<1.0	95	<6	30	28	96
JUL												
29...	<3	21	<4	670	<1	<1	<1.0	110	<6	14	1.6	99
SEP												
24...	<3	19	<4	110	<1	<1	<1.0	120	<6	10	2.8	99

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 sea level, adjustment of 1912. Prior to Sept. 30, 1931, nonrecording gage at site 0.9 mi downstream and Mar. 5, 1939, to Sept. 30, 1945, nonrecording gage at site 1.0 mi downstream, both at datum 2.56 ft lower. Oct. 1, 1945, to June 30, 1946, nonrecording gage at bridge across mouth of North Fork at present datum.

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

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 9,500 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage Height (ft)	Date	Time	Discharge (ft ³ /s)	Gage Height (ft)
Mar. 5	0400	*13,700	*21.42	No other peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	37	16	140	e850	e250	e280	2870	382	85	31	2.5	28
2	32	18	122	e750	e200	e450	2110	305	87	27	2.1	27
3	27	130	116	e550	e180	478	1150	250	53	23	e3.0	94
4	22	300	112	e450	e160	4290	735	211	38	47	e5.0	699
5	17	e150	112	e600	e140	9990	568	196	62	74	e4.5	500
6	14	192	123	923	e130	2810	473	203	81	48	e4.0	212
7	12	267	143	652	e110	1450	389	179	86	37	e11	e80
8	10	204	143	485	e100	990	326	145	62	29	e10	e40
9	22	133	131	413	e95	908	287	121	42	23	e9.0	e30
10	54	99	757	346	e90	737	305	105	32	18	e10	e20
11	80	77	e4000	301	e85	989	318	91	152	15	e11	e15
12	62	129	e3000	370	e80	933	286	80	240	21	e10	e12
13	52	e1000	e2000	709	e100	737	253	80	100	18	e8.5	e10
14	37	706	e1300	1110	e130	550	227	154	63	15	e7.5	e8.5
15	30	367	e900	762	e170	e450	214	138	40	22	e7.0	e7.5
16	20	219	e700	542	310	691	244	95	29	15	e6.5	e7.0
17	15	154	e1300	420	e2500	3620	250	75	23	11	e12	e6.5
18	13	121	e3000	339	1360	3680	221	78	19	9.3	e10	e6.0
19	13	105	e1800	266	888	1870	193	125	16	12	e15	e5.5
20	13	94	e1100	212	648	1850	180	168	14	72	e21	e5.0
21	11	95	e1400	493	590	4460	208	124	13	97	e16	e12
22	9.0	e800	e1100	3090	e5000	3220	331	88	38	48	e14	e15
23	9.9	e2000	e700	2770	e2800	2990	360	68	69	29	e12	e13
24	9.8	e1300	500	1870	1390	5730	321	59	42	19	e10	e12
25	12	e900	408	2190	e700	2010	293	55	32	14	e8.5	11
26	14	705	332	1650	e450	1110	1550	44	25	11	e8.0	33
27	14	420	266	978	e380	1010	2850	37	21	9.3	e7.5	183
28	15	279	249	669	e330	2380	1130	32	19	6.9	17	382
29	21	208	261	523	---	1540	660	28	59	6.7	72	228
30	18	166	e350	409	---	1140	489	24	42	7.1	66	123
31	16	---	e500	e300	---	835	---	42	---	3.0	41	---
TOTAL	731.7	11354	27065	25992	19366	64178	19791	3782	1684	818.3	441.6	2825.0
MEAN	23.6	378	873	838	692	2070	660	122	56.1	26.4	14.2	94.2
MAX	80	2000	4000	3090	5000	9990	2870	382	240	97	72	699
MIN	9.0	16	112	212	80	280	180	24	13	3.0	2.1	5.0
CFSM	.05	.84	1.93	1.85	1.53	4.58	1.46	.27	.12	.06	.03	.21
IN.	.06	.93	2.23	2.14	1.59	5.28	1.63	.31	.14	.07	.04	.23

e Estimated

LITTLE KANAWHA RIVER BASIN

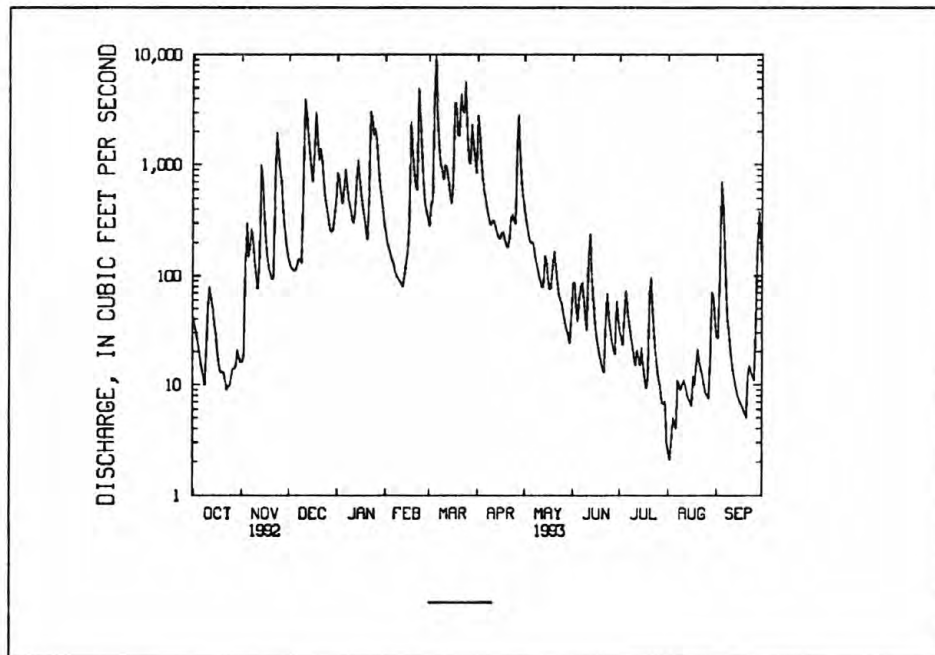
03155500 HUGHES RIVER AT CISCO, WV--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1929-1931, 1939-1993, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	162	390	780	886	1097	1168	926	627	330	227	198	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 1992 CALENDAR YEAR		FOR 1993 WATER YEAR		WATER YEARS 1929 - 1993	
ANNUAL TOTAL	150566.7		178028.6			
ANNUAL MEAN	411		488		574	
HIGHEST ANNUAL MEAN					943	
LOWEST ANNUAL MEAN					260	
HIGHEST DAILY MEAN	4260	Jan 24	9990	Mar 5	26400	Apr 13 1948
LOWEST DAILY MEAN	9.0	Oct 22	2.1	Aug 2	.00	(a)
ANNUAL SEVEN-DAY MINIMUM	11	Oct 19	3.4	Jul 31	.00	Sep 4 1930
INSTANTANEOUS PEAK FLOW			13700	Mar 5	31700	Jun 26 1950
INSTANTANEOUS PEAK STAGE			21.42	Mar 5	32.69	Jun 26 1950
INSTANTANEOUS LOW FLOW			1.9	Aug 2	.00	(a)
ANNUAL RUNOFF (CFSM)	.91		1.08		1.27	
ANNUAL RUNOFF (INCHES)	12.39		14.65		17.25	
10 PERCENT EXCEEDS	1050		1320		1430	
50 PERCENT EXCEEDS	205		123		176	
90 PERCENT EXCEEDS	25		10		11	

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



KANAWHA RIVER BASIN

03176500 NEW RIVER AT GLEN LYN, VA
(National stream-quality accounting network station)

LOCATION.--Lat 37°22'22", long 80°51'39", Giles County, Hydrologic Unit 05050002, on right bank 90 ft upstream from bridge on U.S. Highway 460 at Glen Lyn, 0.3 mi upstream from East River, and 6.3 mi downstream from Wolf Creek.

DRAINAGE AREA.--3,768 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1927 to current year.

REVISED RECORDS.--WSP 758: Drainage area. WSP 1305: 1928(M), 1930(M).

GAGE.--Water-stage recorder. Datum of gage is 1,490.11 ft above sea level. Aug. 11, 1927, to Oct. 16, 1934, on left bank opposite present site at same datum, and Oct. 17, 1934, to June 16, 1939, on left bank at site 200 ft upstream at same datum.

REMARKS.--Records good above 4,000 ft³/s and fair below except for period of no gage-height record, Apr. 8 to May 11, which is 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, Mar. 24, gage height, 17.47 ft, from rating curve extended as explained above; minimum, 946 ft³/s, Sept. 1; minimum daily, 1,110 ft³/s, Sept. 2; minimum gage height, 2.52 ft, Oct. 21.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	2460	3360	5010	5720	2670	3230	17700	e5800	3840	2850	1600	1760		
2	1900	3540	5710	5700	6310	6800	16700	e6000	4880	3210	1280	1110		
3	2130	6040	4240	5150	4670	9870	14600	e6600	4100	3190	1480	1130		
4	2080	8150	4580	4700	4700	19900	12700	e9000	3900	3900	1460	1310		
5	3950	8050	4120	7870	4880	37700	11000	e10800	5650	3080	1670	1510		
6	4210	8080	3060	7920	4880	22600	14000	e10000	5310	2650	1630	1440		
7	3290	5470	3440	6640	2050	15300	9200	e7800	3070	2630	2550	1810		
8	2760	4220	4310	9370	2410	13600	e13000	e6600	2930	2500	1820	1890		
9	3220	3540	3890	11300	4530	12400	e12500	e7200	3720	2370	1370	1890		
10	6890	3700	3990	12300	5000	9450	e12500	e7400	3690	1790	1790	2470		
11	5130	2830	5100	10200	5020	8990	e7600	e7600	3580	2420	2230	2180		
12	3270	2850	4390	10100	5050	8700	e9600	10400	3380	2950	1600	2450		
13	2800	3360	3610	10100	5830	9740	e10300	9610	3530	3370	2440	1240		
14	2310	5630	2480	8750	4980	8910	e10000	9940	6020	2580	3560	1420		
15	1940	4790	4390	7490	2730	4560	e9600	9950	5210	2050	3160	1530		
16	2330	3490	4490	6490	7120	5440	e13500	8280	4270	2740	2820	1620		
17	2090	3460	9070	6030	6750	8050	e15000	8100	3250	3220	2440	4330		
18	2520	2890	12200	4940	7000	12500	e12000	6680	3390	2700	2260	4030		
19	2280	2910	11100	5810	7160	10400	e9600	7670	3660	2450	1530	4060		
20	1380	3000	8910	5510	7340	10300	e10200	6070	3540	2460	1840	3980		
21	1850	2740	7420	6140	2950	11000	e8600	6450	2980	2410	2150	3070		
22	2080	3630	6910	10800	14600	15600	e7800	5080	3700	2120	1260	1990		
23	2070	9290	9020	10800	15300	21500	e8200	5680	3580	1480	1510	1620		
24	1740	14600	10900	9410	9540	81600	e7800	5340	2780	1690	2200	1690		
25	1810	10700	9690	9040	8540	53500	e6600	5260	3010	2360	1600	1690		
26	2290	11800	7520	8630	8480	31600	e7600	6450	2610	2340	1620	1780		
27	1880	12000	5150	7950	7820	33300	e8400	4400	2620	2990	1740	2130		
28	1840	9710	5500	6630	6310	27900	e7400	4490	2560	2310	2340	2090		
29	1840	9390	7270	6190	---	24200	e6400	5180	2690	1640	3020	1990		
30	1910	6710	6900	7110	---	19800	e6000	4500	2710	2150	2860	1900		
31	2560	---	5570	6420	---	19600	---	3510	---	1730	5500	---		
TOTAL	80810	179930	189940	241210	174620	578040	316100	217840	110160	78330	66330	63110		
MEAN	2607	5998	6127	7781	6236	18650	10540	7027	3672	2527	2140	2104		
MAX	6890	14600	12200	12300	15300	81600	17700	10800	6020	3900	5500	4330		
MIN	1380	2740	2480	4700	2050	3230	6000	3510	2560	1480	1260	1110		
(>)	-16	+27	-26	+8	+7	+13	-18	+31	-8	-21	-106	+126		
MEANZ	2591	6025	6101	7789	6243	18660	10520	7058	3664	2506	2034	2230		
CFSMZ	.69	1.60	1.62	2.07	1.66	4.95	2.79	1.87	.97	.67	.54	.59		
IN.2	.79	1.78	1.87	2.38	1.73	5.71	3.12	2.16	1.09	.77	.62	.66		
CAL YR 1992	TOTAL 2122900		MEAN 5800		MAX 61800		MIN 1380		MEANZ 5798		CFSMZ 1.54		IN.2 20.95	
WTR YR 1993	TOTAL 2296420		MEAN 6292		MAX 81600		MIN 1110		MEANZ 6293		CFSMZ 1.67		IN.2 22.68	

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

Z 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	7256	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 - 1993, BY WATER YEAR (WY) [REGULATED, UNADJUSTED]

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	3295	3793	4738	5687	7260	8368	7516	5950	4450	3325	3162	2921
MAX	9882	12450	10910	12660	15810	18650	20890	11270	12860	9784	16410	11500
(WY)	1990	1978	1949	1946	1957	1993	1987	1984	1992	1949	1940	1989
MIN	1204	1258	1506	1489	3304	2407	2673	2397	1741	1390	1267	1362
(WY)	1989	1982	1940	1966	1941	1988	1986	1941	1988	1988	1981	1963

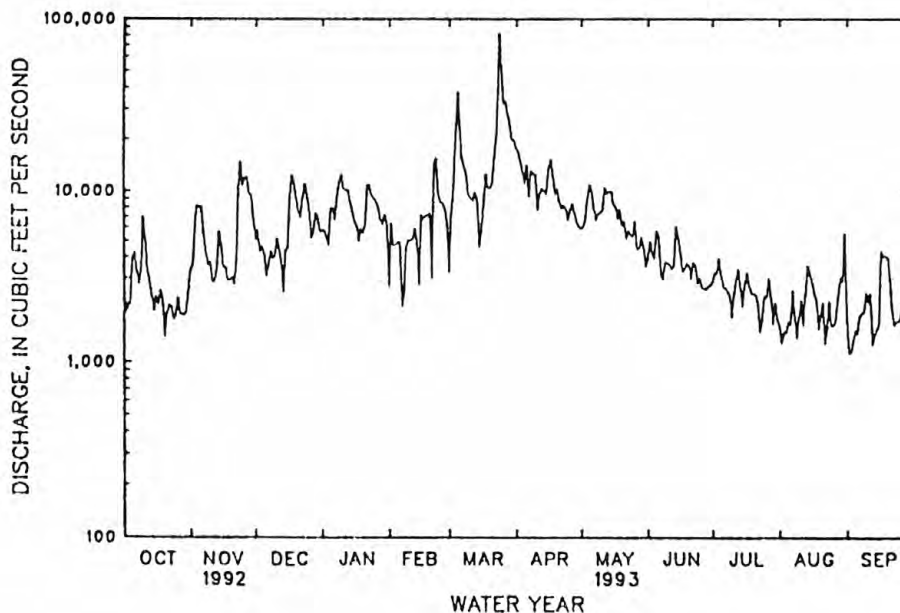
SUMMARY STATISTICS

FOR 1992 CALENDAR YEAR

FOR 1993 WATER YEAR

WATER YEARS 1939 - 1993

ANNUAL TOTAL	2122900	2296420	
ANNUAL MEAN	5800	6292	5026
HIGHEST ANNUAL MEAN			7424
LOWEST ANNUAL MEAN			2626
HIGHEST DAILY MEAN	61800	81600	126000
LOWEST DAILY MEAN	1380	1110	787
ANNUAL SEVEN-DAY MINIMUM	1820	1440	837
INSTANTANEOUS PEAK FLOW		100000	226000
INSTANTANEOUS PEAK STAGE		17.47	27.50
INSTANTANEOUS LOW FLOW		946	697
ANNUAL RUNOFF (CFSM)	1.54	1.67	1.33
ANNUAL RUNOFF (INCHES)	20.96	22.67	18.11
10 PERCENT EXCEEDS	9960	11200	9600
50 PERCENT EXCEEDS	4200	4530	3700
90 PERCENT EXCEEDS	2090	1800	1560



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 1992 TO SEPTEMBER 1993

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	TUR- BID- ITY (NTU) (00076)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (MG/L) (00300)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (00301)	(31625)
DEC 01...	1020	4800	115	7.1	4.0	8.0	720	3.3	11.2	100	95
JAN 26...	1045	8690	85	6.3	0.0	4.0	729	2.3	13.5	108	75
MAR 23...	1000	19300	120	7.4	9.0	8.5	727	18	14.6	131	180
MAY 11...	1040	9880	127	7.5	25.0	18.5	727	5.1	8.7	97	170
AUG 18...	1030	2480	160	7.6	28.0	25.0	724	1.2	7.2	92	78

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)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)
DEC 01...	61	46	11	4.6	3.9	1.7	56	0	46	9.3	3.9
JAN 26...	8	46	11	4.5	3.5	1.3	41	0	34	8.0	9.0
MAR 23...	60	51	13	4.6	3.2	1.2	52	0	43	7.2	4.6
MAY 11...	160	54	13	5.2	3.1	1.3	56	0	46	7.8	3.8
AUG 18...	K4	64	14	7.1	6.0	1.8	65	0	53	13	4.4

DATE	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SiO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	NITRO- GEN, NITRITE (MG/L AS N) (00615)	NITRO- GEN, NITRATE 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)
DEC 01...	<0.10	7.5	68	72	0.020	<0.010	--	0.520	0.500	0.030
JAN 26...	<0.10	9.0	69	70	--	0.020	0.730	--	0.750	0.020
MAR 23...	<0.10	7.0	64	70	--	<0.010	--	--	0.740	0.050
MAY 11...	0.10	5.9	77	71	--	<0.010	--	--	0.610	0.030
AUG 18...	0.10	8.0	94	88	--	<0.010	--	--	0.350	0.050

< 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).

KANAWHA RIVER BASIN

03176500 NEW RIVER AT GLEN LYN, VA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

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)
DEC 01...	0.040	<0.20	0.030	0.010	0.020	<0.010	110	30	<3	62
JAN 26...	--	<0.20	0.020	0.010	--	0.010	--	--	--	--
MAR 23...	--	0.40	0.060	0.020	--	0.010	40	32	<3	29
MAY 11...	--	0.20	0.040	<0.010	--	<0.010	20	32	<3	29
AUG 18...	--	0.30	0.050	0.040	--	0.040	10	35	<3	15

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)
DEC 01...	<4	4	<10	2	<1	<1.0	52	<6	6	62
JAN 26...	--	--	--	--	--	--	--	--	9	68
MAR 23...	<4	4	<10	<1	<1	<1.0	44	<6	39	62
MAY 11...	<4	2	<10	2	<1	<1.0	54	<6	17	83
AUG 18...	<4	5	<10	5	<1	<1.0	73	<6	3	94

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

KANAWHA RIVER BASIN

03179000 BLUESTONE RIVER NEAR PIPESTEM, WV

LOCATION.--Lat 37°32'38", long 81°00'38", Summers County, Hydrologic Unit 05050002, on left bank 1.2 mi downstream from Mountain Creek, 2.5 mi west of Pipestem, and at mile 10.6.

DRAINAGE AREA.--394 mi².

PERIOD OF RECORD.--July 1950 to current year.

REVISED RECORDS.--WSP 1705: 1959. WDR WV-82-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,527.35 ft above sea level (U.S. Army Corps of Engineers bench mark).

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

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

Date	Time	Discharge (ft ³ /s)	Gage Height (ft)	Date	Time	Discharge (ft ³ /s)	Gage Height (ft)
Feb. 22	0400	5,470	9.73	Mar. 23	2230	*13,400	*13.32
Mar. 4	1430	9,250	11.50				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	45	67	68	459	207	415	1150	372	121	105	34	39
2	39	72	65	383	183	471	1020	333	126	101	33	38
3	36	57	67	331	166	662	872	294	115	76	33	35
4	40	59	66	296	157	6600	752	279	127	72	35	40
5	116	90	140	309	147	6730	692	307	315	61	33	60
6	192	93	234	367	e130	2840	686	288	244	58	36	82
7	114	81	208	352	e130	1580	618	241	162	52	41	53
8	77	70	159	499	e120	1360	562	224	134	47	44	43
9	63	59	129	901	e120	1640	527	405	118	43	44	38
10	54	53	129	773	e120	1410	731	389	106	40	36	35
11	53	48	121	596	122	1190	938	419	100	38	35	31
12	49	50	131	589	127	947	871	396	121	55	45	30
13	45	80	130	574	148	e810	712	529	236	64	125	29
14	42	94	120	499	168	e700	601	515	412	100	426	26
15	41	84	125	415	152	e600	522	379	247	86	201	26
16	38	65	273	364	156	e580	690	301	170	411	114	33
17	35	57	1270	325	346	966	822	254	133	288	79	41
18	33	53	1430	282	416	1740	670	228	112	152	61	68
19	35	52	772	242	e270	1650	571	337	106	101	53	86
20	35	50	684	215	316	1320	494	487	97	88	49	71
21	35	48	1000	241	1430	2720	487	409	126	78	51	58
22	35	58	709	426	4830	3980	512	327	106	69	48	53
23	34	116	1840	429	2570	6100	476	269	88	57	45	50
24	34	144	2230	385	1260	9910	442	228	78	53	41	45
25	36	124	1060	396	820	4910	409	199	70	49	39	46
26	32	105	678	364	666	2420	438	184	64	47	45	74
27	35	96	466	332	566	1970	522	171	60	46	122	193
28	36	85	395	303	468	2360	490	155	59	43	82	345
29	36	76	467	275	---	2360	459	142	56	42	60	177
30	36	70	552	234	---	1780	416	131	66	38	48	108
31	51	---	524	211	---	1310	---	125	---	36	42	---
TOTAL	1582	2256	16242	12367	16311	74031	19152	9317	4075	2596	2180	2053
MEAN	51.0	75.2	524	399	583	2388	638	301	136	83.7	70.3	68.4
MAX	192	144	2230	901	4830	9910	1150	529	412	411	426	345
MIN	32	48	65	211	120	415	409	125	56	36	33	26
CFSM	.13	.19	1.33	1.01	1.48	6.06	1.62	.76	.34	.21	.18	.17
IN.	.15	.21	1.53	1.17	1.54	6.99	1.81	.88	.38	.25	.21	.19

e Estimated

KANAWHA RIVER BASIN

03179000 BLUESTONE RIVER NEAR PIPESTEM, WV--Continued

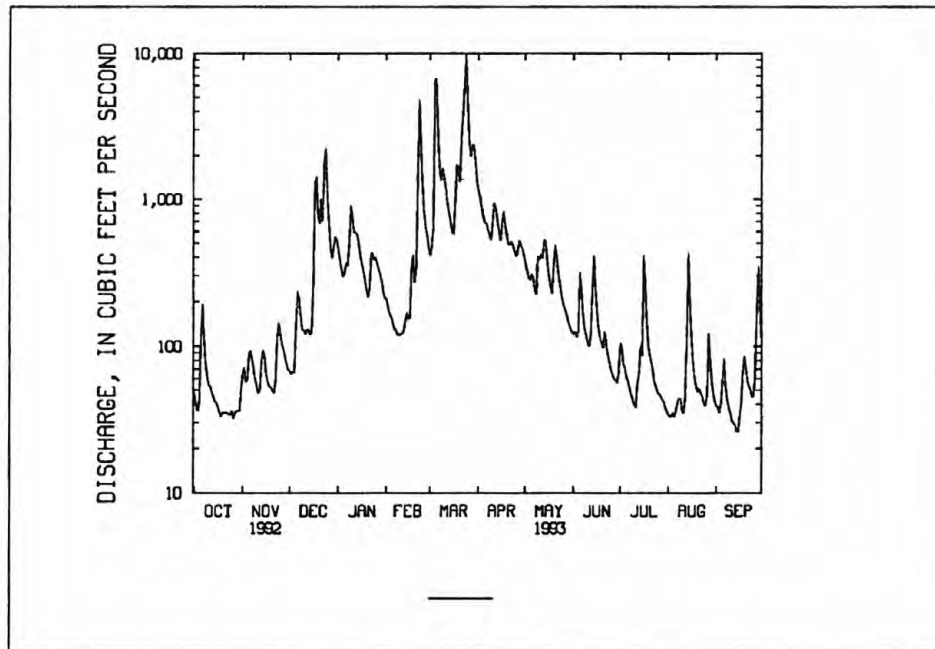
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1950 - 1993, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	154	245	496	664	912	1095	823	626	300	146	116	93.5
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 1992 CALENDAR YEAR		FOR 1993 WATER YEAR		WATER YEARS 1950 - 1993	
ANNUAL TOTAL	184374		162162			
ANNUAL MEAN	504		444		470	
HIGHEST ANNUAL MEAN					762	
LOWEST ANNUAL MEAN					178	
HIGHEST DAILY MEAN	9980		9910		15900	
LOWEST DAILY MEAN	32		26		7.0	
ANNUAL SEVEN-DAY MINIMUM	34		30		8.5	
INSTANTANEOUS PEAK FLOW			13400		19300	
INSTANTANEOUS PEAK STAGE			13.32		15.82	
INSTANTANEOUS LOW FLOW			25		7.0	
ANNUAL RUNOFF (CFSM)	1.28		1.13		1.19	
ANNUAL RUNOFF (INCHES)	17.41		15.31		16.21	
10 PERCENT EXCEEDS	1180		942		1100	
50 PERCENT EXCEEDS	240		131		202	
90 PERCENT EXCEEDS	50		38		37	

a Sept. 14, 15.

b Sept. 21-23, 30, 1955.



KANAWHA RIVER BASIN

03180300 EAST FORK GREENBRIER RIVER AT FRANK, WV

LOCATION.--Lat 38°32'34", long 79°48'24", Pocahontas County, Hydrologic Unit 05050003, on right bank at Frank, 2,400 ft downstream from Johns Run, 1.0 mi east of Durbin, and at mile 1.5.

DRAINAGE AREA.--67.1 mi².

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

GAGE.--Water-stage recorder. Elevation of gage is 2,750 ft above sea level, from topographic map.

REMARKS.--Records good except those for periods of estimated daily discharges (missing gage-height record, 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. 17	1630	2,390	4.37	Mar. 25	2215	2,130	4.22
Mar. 24	0200	*3,080	*4.73	Mar. 26	2230	1,960	4.11

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.2	10	37	201	e45	e55	1040	126	29	7.6	.86	.18
2	8.3	9.8	34	155	e40	e52	930	109	23	9.6	.97	.15
3	8.4	22	32	127	e37	57	471	94	22	11	.72	.32
4	8.2	14	28	106	e34	523	306	90	23	11	.72	31
5	9.5	9.9	28	162	e31	361	211	88	60	9.0	.57	16
6	8.2	12	26	160	e29	201	169	79	35	5.9	14	7.8
7	6.3	11	29	151	e27	158	140	71	26	4.7	22	4.2
8	5.3	8.2	25	146	e25	e130	131	66	24	3.6	8.8	3.2
9	6.4	6.3	22	132	e23	e120	135	62	22	3.0	4.4	2.3
10	8.0	5.5	21	115	e22	e100	213	57	22	2.7	3.0	1.9
11	6.7	5.4	29	106	e20	e90	255	67	19	2.1	2.6	3.1
12	4.6	13	32	118	e19	e80	235	73	18	1.6	2.5	2.5
13	4.1	47	30	135	e19	e70	180	123	19	1.6	2.3	1.9
14	3.7	25	28	141	e18	e60	144	109	18	1.5	2.0	1.8
15	3.9	19	28	132	e17	e56	120	95	16	5.5	.93	1.1
16	3.6	e13	177	119	e16	e100	561	83	15	9.3	.81	3.6
17	3.7	15	1370	103	41	170	753	86	13	4.7	1.8	23
18	4.5	14	817	85	34	281	465	82	12	3.1	8.2	49
19	4.4	12	373	72	37	228	309	173	11	3.3	6.0	21
20	4.5	10	343	60	38	196	214	131	10	5.7	3.1	12
21	5.1	10	319	70	43	181	197	98	11	4.2	2.7	59
22	5.8	50	233	92	96	224	176	78	11	2.8	2.0	33
23	5.6	106	284	93	105	795	166	63	10	1.9	1.1	19
24	6.0	92	284	96	100	2220	157	56	8.3	1.5	1.3	16
25	6.9	83	251	101	e88	1780	150	47	7.0	.68	1.1	16
26	6.5	69	167	e96	e78	1680	162	40	6.0	.55	.95	41
27	6.1	58	152	e86	e66	1620	164	35	8.4	5.6	1.0	162
28	5.7	50	132	e75	e59	1350	164	32	8.2	5.0	.87	126
29	5.2	44	107	e68	---	1090	162	29	9.0	2.8	.72	61
30	4.7	39	144	e58	---	867	145	28	8.8	1.4	.52	42
31	7.9	---	207	e50	---	790	---	26	---	1.2	.33	---
TOTAL	186.0	883.1	5789	3411	1207	15685	8625	2396	524.7	134.13	98.87	761.05
MEAN	6.00	29.4	187	110	43.1	506	287	77.3	17.5	4.33	3.19	25.4
MAX	9.5	106	1370	201	105	2220	1040	173	60	11	22	162
MIN	3.6	5.4	21	50	16	52	120	26	6.0	.55	.33	.15

e Estimated

KANAWHA RIVER BASIN

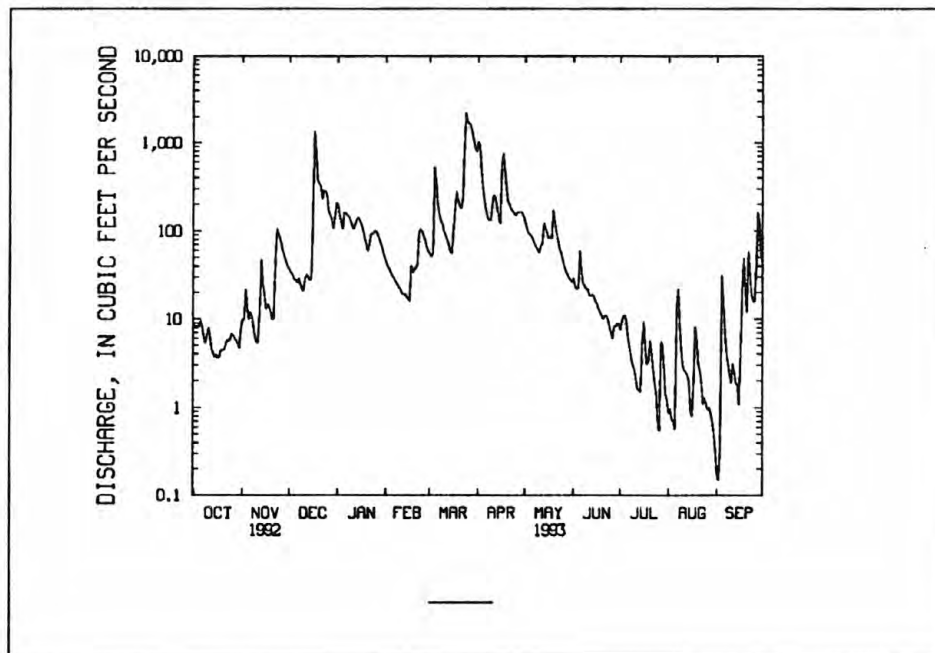
03180300 EAST FORK GREENBRIER RIVER AT FRANK, WV--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1988 - 1993, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	45.6	65.4	171	175	145	274	182	159	47.2	21.2	33.6	20.7
MAX	108	151	294	267	226	506	287	312	106	37.5	146	44.1
(WY)	1990	1990	1992	1990	1992	1993	1993	1989	1989	1989	1989	1989
MIN	2.46	21.5	57.7	110	43.1	149	86.5	43.1	8.59	4.17	2.70	7.12
(WY)	1992	1992	1989	1993	1993	1988	1988	1991	1991	1988	1988	1988

SUMMARY STATISTICS	FOR 1992 CALENDAR YEAR				FOR 1993 WATER YEAR				WATER YEARS 1988 - 1993			
ANNUAL TOTAL	40005.7				39700.85							
ANNUAL MEAN	109				109				118			
HIGHEST ANNUAL MEAN									127			
LOWEST ANNUAL MEAN									109			
HIGHEST DAILY MEAN	1390				2220				2370			
LOWEST DAILY MEAN	3.6				.15				.15			
ANNUAL SEVEN-DAY MINIMUM	4.0				.44				.44			
INSTANTANEOUS PEAK FLOW					3080				6400			
INSTANTANEOUS PEAK STAGE					4.73				6.00			
INSTANTANEOUS LOW FLOW					.00				.00			
10 PERCENT EXCEEDS	254				209				257			
50 PERCENT EXCEEDS	53				29				57			
90 PERCENT EXCEEDS	8.2				2.2				4.6			

a Aug. 27, 28, Sept. 1-3, 1993.



KANAWHA RIVER BASIN

03180500 GREENBRIER RIVER AT DURBIN, WV

LOCATION.--Lat 38°32'37", long 79°50'00", Pocahontas County, Hydrologic Unit 05050003, on left bank at Durbin, 500 ft downstream from confluence of East and West Forks, and at mile 153.4.

DRAINAGE AREA.--133 mi².

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

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

GAGE.--Water-stage recorder. Datum of gage is 2,699.71 ft above sea level.

REMARKS.--Records good except those for periods of estimated daily discharges (intakes out of water, 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. 17	1530	2,810	5.07	Mar. 26	2200	3,000	5.18
Mar. 24	0300	*3,800	*5.65	Apr. 1	0600	3,360	5.41

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e11	15	75	548	e110	e135	2920	223	65	19	e3.7	e2.2
2	e11	21	66	399	e95	e130	2050	193	53	22	e3.7	e1.6
3	e8.9	47	63	317	e88	142	1070	166	48	26	e3.7	e1.6
4	e8.9	39	65	262	e80	876	631	156	55	31	e3.0	e64
5	e8.3	26	62	340	e74	744	481	155	183	24	e3.0	37
6	e9.9	31	81	329	e68	471	389	138	105	17	e20	18
7	e8.9	30	81	306	e64	358	323	121	71	14	64	14
8	e8.3	23	60	304	e60	e290	296	110	66	12	23	11
9	e8.3	19	70	280	e56	e260	296	103	58	e10	16	e9.9
10	e8.3	18	166	248	e52	e230	487	95	59	e8.0	e13	e9.9
11	e8.9	17	286	233	e48	e195	617	99	49	e7.0	e6.9	e11
12	e9.9	50	318	266	e46	e170	552	111	44	e6.0	e6.9	e9.9
13	e9.9	184	215	301	e44	e150	430	230	48	e5.0	e6.9	e9.9
14	e7.9	90	97	319	e42	e140	341	188	42	e4.5	11	e6.3
15	e7.6	64	90	298	e40	e130	281	165	35	20	11	e3.0
16	e7.2	51	368	268	e38	e180	940	149	31	28	10	e3.2
17	e7.2	48	1970	231	102	274	1320	171	28	16	15	71
18	e6.9	44	1560	193	86	378	837	151	26	12	32	129
19	e6.9	39	726	165	136	337	541	322	25	13	18	54
20	e7.9	34	860	132	193	265	403	279	24	15	13	27
21	e8.9	34	786	168	176	330	366	229	26	14	e11	153
22	10	132	540	223	395	427	331	193	26	e11	e9.9	86
23	10	260	817	226	316	1240	306	163	25	e8.0	e8.9	46
24	11	195	813	238	248	3150	283	142	20	e5.0	e6.9	40
25	11	167	547	260	215	2740	259	121	17	e4.0	e5.1	41
26	e11	140	403	e240	e180	2700	290	102	20	e3.0	e3.7	143
27	e9.9	120	282	e220	e160	2650	327	87	29	e14	e3.7	340
28	e9.9	104	301	e190	e140	2370	324	75	22	e13	e3.7	312
29	e9.4	91	240	e170	---	2300	303	67	24	e11	e3.1	160
30	e9.4	78	349	e150	---	1860	263	62	22	e8.0	e2.7	114
31	13	---	578	e130	---	1620	---	58	---	e5.0	e2.2	---
TOTAL	285.6	2211	12935	7954	3352	27242	18257	4624	1346	405.5	344.7	1928.5
MEAN	9.21	73.7	417	257	120	879	609	149	44.9	13.1	11.1	64.3
MAX	13	260	1970	548	395	3150	2920	322	183	31	64	340
MIN	6.9	15	60	130	38	130	259	58	17	3.0	2.2	1.6
CFSM	.07	.55	3.14	1.93	.90	6.61	4.58	1.12	.34	.10	.08	.48
IN.	.08	.62	3.62	2.22	.94	7.62	5.11	1.29	.38	.11	.10	.54

e Estimated

KANAWHA RIVER BASIN

03180500 GREENBRIER RIVER AT DURBIN, WV--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1943 - 1993, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	108	216	331	352	421	566	432	297	158	94.8	82.3	62.5
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	120	234	142	77.9	21.9	10.9	6.02	1.82
(WY)	1954	1954	1961	1981	1993	1957	1955	1976	1991	1988	1988	1953

SUMMARY STATISTICS	FOR 1992 CALENDAR YEAR		FOR 1993 WATER YEAR		WATER YEARS 1943 - 1993	
ANNUAL TOTAL	86169.6		80885.3			
ANNUAL MEAN	235		222		260	
HIGHEST ANNUAL MEAN					359	
LOWEST ANNUAL MEAN					177	
HIGHEST DAILY MEAN	2360		3150		13200	
LOWEST DAILY MEAN	e6.9		e1.6		.50	
ANNUAL SEVEN-DAY MINIMUM	7.4		2.4		.51	
INSTANTANEOUS PEAK FLOW			3800		d37100	
INSTANTANEOUS PEAK STAGE			5.65		f15.82	
INSTANTANEOUS LOW FLOW			UNKNOWN		.00	
ANNUAL RUNOFF (CFSM)	1.77		1.67		1.95	
ANNUAL RUNOFF (INCHES)	24.10		22.62		26.51	
10 PERCENT EXCEEDS	519		428		600	
50 PERCENT EXCEEDS	148		74		136	
90 PERCENT EXCEEDS	14		7.9		17	

a Oct. 18, 19.

b Sept. 2, 3.

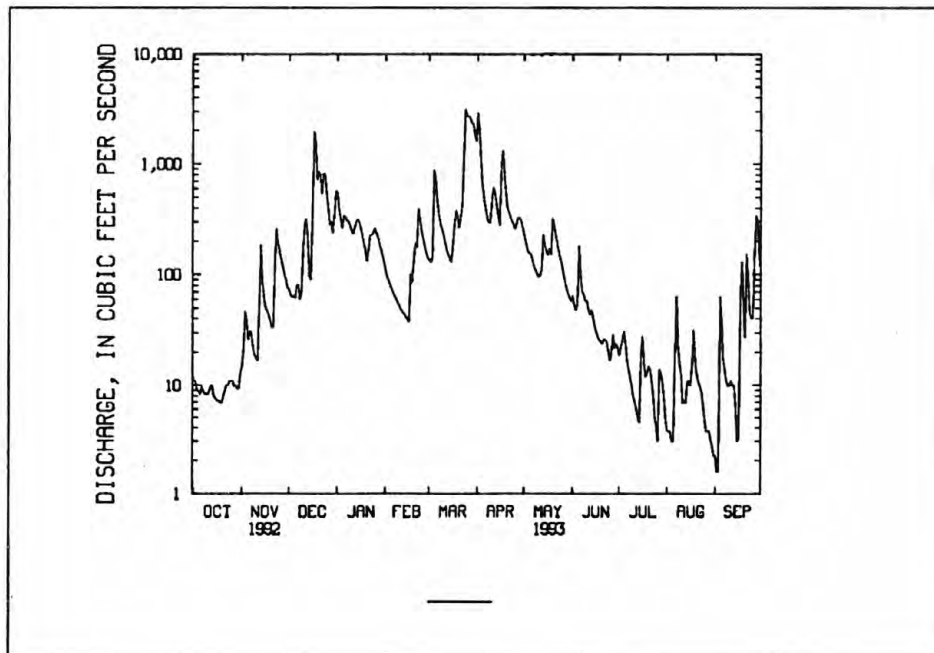
c Sept. 29 to Oct. 4, 1953, and Oct. 2, 3, 1968.

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

e Estimated.

f From floodmarks.

g Oct. 2, 3, 1968.



KANAWHA RIVER BASIN

03182500 GREENBRIER RIVER AT BUCKEYE, WV

LOCATION.--Lat 38°11'09", long 80°07'51", Pocahontas County, Hydrologic Unit 05050003, on right bank at upstream side of highway bridge at Buckeye, 1,000 ft upstream from Swago Creek, 3.5 mi downstream from Knapp Creek, and at mile 105.1 (corrected). Records include flow of Swago Creek.

DRAINAGE AREA.--540 mi², includes that of Swago Creek.

PERIOD OF RECORD.--September 1929 to current year.

REVISED RECORDS.--WSP 758: 1933. WSP 953: 1930-32, 1934-35(M), 1936, 1937(M), 1938-39, 1940(M). WSP 1275: 1936.

GAGE.--Water-stage recorder. Datum of gage is 2,085.89 ft above sea level. Prior to Feb. 27, 1939, nonrecording gage at same site and datum.

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

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 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. 17	1900	12,300	10.35	Mar. 24	0400	*20,900	*13.11
Mar. 4	1700	14,800	11.20				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	50	e60	272	1470	e360	452	5990	703	195	62	20	28
2	49	94	249	1140	e320	527	5980	602	179	129	25	21
3	46	193	234	906	268	689	3480	516	155	109	32	25
4	47	230	207	765	e250	8790	2230	461	144	82	25	67
5	58	187	205	1370	e230	6410	1630	471	315	83	23	125
6	62	155	317	1830	e210	2990	1350	450	506	68	36	111
7	61	150	223	1410	e200	1930	1100	409	295	59	58	67
8	54	136	199	1210	e190	1850	966	374	205	48	82	47
9	55	120	215	1170	e180	2060	910	344	169	41	74	37
10	55	105	178	1060	e170	1720	1170	316	168	36	50	38
11	56	96	222	957	e160	1410	1810	557	147	33	36	37
12	e53	156	215	1050	e150	1060	1710	523	131	31	29	33
13	e50	885	214	1250	e140	e800	1380	672	235	30	25	31
14	e47	674	204	1240	e140	e600	1100	833	444	31	22	28
15	e45	416	230	1100	e130	e500	926	640	270	33	21	26
16	e44	292	587	962	e130	768	3070	516	186	30	19	34
17	e43	222	7380	835	251	1120	5090	505	143	28	20	45
18	e41	188	6870	691	317	2110	3010	535	118	29	19	90
19	e39	167	2940	563	284	1640	1940	1520	101	38	19	261
20	e38	146	2820	463	e250	1400	1390	1450	90	40	21	146
21	e37	134	3150	477	459	1790	1150	1020	87	32	32	215
22	e36	255	2010	1250	1920	3020	1080	774	81	28	29	550
23	e35	1100	1960	1370	1830	7210	953	600	80	25	23	232
24	e38	976	2660	1180	1190	15400	881	486	74	27	20	133
25	e40	740	1790	e1000	876	11300	824	400	66	23	19	111
26	e38	605	1360	e900	798	8130	816	337	60	21	19	239
27	e40	507	958	e800	667	7040	940	280	54	20	28	768
28	e39	433	842	e680	534	6800	903	236	50	19	44	1570
29	e37	370	908	e580	---	6600	879	202	52	20	31	678
30	e35	312	1100	e510	---	4790	805	178	57	19	22	387
31	e45	---	1400	e420	---	3880	---	171	---	18	19	---
TOTAL	1413	10104	42119	30609	12604	114786	55463	17081	4857	1292	942	6180
MEAN	45.6	337	1359	987	450	3703	1849	551	162	41.7	30.4	206
MAX	62	1100	7380	1830	1920	15400	5990	1520	506	129	82	1570
MIN	35	60	178	420	130	452	805	171	50	18	19	21
CFSM	.08	.62	2.52	1.83	.83	6.86	3.42	1.02	.30	.08	.06	.38
IN.	.10	.70	2.90	2.11	.87	7.91	3.82	1.18	.33	.09	.06	.43

e Estimated

KANAWHA RIVER BASIN

03182500 GREENBRIER RIVER AT BUCKEYE, WV--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1930 - 1993, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	355	630	1089	1244	1496	1950	1401	1039	513	335	306	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 1992 CALENDAR YEAR

FOR 1993 WATER YEAR

WATER YEARS 1930 - 1993

ANNUAL TOTAL	285489	297450	
ANNUAL MEAN	780	815	877
HIGHEST ANNUAL MEAN			1318
LOWEST ANNUAL MEAN			492
HIGHEST DAILY MEAN	12000	Apr 22	44400
LOWEST DAILY MEAN	e35	(a)	5.2
ANNUAL SEVEN-DAY MINIMUM	37	Oct 20	7.3
INSTANTANEOUS PEAK FLOW			b82000
INSTANTANEOUS PEAK STAGE			c23.20
INSTANTANEOUS LOW FLOW			17
ANNUAL RUNOFF (CFSM)	1.44	1.51	3.8
ANNUAL RUNOFF (INCHES)	19.67	20.49	22.08
10 PERCENT EXCEEDS	1780	1820	2070
50 PERCENT EXCEEDS	430	232	416
90 PERCENT EXCEEDS	57	29	54

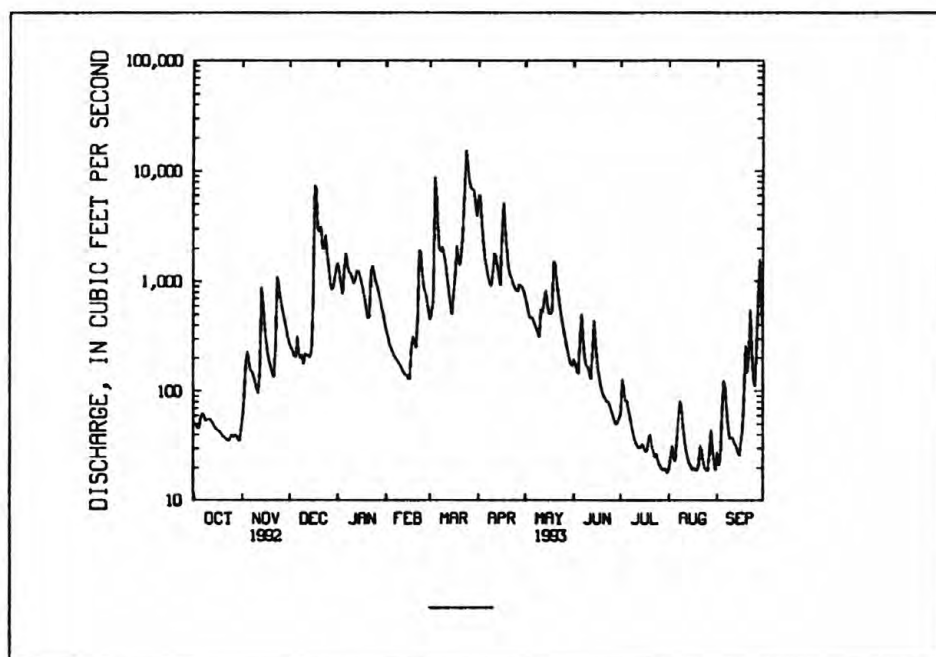
a Oct. 23, 30.

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

c From floodmarks.

d July 31, Aug. 1.

e Estimated.



KANAWHA RIVER BASIN

03183500 GREENBRIER RIVER AT ALDERSON, WV

LOCATION.--Lat 37°43'27", long 80°38'30", Monroe County, Hydrologic Unit 05050003, on left bank 400 ft upstream from highway bridge at Alderson, 0.5 mi upstream from Muddy Creek, and at mile 29.2.

DRAINAGE AREA.--1,364 mi².

PERIOD OF RECORD.--July 1895 to current year. Monthly discharge only for some periods, published in WSP 1305.

REVISED RECORDS.--WSP 536: 1907-9. WSP 803: 1918(M). WSP 953: 1930-41. WSP 1275: 1897, 1905, 1910, 1914(M), 1915-16, 1917(M), 1919-20(M), 1924-25(M), 1927(M), 1929, 1949, WDR WV-82-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,529.42 ft above sea level. Prior to Oct. 15, 1929, nonrecording gage at bridge 400 ft downstream at same datum.

REMARKS.--Records fair except those for periods of estimated daily discharges (ice effect), 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 19,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage Height (ft)	Date	Time	Discharge (ft ³ /s)	Gage Height (ft)
Mar. 5	0400	34,100	14.11	Mar. 24	1400	*36,200	*14.71

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	110	104	458	2740	e980	1440	6950	1770	391	137	48	53
2	104	104	398	2490	e850	1340	9870	1580	407	170	52	82
3	101	121	361	2000	e760	1690	7690	1390	388	481	78	101
4	100	228	329	1670	669	12800	5310	1230	378	465	70	84
5	112	364	319	1530	610	26600	3960	1140	1570	349	59	120
6	113	362	298	2880	e580	11200	3310	1090	2680	508	82	115
7	106	293	294	3070	e550	6250	2850	1030	1620	354	105	111
8	107	250	313	2610	e530	4600	2530	940	1090	239	117	174
9	108	225	289	2760	e510	4600	2330	859	764	184	122	152
10	113	197	277	2700	e490	4360	2330	811	579	153	112	120
11	113	180	269	2410	481	3730	2760	1270	472	135	118	103
12	104	180	238	2270	466	3080	3300	1470	419	127	134	87
13	98	223	279	2740	474	e2500	3000	1670	395	114	115	75
14	93	1380	319	2850	495	e2300	2540	1570	1300	97	106	71
15	92	1090	319	2510	503	e1800	2170	1630	1430	90	89	65
16	90	675	352	2170	492	e1600	3000	1310	931	85	80	77
17	89	486	3130	1900	509	2670	8620	1080	637	84	70	90
18	84	368	14400	1660	687	6680	6740	955	482	79	63	109
19	80	305	7430	1400	702	6090	4550	1180	386	77	63	132
20	77	274	4270	1180	728	4510	3370	2390	327	83	69	148
21	77	230	5280	1080	872	5070	2750	2160	285	84	67	280
22	74	229	4310	2150	4890	8540	2540	1670	270	74	62	255
23	73	532	3570	3490	6860	11400	2380	1330	278	70	56	360
24	74	1770	5040	2990	4600	31300	2140	1100	239	78	52	477
25	81	1450	4250	2590	2970	25300	1960	917	204	77	48	299
26	79	1120	3030	2250	2400	16700	1930	788	184	71	48	236
27	78	908	2240	1920	2080	12000	2170	682	169	75	97	351
28	82	729	1780	1760	1750	12500	2220	588	153	70	123	1340
29	78	611	1800	e1500	---	12200	2070	510	146	59	81	2010
30	73	526	2310	e1300	---	9870	1940	451	140	57	65	1040
31	96	---	2710	e1100	---	7210	---	407	---	50	59	---
TOTAL	2859	15514	70662	67670	38488	261930	109280	36968	18714	4776	2510	8717
MEAN	92.2	517	2279	2183	1375	8449	3643	1193	624	154	81.0	291
MAX	113	1770	14400	3490	6860	31300	9870	2390	2680	508	134	2010
MIN	73	104	238	1080	466	1340	1930	407	140	50	48	53
CFSM	.07	.38	1.67	1.60	1.01	6.19	2.67	.87	.46	.11	.06	.21
IN.	.08	.42	1.93	1.85	1.05	7.14	2.98	1.01	.51	.13	.07	.24

e Estimated

KANAWHA RIVER BASIN

03183500 GREENBRIER RIVER AT ALDERSON, WV--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1895 - 1993, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	744	1256	2272	3009	3473	4533	3105	2336	1321	812	709	424
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 1992 CALENDAR YEAR		FOR 1993 WATER YEAR		WATER YEARS 1895 - 1993	
ANNUAL TOTAL	644410		638088			
ANNUAL MEAN	1761		1748		1994	
HIGHEST ANNUAL MEAN					3372	
LOWEST ANNUAL MEAN					983	
HIGHEST DAILY MEAN	20000		31300		57300	
LOWEST DAILY MEAN	73		48		26	
ANNUAL SEVEN-DAY MINIMUM	76		57		28	
INSTANTANEOUS PEAK FLOW			36200		c90600	
INSTANTANEOUS PEAK STAGE			14.71		d23.95	
INSTANTANEOUS LOW FLOW			43		24	
ANNUAL RUNOFF (CFSM)	1.29		1.28		1.46	
ANNUAL RUNOFF (INCHES)	17.57		17.40		19.86	
10 PERCENT EXCEEDS	4230		4290		4760	
50 PERCENT EXCEEDS	1030		503		936	
90 PERCENT EXCEEDS	131		77		145	

a Oct. 23, 30.

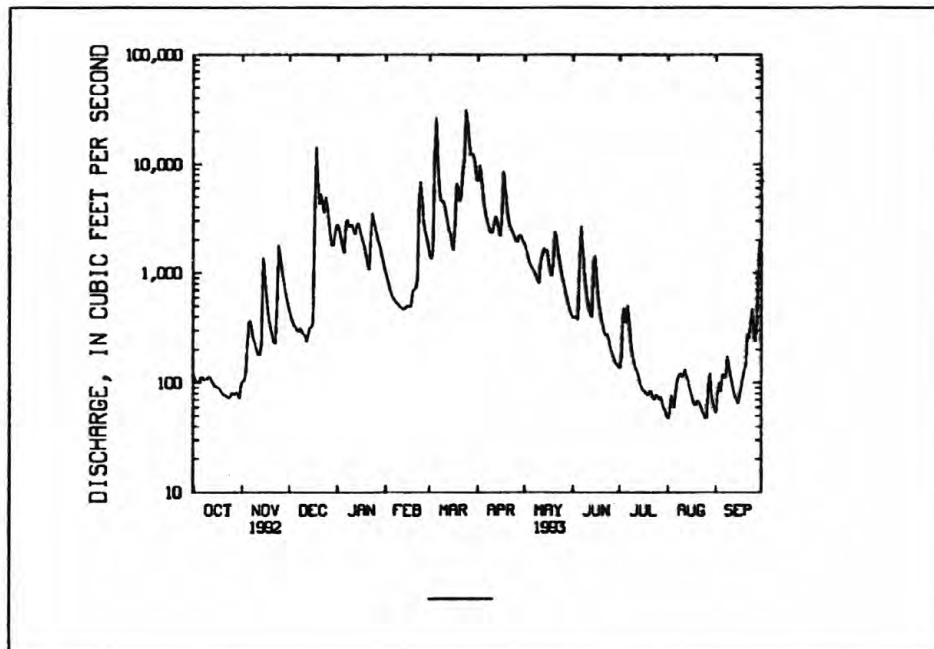
b Aug. 1, 25, 26.

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

d From floodmarks.

f Aug. 2, 25, 26.

g 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 Hildale, 0.1 mi upstream from Howard Creek, 0.9 mi upstream from Powley Creek, 5.0 mi southeast of Hinton, and at mile 5.5. Records include flow of Howard Creek.

DRAINAGE AREA.--1,619 mi², includes that of Howard Creek.

PERIOD OF RECORD.--June 1936 to current year.

REVISED RECORDS.--WSP 1435: 1955. WDR WV-82-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,388.66 ft above sea level (levels by U.S. Army Corps of Engineers).

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

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 18, 1936, reached a stage of 21.85 ft from data furnished by U.S. Army Corps of Engineers, discharge, 60,800 ft³/s.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 24,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage Height (ft)	Date	Time	Discharge (ft ³ /s)	Gage Height (ft)
Mar. 5	0900	39,300	17.23	Mar. 24	2000	*41,500	*17.77

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	112	100	598	2870	e1000	1660	8000	2010	456	194	58	68
2	106	113	522	2670	e900	1530	11200	1780	438	180	53	59
3	101	123	468	2180	e800	1850	9690	1550	442	409	55	70
4	103	145	425	1770	e700	12600	6770	1370	453	753	70	127
5	114	343	405	1570	631	33200	5050	1250	750	554	83	102
6	109	472	386	2290	e600	15200	4170	1170	3740	564	72	137
7	113	406	380	3290	e580	8280	3580	1110	2230	574	88	137
8	106	351	382	2800	e550	5920	3140	1020	1490	383	122	129
9	110	305	396	2890	e520	5500	2860	942	1000	285	147	200
10	109	276	381	2940	e510	5450	2860	903	746	231	149	178
11	115	252	367	2650	e500	4670	3150	1740	599	211	133	143
12	116	238	338	2440	490	3900	3830	1820	542	203	146	120
13	108	241	327	2790	480	3490	3580	1900	870	175	181	104
14	101	891	396	3100	496	e2800	3030	1850	859	161	151	86
15	101	1560	411	2770	508	e2300	2560	1810	1780	140	133	79
16	98	971	460	2380	520	e2000	2620	1520	1230	127	108	90
17	98	678	1660	2050	538	3360	8840	1230	848	116	93	90
18	95	521	15500	1770	635	8330	8270	1050	639	114	82	126
19	88	424	9080	1510	774	8170	5590	1100	519	110	74	146
20	83	364	4960	1270	743	6070	4080	2040	412	102	67	164
21	78	330	5250	1170	1170	6620	3260	2560	359	104	71	192
22	76	321	5080	1960	5390	10800	2980	1930	318	106	71	352
23	75	327	3980	3890	8320	14000	2820	1520	318	96	67	291
24	73	1700	5300	3480	5900	34100	2520	1250	304	84	62	542
25	77	2010	5010	2890	3780	30000	2260	1050	267	88	60	462
26	76	1470	3470	2510	2820	20300	2140	914	230	89	64	339
27	75	1210	2560	2140	2420	15000	2450	796	211	81	59	352
28	78	985	1900	1870	2020	15300	2570	698	195	77	82	829
29	76	816	1790	e1600	---	14900	2410	612	180	80	154	2350
30	81	692	2300	e1400	---	12400	2220	538	173	65	102	1450
31	98	---	2790	e1200	---	8980	---	485	---	59	76	---
TOTAL	2949	18635	77272	72110	44295	318680	128500	41518	22598	6515	2933	9514
MEAN	95.1	621	2493	2326	1582	10280	4283	1339	753	210	94.6	317
MAX	116	2010	15500	3890	8320	34100	11200	2560	3740	753	181	2350
MIN	73	100	327	1170	480	1530	2140	485	173	59	53	59
CFSM	.06	.38	1.54	1.44	.98	6.35	2.65	.83	.47	.13	.06	.20
IN.	.07	.43	1.78	1.66	1.02	7.32	2.95	.95	.52	.15	.07	.22

e Estimated

KANAWHA RIVER BASIN

03184000 GREENBRIER RIVER AT HILLDALE, WV--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1936 - 1993, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	853	1379	2705	3302	4067	5156	3658	2727	1410	759	728	460
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

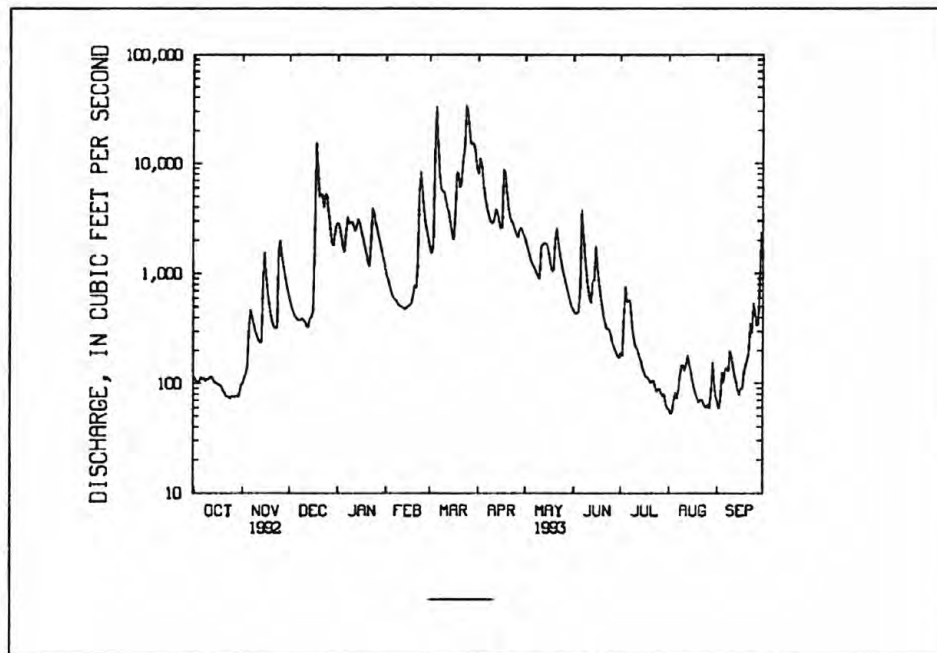
SUMMARY STATISTICS	FOR 1992 CALENDAR YEAR		FOR 1993 WATER YEAR		WATER YEARS 1936 - 1993	
ANNUAL TOTAL	735039		745519			
ANNUAL MEAN	2008		2043		2261	
HIGHEST ANNUAL MEAN					3359	
LOWEST ANNUAL MEAN					1189	
HIGHEST DAILY MEAN	19700		34100		51000	
LOWEST DAILY MEAN	73		53		39	
ANNUAL SEVEN-DAY MINIMUM	76		63		44	
INSTANTANEOUS PEAK FLOW			41500		a83800	
INSTANTANEOUS PEAK STAGE			17.77		b25.68	
INSTANTANEOUS LOW FLOW			51		39	
ANNUAL RUNOFF (CFSM)	1.24		1.26		1.40	
ANNUAL RUNOFF (INCHES)	16.89		17.13		18.97	
10 PERCENT EXCEEDS	4760		5060		5420	
50 PERCENT EXCEEDS	1110		580		1050	
90 PERCENT EXCEEDS	125		83		155	

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

b From floodmarks.

c Aug. 2, 28.

d Sept. 18-20, 1946, Sept. 16, 1964.



KANAWHA RIVER BASIN

03184500 NEW RIVER AT HINTON, WV

LOCATION.--Lat 37°40'13", long 80°53'45", Summers County, Hydrologic Unit 05050004, on right bank at Hinton, 0.2 mi upstream from Madam Creek, 1.5 mi downstream from Greenbrier River, at New River mile 62.0 and Kanawha River mile 160.0.

DRAINAGE AREA.--6,256 mi².

PERIOD OF RECORD.--June 1936 to current year.

REVISED RECORDS.--WDR WV-82-1: Drainage area. WDR WV-85-1: 1984(m).

GAGE.--Water-stage recorder. Datum of gage is 1,355.18 ft above sea level. Prior to June 5, 1949, water-stage recorder at site 400 ft upstream at same datum.

REMARKS.--No estimated daily discharges. Records good. Flow regulated since May 1939 by Claytor Lake and since August 1949 by Bluestone Lake. U.S. Army Corps of Engineers satellite telemeter at station.

PEAK DISCHARGE FOR CURRENT YEAR.--Maximum discharge, 73,900 ft³/s, Mar. 26, gage height, 9.63 ft.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2840	3420	6400	8600	5270	6370	42500	9090	4130	3130	1880	2980
2	2600	3720	5980	8180	5910	8100	39000	8590	5070	3320	1690	1830
3	2330	5780	5810	7430	6220	11200	27600	8290	5070	3890	1570	1510
4	2340	7800	5140	6840	5410	31100	20000	8050	4280	4340	1570	1560
5	3640	8380	4610	7920	5370	63100	16500	9320	5440	4190	1610	1560
6	4540	8260	4030	10500	5460	51700	17500	12300	9810	3640	2020	1560
7	3760	6290	3790	10000	3920	40000	14600	11500	6130	3430	2260	1580
8	3420	5070	4160	11100	3320	29600	14900	9010	4530	3050	2290	1820
9	3410	3810	4800	14800	4970	21800	16500	8490	4340	2620	1920	2150
10	6090	3640	4430	15800	5530	18200	16300	8660	4550	2560	2060	2030
11	5970	3480	5320	14200	5250	15300	16400	9320	4350	2530	2270	2030
12	3760	3200	4920	13500	5220	13500	15500	11200	4060	3220	2280	2260
13	3160	3850	3990	13200	5530	13400	14900	11800	5630	3610	2780	1900
14	2600	5310	3530	12500	5660	13400	14100	11200	5800	3310	3450	1800
15	2350	6460	4260	10200	4420	10000	13300	11500	7260	3000	3680	1790
16	1950	5090	4940	9150	6480	8190	13900	9850	5900	2750	3350	1800
17	2660	4270	8960	8300	7830	12200	25300	9340	4230	3210	2890	2900
18	2620	3780	28100	7010	7910	22300	25100	8110	3830	3520	2270	3740
19	2370	3480	22100	7280	8440	23500	19100	7700	4010	3120	1980	3980
20	2370	3410	15100	7040	7910	17300	15500	9040	4240	2710	2110	4250
21	2300	3380	13500	6760	7160	21900	13600	8510	3890	2590	2000	3760
22	2090	3720	12100	11100	23100	30400	11000	7860	3760	2270	1670	2780
23	2000	8280	12800	15700	29300	37800	10700	7540	3870	2050	1910	2280
24	2230	15400	18300	13400	19700	60500	12100	6820	3440	2230	2000	2100
25	2350	12900	17000	12100	13800	63400	11600	6380	3170	2350	1920	2190
26	2200	13200	12000	11600	11800	66900	8890	6600	2940	2380	1920	2250
27	2290	12900	8190	10300	11200	64200	11100	5580	2780	2740	2000	2470
28	2360	10600	6880	9080	8070	61700	12500	4770	2770	2950	2140	3120
29	2140	9260	8850	8440	---	60600	11100	5680	2770	2560	2790	4470
30	2160	8780	9250	8280	---	50400	9840	5240	3010	2020	3260	3560
31	2520	---	9470	7810	---	42300	---	4350	---	1890	4330	---
TOTAL	89420	196920	278710	318120	240160	990360	510930	261690	135060	91180	71870	74010
MEAN	2885	6564	8991	10260	8577	31950	17030	8442	4502	2941	2318	2467
MAX	6090	15400	28100	15800	29300	66900	42500	12300	9810	4340	4330	4470
MIN	1950	3200	3530	6760	3320	6370	8890	4350	2770	1890	1570	1510

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 - 1993, BY WATER YEAR (WY)
[REGULATED, UNADJUSTED]

MEAN	4112	5340	8021	9750	12770	15390	12500	9511	6282	4186	3925	3352
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 1992 CALENDAR YEAR

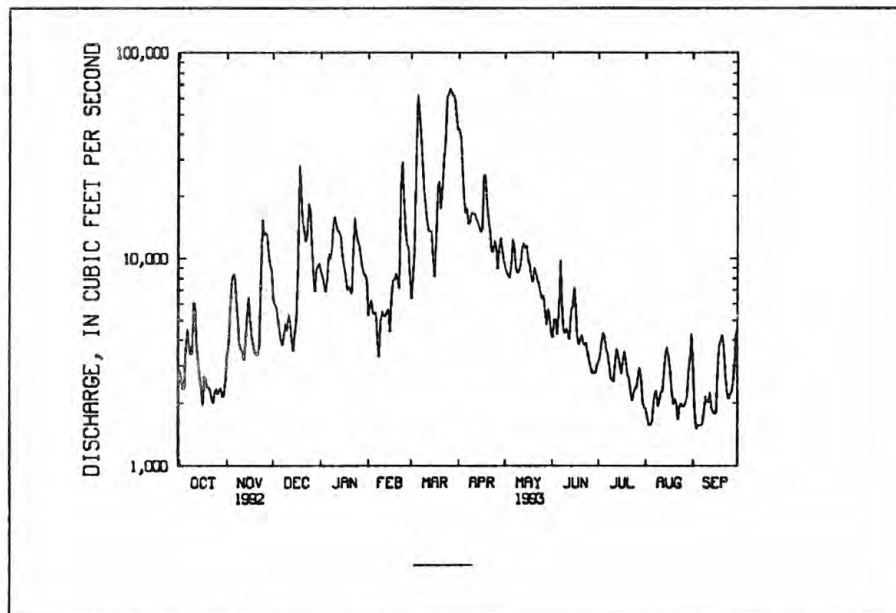
FOR 1993 WATER YEAR

WATER YEARS 1939 - 1993

ANNUAL TOTAL	3134400	3258430	
ANNUAL MEAN	8564	8927	7903
HIGHEST ANNUAL MEAN			11490
LOWEST ANNUAL MEAN			3988
HIGHEST DAILY MEAN	53700	Apr 23	66900
LOWEST DAILY MEAN	1950	Oct 16	1510
ANNUAL SEVEN-DAY MINIMUM	2140	Sep 23	1630
INSTANTANEOUS PEAK FLOW			73900
INSTANTANEOUS PEAK STAGE			9.63
INSTANTANEOUS LOW FLOW			1490
10 PERCENT EXCEEDS	15400		16700
50 PERCENT EXCEEDS	5840		5320
90 PERCENT EXCEEDS	2600		2110

a 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.

b Sept. 2, 3.



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.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--February 1981 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,030.71 (corrected) ft above sea level.

REMARKS.--Records good. Flow regulated by Claytor Lake and Bluestone Lake. National Park Service gage-height telemeter at station.

PEAK DISCHARGE FOR CURRENT YEAR.--Maximum discharge, 77,700 ft³/s, Mar. 26, gage height, 18.43 ft.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2300	2840	7760	9710	6840	6950	45300	9810	4460	3390	1830	4610
2	3010	3790	5930	8820	5050	7330	41500	9070	4650	3400	1860	2220
3	2260	4510	6320	8310	6940	11300	31800	8640	5650	3890	1700	1610
4	2250	7550	5500	7470	5750	31300	22300	8370	4990	4530	1550	1610
5	2530	8460	5230	7600	5620	71000	18300	8730	6410	4610	1570	1560
6	4750	8590	4600	10400	5620	59600	17700	11900	10400	4240	1660	1520
7	4380	7450	4020	11300	5290	44300	16900	12200	7710	3610	2340	1530
8	3490	5330	4090	10400	3190	34100	14500	10100	5540	3480	2320	1550
9	3440	4880	4740	14900	4060	24200	17700	7950	4530	2820	2330	1960
10	4130	3260	5020	16600	5830	21100	17400	9150	4880	2660	1690	2320
11	7330	3930	5010	15900	5590	16900	18500	9470	4840	2600	2330	1910
12	4770	3230	5700	14100	5400	15100	16600	11900	4370	2760	2430	2130
13	3410	3390	4590	13900	5500	14200	16400	12900	5440	3790	2630	2250
14	2950	4690	3900	13700	6130	14900	15200	12400	5800	3870	3620	1730
15	2240	6520	3700	11500	5080	12000	14200	11800	7340	3200	4180	1780
16	2200	5920	5670	9590	5190	9110	13800	11200	6860	3050	3640	1870
17	1600	4520	9870	9230	8090	11800	23400	9400	5230	2810	3520	1920
18	2920	4200	27400	7700	8060	22400	27000	9410	3880	3690	2680	3900
19	2260	3500	27200	7240	8360	27000	21600	7740	4180	3610	2260	4040
20	2220	3410	18600	7620	8720	20000	16400	9480	4340	3010	1880	4510
21	2210	3330	15700	7120	7860	22200	14900	9220	4430	2650	2310	4450
22	2170	3460	14300	9580	22800	33800	12800	8480	3870	2650	1860	3600
23	1830	5850	14200	16300	32200	43300	10300	7930	4030	2070	1570	2370
24	1830	14400	19500	15300	24600	70200	12900	7510	3960	2030	2160	2270
25	2230	14600	20000	13000	15300	69200	12300	6740	3270	2360	1980	2050
26	2220	13100	14700	12500	13200	70300	11000	6700	3190	2390	1970	2440
27	1980	14100	10200	11500	12000	69900	10200	6630	2850	2460	1980	2680
28	2240	11500	7390	9960	10200	65900	13500	5150	2830	3060	2150	3040
29	2240	9980	8680	8990	---	65100	12300	5350	2990	3030	2320	4130
30	1880	9110	10300	8590	---	55800	10700	6070	2950	2340	e3200	4530
31	2150	---	10200	8540	---	43100	---	4910	---	1820	4130	---
TOTAL	87420	199400	310020	337370	258470	1083390	547400	276310	145870	95880	73650	78090
MEAN	2820	6647	10000	10880	9231	34950	18250	8913	4862	3093	2376	2603
MAX	7330	14600	27400	16600	32200	71000	45300	12900	10400	4610	4180	4610
MIN	1600	2840	3700	7120	3190	6950	10200	4910	2830	1820	1550	1520

e Estimated

KANAWHA RIVER BASIN

03185400 NEW RIVER AT THURMOND, WV--Continued

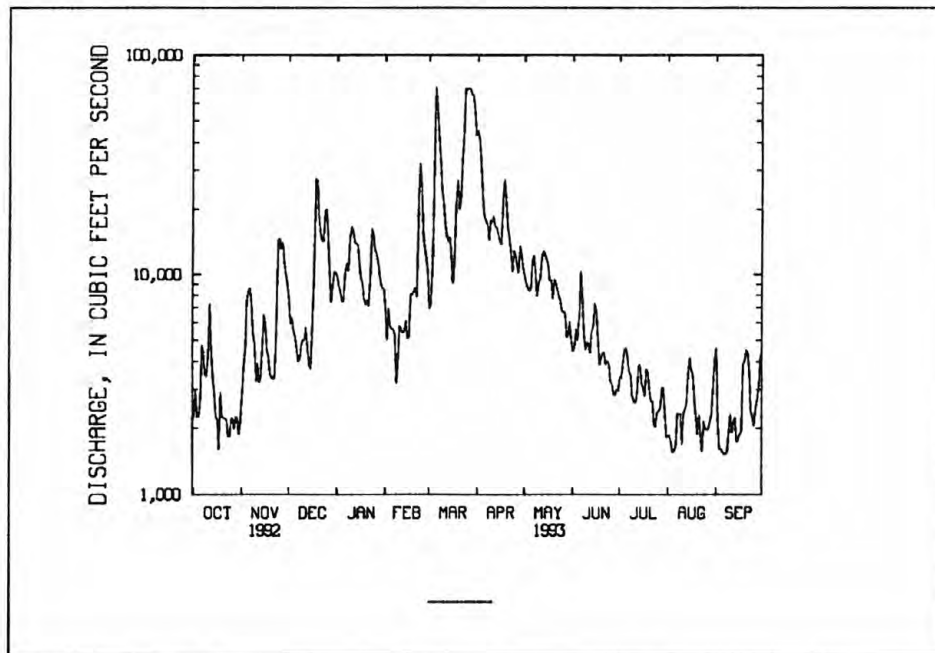
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1981 - 1993, BY WATER YEAR (WY)
[REGULATED, UNADJUSTED]

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	4374	6238	9382	10340	14620	16560	14810	11510	7253	3992	3349	3362
MAX	16510	15260	14530	19370	23470	34950	40500	19650	19050	8029	6602	14310
(WY)	1990	1986	1984	1991	1982	1993	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 1992 CALENDAR YEAR				FOR 1993 WATER YEAR				WATER YEARS 1981 - 1993			
ANNUAL TOTAL	3381660				3493270							
ANNUAL MEAN	9240				9571				8859			
HIGHEST ANNUAL MEAN									11540			
LOWEST ANNUAL MEAN									4336			
HIGHEST DAILY MEAN	63000				Apr 23				79900			
LOWEST DAILY MEAN	1600				Oct 17				808			
ANNUAL SEVEN-DAY MINIMUM	2040				Sep 24				852			
INSTANTANEOUS PEAK FLOW					77700				Mar 26			
INSTANTANEOUS PEAK STAGE					18.43				Mar 26			
INSTANTANEOUS LOW FLOW					1460				Sep 3			
10 PERCENT EXCEEDS	17200				18500				19000			
50 PERCENT EXCEEDS	6110				5540				5320			
90 PERCENT EXCEEDS	2420				2150				1800			

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

b July 10, 11, 1988.



KANAWHA RIVER BASIN

03185400 NEW RIVER AT THURMOND, WV--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1991 to September 1993, discontinued.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1990 to September 1993.

pH: October 1990 to September 1993.

WATER TEMPERATURE: October 1990 to September 1993.

DISSOLVED OXYGEN: October 1990 to September 1993.

INSTRUMENTATION.--Water quality monitor since October 1990. Digital recorder set for hourly punches.

REMARKS: Missing data during periods of equipment malfunction.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily mean, 207 microsiemens, Nov. 26, 1991; minimum daily mean, 87 microsiemens, Mar. 25, 1993.

pH: (For published data only) Maximum daily median, 8.8 units, June 10, 11, 1991; minimum daily median, 7.3 units, May 11, 1993.

TEMPERATURE: Maximum daily mean, 29.2°C, July 29, 1993; minimum daily mean, 0.7°C, Jan. 20, 1992.

DISSOLVED OXYGEN: Maximum daily mean, 13.4 mg/L, Dec. 20, 1991; minimum daily mean, 6.1 mg/L, June 3, 4, 1991.

WATER QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

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 OF (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)
OCT 1992								
06...	1200	5050	177	8.1	17.5	742	9.2	99
09...	1215	3430	172	8.2	18.0	732	9.4	103
NOV								
17...	1630	4460	149	8.2	8.5	736	11.5	102
DEC								
07...	1145	4060	125	7.9	4.0	--	11.8	--
29...	1100	7920	117	7.7	4.0	744	12.0	94
FEB 1993								
04...	1200	5640	130	7.9	4.0	745	11.9	93
MAY								
28...	1200	5130	136	8.1	19.5	--	8.2	--
JUL								
06...	1300	4320	166	8.2	28.0	737	6.9	91
08...	1400	3470	162	8.2	29.0	--	7.0	--
AUG								
19...	1200	2250	183	8.2	26.5	737	7.9	102
SEP								
14...	1200	1750	181	8.1	23.0	739	8.5	102
*OCT								
01...	1200	3080	181	8.1	16.0	738	9.7	102

* Field parameters taken and equipment removed this day.

KANAWHA RIVER BASIN

03185400 NEW RIVER AT THURMOND, WV--Continued

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	184	127	160	90	139	133	113	144	128	153	164	172
2	---	132	162	95	136	137	118	143	130	157	160	174
3	---	137	156	102	132	136	125	135	134	162	149	179
4	---	140	153	118	130	130	126	132	141	164	148	184
5	189	142	151	121	129	113	129	135	139	163	147	184
6	188	144	148	125	137	107	134	136	143	165	147	187
7	183	146	156	125	149	113	137	143	143	167	---	192
8	185	147	145	116	157	116	139	144	143	166	---	191
9	186	151	136	114	146	121	139	144	143	167	157	186
10	188	153	129	128	139	124	139	143	143	165	163	183
11	186	155	125	124	137	128	142	141	144	162	---	181
12	193	162	122	113	134	130	143	142	146	160	---	181
13	176	141	125	106	132	133	140	141	151	161	---	179
14	149	135	132	108	139	130	130	139	155	165	---	184
15	138	130	140	110	136	129	118	136	158	161	160	186
16	130	131	154	115	126	127	116	134	160	160	162	183
17	129	134	152	118	124	134	117	136	162	161	164	185
18	130	129	133	112	126	132	119	135	160	165	167	184
19	127	131	125	109	134	122	122	131	157	170	169	183
20	136	130	121	115	130	112	124	128	166	170	169	185
21	130	---	119	119	113	116	130	137	157	172	169	186
22	123	---	117	119	113	119	124	130	148	171	165	187
23	114	---	122	126	115	115	121	126	148	172	163	189
24	117	---	119	134	117	103	121	121	146	168	162	186
25	110	---	117	139	120	100	126	120	143	169	162	183
26	110	---	107	136	123	111	129	123	147	171	163	186
27	113	---	106	138	127	114	131	129	150	174	166	---
28	115	---	113	138	131	120	134	136	153	175	164	---
29	117	149	117	141	---	127	137	136	153	167	166	169
30	118	154	120	142	---	117	141	131	157	164	167	169
31	121	---	108	150	---	113	---	128	---	166	170	---
MEAN	---	---	132	121	131	121	129	135	148	166	---	---
MAX	---	---	162	150	157	137	143	144	166	175	---	---
MIN	---	---	106	90	113	100	113	120	128	153	---	---

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEDIAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.1	---	---	---	---	---	---	---	---	7.9	8.1	---
2	---	---	---	---	---	---	---	---	---	8.0	8.1	---
3	---	---	---	---	---	---	---	---	---	8.1	8.2	---
4	---	---	---	---	---	---	---	---	---	8.2	8.2	---
5	8.4	---	---	---	---	---	---	---	8.0	8.3	8.2	---
6	8.3	---	---	---	---	---	---	---	8.2	8.3	8.2	---
7	8.3	---	---	---	---	---	---	---	8.2	8.3	8.2	---
8	8.3	---	---	---	---	---	---	---	8.2	8.3	8.0	---
9	8.1	---	---	---	---	---	---	---	8.3	8.4	8.0	---
10	8.0	---	---	---	---	---	---	---	8.8	8.3	7.9	---
11	---	---	---	---	---	---	---	---	8.8	8.3	7.9	---
12	---	---	---	---	---	---	---	---	8.5	8.3	7.8	---
13	---	---	---	---	---	---	---	---	8.3	8.3	7.5	---
14	---	---	---	---	---	---	---	---	8.3	8.2	7.4	---
15	---	---	---	---	---	---	---	---	8.3	8.4	7.5	---
16	---	---	---	---	---	---	---	---	8.2	8.5	7.7	---
17	---	---	---	---	---	---	---	---	8.0	8.5	8.2	---
18	---	---	---	---	---	---	---	---	8.1	8.5	8.1	---
19	---	---	---	---	---	---	---	---	8.0	8.4	8.2	---
20	---	---	---	---	---	---	---	---	8.0	8.5	8.2	---
21	---	---	---	---	---	---	---	---	7.9	8.5	8.2	---
22	---	---	---	---	---	---	---	---	8.0	8.5	8.2	---
23	---	---	---	---	---	---	---	---	8.1	8.4	8.2	---
24	---	---	---	---	---	---	---	---	8.2	8.0	8.3	---
25	---	---	---	---	---	---	---	---	8.2	7.6	8.3	---
26	---	---	---	---	---	---	---	---	8.2	7.4	8.3	---
27	---	---	---	---	---	---	---	---	8.3	7.9	---	---
28	---	---	---	---	---	---	---	---	8.3	8.1	---	---
29	---	---	---	---	---	---	---	---	8.3	8.0	---	---
30	---	---	---	---	---	---	---	---	8.2	8.1	---	---
31	---	---	---	---	---	---	---	---	---	8.1	---	---
MAX	---	---	---	---	---	---	---	---	---	8.5	---	---
MIN	---	---	---	---	---	---	---	---	---	7.4	---	---
MED	---	---	---	---	---	---	---	---	---	8.3	---	---

KANAWHA RIVER BASIN

03185400 NEW RIVER AT THURMOND, WV--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19.5	11.6	8.2	6.1	4.5	6.0	8.8	18.2	24.0	27.1	26.0	26.6
2	---	11.8	8.3	5.4	4.8	7.0	9.4	18.4	24.1	27.3	26.1	25.6
3	---	11.9	9.0	5.2	4.6	7.8	10.0	17.7	24.6	27.2	26.8	23.9
4	---	12.0	8.8	5.8	4.6	7.8	10.8	17.9	23.8	27.1	27.2	22.8
5	18.9	12.4	6.7	5.5	4.9	6.8	11.7	18.5	22.7	27.6	26.9	23.3
6	19.3	12.1	6.0	5.8	5.6	6.5	12.3	19.0	22.5	27.8	26.5	24.1
7	19.5	11.3	5.8	5.9	6.5	7.2	13.5	18.8	22.3	28.0	26.9	24.9
8	19.9	10.6	5.3	5.7	6.8	7.3	14.3	19.0	22.3	27.8	27.2	24.9
9	20.3	9.7	4.8	5.7	6.7	7.1	15.4	19.3	22.7	27.4	27.3	24.7
10	20.2	9.4	4.6	6.4	6.7	6.9	15.9	18.8	23.3	26.7	26.6	24.3
11	19.4	9.6	4.9	6.2	5.9	6.4	15.0	20.2	23.6	26.4	26.3	24.3
12	19.0	9.1	5.0	6.4	5.0	6.2	15.1	20.7	23.7	26.8	26.1	24.5
13	19.1	8.2	5.5	6.0	4.9	6.4	14.4	20.9	24.3	27.3	25.1	24.7
14	18.6	7.8	5.8	5.5	4.9	6.1	13.9	22.0	24.9	26.8	24.4	24.6
15	18.6	8.2	5.7	5.1	3.7	6.2	12.5	22.2	24.9	26.7	24.3	25.3
16	18.1	8.5	5.9	5.8	2.4	6.6	12.7	22.2	25.4	26.6	24.7	25.7
17	18.3	8.8	5.8	6.4	2.1	7.5	13.6	22.5	25.8	27.0	25.2	25.9
18	18.0	8.0	6.1	6.3	2.1	8.3	15.1	23.0	25.9	27.1	25.3	26.4
19	15.9	7.7	7.0	5.6	2.9	8.2	15.6	22.0	25.6	27.4	25.4	25.6
20	15.4	8.6	6.8	5.6	5.0	8.0	14.7	19.8	25.6	28.0	24.9	22.6
21	14.5	---	7.5	5.0	6.5	8.4	13.6	19.3	25.8	28.5	24.3	21.2
22	15.0	---	8.1	3.9	6.7	9.4	11.6	18.2	25.9	28.8	24.0	20.9
23	14.9	---	8.5	3.1	6.5	11.0	11.3	18.8	25.3	28.9	24.3	20.7
24	14.3	---	8.1	2.9	6.4	10.8	11.8	20.4	24.6	28.6	25.2	20.8
25	13.7	---	7.3	2.3	6.6	10.6	12.6	21.8	24.0	28.3	25.6	20.4
26	12.7	---	5.5	2.2	5.7	10.5	14.4	23.3	24.1	27.6	25.1	19.3
27	12.0	---	4.2	2.6	5.5	10.7	15.8	24.0	24.6	27.1	25.1	---
28	11.8	---	3.8	3.4	5.5	11.4	16.7	24.3	25.1	26.7	25.5	---
29	11.1	10.5	4.1	3.8	---	11.6	17.9	23.6	26.3	25.9	26.0	18.1
30	11.0	8.8	5.7	4.6	---	10.0	18.4	22.8	27.0	25.3	26.7	18.8
31	11.4	---	6.9	5.1	---	8.8	---	23.3	---	25.9	27.1	---
MEAN	---	---	6.3	5.0	5.1	8.2	13.6	20.7	24.5	27.3	25.7	---
MAX	---	---	9.0	6.4	6.8	11.6	18.4	24.3	27.0	28.9	27.3	---
MIN	---	---	3.8	2.2	2.1	6.0	8.8	17.7	22.3	25.3	24.0	---

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.1	9.7	11.4	12.3	11.9	11.7	11.3	8.4	6.3	---	---	6.8
2	---	9.6	11.3	12.3	11.9	11.4	11.1	8.4	6.3	---	---	7.1
3	---	9.7	11.1	12.3	11.9	11.2	10.9	8.6	6.1	---	---	7.1
4	---	9.7	11.0	12.4	11.9	11.2	10.6	8.4	6.1	---	---	7.5
5	8.2	9.6	11.8	12.5	11.8	11.8	10.3	8.4	---	---	---	7.2
6	8.2	9.4	12.1	12.4	11.6	11.7	10.2	8.2	---	---	---	7.3
7	8.3	9.6	12.1	12.2	11.2	11.5	9.8	8.4	---	---	---	7.4
8	8.0	9.7	12.4	12.3	11.2	11.5	9.6	8.3	---	---	7.0	7.3
9	8.0	9.9	12.6	12.3	11.3	11.6	9.4	8.0	---	---	6.5	7.3
10	7.9	10.1	12.6	12.2	11.2	11.6	9.2	8.2	---	---	6.5	7.2
11	7.8	10.4	12.6	12.1	11.4	11.8	9.4	8.1	---	---	6.9	7.3
12	8.0	10.6	12.5	12.2	11.7	11.7	9.3	7.9	---	---	6.9	7.3
13	7.9	10.7	12.2	12.4	11.6	11.6	9.4	7.7	---	---	6.9	7.1
14	8.1	11.0	12.3	12.6	11.4	11.7	9.5	7.5	---	---	7.0	6.8
15	8.1	11.0	12.1	12.6	11.9	11.9	9.8	7.1	---	---	7.3	6.9
16	8.3	10.8	12.0	12.2	12.5	11.9	9.8	7.0	---	---	7.2	6.7
17	8.3	10.7	12.0	12.0	12.7	11.6	9.7	7.1	---	---	7.0	6.8
18	8.2	10.9	11.9	12.1	12.7	11.2	9.4	7.1	---	---	7.0	6.7
19	8.7	11.0	11.7	12.2	12.6	11.3	9.1	7.1	---	---	6.9	6.5
20	8.9	10.8	11.9	12.1	12.1	11.4	9.2	7.5	---	---	7.0	7.2
21	9.2	---	11.6	12.1	11.7	11.2	9.3	7.6	---	---	7.1	7.7
22	9.0	---	11.4	12.5	11.5	11.0	9.7	7.9	---	---	7.3	7.8
23	9.0	---	11.2	12.8	11.5	10.6	9.8	7.7	---	---	7.3	7.6
24	9.3	---	11.3	12.9	11.5	10.8	9.8	7.3	---	---	7.1	7.7
25	9.2	---	11.8	13.1	11.4	10.8	9.7	7.1	---	---	6.9	7.5
26	9.5	---	12.4	13.0	11.6	10.7	9.4	6.9	---	---	7.3	7.8
27	9.7	---	12.7	12.7	11.8	10.6	9.0	6.7	---	---	7.4	8.1
28	9.7	---	12.9	12.1	11.8	10.4	8.8	6.7	---	---	7.3	8.3
29	9.8	10.8	12.9	12.0	---	10.3	8.6	6.6	---	---	7.2	8.4
30	9.8	11.3	12.4	11.6	---	10.9	8.4	6.6	---	---	6.9	8.3
31	9.8	---	12.1	11.6	---	11.3	---	6.5	---	---	6.6	---
MEAN	---	---	12.0	12.3	11.8	11.3	9.6	7.6	---	---	---	7.4
MAX	---	---	12.9	13.1	12.7	11.9	11.3	8.6	---	---	---	8.4
MIN	---	---	11.0	11.6	11.2	10.3	8.4	6.5	---	---	---	6.5

KANAWHA RIVER BASIN

03185400 NEW RIVER AT THURMOND, WV--Continued

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	166	199	169	113	132	113	125	129	130	149	178	163
2	169	197	154	120	131	114	131	129	124	150	169	158
3	173	197	147	124	128	117	131	127	121	---	164	152
4	172	199	112	126	128	119	130	132	119	---	162	154
5	174	198	116	127	128	124	132	139	103	---	163	162
6	176	200	116	110	133	126	140	146	102	149	160	169
7	180	201	121	109	136	136	131	149	99	---	158	162
8	184	204	126	116	141	132	136	147	104	---	158	160
9	186	206	125	118	145	135	148	133	111	---	160	163
10	188	202	130	121	145	126	147	137	117	---	167	165
11	189	202	128	124	140	120	136	126	123	148	172	164
12	191	202	134	125	143	110	133	117	123	149	169	160
13	193	197	145	129	148	112	---	112	122	152	167	161
14	196	192	152	133	151	116	130	113	123	155	169	161
15	197	---	151	139	152	119	132	117	122	157	175	161
16	199	---	144	143	159	124	141	117	126	159	175	162
17	199	---	137	142	134	128	148	118	134	160	173	162
18	201	---	137	147	121	133	143	113	138	164	175	161
19	203	---	139	145	118	130	141	111	136	168	175	159
20	204	167	137	142	124	115	---	119	131	171	169	160
21	203	164	139	144	126	107	---	123	136	174	165	164
22	201	166	144	145	120	113	---	123	138	173	166	---
23	199	175	147	145	117	122	---	124	136	175	172	---
24	200	171	153	150	115	121	---	130	136	174	180	---
25	201	190	152	152	114	134	---	133	138	180	183	---
26	201	207	164	154	118	140	114	139	140	173	181	---
27	198	200	163	147	105	137	116	140	141	167	180	---
28	196	192	158	142	106	134	118	141	145	165	175	---
29	196	182	151	140	109	130	119	143	147	170	169	---
30	197	174	131	136	---	125	124	139	148	174	173	---
31	199	---	114	136	---	124	---	137	---	175	171	---
MEAN	191	---	140	134	130	124	---	129	127	---	170	---
MAX	204	---	169	154	159	140	---	149	148	---	183	---
MIN	166	---	112	109	105	107	---	111	99	---	158	---

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEDIAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	7.8	7.9	7.7	7.9	7.9	7.6	7.6	7.9	8.0
2	---	---	---	7.9	8.0	7.7	7.9	7.8	7.7	7.6	8.0	8.0
3	---	---	---	7.9	8.1	7.7	8.0	7.8	7.8	7.6	8.0	8.0
4	---	---	---	7.9	8.1	7.8	8.0	7.9	7.7	7.6	8.0	8.0
5	---	---	---	7.9	8.1	7.8	8.0	7.9	7.8	8.1	8.0	8.0
6	---	---	---	7.7	8.2	7.8	8.0	7.9	7.9	8.0	8.1	8.1
7	---	---	---	7.7	8.4	7.8	7.9	7.8	7.8	8.0	8.3	8.0
8	---	---	---	7.8	8.5	7.8	7.9	7.9	7.9	8.2	8.3	8.1
9	---	---	---	7.8	8.5	7.8	8.0	7.8	7.8	8.1	8.2	8.1
10	---	---	---	7.8	8.6	7.8	8.0	7.8	7.8	7.9	8.3	8.0
11	---	---	---	7.9	8.7	7.7	8.0	7.9	7.9	8.0	8.2	8.1
12	---	---	---	7.9	8.7	7.7	7.9	7.9	7.7	8.1	8.2	8.1
13	---	---	---	7.9	8.4	7.7	7.9	7.9	7.7	8.2	8.1	8.1
14	---	---	---	8.0	8.3	7.8	8.0	7.8	7.7	8.3	8.1	8.2
15	---	---	---	8.0	8.5	7.8	7.9	7.7	7.7	8.1	8.0	8.2
16	---	---	---	8.0	8.1	7.9	7.9	7.5	7.7	8.0	8.0	8.2
17	---	---	---	8.0	7.8	7.9	8.0	7.5	7.8	8.0	8.0	8.1
18	---	---	---	8.0	7.7	7.9	8.0	7.4	7.8	8.0	8.2	8.0
19	---	---	---	8.0	7.8	7.8	8.0	7.5	7.8	8.1	8.2	7.8
20	---	---	---	8.0	7.8	7.7	8.0	7.5	7.8	8.1	8.1	8.0
21	---	---	7.9	8.0	7.9	7.7	8.0	7.7	7.9	8.1	8.1	8.0
22	---	---	8.0	8.0	7.9	7.8	7.8	7.8	7.8	8.0	8.1	8.0
23	---	---	8.0	8.0	7.9	7.8	7.6	7.9	7.9	8.0	8.2	8.0
24	---	---	8.0	7.9	7.7	7.9	7.6	7.9	7.9	7.9	8.2	8.1
25	---	---	8.0	8.0	7.8	7.9	7.7	7.9	7.9	7.9	8.2	8.1
26	---	---	8.1	8.0	7.7	7.9	7.7	8.0	7.9	7.9	8.2	8.1
27	---	---	8.1	8.0	7.7	8.0	7.7	8.0	7.8	7.8	8.2	8.1
28	---	---	8.1	8.0	7.7	7.9	7.7	7.9	7.8	7.7	7.9	8.1
29	---	---	8.0	8.0	7.6	7.9	7.6	7.8	7.5	7.8	7.9	8.2
30	---	---	7.8	8.0	---	7.9	7.6	7.7	7.6	7.9	8.0	8.2
31	---	---	7.8	8.0	---	7.9	---	7.6	---	7.8	8.0	---
MAX	---	---	---	8.0	8.7	8.0	8.0	8.0	7.9	8.3	8.3	8.2
MIN	---	---	---	7.7	7.6	7.7	7.6	7.4	7.5	7.6	7.9	7.8
MED	---	---	---	8.0	8.0	7.8	7.9	7.8	7.8	8.0	8.1	8.1

KANAWHA RIVER BASIN

03185400 NEW RIVER AT THURMOND, WV--Continued

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19.7	14.1	9.8	4.8	3.5	6.4	7.4	13.2	14.3	24.2	25.5	24.3
2	20.2	13.6	9.8	5.1	2.8	6.8	7.5	15.3	14.9	24.2	25.2	24.1
3	20.6	12.3	10.2	5.5	2.8	7.6	6.8	17.0	16.6	24.9	25.4	24.0
4	20.6	10.4	10.0	6.0	3.7	8.5	6.3	16.4	18.0	24.7	25.8	24.3
5	20.9	8.9	8.3	7.4	4.6	9.6	6.0	15.8	16.5	24.6	25.3	24.5
6	19.6	8.1	7.0	7.1	4.1	10.4	6.9	16.1	15.9	24.8	24.6	24.7
7	17.6	7.7	6.6	6.3	4.0	10.7	7.3	15.4	16.3	24.8	24.2	25.0
8	16.1	7.6	6.9	5.7	3.8	10.9	8.1	14.8	17.3	24.9	24.5	25.5
9	15.4	7.5	7.4	5.7	3.2	11.1	9.5	13.8	17.9	25.4	25.3	26.1
10	15.3	7.3	8.0	5.5	2.6	11.5	10.8	13.2	18.5	26.1	26.3	25.8
11	15.9	6.6	7.5	4.9	2.8	9.5	12.4	14.0	18.1	26.7	26.8	25.3
12	16.2	7.5	7.4	4.8	4.2	7.1	12.6	15.7	17.7	27.2	26.7	24.3
13	16.2	7.6	8.0	5.5	4.6	5.6	12.8	17.2	18.0	27.6	25.5	23.5
14	15.4	7.1	8.6	6.1	4.4	5.3	13.4	17.8	18.8	27.8	24.6	23.8
15	15.0	7.8	7.1	4.5	5.2	5.4	13.4	18.0	19.7	28.1	25.2	24.2
16	14.3	---	5.3	2.8	5.4	5.0	14.3	17.6	20.0	28.0	24.5	24.6
17	13.9	---	4.5	2.0	4.9	5.4	14.8	17.8	20.5	27.8	24.4	24.5
18	13.6	---	4.4	2.5	5.1	6.3	15.2	17.5	20.5	27.5	24.4	24.1
19	13.7	---	3.3	1.5	5.9	6.9	15.9	17.6	20.9	27.5	24.3	23.5
20	13.7	10.8	2.2	.7	6.0	7.1	16.4	17.8	21.0	27.5	24.8	22.8
21	13.8	11.8	2.7	1.1	5.7	7.1	16.4	18.3	20.6	27.5	24.9	22.9
22	13.9	12.5	3.4	1.7	6.6	7.0	15.3	18.7	20.3	27.4	25.1	23.3
23	14.4	12.7	3.8	2.5	6.7	6.5	12.8	19.2	20.7	27.1	25.3	22.9
24	15.4	11.7	4.4	2.2	6.9	6.6	13.6	19.3	20.9	27.0	25.3	21.2
25	16.3	10.2	3.5	1.0	7.6	7.0	14.4	18.2	21.4	27.3	26.0	19.9
26	16.8	9.1	2.9	1.7	7.8	7.5	13.6	18.1	21.5	27.2	26.7	20.4
27	17.2	8.2	3.5	2.0	7.3	7.5	12.4	17.8	21.8	26.6	26.9	21.6
28	17.5	8.3	3.8	2.3	6.5	7.5	11.7	17.2	22.5	26.0	26.0	21.9
29	16.9	9.0	4.3	2.9	6.4	7.4	11.7	16.2	23.1	26.1	24.0	21.1
30	15.8	9.3	5.0	3.1	---	7.7	12.7	15.6	23.8	26.4	23.9	19.5
31	15.2	---	5.2	3.4	---	7.9	---	14.8	---	26.4	24.1	---
MEAN	16.4	---	6.0	3.8	5.0	7.6	11.7	16.6	19.3	26.4	25.2	23.5
MAX	20.9	---	10.2	7.4	7.8	11.5	16.4	19.3	23.8	28.1	26.9	26.1
MIN	13.6	---	2.2	.7	2.6	5.0	6.0	13.2	14.3	24.2	23.9	19.5

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.0	8.6	10.0	12.3	12.4	12.0	11.4	10.3	10.0	7.6	8.2	---
2	7.9	8.7	9.8	12.2	12.8	11.9	11.4	9.8	10.0	7.6	8.4	---
3	7.7	9.1	10.0	12.0	12.8	11.6	11.6	9.5	9.7	7.4	8.4	---
4	7.6	9.6	10.4	11.8	12.6	11.4	11.6	9.6	9.2	7.5	8.2	---
5	7.2	10.2	10.8	11.7	12.2	11.2	12.0	9.8	9.5	7.5	8.1	---
6	7.3	10.5	11.1	11.8	12.4	10.9	11.9	9.7	9.9	7.4	7.8	---
7	7.8	10.6	11.3	11.9	12.4	10.8	11.7	9.9	9.8	7.6	---	---
8	8.3	10.6	11.2	12.1	12.4	10.7	11.5	10.0	9.4	7.5	---	---
9	8.5	10.7	11.0	11.9	12.8	10.8	11.1	10.1	9.1	7.3	---	---
10	8.4	10.7	10.8	11.9	13.1	10.5	10.9	10.4	8.9	7.3	---	---
11	8.0	10.7	11.0	12.1	13.0	10.9	10.5	10.3	9.0	7.3	---	---
12	7.9	10.5	11.1	12.2	12.5	11.8	10.4	9.9	8.9	7.4	---	---
13	8.1	10.5	10.9	11.9	12.2	12.2	10.5	9.5	8.8	7.4	---	---
14	8.3	10.8	10.7	11.6	12.4	12.2	10.3	9.4	8.7	7.5	---	---
15	8.1	10.6	11.2	12.1	12.1	12.1	10.2	9.4	8.4	7.1	---	---
16	8.3	---	11.8	12.6	11.8	12.3	10.0	9.5	8.4	7.3	---	---
17	8.6	---	12.1	12.8	12.0	12.1	9.9	9.5	8.4	7.4	---	---
18	8.8	---	12.2	12.7	11.9	11.8	9.8	9.5	8.3	7.5	---	---
19	8.6	---	12.8	13.1	11.7	11.5	9.8	9.4	8.2	7.6	---	---
20	8.8	10.1	13.4	13.3	11.6	11.7	9.6	9.5	8.2	7.7	---	---
21	8.7	9.2	13.0	13.2	11.9	11.7	9.4	9.5	8.2	7.6	---	---
22	8.8	8.9	12.7	13.0	11.8	11.6	10.0	9.5	8.5	7.6	---	---
23	8.8	8.8	12.4	12.6	11.5	11.7	10.9	9.4	8.4	7.7	---	---
24	8.4	9.1	12.3	12.6	11.4	11.8	10.6	9.2	8.4	7.7	---	---
25	8.3	9.6	12.7	13.1	11.3	11.8	10.2	9.4	8.2	7.8	---	---
26	8.1	10.1	12.9	13.0	11.2	11.5	10.2	9.4	8.1	7.7	---	---
27	8.0	10.5	12.7	13.0	11.8	11.4	10.4	9.5	8.2	7.7	---	---
28	8.0	10.6	12.5	13.0	12.0	11.6	10.5	9.6	8.0	7.9	---	---
29	8.1	10.4	12.2	12.8	11.9	11.6	10.6	9.7	7.9	8.1	---	---
30	8.4	10.2	12.3	12.7	---	11.5	10.2	9.8	7.8	8.1	---	---
31	8.4	---	12.2	12.4	---	11.3	---	10.0	---	8.0	---	---
MEAN	8.2	---	11.7	12.4	12.1	11.5	10.6	9.7	8.7	7.6	---	---
MAX	8.8	---	13.4	13.3	13.1	12.3	12.0	10.4	10.0	8.1	---	---
MIN	7.2	---	9.8	11.6	11.2	10.5	9.4	9.2	7.8	7.1	---	---

KANAWHA RIVER BASIN

03185400 NEW RIVER AT THURMOND, WV--Continued

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	184	169	108	122	127	126	109	141	141	154	173	174
2	178	172	107	123	126	128	110	149	141	154	173	176
3	181	169	108	119	126	138	108	154	146	155	172	175
4	181	171	113	120	128	139	108	158	143	158	171	171
5	183	164	122	120	137	99	132	164	140	161	171	175
6	177	142	123	121	135	100	127	174	145	163	168	171
7	172	133	126	121	132	105	125	178	146	161	167	167
8	170	133	127	114	137	115	127	175	138	162	168	168
9	170	137	132	119	137	123	128	173	140	159	171	167
10	170	136	137	122	138	125	127	175	140	157	174	164
11	154	136	139	120	141	123	124	176	148	153	178	161
12	147	135	138	114	152	127	128	179	152	150	180	164
13	151	139	133	112	147	129	129	179	155	151	175	168
14	149	141	137	115	134	130	129	178	154	153	180	178
15	148	145	142	117	133	130	126	168	151	155	176	185
16	146	154	141	115	135	129	129	149	149	160	175	187
17	142	147	151	116	141	138	126	144	144	165	177	190
18	139	147	136	119	142	148	115	137	141	163	180	183
19	139	143	103	121	135	138	109	135	139	162	181	173
20	142	138	102	125	141	131	112	133	137	170	177	167
21	142	135	103	128	139	131	126	133	137	166	176	168
22	146	134	102	129	129	127	122	130	140	164	172	168
23	153	137	107	127	123	115	122	129	144	165	169	166
24	157	139	112	124	113	95	134	131	149	165	168	165
25	164	128	110	119	110	87	135	134	148	165	167	165
26	165	113	106	117	113	89	133	130	148	163	169	165
27	163	109	105	118	120	96	129	132	149	162	170	171
28	166	112	106	118	124	102	134	132	150	162	170	165
29	167	108	112	119	---	101	140	131	152	163	172	161
30	167	108	119	120	---	101	137	133	151	166	177	170
31	167	---	123	124	---	103	---	136	---	169	178	---
MEAN	161	139	120	120	132	118	125	151	145	161	173	171
MAX	184	172	151	129	152	148	140	179	155	170	181	190
MIN	139	108	102	112	110	87	108	129	137	150	167	161

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEDIAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.2	---	7.9	7.8	7.9	7.9	7.8	7.6	8.1	8.2	8.6	7.8
2	8.2	---	7.9	7.8	7.9	7.9	7.8	7.7	8.3	8.1	8.5	7.9
3	8.2	---	7.9	7.8	7.9	7.9	7.8	7.8	8.2	8.1	8.5	8.0
4	8.1	---	7.8	7.8	7.8	7.8	7.8	7.7	7.9	8.1	8.3	7.9
5	8.1	---	7.8	7.8	7.8	7.6	7.9	7.6	7.6	8.1	8.3	7.9
6	8.1	---	7.9	7.8	7.9	7.7	7.9	7.7	7.7	8.2	8.3	8.1
7	8.4	---	7.9	7.9	7.9	7.7	8.0	7.6	7.6	8.2	8.2	8.0
8	---	---	7.8	7.8	7.9	7.8	8.0	7.5	7.7	8.2	8.4	8.1
9	---	---	7.9	7.8	8.0	7.9	8.0	7.5	7.8	8.3	8.4	8.1
10	---	---	7.9	7.8	8.0	7.9	8.0	7.4	7.9	8.4	8.4	8.0
11	---	---	7.9	7.8	8.0	7.9	8.0	7.3	8.0	8.3	8.3	8.0
12	---	---	7.9	7.8	8.0	7.9	8.0	7.9	8.0	8.2	8.3	8.1
13	---	---	7.9	7.8	7.9	7.9	8.0	7.9	8.0	8.3	8.2	8.1
14	---	---	7.9	7.8	7.9	7.9	8.0	7.9	7.8	8.1	8.1	8.1
15	---	---	7.9	7.8	7.9	7.9	8.0	7.9	7.7	8.1	8.1	8.1
16	---	---	7.9	7.8	8.0	7.9	8.0	8.0	7.8	8.1	8.1	8.0
17	---	---	7.7	7.8	7.9	7.9	8.0	8.0	7.9	8.3	8.2	8.1
18	---	8.3	7.7	7.8	8.0	7.9	8.0	8.1	8.0	8.3	8.2	8.0
19	---	8.3	7.7	7.8	8.0	7.9	8.0	8.1	8.1	8.2	8.3	7.9
20	---	8.3	7.7	7.8	8.0	7.9	8.0	8.3	8.0	8.2	8.3	7.9
21	---	8.2	7.7	7.9	7.9	7.9	8.0	8.3	7.9	8.3	8.3	7.9
22	---	8.1	7.7	7.8	7.7	7.8	8.1	8.3	8.0	8.4	8.4	8.0
23	---	8.1	7.7	7.8	7.7	7.8	8.0	8.3	8.1	8.5	8.3	8.0
24	---	8.0	7.8	7.8	7.7	7.7	8.0	8.4	8.2	8.5	8.2	8.0
25	---	7.9	7.8	7.8	7.7	7.7	8.0	8.3	8.3	8.5	7.8	8.0
26	---	7.9	7.8	7.8	7.8	7.7	8.0	8.3	8.2	8.5	7.7	8.0
27	---	7.8	7.8	7.8	7.8	7.7	8.0	8.4	8.3	8.5	7.9	8.0
28	---	7.9	7.8	7.8	7.8	7.8	7.8	8.2	8.2	8.4	8.2	8.0
29	---	7.9	7.8	7.8	---	7.8	7.7	8.0	8.2	8.5	8.2	8.1
30	---	7.9	7.8	7.8	---	7.8	7.6	8.2	8.2	8.5	8.2	8.0
31	---	---	7.8	7.9	---	7.8	---	8.1	---	8.5	8.0	---
MAX	---	---	7.9	7.9	8.0	7.9	8.1	8.4	8.3	8.5	8.6	8.1
MIN	---	---	7.7	7.8	7.7	7.6	7.6	7.3	7.6	8.1	7.7	7.8
MED	---	---	7.8	7.8	7.9	7.9	8.0	8.0	8.0	8.3	8.3	8.0

KANAWHA RIVER BASIN

03185400 NEW RIVER AT THURMOND, WV--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18.4	14.3	8.6	6.9	4.7	2.9	9.6	15.7	20.7	25.9	26.0	27.5
2	18.2	14.6	7.3	6.2	3.5	3.7	9.6	16.8	20.4	26.3	25.6	27.0
3	18.8	14.9	6.9	6.6	3.2	4.7	9.0	17.3	20.9	26.6	26.3	26.9
4	18.8	14.8	6.5	7.2	3.9	5.5	8.7	17.1	21.2	26.7	26.2	26.5
5	18.4	14.3	5.8	7.8	4.0	5.4	8.7	17.5	20.2	27.5	25.9	25.7
6	17.8	13.0	4.3	7.2	4.1	5.3	8.9	18.0	20.2	28.0	25.0	25.4
7	17.5	12.3	4.3	8.3	4.4	5.2	9.3	18.0	20.8	28.3	24.2	25.3
8	17.6	11.6	4.3	8.1	4.5	5.6	9.9	18.5	21.7	28.4	24.4	25.1
9	18.5	10.6	3.5	7.8	5.2	6.1	10.8	19.7	22.9	28.7	25.2	25.1
10	18.6	10.3	3.4	7.4	5.6	6.1	11.0	20.1	23.8	28.9	25.6	24.8
11	18.0	10.7	3.0	6.8	6.3	5.7	10.7	20.7	24.2	28.5	25.2	23.6
12	17.6	11.0	3.3	6.5	7.0	5.4	11.1	20.2	24.4	27.8	24.9	22.4
13	17.2	10.9	3.7	6.8	6.6	4.0	11.7	19.4	24.2	28.0	24.8	22.1
14	17.1	9.4	3.9	6.5	5.4	2.1	13.0	19.0	23.2	28.0	24.9	22.9
15	17.6	8.9	4.1	6.4	5.4	1.4	13.5	19.1	23.5	28.1	25.7	23.5
16	17.6	8.2	4.8	6.0	5.4	2.1	14.2	19.4	23.8	28.4	26.2	23.6
17	16.8	8.5	5.4	5.5	4.7	2.7	13.5	19.7	24.0	28.2	26.3	23.7
18	15.1	9.4	6.0	5.4	3.6	3.6	12.0	19.5	24.5	28.1	26.4	23.7
19	13.5	9.6	6.3	5.0	2.8	4.3	11.5	19.6	25.4	28.1	26.6	23.0
20	12.1	9.4	6.6	4.8	3.1	4.4	12.5	18.6	26.0	28.5	26.9	22.7
21	12.0	9.5	6.1	5.2	3.1	5.4	13.4	18.1	25.9	28.3	26.7	22.9
22	13.1	10.3	6.2	5.3	3.6	6.4	12.4	17.5	25.0	27.9	26.6	23.0
23	14.2	11.1	6.5	5.7	4.2	6.7	12.2	17.3	25.2	27.5	26.6	22.6
24	14.4	11.0	6.2	5.7	3.7	6.7	12.1	18.1	25.7	27.4	26.6	22.2
25	13.9	11.0	5.3	5.2	2.6	7.0	12.6	18.9	26.2	27.9	27.2	21.3
26	13.2	11.4	4.5	4.6	2.1	7.2	13.5	18.5	25.7	28.5	27.9	20.9
27	13.0	10.8	3.3	4.1	2.2	7.1	13.1	19.2	25.1	28.8	28.0	20.6
28	13.2	10.2	3.6	3.9	2.4	7.7	14.3	20.1	25.4	28.8	27.8	19.8
29	14.0	9.6	4.1	4.2	---	8.3	15.0	20.9	25.9	29.2	27.6	19.2
30	14.2	8.7	4.9	3.6	---	8.6	15.4	20.9	25.6	28.2	27.8	18.3
31	14.2	---	5.8	4.2	---	8.9	---	21.0	---	27.0	27.6	---
MEAN	16.0	11.0	5.1	6.0	4.2	5.4	11.8	18.9	23.7	28.0	26.2	23.4
MAX	18.8	14.9	8.6	8.3	7.0	8.9	15.4	21.0	26.2	29.2	28.0	27.5
MIN	12.0	8.2	3.0	3.6	2.1	1.4	8.7	15.7	20.2	25.9	24.2	18.3

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	10.8	11.3	11.7	12.0	10.2	8.9	7.8	7.0	---	7.4
2	---	---	11.1	11.5	12.2	11.6	10.2	8.7	7.9	6.9	---	7.6
3	---	---	11.3	11.4	12.4	11.3	10.3	8.6	7.8	6.9	---	7.7
4	---	---	11.4	11.3	12.2	10.9	10.3	8.5	7.6	6.8	---	7.6
5	---	---	11.5	11.0	12.0	11.3	10.2	8.5	7.6	6.8	---	8.0
6	---	---	12.0	11.2	11.9	11.5	10.2	8.4	7.7	6.8	---	8.1
7	---	---	11.9	11.0	11.7	11.5	10.2	8.4	7.8	6.8	---	8.1
8	---	---	12.0	10.9	11.7	11.2	10.0	8.4	7.8	6.6	---	8.1
9	---	---	12.3	11.0	11.6	11.0	9.7	8.2	7.6	---	---	8.0
10	8.7	---	12.1	11.2	11.5	10.9	9.6	8.1	7.6	---	---	7.9
11	8.5	---	12.1	11.4	11.2	11.0	9.8	7.7	7.5	---	---	8.3
12	8.7	---	12.2	11.5	10.9	11.1	9.7	7.7	7.6	---	---	8.5
13	8.9	---	12.2	11.3	10.7	11.0	9.7	7.7	7.5	---	---	8.6
14	9.0	---	12.2	11.4	11.1	11.8	9.3	8.0	7.6	---	---	8.5
15	9.0	---	12.1	11.5	11.3	12.3	9.2	8.0	7.4	---	---	8.4
16	8.8	---	11.8	11.5	11.3	12.2	9.1	7.9	7.6	---	---	8.3
17	9.0	---	11.6	11.6	11.4	11.8	9.2	7.9	7.7	---	---	8.4
18	9.3	11.1	11.7	11.7	11.8	11.6	9.7	7.9	7.7	---	---	8.2
19	9.6	11.1	11.7	11.9	12.1	11.6	9.7	7.8	7.7	---	---	8.3
20	9.9	11.1	11.4	12.0	11.8	11.5	9.5	8.0	7.6	---	7.7	8.3
21	10.0	11.0	11.5	11.8	11.7	11.2	9.1	8.2	7.4	---	7.9	8.2
22	9.9	10.7	11.5	11.6	11.5	11.1	9.3	8.4	7.7	---	7.9	8.4
23	9.6	10.4	11.4	11.7	11.6	11.0	9.5	8.4	7.7	---	8.0	8.4
24	9.4	10.4	11.5	11.5	11.8	11.1	9.5	8.4	7.6	---	7.9	8.5
25	9.5	10.4	11.8	11.8	12.0	11.0	9.5	8.1	7.3	---	7.9	8.6
26	9.7	10.3	12.1	12.0	12.1	11.1	9.1	8.2	7.1	---	7.8	8.6
27	9.6	10.5	12.4	12.0	12.1	11.0	9.4	8.2	7.4	---	7.7	8.6
28	9.6	10.5	12.4	12.1	12.1	10.8	9.2	8.1	7.2	---	7.7	8.9
29	9.5	10.7	12.2	12.0	---	10.7	9.1	7.7	7.1	---	7.8	9.0
30	9.3	10.9	12.0	12.3	---	10.6	9.0	7.9	7.3	---	7.8	9.1
31	9.3	---	11.6	12.0	---	10.4	---	7.6	---	---	7.6	---
MEAN	---	---	11.8	11.6	11.7	11.3	9.6	8.1	7.6	---	---	8.3
MAX	---	---	12.4	12.3	12.4	12.3	10.3	8.9	7.9	---	---	9.1
MIN	---	---	10.8	10.9	10.7	10.4	9.0	7.6	7.1	---	---	7.4

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KANAWHA RIVER BASIN

03186500 WILLIAMS RIVER AT DYER, WV

LOCATION.--Lat 38°22'44", long 80°29'03", Webster County, Hydrologic Unit 05050005, on left bank at Dyer, 0.2 mi downstream from Craig Run, 7.0 mi southwest of Webster Springs, and at mile 2.3.

DRAINAGE AREA.--128 mi².

PERIOD OF RECORD.--September 1929 to current year. Monthly discharge only for some periods, published in WSP 1305.

REVISED RECORDS.--WSP 1275: 1930.

GAGE.--Water-stage recorder. Datum of gage is 2,193.46 ft above sea level, adjustment of 1912. Prior to June 11, 1930, nonrecording gage at same site and datum.

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

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 4,600 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage Height (ft)	Date	Time	Discharge (ft ³ /s)	Gage Height (ft)
Dec. 17	1430	*5,110	*7.95	Apr. 1	0500	4,950	7.82
Mar. 24	0230	4,970	7.84				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	25	114	896	e140	e180	3030	243	103	14	2.5	e5.0
2	13	31	105	568	e130	200	1550	204	81	17	6.8	e4.5
3	12	378	102	437	e120	238	1000	172	61	29	e13	e5.0
4	11	185	91	344	e110	2050	712	152	59	81	e27	e10
5	13	127	155	516	e100	1750	555	146	295	76	e16	e35
6	21	137	129	467	e90	903	451	129	223	31	e45	e27
7	18	115	124	359	e82	622	382	111	132	19	e120	e20
8	14	94	106	349	e75	592	407	97	100	13	e60	e11
9	12	80	98	363	e70	577	455	88	83	11	e35	e9.0
10	11	71	109	314	e65	516	861	83	132	8.7	e22	e8.0
11	18	66	133	278	71	498	780	151	99	8.1	e15	e10
12	17	68	131	357	78	379	607	131	77	10	e12	e9.0
13	17	805	126	386	100	e300	460	206	198	7.7	e9.0	e8.0
14	15	324	124	361	102	e240	379	180	345	6.7	e8.0	e7.0
15	13	218	168	307	85	e200	332	133	182	6.8	e7.0	e6.0
16	12	167	1110	275	97	e350	1260	116	132	7.2	e6.5	e13
17	11	139	3540	235	217	e600	932	248	99	6.8	e7.0	e25
18	10	134	1970	201	205	752	623	235	78	6.2	e9.0	e30
19	11	117	973	174	e160	498	467	1260	63	5.9	e15	e35
20	11	102	1920	150	e110	397	363	744	52	7.4	e11	e27
21	11	96	1310	168	390	560	405	485	45	14	e8.0	e100
22	11	341	805	384	1180	669	482	353	41	13	e7.0	e140
23	11	629	1950	345	751	1510	420	263	38	8.7	e6.5	e60
24	12	378	1320	324	520	3290	367	206	31	6.6	e6.0	e40
25	13	295	792	398	e370	2540	309	164	24	5.3	e5.6	e35
26	17	240	566	318	e290	2310	457	141	20	4.5	e5.4	e120
27	17	200	394	318	e240	2450	619	115	17	3.9	e5.0	e300
28	15	172	398	270	e200	2260	467	94	16	3.4	e4.5	e350
29	14	146	425	241	---	2400	366	80	16	3.9	e5.5	e150
30	14	125	671	172	---	1710	295	72	15	2.9	e7.0	e100
31	16	---	893	e150	---	1500	---	66	---	2.6	e6.0	---
TOTAL	426	6005	20852	10425	6148	33041	19793	6868	2857	441.3	513.3	1699.5
MEAN	13.7	200	673	336	220	1066	660	222	95.2	14.2	16.6	56.6
MAX	21	805	3540	896	1180	3290	3030	1260	345	81	120	350
MIN	10	25	91	150	65	180	295	66	15	2.6	2.5	4.5
CF5M	.11	1.56	5.26	2.63	1.72	8.33	5.15	1.73	.74	.11	.13	.44
IN.	.12	1.75	6.06	3.03	1.79	9.60	5.75	2.00	.83	.13	.15	.49

e Estimated

KANAWHA RIVER BASIN

03186500 WILLIAMS RIVER AT DYER, WV--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1929 - 1993, BY WATER YEAR (WY)

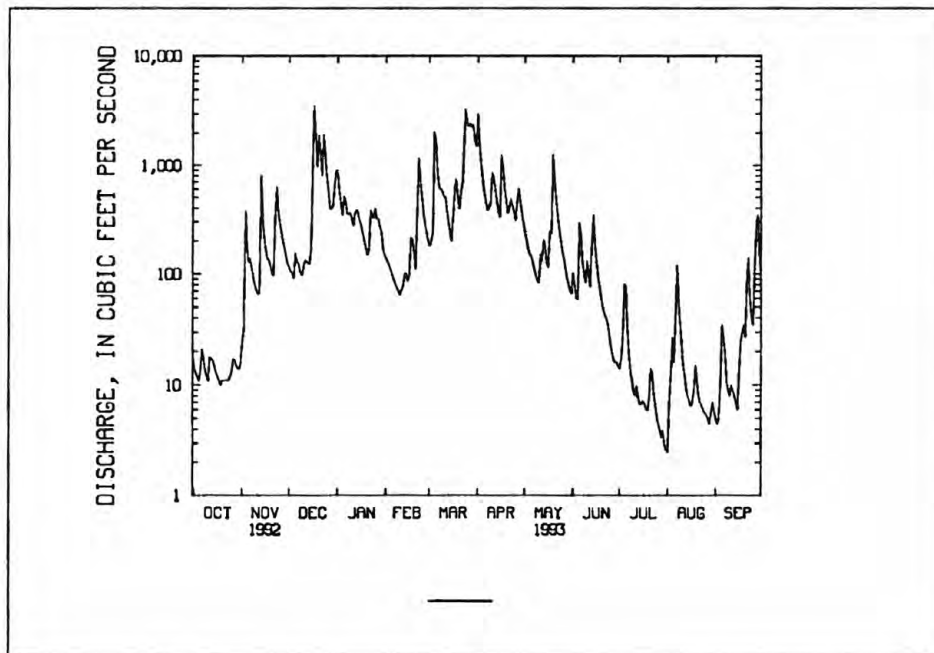
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	171	295	425	446	512	662	499	347	203	185	170	91.3
MAX	852	1085	934	903	1005	1518	1421	826	769	803	710	408
(WY)	1930	1986	1979	1974	1939	1963	1958	1967	1940	1954	1989	1950
MIN	1.07	8.87	94.9	75.7	118	326	177	66.1	19.5	5.85	6.97	2.34
(WY)	1954	1954	1940	1940	1978	1976	1942	1964	1965	1930	1944	1953

SUMMARY STATISTICS	FOR 1992 CALENDAR YEAR				FOR 1993 WATER YEAR				WATER YEARS 1929 - 1993			
ANNUAL TOTAL	120280				109069.1							
ANNUAL MEAN	329				299				333			
HIGHEST ANNUAL MEAN									470			
LOWEST ANNUAL MEAN									187			
HIGHEST DAILY MEAN	3540				Dec 17				10000			
LOWEST DAILY MEAN	10				Oct 18				.50			
ANNUAL SEVEN-DAY MINIMUM	11				Oct 17				.54			
INSTANTANEOUS PEAK FLOW					5110				Dec 17			
INSTANTANEOUS PEAK STAGE					7.95				Dec 17			
INSTANTANEOUS LOW FLOW					2.3				Aug 2			
ANNUAL RUNOFF (CFSM)	2.57				2.33				2.60			
ANNUAL RUNOFF (INCHES)	34.96				31.70				35.36			
10 PERCENT EXCEEDS	796				747				760			
50 PERCENT EXCEEDS	199				120				180			
90 PERCENT EXCEEDS	22				7.9				20			

a Oct. 13-16, 21, 1953.

b From rating curve extended above 7,000 ft³/s on basis of slope-area measurements at gage heights 12.33 ft and 1845.ft.

c From floodmarks.



KANAWHA RIVER BASIN

03187500 CRANBERRY RIVER NEAR RICHWOOD, WV

LOCATION.--Lat 38°17'43", long 80°31'36", Nicholas County, Hydrologic Unit 05050005, Monongahela National Forest, on left bank 30 ft downstream from U.S. Forest Service highway bridge, 0.6 mi upstream from Barrenshe Run, 5.0 mi north of Richwood, and at mile 5.6.

DRAINAGE AREA.--80.4 mi².

PERIOD OF RECORD.--October 1944 to December 1951, June 1964 to September 1982, March 1984 to current year.

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

GAGE.--Water-stage recorder. Elevation of gage is 2,100 ft above sea level, from topographic map.

REMARKS.--Records good except those for periods of estimated daily discharges (ice effect) and periods below 5 cfs, 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. 17	1400	3,340	6.85	Apr. 1	0430	*3,470	*6.94
Mar. 24	0200	3,100	6.68				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	18	75	597	e80	e100	2240	166	86	11	.55	2.4
2	9.1	21	70	364	e72	110	1130	135	64	14	2.1	4.0
3	8.4	250	68	267	e66	122	715	113	47	22	20	3.3
4	8.1	129	60	218	e60	1100	497	101	46	18	23	26
5	9.0	90	94	359	e55	1070	386	95	313	23	14	43
6	14	95	89	306	e52	572	304	84	220	15	41	19
7	12	81	80	231	e48	389	258	73	131	11	110	12
8	9.7	67	70	226	e44	353	265	63	100	8.7	37	8.2
9	8.1	57	65	230	e40	307	295	57	83	7.3	20	6.4
10	7.6	50	69	195	e38	263	507	52	157	6.1	13	7.1
11	13	47	80	173	44	e210	440	52	108	5.7	10	5.7
12	12	46	76	212	48	e190	350	66	87	12	8.1	8.4
13	13	617	75	225	60	e160	270	104	181	9.0	6.5	6.8
14	11	229	74	211	62	e140	223	97	290	6.7	5.5	5.2
15	9.3	150	102	180	53	e120	194	78	149	5.7	4.9	5.1
16	8.3	113	768	161	56	156	737	69	109	5.1	4.0	11
17	7.6	95	2410	141	102	288	543	121	83	4.3	5.2	30
18	6.8	88	1340	120	90	425	352	132	67	3.7	12	27
19	6.9	77	622	104	e75	305	266	769	56	3.5	9.9	60
20	7.2	68	1390	89	e65	244	212	467	46	3.7	8.3	25
21	7.2	63	882	94	89	336	239	311	38	9.7	6.7	107
22	7.5	193	510	233	332	399	289	228	35	8.2	5.5	90
23	7.5	379	1400	195	380	917	260	170	32	5.6	4.7	41
24	7.9	232	889	178	287	2260	230	132	26	4.3	3.9	30
25	9.0	185	493	198	209	1720	197	105	21	3.3	3.4	28
26	12	153	342	159	e170	1580	292	90	18	2.9	3.1	176
27	12	126	237	156	e140	1760	388	75	15	2.2	2.6	278
28	11	108	242	140	e110	1620	298	63	14	1.8	2.1	256
29	10	94	261	128	---	1630	235	53	14	1.5	2.0	113
30	9.8	80	393	93	---	1130	191	48	12	1.1	1.8	75
31	11	---	561	e85	---	1080	---	43	---	.75	1.7	---
TOTAL	297.0	4001	13887	6268	2927	21056	12803	4212	2648	236.85	392.55	1509.6
MEAN	9.58	133	448	202	105	679	427	136	88.3	7.64	12.7	50.3
MAX	14	617	2410	597	380	2260	2240	769	313	23	110	278
MIN	6.8	18	60	85	38	100	191	43	12	.75	.55	2.4
CFSM	.12	1.66	5.57	2.51	1.30	8.45	5.31	1.69	1.10	.10	.16	.63
IN.	.14	1.85	6.43	2.90	1.35	9.74	5.92	1.95	1.23	.11	.18	.70

e Estimated

KANAWHA RIVER BASIN

03187500 CRANBERRY RIVER NEAR RICHWOOD, WV--Continued

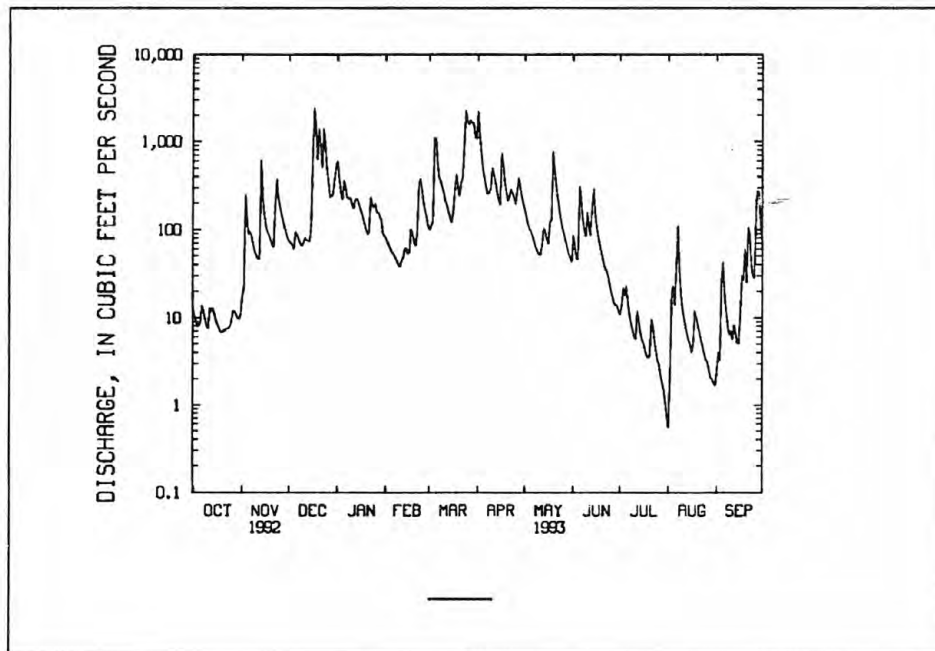
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1945-1952, 1964-1982, 1984-1993, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	128	223	327	308	342	445	324	258	153	120	110	88.2
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	9.58	36.7	63.0	40.3	68.2	245	137	86.1	12.7	7.64	8.56	2.50
(WY)	1993	1947	1966	1977	1978	1976	1946	1991	1966	1993	1946	1946

SUMMARY STATISTICS	FOR 1992 CALENDAR YEAR		FOR 1993 WATER YEAR		WATER YEARS 1945 - 1993	
ANNUAL TOTAL	75028.0		70238.00			
ANNUAL MEAN	205		192		235	
HIGHEST ANNUAL MEAN					318	
LOWEST ANNUAL MEAN					156	
HIGHEST DAILY MEAN	2410		2410		6770	
LOWEST DAILY MEAN	6.8		.55		.16	
ANNUAL SEVEN-DAY MINIMUM	7.2		1.4		.28	
INSTANTANEOUS PEAK FLOW			3470		a11200	
INSTANTANEOUS PEAK STAGE			6.94		b11.93	
INSTANTANEOUS LOW FLOW			.45		.14	
ANNUAL RUNOFF (CFSM)	2.55		2.39		2.92	
ANNUAL RUNOFF (INCHES)	34.71		32.50		39.63	
10 PERCENT EXCEEDS	484		409		535	
50 PERCENT EXCEEDS	113		80		131	
90 PERCENT EXCEEDS	15		5.7		17	

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.

c Aug. 1, 2. Rating poorly defined below 5 ft³/s.

KANAWHA RIVER BASIN

03189100 GAULEY RIVER NEAR CRAIGSVILLE, WV

LOCATION.--Lat 38°17'27", long 80°38'57", Nicholas County, Hydrologic Unit 05050005, on right bank at downstream side of highway bridge on State Highway 20, 200 ft downstream from Cherry River, 1.8 mi downstream from Cranberry River, 2.7 mi south of Craigsville, and at mile 61.5.

DRAINAGE AREA.--529 mi².

PERIOD OF RECORD.--October 1964 to September 1982, October 1982 to September 1983 (gauge heights, discharge measurements, and annual maximum discharge only), October 1985 to current year.

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

GAGE.--Water stage recorder. Datum of gage is 1,870.00 ft above sea level.

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

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 12,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage Height (ft)	Date	Time	Discharge (ft ³ /s)	Gage Height (ft)
Dec. 17	1700	16,900	17.12	Mar. 24	0500	*17,300	*17.24
Mar. 4	2100	12,900	15.86	Apr. 1	0800	12,200	15.65

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	60	68	392	3090	e480	687	9200	1100	410	69	15	23
2	51	93	365	2170	417	750	6100	906	349	211	17	20
3	46	740	359	1650	388	898	4300	746	268	148	130	20
4	44	731	331	1350	e380	6750	3050	637	245	270	119	70
5	45	433	530	1710	e360	8430	2370	594	1550	491	68	154
6	61	406	523	1770	e340	4140	1940	539	1470	235	168	98
7	61	391	502	1390	e330	2720	1590	465	811	148	527	69
8	59	321	429	1350	e320	2530	1510	405	563	102	267	48
9	51	282	370	1450	e300	2570	1540	366	440	75	143	37
10	46	248	424	1300	285	2180	2550	355	504	59	88	36
11	53	229	669	1150	274	2120	2800	357	452	51	64	46
12	57	225	625	1250	281	1620	2200	435	372	58	50	41
13	67	2170	544	1360	334	e1200	1750	1020	567	55	42	35
14	62	1300	519	1370	377	e950	1430	878	1130	45	36	29
15	55	815	617	1200	319	e850	1210	623	638	39	31	27
16	49	593	3250	1070	324	1040	2750	508	458	35	28	42
17	45	481	12500	934	727	2020	2990	817	358	32	28	124
18	41	435	8500	785	753	3520	2100	985	289	30	38	137
19	39	408	4040	653	508	2460	1650	5020	245	32	65	159
20	37	364	6410	553	e420	1950	1340	3460	208	38	47	119
21	37	329	5530	556	1240	2740	1500	2240	179	38	37	424
22	38	650	3340	1150	4810	3460	2140	1590	167	37	31	637
23	38	1860	6520	1240	3260	6400	2080	1160	152	33	28	259
24	38	1340	5620	1160	2130	13400	1780	893	128	31	27	175
25	42	1010	3270	1380	1460	9310	1480	688	101	27	25	148
26	45	826	2320	1190	e1100	8450	1900	574	83	25	25	577
27	50	673	1580	1120	e950	8840	2900	471	72	23	23	1420
28	53	565	1480	988	e750	7750	2280	391	63	21	21	1680
29	50	492	1630	894	---	7990	1760	330	63	19	22	651
30	49	427	2100	653	---	6080	1380	295	65	17	31	389
31	53	---	2900	e550	---	5170	---	286	---	16	27	---
TOTAL	1522	18905	78189	38436	23617	128975	73570	29134	12400	2510	2268	7694
MEAN	49.1	630	2522	1240	843	4160	2452	940	413	81.0	73.2	256
MAX	67	2170	12500	3090	4810	13400	9200	5020	1550	491	527	1680
MIN	37	68	331	550	274	687	1210	286	63	16	15	20
CF5M	.09	1.19	4.77	2.34	1.59	7.86	4.64	1.78	.78	.15	.14	.48
IN.	.11	1.33	5.50	2.70	1.66	9.07	5.17	2.05	.87	.18	.16	.54

e Estimated

KANAWHA RIVER BASIN

03189100 GAULEY RIVER NEAR CRAIGSVILLE, WV--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1965-1982, 1986-1993, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	831	1379	2037	1801	2043	2665	2057	1537	932	721	676	494
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	49.1	302	341	464	551	1433	894	463	100	72.7	67.9	119
(WY)	1993	1979	1966	1977	1978	1976	1976	1991	1991	1991	1988	1991

SUMMARY STATISTICS

FOR 1992 CALENDAR YEAR

FOR 1993 WATER YEAR

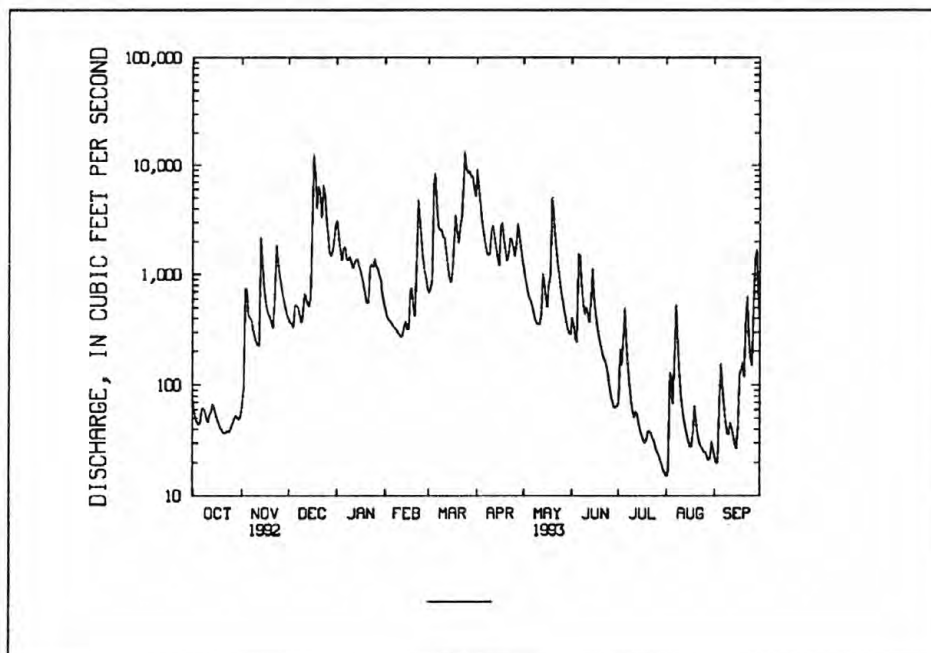
WATER YEARS 1965 - 1993

ANNUAL TOTAL	462260		417220									
ANNUAL MEAN	1263		1143							1429		
HIGHEST ANNUAL MEAN										1914		1979
LOWEST ANNUAL MEAN										866		1966
HIGHEST DAILY MEAN	12500	Dec 17		13400	Mar 24		29800	Oct 9	1976			
LOWEST DAILY MEAN	37	(a)		15	Aug 1		8.5	Aug 21	1987			
ANNUAL SEVEN-DAY MINIMUM	38	Oct 18		18	Jul 27		11	Aug 16	1987			
INSTANTANEOUS PEAK FLOW				17300	Mar 24		b61800	Nov 4	1985			
INSTANTANEOUS PEAK STAGE				17.24	Mar 24		25.72	Nov 4	1985			
INSTANTANEOUS LOW FLOW				15	(c)		7.6	Aug 22	1987			
ANNUAL RUNOFF (CFSM)	2.39			2.16			2.70					
ANNUAL RUNOFF (INCHES)	32.51			29.34			36.70					
10 PERCENT EXCEEDS	2850			2840			3280					
50 PERCENT EXCEEDS	803			440			819					
90 PERCENT EXCEEDS	73			37			124					

a Oct. 20, 21.

b From rating curve extended above 35,000 ft³/s.

c Aug. 1, 2.



KANAWHA RIVER BASIN

03189600 GAULEY RIVER BELOW SUMMERSVILLE DAM, WV

LOCATION.--Lat 38°12'54", long 80°53'18", Nicholas County, Hydrologic Unit 05050005, on right bank 0.4 mi downstream from Summersville Dam, 5.0 mi southwest of Summersville, and at mile 35.3.

DRAINAGE AREA.--806 mi².

PERIOD OF RECORD.--March 1966 to September 1982, October 1986 to current year. October 1982 to September 1986 gage heights, discharge measurements, and annual maximum discharge only.

REVISED RECORDS.--WDR WV-67: 1966. WDR WV-82-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,350.00 ft above sea level (levels by U.S. Army Corps of Engineers).

REMARKS.--Records good, except those below 200 cfs, which are fair, and those below 100 cfs which are poor. Flow regulated since May 1965 by Summersville Lake. U.S. Army Corps of Engineers satellite telemeter at station.

PEAK DISCHARGE FOR CURRENT YEAR.--Maximum discharge, 15,100 ft³/s, Mar. 25, gage height, 18.38 ft.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	485	437	544	2930	855	1240	3410	1850	270	156	890	106
2	1420	437	384	4000	413	1220	439	1230	191	211	1010	390
3	1540	436	474	2750	564	1220	234	1130	254	303	1080	847
4	1470	301	449	1980	702	4510	200	958	389	628	1070	847
5	1360	105	487	1860	574	14600	201	660	2610	547	1070	790
6	436	1040	750	1860	573	9480	201	602	2070	545	687	736
7	435	2370	899	1860	458	4820	200	604	1120	256	198	735
8	434	2680	702	2090	419	3700	201	605	726	183	198	541
9	1350	2660	463	1980	419	3850	201	529	653	213	279	536
10	1130	2250	628	1830	421	3510	203	472	767	447	307	997
11	1170	1950	974	1830	422	3630	203	473	1030	679	203	1380
12	1370	1940	1150	1830	422	2870	203	562	813	400	203	1390
13	486	2410	955	1580	423	2180	209	1730	627	190	203	1020
14	484	2770	808	1650	479	2210	215	1990	814	189	203	414
15	484	2640	811	1800	544	1670	186	993	1120	189	203	316
16	552	1800	1980	1800	507	1830	142	623	704	189	203	360
17	2180	1350	10700	1660	632	2180	183	623	479	189	204	811
18	1960	1340	13800	1260	1450	4820	184	1660	343	189	203	1310
19	558	1140	8860	941	1030	4320	184	7340	326	253	203	1310
20	459	1260	6230	942	786	3080	185	4700	307	360	165	970
21	442	1160	8470	944	1110	3750	193	2780	287	360	280	268
22	443	1180	6280	971	5640	5770	198	2120	287	579	674	105
23	443	2290	4650	1480	7180	8110	1420	1550	285	862	488	186
24	442	2560	10200	1700	3830	11100	2630	1180	236	643	360	973
25	441	2040	4070	1980	2360	8760	2480	1040	200	490	488	1380
26	440	2030	4070	1860	1980	14900	2890	1040	201	536	488	1380
27	440	1700	3230	1530	2080	14300	3560	965	201	357	449	1010
28	439	1350	1930	1250	1240	12100	3130	659	177	189	333	265
29	438	870	2060	979	---	9670	2520	508	155	287	196	107
30	439	646	2320	813	---	8360	2260	505	154	636	107	282
31	438	---	2330	901	---	6100	---	376	---	890	106	---
TOTAL	24608	47142	101658	52841	37513	179860	28665	42057	17796	12145	12751	21762
MEAN	794	1571	3279	1705	1340	5802	955	1357	593	392	411	725
MAX	2180	2770	13800	4000	7180	14900	3560	7340	2610	890	1080	1390
MIN	434	105	384	813	413	1220	142	376	154	156	106	105

KANAWHA RIVER BASIN

03189600 GAULEY RIVER BELOW SUMMERSVILLE DAM, WV--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966-1982, 1987-1993, BY WATER YEAR (WY)
[REGULATED, UNADJUSTED]

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	2086	2644	2867	2709	2687	3336	1468	2070	1450	1023	1117	1192
MAX	5705	5258	4995	5825	5087	5802	5468	4806	3888	3052	3882	3352
(WY)	1977	1973	1973	1974	1982	1993	1966	1967	1981	1979	1989	1971
MIN	484	159	817	596	729	1408	52.2	141	122	186	19.0	490
(WY)	1989	1979	1990	1977	1967	1976	1971	1991	1991	1991	1966	1967

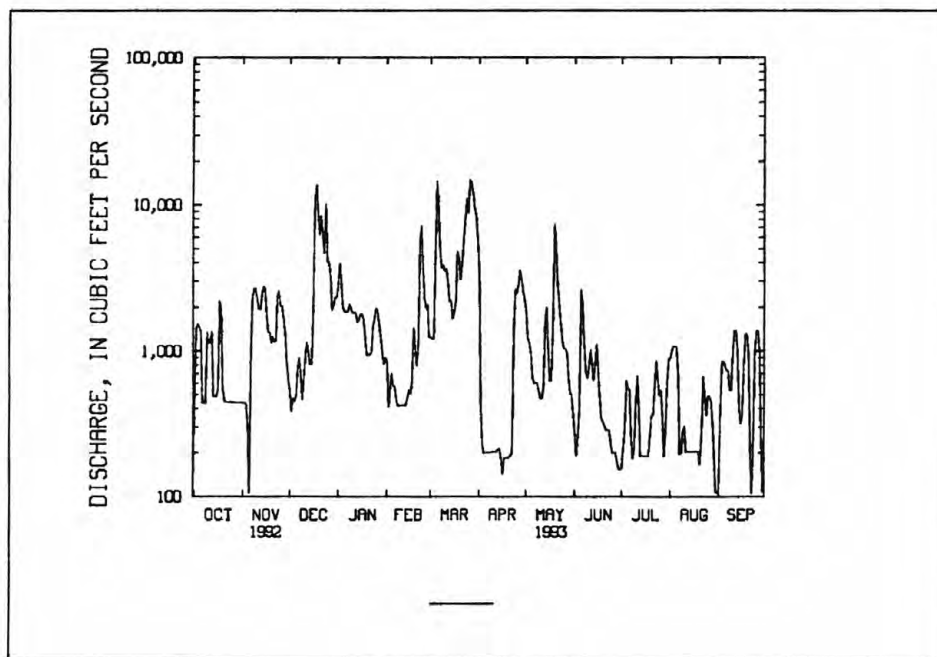
SUMMARY STATISTICS	FOR 1992 CALENDAR YEAR				FOR 1993 WATER YEAR				WATER YEARS 1966 - 1993			
ANNUAL TOTAL	611964				578798							
ANNUAL MEAN	1672				1586				2050			
HIGHEST ANNUAL MEAN									2741			
LOWEST ANNUAL MEAN									1346			
HIGHEST DAILY MEAN	13800				Dec 18				14900			
LOWEST DAILY MEAN	105				Nov 5				105			
ANNUAL SEVEN-DAY MINIMUM	170				Apr 2				178			
INSTANTANEOUS PEAK FLOW									15100			
INSTANTANEOUS PEAK STAGE									18.38			
INSTANTANEOUS LOW FLOW									c52			
10 PERCENT EXCEEDS	3200				3590				4760			
50 PERCENT EXCEEDS	1220				808				1280			
90 PERCENT EXCEEDS	356				201				184			

a Nov. 5, Sept. 22.

b Feb. 10, 13-16, 1967.

c Rating poor below 100 ft³/s.

d Feb. 16, 17, 1967.



KANAWHA RIVER BASIN

03190400 MEADOW RIVER NEAR MOUNT LOOKOUT, WV

LOCATION.--Lat 38°11'23", long 80°56'49", Nicholas County, Hydrologic Unit 05050005, on right bank 1,000 ft upstream from mouth, and 2.5 mi northwest of Mount Lookout.

DRAINAGE AREA.--365 mi².

PERIOD OF RECORD.--September 1966 to September 1983, October 1985 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 1,200 ft, above sea level, from topographic map.

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

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

Date	Time	Discharge (ft ³ /s)	Gage Height (ft)	Date	Time	Discharge (ft ³ /s)	Gage Height (ft)
Dec. 17	1930	5,490	8.77	Mar. 24	0300	*9,470	*10.59
Mar. 4	2330	7,620	9.82				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	27	36	171	938	e310	e450	2170	672	213	61	12	14
2	25	31	161	819	e260	536	2460	560	196	133	12	12
3	22	52	154	697	233	633	2170	468	160	272	12	11
4	19	192	144	599	e230	3990	1770	400	150	368	58	36
5	19	161	174	579	e220	6870	1410	385	2320	525	78	75
6	22	131	209	628	e210	4540	1170	356	1940	322	90	49
7	52	127	249	581	211	2640	946	317	1190	219	122	35
8	47	117	232	600	200	1910	827	277	829	178	132	30
9	36	99	187	724	192	1780	741	241	569	122	87	25
10	29	87	190	758	182	1640	928	221	399	85	61	24
11	26	79	236	722	173	1550	1190	241	316	66	49	43
12	25	77	240	708	175	1280	1120	270	250	55	46	44
13	25	171	250	767	188	e900	955	448	1100	49	45	32
14	26	440	240	776	205	e650	792	502	853	45	50	29
15	25	295	276	715	194	e500	666	426	555	44	68	23
16	25	231	791	637	185	778	699	356	387	44	46	24
17	21	187	3920	560	244	1120	848	362	281	41	42	85
18	19	162	4670	478	324	1870	803	458	214	34	71	76
19	17	146	2950	403	241	1700	714	1580	180	31	58	62
20	17	129	3090	352	e220	1490	623	1400	153	45	47	48
21	16	117	3160	336	887	1880	671	941	130	43	54	43
22	18	119	2120	616	3240	2710	901	667	122	37	62	82
23	18	455	2250	779	2460	5030	1010	504	110	38	49	81
24	19	541	2680	779	1870	8290	917	395	99	31	39	65
25	19	427	1930	819	1480	6330	789	320	84	25	30	53
26	21	358	1410	736	e1000	4580	915	264	71	22	24	81
27	26	295	999	647	e700	3560	1460	225	63	21	22	498
28	21	245	790	595	e500	3570	1270	196	57	19	20	565
29	21	215	762	520	---	2890	1020	174	54	17	18	300
30	22	192	843	440	---	2440	814	155	51	15	17	182
31	28	---	954	358	---	1980	---	144	---	12	15	---
TOTAL	753	5914	36432	19666	16534	80087	32769	13925	13096	3019	1536	2727
MEAN	24.3	197	1175	634	590	2583	1092	449	437	97.4	49.5	90.9
MAX	52	541	4670	938	3240	8290	2460	1580	2320	525	132	565
MIN	16	31	144	336	173	450	623	144	51	12	12	11
CFSM	.07	.54	3.22	1.74	1.62	7.08	2.99	1.23	1.20	.27	.14	.25
IN.	.08	.60	3.71	2.00	1.69	8.16	3.34	1.42	1.33	.31	.16	.28

e Estimated

KANAWHA RIVER BASIN

03190400 MEADOW RIVER NEAR MOUNT LOOKOUT, WV--Continued

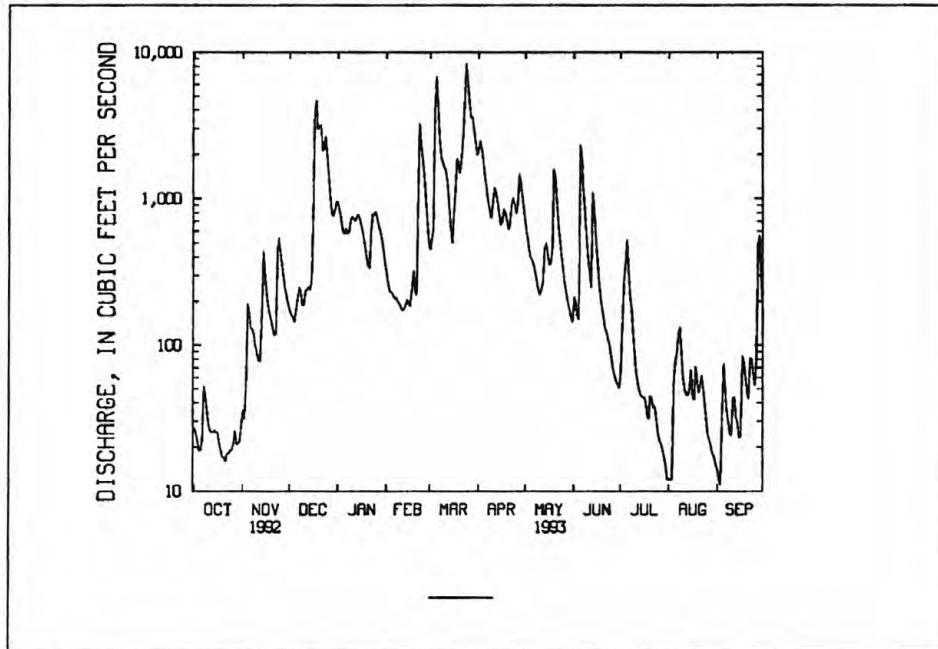
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966-1983, 1986-1993, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	339	629	1012	998	1198	1453	1135	859	494	315	289	165
MAX	1574	1529	1710	2148	2081	2583	2687	1904	1139	1057	1074	636
(WY)	1977	1986	1973	1974	1982	1993	1987	1989	1981	1972	1969	1979
MIN	8.18	55.8	293	140	396	599	373	271	72.4	32.2	12.9	13.1
(WY)	1992	1979	1981	1977	1978	1988	1986	1976	1988	1991	1987	1983

SUMMARY STATISTICS	FOR 1992 CALENDAR YEAR		FOR 1993 WATER YEAR		WATER YEARS 1966 - 1993	
ANNUAL TOTAL	238024		226458		735	
ANNUAL MEAN	650		620		975	
HIGHEST ANNUAL MEAN					1979	
LOWEST ANNUAL MEAN					410	
HIGHEST DAILY MEAN	4670	Dec 18	8290	Mar 24	14200	Feb 26 1972
LOWEST DAILY MEAN	16	Oct 21	11	Sep 3	4.1	(a)
ANNUAL SEVEN-DAY MINIMUM	18	Oct 18	14	Jul 28	5.7	Oct 8 1991
INSTANTANEOUS PEAK FLOW			9470	Mar 24	18500	Mar 7 1967
INSTANTANEOUS PEAK STAGE			10.59	Mar 24	13.44	Mar 7 1967
INSTANTANEOUS LOW FLOW			11	(b)	3.0	Aug 22 1987
ANNUAL RUNOFF (CFSM)	1.78		1.70		2.01	
ANNUAL RUNOFF (INCHES)	24.26		23.08		27.36	
10 PERCENT EXCEEDS	1660		1730		1850	
50 PERCENT EXCEEDS	383		231		415	
90 PERCENT EXCEEDS	30		24		46	

a Aug. 21, 22, 1987.

b Aug. 2, Sept. 3.



KANAWHA RIVER BASIN

03192000 GAULEY RIVER ABOVE BELVA, WV

LOCATION.--Lat 38°14'00", long 81°10'52", Nicholas County, Hydrologic Unit 05050005, on right bank 0.5 mi upstream from Belva, 1.0 mi upstream from Twentymile Creek, and at mile 6.3.

DRAINAGE AREA.--1,317 mi².

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

REVISED RECORDS.--WSP 873: 1938. WSP 1275: 1929-30, WDR WV-82-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 669.00 ft above sea level, adjustment of 1912.

REMARKS.--No estimated daily discharges. Records good. Flow regulated since May 1965 by Summersville Lake. U.S. Army Corps of Engineers satellite telemeter at station.

PEAK DISCHARGE FOR CURRENT YEAR.--Maximum discharge, 29,000 ft³/s, Mar. 4, gage height, 13.88 ft.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	193	531	876	4860	1340	1950	6610	2940	626	276	880	102
2	1140	531	655	4650	1370	1940	3630	2100	470	388	918	98
3	1610	560	610	3310	766	2070	3230	1730	428	582	1060	599
4	1500	617	721	2640	854	13300	2570	1620	528	1350	1080	894
5	1490	457	683	2580	1010	25300	2070	1230	4450	1170	1160	909
6	712	283	963	2620	898	15300	1750	1050	5060	1060	1180	806
7	505	2240	1160	2690	857	8440	1450	994	2820	724	540	783
8	530	2990	1240	2900	711	6360	1260	950	1860	413	360	755
9	1060	2950	758	2720	690	6170	1140	903	1440	398	343	509
10	1470	2730	785	2770	676	5740	1330	779	1320	355	467	974
11	1280	2060	1200	2740	668	5840	1740	837	1340	734	323	1330
12	1130	2050	1720	2570	668	4750	1700	857	1370	749	286	1450
13	745	2270	1430	2460	688	3840	1480	1670	1990	319	294	1140
14	547	3440	1330	2760	712	3560	1270	2940	1900	261	287	640
15	547	3300	1210	2690	802	2600	1100	1890	1890	259	284	407
16	548	2580	2530	2520	801	2980	932	1090	1450	255	284	411
17	1450	1600	16400	2100	791	4000	1130	1120	880	250	279	769
18	2760	1560	19800	1570	1900	7960	1120	1460	640	243	380	1320
19	840	1460	12400	1470	1370	7070	1030	8910	553	240	328	1380
20	540	1270	10500	1400	1220	5270	931	7830	517	367	296	1080
21	501	1450	12600	1390	2470	6710	931	4300	489	445	241	658
22	501	1230	8810	1750	12000	10000	1150	3320	498	434	479	256
23	500	2140	9280	2140	10200	14700	1700	2300	464	827	836	183
24	504	3670	12200	2450	6130	22800	3890	1830	444	870	323	748
25	512	2610	6720	2670	4050	17100	3530	1460	343	525	516	1350
26	505	2500	5900	2900	3470	21000	3810	1390	311	574	543	1590
27	510	2300	4300	2900	3210	19300	5570	1330	297	579	540	1640
28	513	1780	2880	2380	2090	17300	5150	1060	288	298	450	1280
29	506	1420	3180	2020	---	13600	4050	769	266	219	365	583
30	509	903	3440	1630	---	11700	3400	727	237	385	209	372
31	521	---	3680	1290	---	8680	---	663	---	834	106	---
TOTAL	26179	55482	149961	77540	62412	297330	70654	62049	35169	16383	15637	25016
MEAN	844	1849	4837	2501	2229	9591	2355	2002	1172	528	504	834
MAX	2760	3670	19800	4860	12000	25300	6610	8910	5060	1350	1180	1640
MIN	193	283	610	1290	668	1940	931	663	237	219	106	98

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 - 1993, BY WATER YEAR (WY)
[REGULATED, UNADJUSTED]

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	2202	3288	3987	3667	4184	5067	2912	3005	1857	1398	1406	1274
MAX	7547	8434	7270	8493	7696	9591	7050	7362	5503	4249	5053	3722
(WY)	1977	1986	1973	1974	1982	1993	1987	1989	1981	1979	1989	1971
MIN	124	70.8	85.6	276	1517	2245	611	538	236	243	36.8	72.5
(WY)	1966	1966	1966	1966	1966	1988	1986	1991	1991	1991	1965	1965

SUMMARY STATISTICS

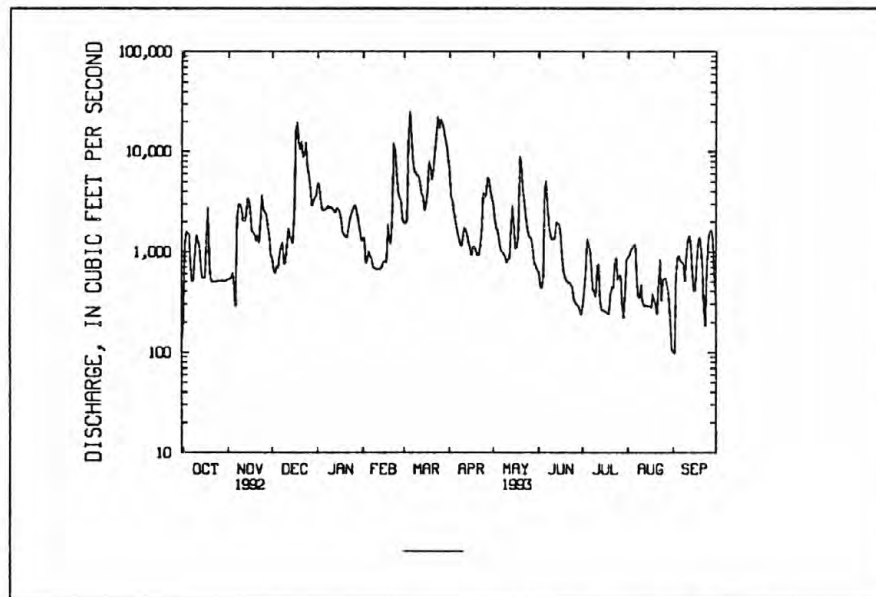
FOR 1992 CALENDAR YEAR

FOR 1993 WATER YEAR

WATER YEARS 1965 - 1993

ANNUAL TOTAL	928118	893812	
ANNUAL MEAN	2536	2449	2850
HIGHEST ANNUAL MEAN			3911
LOWEST ANNUAL MEAN			1452
HIGHEST DAILY MEAN	19800	Dec 18	25300
LOWEST DAILY MEAN	135	Sep 30	98
ANNUAL SEVEN-DAY MINIMUM	416	Sep 4	261
INSTANTANEOUS PEAK FLOW			29000
INSTANTANEOUS PEAK STAGE			13.88
INSTANTANEOUS LOW FLOW			64
10 PERCENT EXCEEDS	5280	5780	6780
50 PERCENT EXCEEDS	1690	1230	1700
90 PERCENT EXCEEDS	511	350	366

a From rating curve extended above 65,000 ft³/s on basis of velocity-area studies and inflow and storage adjustment to record for Kanawha River at Kanawha Falls.



KANAWHA RIVER BASIN

03193000 KANAWHA RIVER AT KANAWHA FALLS, WV

LOCATION.--Lat 38°08'17", long 81°12'52", Fayette County, Hydrologic Unit 05050006, on right bank 150 ft downstream from bridge, 0.8 mi downstream from village of Kanawha Falls, 2.0 mi downstream from Gauley Bridge, 2.0 mi downstream from confluence of New River and Gauley River, and at mile 94.3.

DRAINAGE AREA.--8,371 mi².

PERIOD OF RECORD.--March 1877 to current year. October 1916 to September 1918 and October 1927 to October 1928, published as "at Lock 2, Montgomery".

REVISED RECORDS.--WSP 923: 1878, 1886, 1897, 1899, 1901-3. WSP 1305: 1902(M), 1940. WSP 1335: 1931. WDR WV-82-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 621.20 ft above sea level. Prior to Oct. 27, 1928, nonrecording gages at several sites within 9.0 mi of present site at various datums. Oct. 27, 1928, to Sept. 30, 1964, water-stage recorder at present site at datum 2.00 ft higher.

REMARKS.--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, 110,000 ft³/s, Mar. 5, gage height, 18.34 ft.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2440	3130	9960	15900	9280	9710	56600	14000	5470	3740	2780	5070
2	3800	4170	6680	14500	6570	9370	49400	12100	5170	4060	2880	2830
3	4130	4620	7280	12400	8240	13400	40800	11100	6360	4440	2950	2340
4	3870	7830	6640	10800	7100	43300	28400	10800	5960	6010	2760	2700
5	3990	9290	6370	10500	6930	104000	23600	10400	13000	6160	2860	2650
6	5490	9070	5940	13100	6880	83700	20800	12600	16600	5690	3080	2480
7	5120	10400	5680	15000	6860	59100	21800	14400	12800	4550	3010	2400
8	4200	8460	5540	13700	4490	44700	16500	12300	8370	4070	2740	2430
9	4340	8060	5670	18200	4560	34000	20400	9310	6530	3480	2760	2430
10	5120	6300	6130	20800	6780	29900	20500	10400	6630	3090	2370	3190
11	8940	6070	6220	20400	6590	25700	22500	10400	6580	3320	2660	3360
12	6220	5530	7980	18000	6380	22700	20200	13100	6190	3570	2750	3570
13	4670	5650	6690	17800	6450	20200	20100	15500	7190	4040	2990	3640
14	3660	7670	5730	18000	7110	20700	18300	17000	8360	4210	3860	2770
15	3020	9630	5150	15800	6510	17200	16900	14600	9130	3710	4410	2330
16	2820	9170	7580	13200	5630	13600	16000	13900	9210	3370	4060	2410
17	2940	6460	25200	12000	9310	16100	23400	11000	6750	3060	3790	2570
18	5420	6030	46400	10400	10500	32200	30200	12100	4890	3800	3630	4770
19	3610	5300	44700	9060	10200	38000	25300	18400	4880	3960	2760	5540
20	2850	4860	32400	9750	10400	29200	19100	19600	4990	3500	2340	5710
21	2800	5020	31900	8910	12000	30400	17700	15100	5160	3210	2560	5600
22	2740	4820	26500	10800	34600	46900	16000	12900	4620	3090	2400	4220
23	2490	6150	24300	19100	45300	62500	12600	11100	4620	3020	2600	2870
24	2400	16400	33800	19700	35300	101000	17900	10200	4610	2980	2440	2880
25	2720	19800	29900	16900	22200	93100	17100	8690	3860	2880	2600	3530
26	2780	15900	24000	16700	18800	95900	16800	8390	3630	2970	2500	4210
27	2630	17400	16900	15800	16700	96100	16400	8560	3330	3020	2550	4830
28	2740	14600	11300	13500	14400	89200	21000	6680	3230	3280	2590	4860
29	2800	12400	11800	12000	---	85200	18400	6140	3270	3280	2650	4640
30	2580	10400	14900	11000	---	75900	15700	7300	3220	2840	3360	5400
31	2650	---	14700	10600	---	55600	---	6010	---	2750	3860	---
TOTAL	115980	260590	493940	444320	346070	1498580	680400	364080	194610	115150	91550	108230
MEAN	3741	8686	15930	14330	12360	48340	22680	11740	6487	3715	2953	3608
MAX	8940	19800	46400	20800	45300	104000	56600	19600	16600	6160	4410	5710
MIN	2400	3130	5150	8910	4490	9370	12600	6010	3220	2750	2340	2330

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 - 1993, BY WATER YEAR (WY)
[REGULATED, UNADJUSTED]

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	6038	8658	13130	15590	19810	23800	18230	13990	8967	6201	5725	4620
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 1992 CALENDAR YEAR

FOR 1993 WATER YEAR

WATER YEARS 1939 - 1993

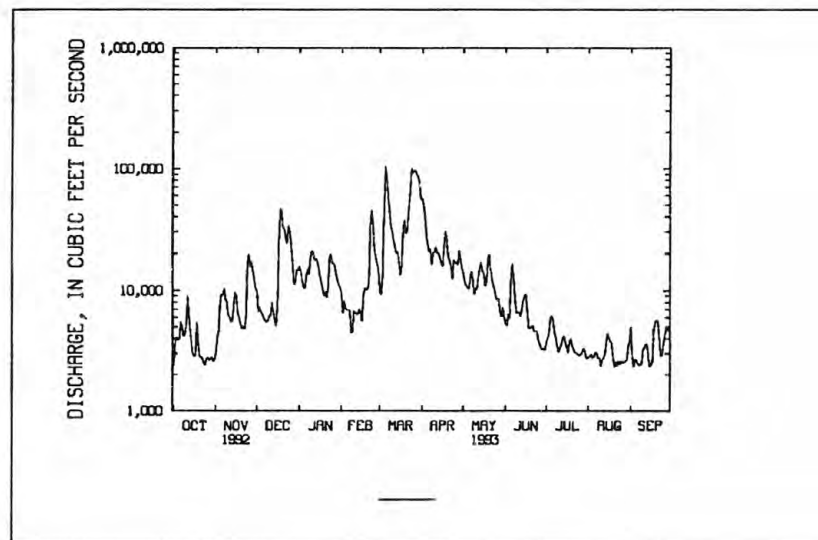
ANNUAL TOTAL	4601890	4713500	
ANNUAL MEAN	12570	12910	12030
HIGHEST ANNUAL MEAN			16830
LOWEST ANNUAL MEAN			6792
HIGHEST DAILY MEAN	75300	Apr 23	104000
LOWEST DAILY MEAN	2340	Sep 30	2330
ANNUAL SEVEN-DAY MINIMUM	2640	Oct 22	2490
INSTANTANEOUS PEAK FLOW			110000
INSTANTANEOUS PEAK STAGE			18.34
INSTANTANEOUS LOW FLOW			1640
10 PERCENT EXCEEDS	25300		26000
50 PERCENT EXCEEDS	8220		6860
90 PERCENT EXCEEDS	3610		2760

a From gage-height relationship and rating curve extended above 150,000 ft³/s.

b Site then in use, 39.80 ft gage height at current datum.

c 31.60 ft gage height at current datum.

d Not determined.



KANAWHA RIVER BASIN

03194700 ELK RIVER BELOW WEBSTER SPRINGS, WV

LOCATION.--Lat 38°35'50", long 80°29'26", Webster County, Hydrologic Unit 05050007, on right bank 200 ft upstream from bridge on County Highway 7, 6.5 mi upstream from town of Centralia, 8.9 mi southwest of Salisburg Station, 8.9 mi northwest of Webster Springs, and at mile 125.2.

DRAINAGE AREA.--266 mi².

PERIOD OF RECORD.--October 1959 to September 1983, October 1985 to current year.

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

GAGE.--Water-stage recorder. Elevation of gage is 1,020.1 ft above sea level.

REMARKS.--Records good except those for periods of estimated daily discharges (ice effect, missing record, and periods below 10 ft³/s), 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. 17	1700	*9,300	*9.65	Mar. 24	0600	8,950	9.52

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	47	33	153	1060	e260	347	3430	571	138	55	7.7	6.5
2	42	42	143	876	e220	364	3000	459	136	46	8.4	8.1
3	40	54	138	710	192	395	2250	376	112	46	8.1	9.5
4	37	258	133	600	e180	2660	1610	316	100	63	9.3	26
5	35	187	190	599	e170	4150	1200	286	255	96	9.9	152
6	33	139	245	766	e170	2140	993	274	416	102	15	97
7	32	143	228	638	e160	1380	797	237	263	80	67	58
8	33	128	205	586	e150	1200	691	208	195	52	113	40
9	33	103	185	612	151	1260	635	191	163	39	64	30
10	29	88	191	567	139	1110	973	173	129	31	40	27
11	28	80	481	510	132	1130	1530	165	114	27	29	23
12	27	82	415	521	133	879	1210	187	102	23	24	23
13	31	432	328	624	151	787	935	856	101	20	20	22
14	33	500	292	764	200	582	732	661	215	21	18	19
15	32	304	338	688	181	e450	599	474	229	23	15	17
16	29	228	1530	595	174	521	1140	376	155	29	12	23
17	28	185	6650	506	405	1020	1690	689	115	33	17	39
18	27	166	4520	418	498	2100	1200	622	91	26	21	102
19	26	161	2160	343	364	1360	903	1690	76	21	29	87
20	24	143	2640	289	e230	e1000	704	1510	66	20	34	70
21	25	132	2630	267	438	1530	721	1050	58	20	31	304
22	25	142	1650	362	2200	1940	1090	731	53	28	24	500
23	25	563	2530	572	1790	2990	1130	532	54	20	19	261
24	27	556	2590	563	1170	6600	949	406	50	17	16	175
25	28	390	1600	719	773	4540	767	319	44	14	14	218
26	30	321	1100	661	657	4060	923	258	39	12	12	423
27	39	266	745	594	534	3820	1710	214	35	10	11	950
28	37	228	626	502	431	3330	1300	181	32	9.0	9.4	1010
29	34	201	637	442	---	4000	953	152	37	8.2	10	549
30	32	175	771	362	---	3040	720	133	51	7.8	8.0	328
31	33	---	978	300	---	2330	---	123	---	8.4	6.8	---
TOTAL	981	6430	37022	17616	12253	63015	36485	14420	3624	1007.4	722.6	5597.1
MEAN	31.6	214	1194	568	438	2033	1216	465	121	32.5	23.3	187
MAX	47	563	6650	1060	2200	6600	3430	1690	416	102	113	1010
MIN	24	33	133	267	132	347	599	123	32	7.8	6.8	6.5
CFSM	.12	.81	4.49	2.14	1.65	7.64	4.57	1.75	.45	.12	.09	.70
IN.	.14	.90	5.18	2.46	1.71	8.81	5.10	2.02	.51	.14	.10	.78

e Estimated

KANAWHA RIVER BASIN

03194700 ELK RIVER BELOW WEBSTER SPRINGS, WV--Continued

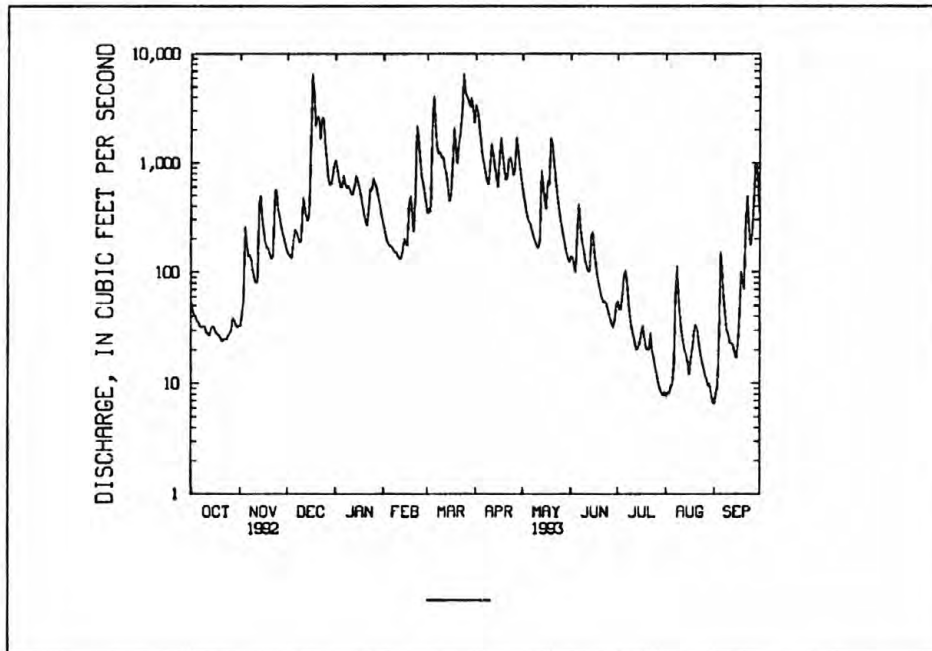
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1960-1983, 1986-1993, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	361	692	946	851	1007	1360	1078	714	462	350	301	218
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	32.5	23.3	36.8
(WY)	1964	1966	1966	1977	1978	1976	1963	1964	1965	1993	1993	1983

SUMMARY STATISTICS	FOR 1992 CALENDAR YEAR		FOR 1993 WATER YEAR		WATER YEARS 1960 - 1993	
ANNUAL TOTAL	249269		199173.1			
ANNUAL MEAN	681		546		692	
HIGHEST ANNUAL MEAN					946	1972
LOWEST ANNUAL MEAN					446	1966
HIGHEST DAILY MEAN	6650	Dec 17	6650	Dec 17	15200	Apr 26 1989
LOWEST DAILY MEAN	24	Oct 20	6.5	Sep 1	6.5	Sep 1 1993
ANNUAL SEVEN-DAY MINIMUM	26	Oct 18	8.2	Jul 28	8.2	Jul 28 1993
INSTANTANEOUS PEAK FLOW			9300	Dec 17	a38000	Nov 4 1985
INSTANTANEOUS PEAK STAGE			9.65	Dec 17	b17.20	Nov 4 1985
INSTANTANEOUS LOW FLOW			c6.2	Sep 1	6.5	Oct 1 1959
ANNUAL RUNOFF (CFSM)	2.56		2.05		2.60	
ANNUAL RUNOFF (INCHES)	34.86		27.85		35.33	
10 PERCENT EXCEEDS	1630		1430		1630	
50 PERCENT EXCEEDS	448		191		388	
90 PERCENT EXCEEDS	55		20		63	

a From rating curve extended above 24,000 ft³/s,

b From floodmarks.

c Rating poor below 10 ft³/s.

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 September 1992, October 1992 to September 1993 (gage heights, occasional discharge measurements, and annual maximum discharge only). 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 sea level. 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.--Records for winter periods not adjusted for ice effect. Flow regulated since April 1959 by Sutton Lake. U.S. Army Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--54 years (water years 1940-92), 1,149 ft³/s, 28.79 in/yr, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 34,200 ft³/s, Jan. 29, 1957, gage height, 39.30 ft, present datum; minimum, 0.4 ft³/s, Oct. 25, 26, 28, 29, 1953; minimum gage height, 9.87 ft, Oct. 25, 1953, present datum. Minimum daily discharge since regulation, 11 ft³/s, Mar. 9, 1967.

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.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 7,300 ft³/s, Mar. 25, gage height, 20.18 ft; minimum gage height, 10.74 ft, Aug. 15.

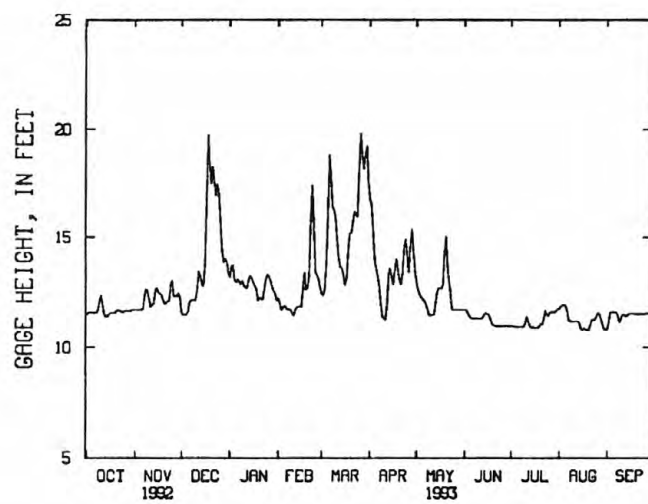
GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11.49	11.72	11.60	13.19	12.24	12.44	16.86	12.98	11.71	10.98	11.76	10.82
2	11.59	11.72	11.49	13.70	12.04	12.38	16.54	12.64	11.71	10.97	11.87	11.17
3	11.59	11.72	11.49	13.72	11.72	12.64	15.35	12.42	11.58	10.96	11.94	11.62
4	11.59	11.72	11.49	13.07	11.82	13.81	14.01	12.27	11.43	10.94	11.93	11.62
5	11.59	11.72	11.64	12.96	11.93	16.11	13.59	12.20	11.35	10.94	11.93	11.61
6	11.59	11.74	12.03	13.10	11.81	18.82	13.27	12.11	11.33	10.94	11.71	11.61
7	11.59	12.27	12.15	12.98	11.73	17.86	12.79	11.99	11.33	10.94	11.27	11.61
8	11.69	12.65	12.15	12.86	11.74	16.42	12.01	11.74	11.33	10.94	11.20	11.41
9	12.10	12.60	12.15	13.04	11.72	16.29	11.41	11.50	11.33	10.94	11.20	11.16
10	12.35	12.25	12.17	12.82	11.56	15.89	11.34	11.47	11.31	11.14	11.20	11.36
11	11.99	11.85	12.67	12.72	11.45	14.84	11.28	11.48	11.31	11.42	11.20	11.48
12	11.52	11.95	13.46	12.72	11.69	14.03	11.94	11.48	11.33	11.21	11.20	11.48
13	11.42	12.00	13.27	13.05	11.83	13.63	13.35	11.99	11.42	10.97	11.20	11.44
14	11.41	12.57	12.89	13.26	11.87	13.62	13.61	12.46	11.56	10.91	11.09	11.45
15	11.50	12.72	12.79	13.15	11.87	13.28	13.20	12.70	11.55	10.93	10.83	11.55
16	11.57	12.50	13.76	12.93	11.87	12.84	12.86	12.70	11.55	10.90	10.80	11.55
17	11.57	12.44	16.63	12.81	12.78	13.15	13.51	12.70	11.42	10.90	10.86	11.55
18	11.57	12.39	19.76	12.65	13.40	14.33	14.03	12.87	11.22	10.90	10.81	11.54
19	11.57	12.16	18.41	12.14	12.64	15.20	13.58	14.41	11.03	10.96	10.80	11.52
20	11.68	11.99	17.51	12.27	12.74	15.18	13.06	15.05	11.01	11.07	10.80	11.53
21	11.70	12.02	18.31	12.23	13.29	15.71	12.86	13.67	10.98	11.05	11.04	11.53
22	11.68	12.11	17.54	12.17	15.94	16.20	13.36	13.03	10.98	11.31	11.27	11.52
23	11.64	12.14	16.96	12.67	17.44	16.12	14.56	12.31	10.98	11.69	11.27	11.53
24	11.61	12.85	17.49	13.06	15.56	15.98	14.91	11.71	10.98	11.50	11.27	11.52
25	11.65	13.03	17.03	13.31	13.44	18.25	14.18	11.71	10.98	11.44	11.40	11.53
26	11.67	12.34	15.54	13.24	13.29	19.84	13.42	11.71	10.98	11.62	11.57	11.55
27	11.66	12.34	14.39	13.04	13.11	18.85	14.62	11.71	10.98	11.61	11.53	11.56
28	11.66	12.33	13.86	12.78	12.74	18.20	15.38	11.71	10.99	11.61	11.31	11.54
29	11.67	12.48	14.03	12.60	---	18.80	14.42	11.71	10.98	11.61	11.08	11.55
30	11.72	12.25	13.87	12.46	---	19.25	13.48	11.71	10.98	11.66	10.82	11.55
31	11.72	---	13.41	12.14	---	17.66	---	11.72	---	11.76	10.82	---
MEAN	11.66	12.22	14.26	12.87	12.69	15.73	13.63	12.32	11.25	11.18	11.26	11.48
MAX	12.35	13.03	19.76	13.72	17.44	19.84	16.86	15.05	11.71	11.76	11.94	11.62
MIN	11.41	11.72	11.49	12.14	11.45	12.38	11.28	11.47	10.98	10.90	10.80	10.82

WTR YR 1993 MEAN 12.55 MAX 19.84 MIN 10.80

KANAWHA RIVER BASIN

03195500 ELK RIVER AT SUTTON, WV--Continued



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, occasional discharge measurements, 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 sea level. 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 April 1959 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, 0.95 ft, Aug. 17, 1993.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 10,500 ft³/s, Dec. 17, gage height, 10.19 ft; minimum gage height, 0.95 ft, Aug. 17.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

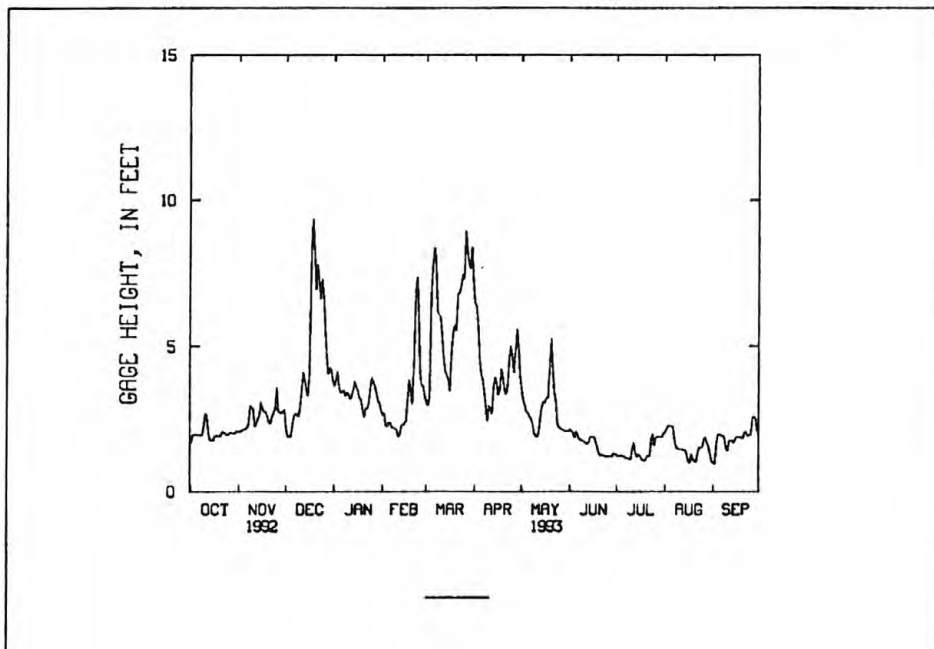
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.69	2.07	2.19	3.63	2.65	3.08	6.51	3.53	2.14	1.24	2.05	.98
2	1.95	2.08	1.90	3.82	2.74	2.97	6.37	3.17	2.08	1.22	2.17	.96
3	1.96	2.11	1.90	4.14	2.26	3.22	5.84	2.97	2.04	1.21	2.27	1.64
4	1.96	2.14	1.89	3.58	2.25	6.75	4.65	2.76	1.85	1.23	2.26	1.96
5	1.95	2.15	2.23	3.40	2.39	7.86	4.07	2.72	2.07	1.23	2.25	1.97
6	1.95	2.21	2.57	3.44	2.37	8.37	3.88	2.58	1.96	1.18	2.24	1.94
7	1.94	2.33	2.70	3.50	2.20	7.79	3.48	2.51	1.80	1.15	1.82	1.92
8	1.95	2.97	2.65	3.29	2.19	6.23	2.97	2.34	1.78	1.13	1.54	1.89
9	2.26	2.90	2.60	3.40	2.18	6.09	2.45	2.02	1.74	1.12	1.47	1.53
10	2.70	2.83	2.87	3.37	2.12	6.01	2.96	1.92	1.73	1.11	1.45	1.40
11	2.63	2.25	3.50	3.18	1.89	5.36	2.87	1.89	1.67	1.48	1.45	1.70
12	2.03	2.34	4.11	3.26	1.96	4.65	2.68	2.03	1.65	1.68	1.44	1.76
13	1.78	2.51	3.91	3.51	2.28	4.15	3.61	2.56	1.67	1.32	1.43	1.75
14	1.75	2.63	3.52	3.79	2.30	4.02	3.93	2.93	1.87	1.19	1.43	1.68
15	1.75	3.09	3.30	3.60	2.33	3.84	3.74	3.10	1.89	1.28	1.26	1.80
16	1.90	2.85	4.06	3.50	2.44	3.46	3.33	3.06	1.87	1.23	1.01	1.89
17	1.92	2.76	8.23	3.23	3.16	4.80	3.54	3.22	1.85	1.10	1.00	1.87
18	1.91	2.75	9.35	3.17	3.84	5.47	4.24	3.25	1.64	1.06	1.29	1.88
19	1.91	2.60	8.24	2.83	3.49	5.72	3.96	4.22	1.43	1.05	1.08	1.85
20	1.93	2.39	6.93	2.58	3.02	5.52	3.49	5.27	1.27	1.15	1.03	1.84
21	2.07	2.35	7.78	2.87	4.41	6.76	3.36	4.28	1.24	1.24	1.02	2.05
22	2.04	2.58	7.20	2.86	6.84	6.83	3.63	3.42	1.26	1.21	1.33	2.06
23	2.00	2.71	6.64	3.08	7.35	7.03	4.61	3.15	1.23	1.79	1.52	1.92
24	1.96	2.86	7.30	3.61	6.08	7.45	5.01	2.33	1.20	1.98	1.52	1.94
25	1.98	3.58	6.72	3.91	4.11	7.28	4.68	2.22	1.19	1.58	1.52	1.96
26	2.03	2.79	5.62	3.76	3.62	8.93	4.09	2.18	1.20	1.84	1.79	2.50
27	2.02	2.73	4.68	3.61	3.64	8.27	4.80	2.14	1.21	1.89	1.87	2.59
28	2.01	2.71	4.04	3.37	3.28	7.83	5.58	2.11	1.19	1.89	1.69	2.53
29	2.00	2.75	4.27	3.12	---	7.65	4.96	2.09	1.33	1.89	1.54	2.13
30	2.06	2.83	4.18	3.03	---	8.40	4.00	2.08	1.28	1.88	1.29	2.01
31	2.08	---	3.84	2.78	---	7.18	---	2.09	---	2.01	1.02	---
MEAN	2.00	2.59	4.55	3.36	3.19	6.10	4.11	2.78	1.61	1.41	1.55	1.86
MAX	2.70	3.58	9.35	4.14	7.35	8.93	6.51	5.27	2.14	2.01	2.27	2.59
MIN	1.69	2.07	1.89	2.58	1.89	2.97	2.45	1.89	1.19	1.05	1.00	.96

WTR YR 1993 MEAN 2.93 MAX 9.35 MIN .96

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 sea level. 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 April 1959 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, 19,000 ft³/s, Mar. 4, gage height, 14.11 ft; minimum gage height, 0.51 ft, Aug. 23, Sept. 2, 3.

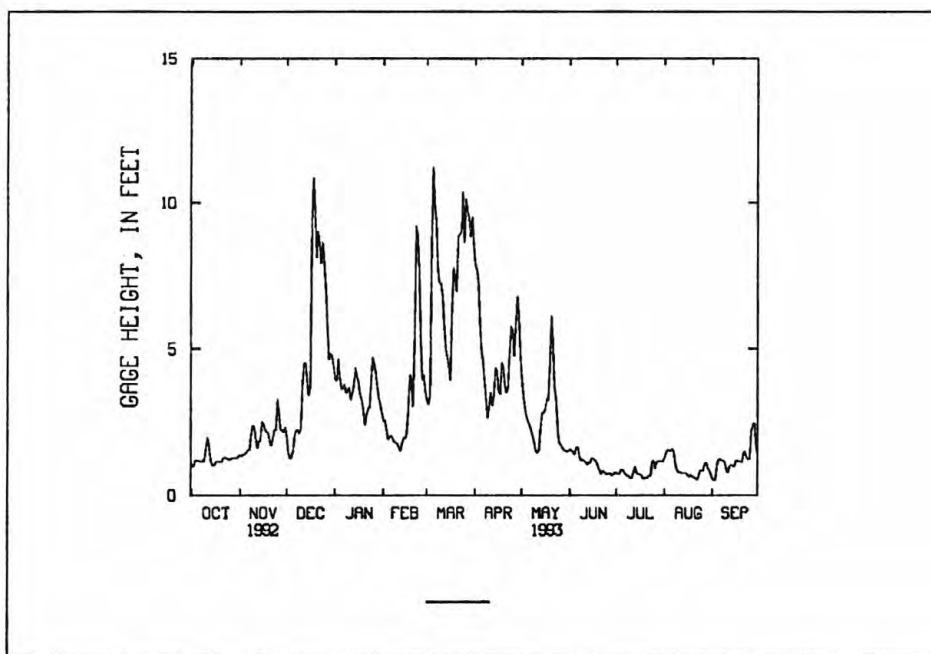
GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.97	1.35	2.03	3.99	2.55	3.26	7.90	4.00	1.57	.75	1.29	.57
2	.99	1.35	1.43	3.91	2.59	3.12	7.70	3.39	1.53	.74	1.44	.52
3	1.19	1.39	1.28	4.65	2.24	3.38	7.35	3.00	1.47	.73	1.55	.52
4	1.18	1.41	1.28	4.07	1.92	8.68	5.91	2.70	1.39	.88	1.53	1.06
5	1.17	1.45	1.51	3.64	2.00	11.24	4.90	2.54	1.63	.86	1.51	1.23
6	1.16	1.55	2.03	3.68	2.05	9.86	4.60	2.39	1.66	.77	1.58	1.24
7	1.16	1.56	2.25	3.81	1.94	9.39	3.92	2.23	1.33	.70	1.49	1.19
8	1.16	2.08	2.23	3.50	1.84	7.68	3.31	2.03	1.21	.67	1.05	1.18
9	1.25	2.39	2.13	3.58	1.80	7.26	2.65	1.78	1.20	.63	.86	1.13
10	1.70	2.34	2.29	3.70	1.77	7.23	3.11	1.50	1.19	.59	.79	.86
11	1.99	1.94	3.79	3.27	1.64	6.83	3.52	1.46	1.14	.59	.78	.77
12	1.63	1.61	4.50	3.48	1.50	5.82	3.07	1.56	1.07	.80	.76	.98
13	1.18	1.85	4.53	3.82	1.74	5.03	3.41	2.37	1.10	.98	.76	1.03
14	1.02	1.87	3.90	4.37	1.97	4.72	4.37	2.83	1.14	.76	.75	1.01
15	1.01	2.53	3.42	4.06	1.94	4.39	4.26	2.85	1.28	.73	.75	.98
16	1.10	2.45	3.70	3.86	2.10	3.94	3.59	2.93	1.25	.71	.68	1.17
17	1.17	2.25	9.25	3.44	2.90	6.35	3.47	3.31	1.21	.68	.63	1.19
18	1.16	2.19	10.87	3.29	4.12	7.79	4.55	3.26	1.15	.60	.70	1.16
19	1.15	2.13	9.73	2.95	4.02	7.36	4.43	4.43	1.00	.57	.63	1.15
20	1.15	1.86	8.13	2.41	3.05	6.97	3.79	6.11	.85	.61	.61	1.13
21	1.27	1.70	9.02	2.69	5.11	8.82	3.51	5.24	.73	.59	.58	1.46
22	1.30	1.95	8.50	2.96	9.22	8.93	3.65	3.74	.83	.67	.53	1.49
23	1.28	2.23	7.91	3.02	8.89	9.00	4.79	3.33	.81	.66	.62	1.29
24	1.25	2.25	8.65	3.82	7.73	10.37	5.75	2.35	.75	1.14	.83	1.24
25	1.22	3.29	7.92	4.72	5.25	8.64	5.61	1.82	.72	1.19	.83	1.26
26	1.24	2.79	6.96	4.52	3.95	10.14	4.77	1.74	.73	.91	.84	2.22
27	1.28	2.28	5.67	4.23	4.11	9.77	5.75	1.64	.75	1.15	1.08	2.41
28	1.28	2.21	4.63	3.76	3.55	9.47	6.79	1.55	.69	1.16	1.12	2.50
29	1.28	2.17	4.84	3.35	---	8.84	6.19	1.52	.71	1.17	.94	1.73
30	1.27	2.34	4.77	3.10	---	9.52	4.77	1.50	.77	1.15	.84	1.42
31	1.35	---	4.41	2.85	---	8.56	---	1.51	---	1.16	.72	---
MEAN	1.24	2.03	4.95	3.63	3.34	7.50	4.71	2.66	1.10	.82	.94	1.24
MAX	1.99	3.29	10.87	4.72	9.22	11.24	7.90	6.11	1.66	1.19	1.58	2.50
MIN	.97	1.35	1.28	2.41	1.50	3.12	2.65	1.46	.69	.57	.53	.52

WTR YR 1993 MEAN 2.85 MAX 11.24 MIN .52

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 sea level. Prior to June 19, 1932, nonrecording gage and June 19, 1932, to Sept. 30, 1946, water-stage recorder, at bridge 100 ft upstream at same datum.

REMARKS.--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, 16,300 ft³/s, Mar. 5, gage height, 12.53 ft.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	299	367	839	2370	1080	1720	7120	2580	490	173	295	120
2	212	370	521	2150	944	1600	6760	1940	492	169	398	73
3	243	386	376	2610	936	1680	6340	1520	455	156	434	47
4	303	396	345	2510	659	6590	4960	1270	440	146	449	55
5	303	410	401	2010	614	14300	3670	1080	548	226	436	228
6	299	448	618	1960	669	10200	3120	1010	632	206	449	308
7	294	483	792	1980	664	9470	2520	878	521	160	506	306
8	293	495	850	1910	577	7230	1980	805	398	130	407	291
9	308	909	784	1810	551	6190	1440	690	358	110	250	286
10	387	860	807	1890	532	6030	1330	541	356	97	178	261
11	645	823	1660	1690	504	5950	2090	450	334	88	150	166
12	652	509	2550	1690	446	4680	1740	469	300	78	143	126
13	412	530	2910	1990	433	3790	1610	907	275	134	139	199
14	286	637	2380	2540	594	3290	2500	1170	294	232	134	225
15	233	722	1860	2440	601	2790	2590	1250	312	171	130	224
16	230	1040	1740	2160	657	2500	2160	1340	348	137	125	239
17	252	846	7060	1870	1010	4650	1830	1590	331	124	121	292
18	286	779	12400	1590	1870	7860	2360	1620	319	113	148	292
19	283	767	9990	1390	2200	6530	2740	2250	285	92	144	278
20	281	678	7660	1050	1680	6010	2270	3850	232	78	91	270
21	279	555	8570	956	2860	8410	1870	3910	173	74	109	371
22	325	565	7940	1420	9780	9340	1910	2540	146	71	83	429
23	337	761	7060	1410	8570	8900	2590	1700	164	77	65	426
24	329	837	8060	1810	7150	12500	3870	1330	150	88	60	342
25	317	1160	7150	3060	4410	8560	3980	741	128	270	145	329
26	313	1510	6010	3010	2670	9860	3270	620	119	300	154	723
27	323	862	4360	2630	2400	9790	4170	559	115	211	159	1050
28	334	800	3240	2190	2070	9650	5130	519	119	282	247	1020
29	331	770	3050	1800	---	8410	4880	491	132	291	261	770
30	330	788	3110	1450	---	9020	3590	470	148	286	196	471
31	340	---	2810	1290	---	8170	---	466	---	278	157	---
TOTAL	10059	21063	117903	60636	57131	215670	96390	40556	9114	5048	6763	10217
MEAN	324	702	3803	1956	2040	6957	3213	1308	304	163	218	341
MAX	652	1510	12400	3060	9780	14300	7120	3910	632	300	506	1050
MIN	212	367	345	956	433	1600	1330	450	115	71	60	47

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 - 1993, BY WATER YEAR (WY)
[REGULATED, UNADJUSTED]

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1092	2076	3069	2888	3415	4185	2855	2396	1276	857	879	625
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 1992 CALENDAR YEAR

FOR 1993 WATER YEAR

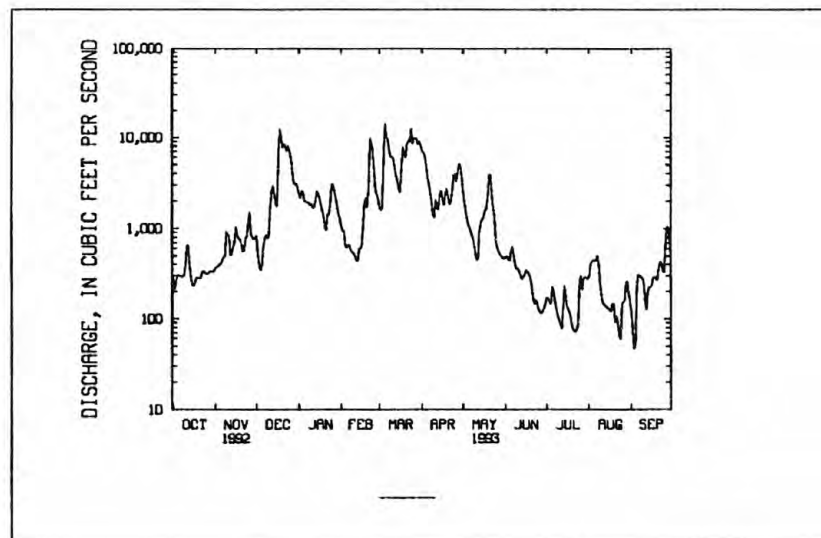
WATER YEARS 1959 - 1993

ANNUAL TOTAL	851355	650550	
ANNUAL MEAN	2326	1782	2129
HIGHEST ANNUAL MEAN			3085
LOWEST ANNUAL MEAN			1063
HIGHEST DAILY MEAN	14800	Aug 16	14300
LOWEST DAILY MEAN	168	Sep 23	47
ANNUAL SEVEN-DAY MINIMUM	205	Sep 18	85
INSTANTANEOUS PEAK FLOW			16300
INSTANTANEOUS PEAK STAGE			12.53
INSTANTANEOUS LOW FLOW			42
10 PERCENT EXCEEDS	5750		6010
50 PERCENT EXCEEDS	1510		637
90 PERCENT EXCEEDS	331		144

a Nov. 3, 4, 1953.

b From rating curve extended above 40,000 ft³/s.

c Nov. 4, 5, 1953.



KANAWHA RIVER BASIN

03198000 KANAWHA RIVER AT CHARLESTON, WV

LOCATION.--Lat 38°22'10", long 81°42'05", Kanawha County, Hydrologic Unit 05050008, on left bank at old lock 6, 1.0 mi upstream from Davis Creek, 1.5 mi downstream from Twomile Creek, 2.0 mi downstream from Patrick Street Bridge at Charleston, 3.5 mi downstream from Elk River, and at mile 54.5.

DRAINAGE AREA.--10,448 mi².

PERIOD OF RECORD.--June 1939 to current year. Monthly discharge only September 1939 to February 1940, published in WSP 1305.

REVISED RECORDS.--WSP 1335: 1943.

GAGE.--Water-stage recorder. Datum of gage is 548.00 ft above sea level (levels by U.S. Army Corps of Engineers). Auxiliary water-stage recorder 2.3 mi upstream from base gage at datum 547.00 ft, U.S. Army Corps of Engineers datum. Prior to Oct. 1, 1955, auxiliary gages at different sites and datum.

REMARKS.--Records good except those for periods of estimated daily discharges, 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 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e2900	e3700	11000	19700	12300	13400	65600	17900	6430	e4400	e3200	e5300
2	e4200	5000	7870	17600	8810	12700	57800	15000	5640	4920	e3400	e3000
3	e4500	5730	8380	15800	10100	16000	50300	13400	7120	5040	e3500	e2500
4	e4300	8570	7080	14600	9290	47500	34500	12700	6010	6510	e3300	e2900
5	e4400	10200	8490	13700	8440	124000	28100	12200	e19000	6790	e3400	e3000
6	e5900	10100	6810	15600	8470	103000	23800	13400	e21000	5710	e3700	e2900
7	e5600	11100	6990	17600	8120	75600	25700	16000	14800	4810	e3800	e2800
8	e4600	9520	6820	16400	6140	56900	e20000	13800	10000	4400	e3400	e2800
9	e4800	9680	6740	19300	5720	41500	22000	10700	7500	3920	e3200	e2800
10	5970	7850	7850	22200	7860	35800	22100	11100	e7700	3720	e2700	e3500
11	9640	7380	9180	22500	8010	32700	24100	11200	e7500	3400	e2900	e3600
12	e7000	e6200	11700	20200	7250	28400	22700	13500	e7100	4250	e3000	e3800
13	e5200	e6400	10800	21200	8560	25400	22200	16300	e8100	4250	e3400	e3900
14	e4100	9440	9050	21700	8550	25800	20600	18400	e9500	4460	e4900	e3100
15	e3400	10700	7910	19700	7870	21900	20100	15900	e10000	4320	e5100	e2600
16	e3200	11400	9690	16800	7720	19100	19000	15600	e10000	e3700	e4500	e2800
17	e3300	7450	e35000	15700	11700	24600	22900	13600	7170	e3400	e4100	e3000
18	e5800	6930	e64000	13800	13500	42500	30700	14100	5400	e4100	e4000	e5200
19	e4000	6250	e58000	11600	13500	47500	27400	20800	4960	e4200	e3200	e6000
20	e3200	5450	e43000	11800	13800	37500	21500	23400	5050	e3800	e2600	e6100
21	e3200	5530	e44000	11400	18400	40300	20700	19400	5280	e3500	e2800	e6100
22	e3200	6010	e37000	13800	47900	59000	18600	16600	5400	e3300	e2600	e4800
23	e3000	7510	e34000	20700	56800	73500	16100	13500	4820	e3200	e2800	e3500
24	e2900	15000	e45000	22400	45700	117000	20700	12200	4600	e3200	e2600	e3300
25	e3200	19500	e40000	21500	28200	105000	21300	10400	4260	e3300	e2800	e4000
26	e3200	17100	30100	21000	22900	104000	21700	9860	e4000	e3400	e2700	e5300
27	e3100	17600	23000	20500	20900	107000	21200	9590	e3800	e3300	e2800	e6400
28	e3200	15100	16700	17200	18700	102000	25900	7640	3690	e3700	e2900	e6700
29	e3300	13200	15600	16200	---	95100	24100	6980	4020	e3700	e3000	e5900
30	e3000	11500	18800	14000	---	87600	20900	7970	3970	e3200	e3600	e6200
31	e3100	---	18400	13500	---	66800	---	6490	---	e3100	e4100	---
TOTAL	130410	287100	658960	539700	445210	1789100	792300	419630	223820	127000	104000	123800
MEAN	4207	9570	21260	17410	15900	57710	26410	13540	7461	4097	3355	4127
MAX	9640	19500	64000	22500	56800	124000	65600	23400	21000	6790	5100	6700
MIN	2900	3700	6740	11400	5720	12700	16100	6490	3690	3100	2600	2500

e Estimated

KANAWHA RIVER BASIN

03198000 KANAWHA RIVER AT CHARLESTON, WV--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 1993, BY WATER YEAR (WY)
[REGULATED, UNADJUSTED]

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	7073	10850	16990	20040	24790	30180	22970	17390	10670	7599	6887	5337
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 1992 CALENDAR YEAR

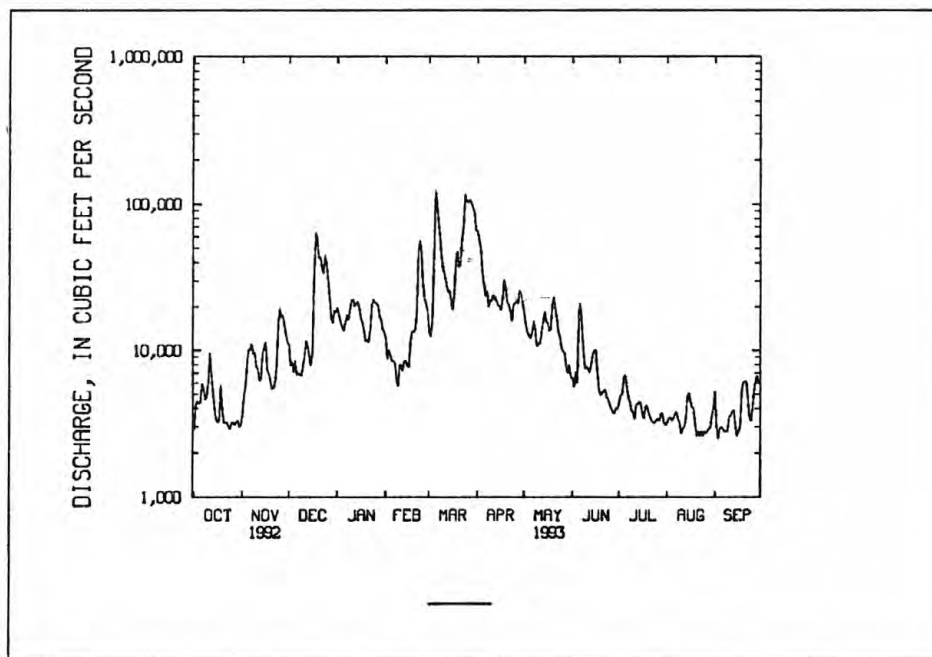
FOR 1993 WATER YEAR

WATER YEARS 1939 - 1993

ANNUAL TOTAL	5736480	5641030	
ANNUAL MEAN	15670	15450	15030
HIGHEST ANNUAL MEAN			20960
LOWEST ANNUAL MEAN			8649
HIGHEST DAILY MEAN	80500	Apr 23	124000
LOWEST DAILY MEAN	e2800	Sep 30	e2500
ANNUAL SEVEN-DAY MINIMUM	3110	Oct 21	2700
INSTANTANEOUS PEAK FLOW			130000
INSTANTANEOUS PEAK STAGE			33.16
INSTANTANEOUS LOW FLOW			UNKNOWN
10 PERCENT EXCEEDS	31800		34200
50 PERCENT EXCEEDS	11000		8490
90 PERCENT EXCEEDS	4400		3200

a Minimum discharge less than 1,030 ft³/s during Oct. 1-5, 1953.

e Estimated.



KANAWHA RIVER BASIN

03198500 BIG COAL RIVER AT ASHFORD, WV

LOCATION.--Lat 38°10'47", long 81°42'42", Boone County, Hydrologic Unit 05050009, on left bank at downstream side of highway bridge at Ashford, 300 ft upstream from Lick Creek, 1.0 mi downstream from Brush Creek, 1.8 mi upstream from Bull Creek, and at mile 30.2 upstream from Kanawha River.

DRAINAGE AREA.--391 mi².

PERIOD OF RECORD.--June 1908 to September 1916, May 1930 to current year. Published as Coal River at Brushton, June 1908 to September 1916 and as Coal River at Ashford, May 1930 to September 1960.

REVISED RECORDS.--WSP 1305: 1913-14(M). WSP 1335: 1912, 1916(M). WDR WV-82-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 622.46 ft above sea level. Prior to Aug. 9, 1916, nonrecording gage at site 1.0 mi upstream at different datum. May 7, 1930, to Feb. 10, 1939, nonrecording gage at present site and datum.

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

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)
Feb. 22	0530	7,840	13.09	Mar. 24	0630	9,710	14.92
Mar. 5	0030	*13,200	*17.90				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	62	89	109	434	319	669	1310	599	309	229	38	34
2	58	97	107	383	283	708	1360	516	213	257	39	32
3	57	121	110	349	245	848	1300	445	172	283	41	36
4	59	102	109	329	224	5240	1160	391	247	228	43	57
5	67	99	141	337	208	8620	1040	366	2960	200	52	62
6	65	104	198	326	201	2960	928	339	1400	194	96	64
7	59	102	201	303	195	1890	814	300	806	149	128	51
8	58	97	182	332	190	1480	724	270	549	120	84	41
9	62	85	159	417	179	1230	662	246	406	104	67	36
10	65	77	183	473	168	1100	752	225	355	92	57	44
11	60	73	288	463	160	1040	999	217	316	86	51	65
12	58	75	433	449	174	936	895	318	281	91	95	53
13	54	86	417	451	190	e850	759	569	498	100	277	42
14	48	120	356	436	204	e780	660	611	414	97	544	37
15	46	114	326	399	187	e700	591	453	314	97	260	37
16	45	101	389	378	207	e750	555	367	244	89	141	53
17	45	91	2260	360	325	1970	505	353	205	78	99	69
18	48	83	2250	327	458	2980	450	371	181	71	101	74
19	47	82	1120	285	409	2210	401	1010	160	83	95	77
20	54	79	1260	253	389	1690	372	876	172	93	74	59
21	53	77	1700	274	1530	2310	419	657	168	77	64	52
22	56	95	1140	515	5890	3070	517	512	221	63	61	67
23	54	134	1140	640	2290	3890	519	408	181	58	55	55
24	56	160	1700	594	1380	7980	517	346	142	51	50	46
25	56	159	1160	740	1020	3630	507	294	126	51	44	49
26	62	166	876	740	891	2190	592	260	120	50	42	160
27	61	155	645	671	809	1880	952	227	116	49	40	262
28	58	139	521	558	701	1950	955	199	106	45	38	519
29	58	126	483	463	---	1870	817	185	101	44	37	254
30	61	115	472	383	---	1620	701	174	113	41	37	147
31	78	---	449	335	---	1360	---	178	---	38	36	---
TOTAL	1770	3203	20884	13397	19426	70401	22733	12282	11596	3308	2886	2634
MEAN	57.1	107	674	432	694	2271	758	396	387	107	93.1	87.8
MAX	78	166	2260	740	5890	8620	1360	1010	2960	283	544	519
MIN	45	73	107	253	160	669	372	174	101	38	36	32
CFM	.15	.27	1.72	1.11	1.77	5.81	1.94	1.01	.99	.27	.24	.22
IN.	.17	.30	1.99	1.27	1.85	6.70	2.16	1.17	1.10	.31	.27	.25

e Estimated

KANAWHA RIVER BASIN

03198500 BIG COAL RIVER AT ASHFORD, WV--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1908-1916, 1930-1993, BY WATER YEAR (WY)

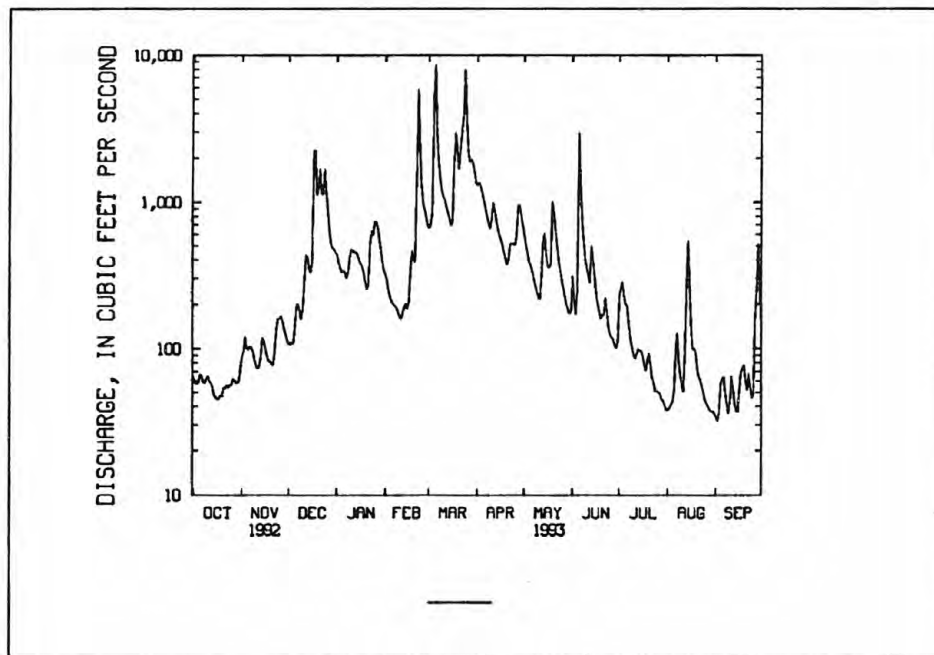
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	127	243	577	816	997	1207	909	571	299	225	168	94.9
MAX	1086	914	2043	2241	2243	2866	2448	1681	1208	1040	1570	442
(WY)	1990	1987	1943	1974	1972	1955	1987	1989	1981	1938	1916	1950
MIN	1.11	5.94	16.7	29.4	142	366	173	89.2	19.6	6.41	11.9	1.13
(WY)	1931	1931	1931	1940	1941	1988	1942	1941	1936	1930	1957	1930
SUMMARY STATISTICS	FOR 1992 CALENDAR YEAR					FOR 1993 WATER YEAR			WATER YEARS 1908 - 1993			
ANNUAL TOTAL	169272					184520						
ANNUAL MEAN	462					506			519			
HIGHEST ANNUAL MEAN									833			
LOWEST ANNUAL MEAN									206			
HIGHEST DAILY MEAN	4030					8620			20400			
LOWEST DAILY MEAN	45					32			.00			
ANNUAL SEVEN-DAY MINIMUM	48					36			.00			
INSTANTANEOUS PEAK FLOW						13200			c35800			
INSTANTANEOUS PEAK STAGE						17.90			d36.30			
INSTANTANEOUS LOW FLOW						31			.00			
ANNUAL RUNOFF (CFSM)	1.18					1.29			1.33			
ANNUAL RUNOFF (INCHES)	16.10					17.56			18.03			
10 PERCENT EXCEEDS	1070					1160			1230			
50 PERCENT EXCEEDS	316					208			218			
90 PERCENT EXCEEDS	78					51			26			

a Oct. 16, 17.

b Sept. 18-21, 24, Oct. 6-12, 1930.

c From rating curve extended above 25,000 ft³/s.

d Observed. From floodmark, site and datum then in use, or 35.66 ft from floodmark, present site and datum.



KANAWHA RIVER BASIN

03200500 COAL RIVER AT TORNADO, WV

LOCATION.--Lat 38°20'20", long 81°50'30", Kanawha County, Hydrologic Unit 05050009, on downstream side of highway bridge at Tornado, 0.2 mi upstream from Falls Creek, and at mile 11.5.

DRAINAGE AREA.--862 mi², includes that of Falls Creek.

PERIOD OF RECORD.--June 1908 to September 1911, October 1911 to June 1912 (gage heights only), November 1928 to September 1931, August 1961 to current year.

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

GAGE.--Water-stage recorder. Datum of gage is 570.46 ft above sea level. Aug. 1, 1961 to Jan. 9, 1973, nonrecording gage at same site and datum. Prior to Aug. 1, 1961, nonrecording gage at same site at different datum.

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

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

Date	Time	Discharge (ft ³ /s)	Gage Height (ft)	Date	Time	Discharge (ft ³ /s)	Gage Height (ft)
Mar. 5	0800	18,900	21.28	Mar. 24	1400	*19,000	*21.29

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	149	172	218	922	749	1470	3360	1190	511	460	83	72
2	135	202	215	841	674	1520	3320	1030	438	551	88	73
3	126	267	215	766	591	1690	3070	911	368	509	96	74
4	124	307	219	730	546	5700	2720	817	359	506	96	110
5	131	242	262	733	518	17400	2340	763	5560	483	102	146
6	146	238	334	745	497	8000	2020	703	3320	397	145	135
7	130	246	368	669	486	4250	1710	633	1590	334	309	115
8	116	216	340	695	473	3360	1460	572	1030	270	223	91
9	125	194	306	873	445	2850	1330	525	782	226	138	81
10	147	178	348	948	427	2500	1300	487	648	201	112	85
11	150	164	545	953	409	2320	1580	463	596	179	100	108
12	129	169	831	975	434	2010	1470	496	537	183	116	130
13	127	185	856	1020	477	e1800	1270	808	605	230	301	99
14	118	227	713	1050	520	e1700	1120	910	760	230	815	84
15	112	261	597	957	505	e1600	1010	753	561	198	519	81
16	108	235	583	904	554	e1600	972	644	457	219	290	99
17	98	211	2460	849	846	3960	916	686	396	183	203	154
18	90	184	5160	777	1070	6890	830	564	355	149	172	157
19	93	175	2680	672	1010	4880	767	1540	334	138	237	138
20	96	175	2390	605	939	3860	721	1560	314	176	174	127
21	99	169	3750	668	2160	4740	812	1160	355	188	130	111
22	106	190	2720	1010	11200	5930	1070	906	385	141	145	121
23	119	295	2090	1170	5980	6920	1150	742	412	127	125	152
24	122	357	3160	1140	3230	17400	1140	631	306	119	106	109
25	113	371	2590	1470	2320	10400	1070	554	280	110	96	96
26	116	339	1930	1490	1890	4810	1180	498	281	103	88	390
27	130	315	1430	1410	1740	4010	1730	455	309	99	84	536
28	134	285	1180	1220	1530	4440	1850	417	260	98	83	808
29	129	257	1060	1060	---	4190	1610	381	245	99	76	503
30	131	233	999	899	---	3660	1380	370	239	91	76	296
31	147	---	950	784	---	3130	---	367	---	84	74	---
TOTAL	3796	7059	41499	29005	42220	148990	46278	22536	22593	7081	5402	5281
MEAN	122	235	1339	936	1508	4806	1543	727	753	228	174	176
MAX	150	371	5160	1490	11200	17400	3360	1560	5560	551	815	808
MIN	90	164	215	605	409	1470	721	367	239	84	74	72
CFSM	.14	.27	1.55	1.09	1.75	5.58	1.79	.84	.87	.26	.20	.20
IN.	.16	.30	1.79	1.25	1.82	6.43	2.00	.97	.98	.31	.23	.23

e Estimated

KANAWHA RIVER BASIN

03200500 COAL RIVER AT TORNADO, WV--Continued

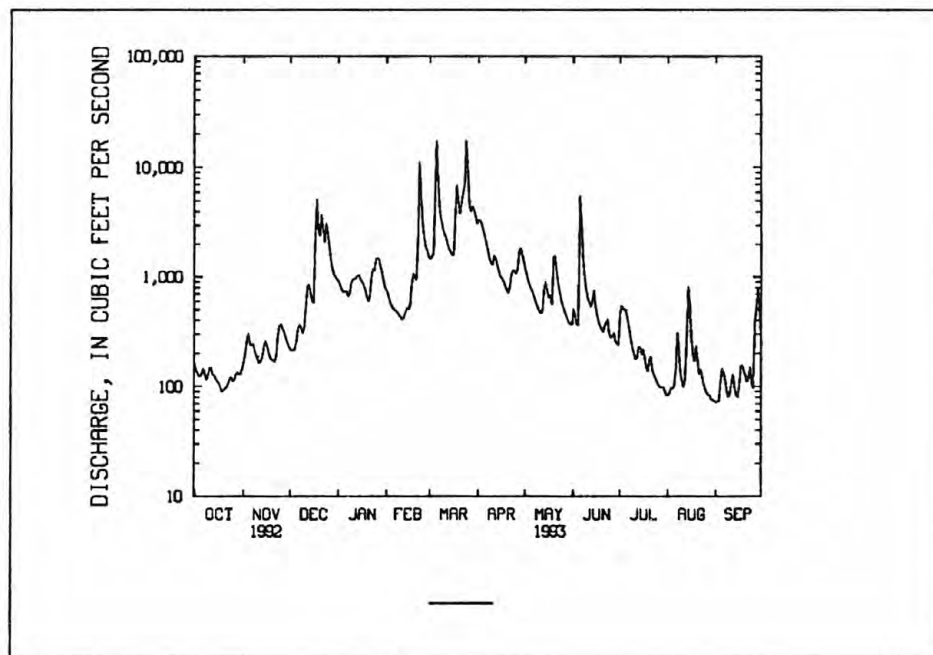
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1908-1911, 1929-1931, 1961-1993, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	392	807	1424	1679	2137	2489	2028	1434	806	551	422	289
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 1992 CALENDAR YEAR	FOR 1993 WATER YEAR	WATER YEARS 1908 - 1993
ANNUAL TOTAL	369460	381740	
ANNUAL MEAN	1009	1046	1202
HIGHEST ANNUAL MEAN			1788
LOWEST ANNUAL MEAN			585
HIGHEST DAILY MEAN	5550	Aug 16	32000 (a)
LOWEST DAILY MEAN	90	Oct 18	2.0 Oct 1 1930
ANNUAL SEVEN-DAY MINIMUM	99	Oct 16	2.0 Oct 1 1930
INSTANTANEOUS PEAK FLOW		19000	35500 Mar 7 1967
INSTANTANEOUS PEAK STAGE		21.29	31.98 Mar 7 1967
INSTANTANEOUS LOW FLOW		70	e2.0 (a)
ANNUAL RUNOFF (CFSM)	1.17	1.21	1.39
ANNUAL RUNOFF (INCHES)	15.94	16.47	18.94
10 PERCENT EXCEEDS	2320	2540	2690
50 PERCENT EXCEEDS	710	473	650
90 PERCENT EXCEEDS	172	106	101

a Oct. 1-10, 1930.

e Estimated.



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 1992 TO SEPTEMBER 1993

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 OF SATUR- ATION) (MG/L) (00300)	OXYGEN, (PER- CENT OF SATUR- ATION) (MG/L) (00301)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)
DEC 1992											
29...	1200	E17300	127	6.8	5.5	5.2	753	12.9	104	510	130
MAR 1993											
29...	1200	E102000	113	6.9	8.5	33	743	11.7	103	1200	370
JUN											
25...	1330	E4710	227	7.9	26.0	5.4	749	7.3	92	K20	K23
SEP											
30...	1115	E6670	240	7.1	17.5	18	753	6.7	71	K710	K100

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- LITY WAT DIS TOT IT FIELD (MG/L AS CACO3 (39086)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)
DEC 1992											
29...	43	11	3.8	5.8	1.4	29	0	24	23	5.7	<0.10
MAR 1993											
29...	44	11	3.9	3.5	1.2	30	0	25	18	4.0	<0.10
JUN											
25...	71	17	7.0	15	1.9	56	0	46	39	11	0.20
SEP											
30...	73	18	6.8	16	2.2	61	0	50	39	13	0.20

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 1992 TO SEPTEMBER 1993

DATE	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 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)
DEC 1992 29...	5.6	84	74	0.710	0.010	0.720	0.060	--	<0.20	0.020	0.010
MAR 1993 29...	5.7	62	65	--	<0.010	0.690	0.050	0.35	0.40	0.070	<0.010
JUN 25...	5.3	131	127	--	<0.010	0.560	0.040	0.26	0.30	0.080	0.050
SEP 30...	5.1	137	133	0.470	0.010	0.480	0.130	0.17	0.30	0.050	0.030

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)	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)	
	DEC 1992											
	29...	<0.010	10	27	<3	43	<4	31	<1	<1	<1.0	84
	MAR 1993											
29...	<0.010	60	28	<3	38	<4	19	1	<1	<1.0	67	
JUN												
25...	0.030	10	38	<3	4	5	2	1	<1	<1.0	150	
SEP												
30...	0.020	50	44	<3	21	<4	2	<1	<1	<1.0	160	

[illegible]

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

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, 42.80 ft, Mar. 6; minimum, 24.09 ft, Dec. 8 and June 15.

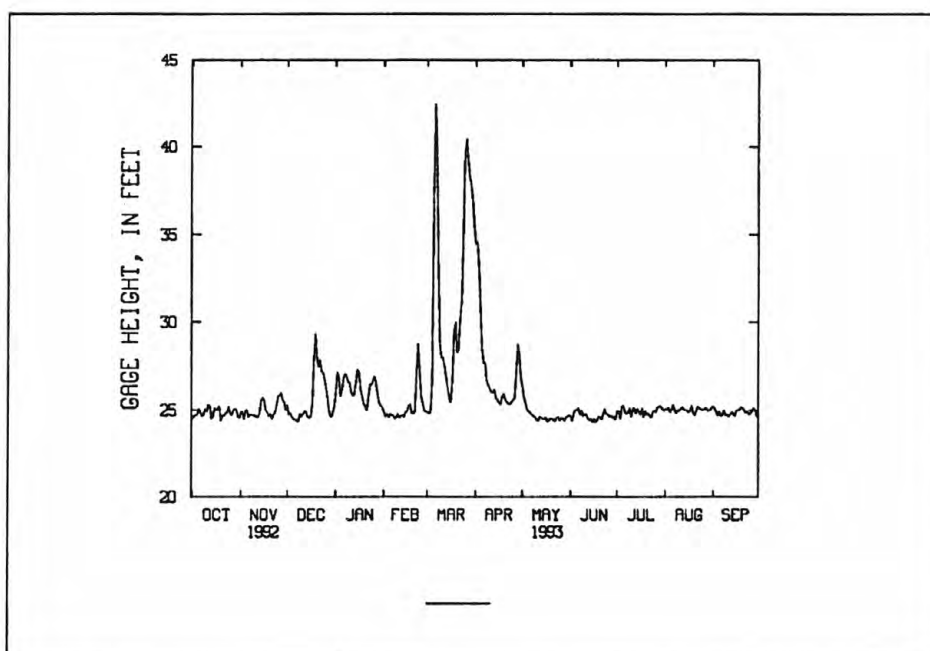
GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24.55	24.87	25.28	25.91	24.84	24.88	34.48	26.35	24.61	24.95	25.04	25.22
2	24.67	24.90	24.73	27.18	24.63	24.80	34.61	25.71	24.36	24.93	25.02	25.09
3	24.69	24.48	24.81	26.87	24.78	24.88	33.02	25.36	24.83	24.49	25.16	24.89
4	24.79	24.93	24.58	25.77	24.60	26.60	30.70	25.01	25.00	25.21	24.89	24.68
5	25.07	25.01	24.45	26.14	24.79	36.88	28.57	24.92	24.98	25.23	24.99	24.93
6	24.84	24.62	24.45	26.77	24.70	42.45	27.67	24.84	25.12	24.90	25.28	24.65
7	24.65	24.71	24.36	27.07	24.68	39.99	27.69	24.74	24.73	24.78	25.02	24.74
8	24.74	24.72	24.34	26.98	24.52	33.05	26.67	24.64	24.97	24.86	24.84	25.01
9	25.06	24.70	24.77	26.58	24.56	28.75	26.43	24.62	24.66	25.12	24.99	24.70
10	24.91	24.67	24.62	26.55	24.77	27.98	26.22	24.44	24.74	24.63	24.96	24.75
11	25.29	24.62	24.76	25.98	24.54	27.98	26.02	24.38	24.77	25.06	25.07	24.63
12	25.24	24.57	24.94	25.81	24.66	27.46	25.98	24.63	24.53	25.12	25.16	24.76
13	24.52	24.79	24.90	25.91	24.70	26.87	26.18	24.54	24.41	24.80	25.03	24.89
14	24.62	25.49	24.60	26.65	24.62	26.29	25.67	24.50	24.49	25.08	24.99	24.75
15	25.10	25.68	24.54	27.32	24.88	25.65	25.57	24.46	24.31	24.88	24.98	24.65
16	24.99	25.58	24.60	27.11	24.93	25.43	25.41	24.58	24.50	24.74	24.88	24.99
17	25.05	25.04	25.36	26.17	25.26	26.57	25.32	24.33	24.30	25.10	25.00	25.00
18	25.22	24.85	27.89	25.78	25.31	29.45	25.77	24.42	24.39	24.59	25.26	25.01
19	24.40	24.64	29.36	25.33	24.83	30.00	25.92	24.50	24.63	24.97	24.83	25.17
20	24.68	24.77	27.99	25.20	24.80	28.29	25.59	24.47	24.59	24.73	24.70	25.11
21	24.66	24.49	27.48	24.97	24.92	28.48	25.45	24.44	24.47	24.81	24.93	24.95
22	24.79	24.72	27.85	25.75	27.19	30.23	25.33	24.35	24.78	24.65	25.19	24.84
23	24.84	24.82	27.19	26.48	28.76	31.36	25.32	24.55	25.07	24.57	25.10	24.93
24	25.19	25.27	27.11	26.41	27.28	35.55	25.45	24.58	24.78	24.88	25.05	24.74
25	24.84	25.79	26.69	26.72	25.76	39.66	25.57	24.42	24.75	24.95	25.01	24.81
26	24.68	25.82	26.18	26.93	25.40	40.43	25.70	24.50	24.62	24.89	25.03	24.94
27	24.97	25.97	25.51	26.46	24.97	39.27	27.29	24.53	24.68	25.16	25.12	25.10
28	25.06	25.57	24.81	25.81	24.90	38.31	28.73	24.38	24.54	25.19	25.04	24.98
29	25.03	25.40	24.61	25.36	---	37.83	28.17	24.57	24.62	25.22	24.94	24.65
30	24.65	24.96	24.76	25.24	---	36.87	26.80	24.62	24.45	25.09	25.00	24.80
31	24.54	---	25.18	25.12	---	35.40	---	24.70	---	24.97	25.13	---
MEAN	24.85	25.01	25.57	26.20	25.16	31.54	27.24	24.68	24.66	24.92	25.02	24.88
MAX	25.29	25.97	29.36	27.32	28.76	42.45	34.61	26.35	25.12	25.23	25.28	25.22
MIN	24.40	24.48	24.34	24.97	24.52	24.80	25.32	24.33	24.30	24.49	24.70	24.63

WTR YR 1993 MEAN 25.82 MAX 42.45 MIN 24.30

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 sea level. Prior to Sept. 10, 1969, at site 25 ft upstream at same 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 4,400 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage Height (ft)	Date	Time	Discharge (ft ³ /s)	Gage Height (ft)
Mar. 4	1900	*8,170	*12.89	Mar. 24	0400	7,980	12.72

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	55	55	56	274	184	332	1090	405	175	e170	55	59
2	54	55	56	237	164	364	1070	367	147	e150	56	64
3	53	61	57	214	136	457	954	332	136	e130	69	58
4	55	63	56	205	134	4310	842	317	240	e110	71	96
5	77	64	68	200	128	3990	758	315	1160	e100	63	107
6	88	66	113	197	125	1830	682	283	641	e90	66	76
7	67	62	103	179	124	1240	586	260	364	e80	70	63
8	58	55	88	197	124	e950	524	243	269	77	67	58
9	55	51	75	233	114	e750	495	235	221	74	59	55
10	53	49	76	233	108	e700	751	314	194	72	56	56
11	50	46	96	234	107	e650	832	527	170	72	60	55
12	51	48	107	244	116	e600	753	781	174	74	106	49
13	51	55	98	243	136	e550	637	745	361	81	279	48
14	49	60	91	227	140	e500	561	598	392	88	397	48
15	48	60	89	208	124	e470	500	457	285	82	158	47
16	47	53	131	202	134	501	475	374	217	157	99	58
17	49	52	845	194	199	868	430	323	179	139	78	63
18	46	50	1010	180	252	1550	380	296	156	95	75	57
19	47	49	466	158	210	1380	354	371	142	85	71	51
20	47	47	383	144	217	1110	334	325	136	88	184	48
21	45	47	610	161	673	1720	387	288	130	77	164	48
22	47	52	439	228	2690	2360	416	261	141	71	95	49
23	46	69	1130	242	1360	3200	413	239	127	68	73	48
24	46	86	1370	245	789	5620	401	221	113	66	66	48
25	46	88	663	294	542	2600	380	203	106	64	59	50
26	46	84	443	290	475	1700	542	205	101	65	61	66
27	45	77	306	290	416	1370	730	190	e100	63	65	116
28	45	68	281	262	350	1300	621	172	e95	61	87	163
29	44	64	291	235	---	1380	528	162	e90	58	72	94
30	44	58	297	199	---	1240	460	158	e110	57	68	68
31	51	---	293	176	---	1040	---	158	---	55	59	---
TOTAL	1605	1794	10187	6825	10271	46632	17886	10125	6872	2719	3008	1966
MEAN	51.8	59.8	329	220	367	1504	596	327	229	87.7	97.0	65.5
MAX	88	88	1370	294	2690	5620	1090	781	1160	170	397	163
MIN	44	46	56	144	107	332	334	158	90	55	55	47
CFSM	.17	.20	1.07	.72	1.20	4.92	1.95	1.07	.75	.29	.32	.21
IN.	.20	.22	1.24	.83	1.25	5.67	2.17	1.23	.84	.33	.37	.24

e Estimated

GUYANDOTTE RIVER BASIN

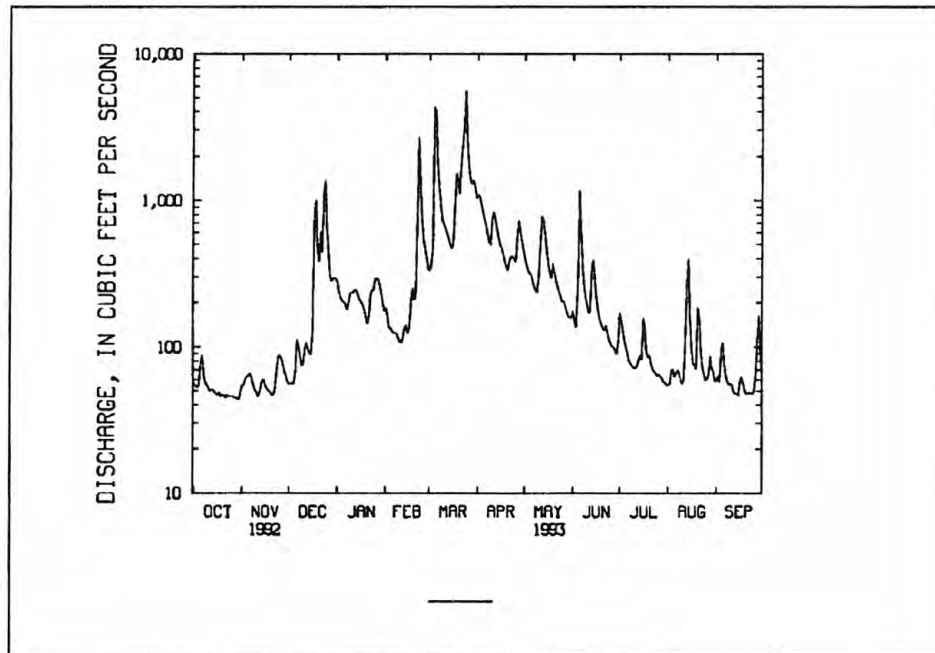
03202400 GUYANDOTTE RIVER NEAR BAILEYSVILLE, WV--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1968 - 1993, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	162	236	433	596	743	795	752	590	319	181	159	103
MAX	680	774	1294	1894	1620	1969	2003	1257	1262	504	649	264
(WY)	1990	1978	1973	1974	1972	1975	1987	1989	1981	1979	1972	1989
MIN	35.6	33.8	140	153	237	193	211	198	109	74.5	49.8	47.9
(WY)	1979	1979	1981	1977	1988	1988	1986	1976	1988	1970	1970	1987

SUMMARY STATISTICS	FOR 1992 CALENDAR YEAR			FOR 1993 WATER YEAR			WATER YEARS 1968 - 1993		
ANNUAL TOTAL	131193			119890					
ANNUAL MEAN	358			328			421		
HIGHEST ANNUAL MEAN							620		
LOWEST ANNUAL MEAN							174		
HIGHEST DAILY MEAN	2860			5620			17900		
LOWEST DAILY MEAN	44			44			23		
ANNUAL SEVEN-DAY MINIMUM	45			45			27		
INSTANTANEOUS PEAK FLOW				8170			b36700		
INSTANTANEOUS PEAK STAGE				12.89			26.89		
INSTANTANEOUS LOW FLOW				43			21		
ANNUAL RUNOFF (CFSM)	1.17			1.07			1.38		
ANNUAL RUNOFF (INCHES)	15.95			14.57			18.71		
10 PERCENT EXCEEDS	796			752			904		
50 PERCENT EXCEEDS	223			136			230		
90 PERCENT EXCEEDS	55			51			59		

a Oct. 29, 30.

b From rating curve extended above 14,000 ft³/s on basis of slope-area measurement of peak flow.

GUYANDOTTE RIVER BASIN

03202750 CLEAR FORK AT CLEAR FORK, WV

LOCATION.--Lat 37°37'23", long 81°42'27", Wyoming County, Hydrologic Unit 05070101, on left bank 0.2 mi downstream from Walls Branch, 0.7 mi upstream from Spratt Branch, 1.4 mi southwest of Clear Fork, and at mile 2.6.

DRAINAGE AREA.--126 mi².

REVISED RECORDS.--WDR WV-81-1: Drainage area.

PERIOD OF RECORD.--June 1974 to current year. Prior to October 22, 1974, partial record station.

GAGE.--Water-stage recorder. Elevation of gage is 1,150 ft above sea level, from topographic map. June 28, 1974 to Oct. 22, 1974, nonrecording gage; Oct. 23, 1974 to Oct. 26, 1977, digital recorder at site 0.9 mi upstream at different datum; Oct. 27, 1977 to Dec. 31, 1980, digital recorder at site 0.2 mi upstream at different datum.

REMARKS.--Records good except those for period of estimated daily discharges (ice effect), 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 1,600 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage Height (ft)	Date	Time	Discharge (ft ³ /s)	Gage Height (ft)
Feb. 21	1900	2,140	6.96	Mar. 24	0700	*3,390	*8.76

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22	16	35	181	119	178	374	193	54	44	2.9	13
2	20	15	32	148	102	209	370	161	38	61	2.9	14
3	18	19	32	134	86	311	368	137	30	35	12	17
4	18	24	30	123	78	976	333	123	105	44	14	37
5	31	23	40	129	72	832	296	115	540	34	11	58
6	37	24	62	118	70	789	265	99	297	26	8.2	32
7	31	27	64	107	69	545	226	88	160	21	15	21
8	25	25	61	131	66	440	201	79	108	18	11	15
9	22	21	52	176	62	376	186	73	81	16	9.6	12
10	22	19	55	196	58	347	260	66	67	14	7.0	18
11	20	16	86	188	55	312	329	61	55	12	7.0	18
12	19	16	113	184	63	263	315	97	48	38	30	12
13	18	25	112	171	73	e240	265	138	118	24	197	11
14	16	31	108	156	77	e220	228	120	87	20	177	9.0
15	15	29	112	141	71	e200	197	94	60	16	67	7.7
16	14	26	246	135	86	e190	185	77	48	16	38	22
17	12	23	982	128	183	543	161	67	39	13	26	50
18	11	21	757	113	213	866	140	62	34	12	38	55
19	11	19	401	94	174	737	125	103	30	11	29	32
20	11	18	406	83	163	533	115	85	31	11	131	23
21	11	16	541	118	612	930	132	70	29	9.5	125	18
22	11	25	384	254	951	1050	157	61	52	8.4	61	15
23	11	47	775	271	710	1500	159	55	37	7.3	38	13
24	10	56	784	270	425	2760	155	49	28	5.9	27	12
25	10	64	464	333	293	1200	147	43	23	5.5	20	13
26	9.9	66	306	323	255	657	333	42	20	5.7	16	40
27	11	62	214	274	216	502	607	39	20	5.8	14	136
28	10	53	200	218	181	491	412	33	19	5.0	14	166
29	10	45	210	177	---	556	299	31	19	4.5	24	80
30	10	39	215	141	---	488	235	29	20	4.0	28	49
31	14	---	202	122	---	387	---	33	---	3.2	18	---
TOTAL	510.9	910	8081	5337	5583	19628	7575	2523	2297	550.8	1218.6	1018.7
MEAN	16.5	30.3	261	172	199	633	252	81.4	76.6	17.8	39.3	34.0
MAX	37	66	982	333	951	2760	607	193	540	61	197	166
MIN	9.9	15	30	83	55	178	115	29	19	3.2	2.9	7.7
CFSM	.13	.24	2.07	1.37	1.58	5.03	2.00	.65	.61	.14	.31	.27
IN.	.15	.27	2.39	1.58	1.65	5.79	2.24	.74	.68	.16	.36	.30

e Estimated

GUYANDOTTE RIVER BASIN

03202750 CLEAR FORK AT CLEAR FORK, WV--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1974 - 1993, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	76.0	130	225	273	349	371	318	236	116	70.3	58.3	40.9
MAX	365	366	491	833	562	981	766	556	551	333	308	103
(WY)	1990	1978	1979	1979	1979	1975	1987	1984	1981	1980	1977	1982
MIN	5.27	11.7	67.5	47.5	126	96.0	74.8	38.9	18.3	12.2	6.32	7.68
(WY)	1992	1988	1981	1977	1988	1988	1986	1976	1988	1988	1987	1983

SUMMARY STATISTICS

FOR 1992 CALENDAR YEAR

FOR 1993 WATER YEAR

WATER YEARS 1974 - 1993

ANNUAL TOTAL	61256.9		55233.0									
ANNUAL MEAN	167		151							188		
HIGHEST ANNUAL MEAN										318		1979
LOWEST ANNUAL MEAN										76.5		1988
HIGHEST DAILY MEAN	e1300	Mar 11				2760	Mar 24			6380	Apr 5	1977
LOWEST DAILY MEAN	9.9	Oct 26				2.9	(a)			2.3	Aug 18	1988
ANNUAL SEVEN-DAY MINIMUM	10	Oct 24				4.0	Jul 27			2.9	Aug 13	1988
INSTANTANEOUS PEAK FLOW						3390	Mar 24			b9900	Apr 5	1977
INSTANTANEOUS PEAK STAGE						8.76	Mar 24			c18.64	Apr 5	1977
INSTANTANEOUS LOW FLOW						2.6	(a)			2.3	(d)	
ANNUAL RUNOFF (CFSM)	1.33					1.20				1.49		
ANNUAL RUNOFF (INCHES)	18.09					16.31				20.26		
10 PERCENT EXCEEDS	383					379				434		
50 PERCENT EXCEEDS	104					61				83		
90 PERCENT EXCEEDS	22					11				12		

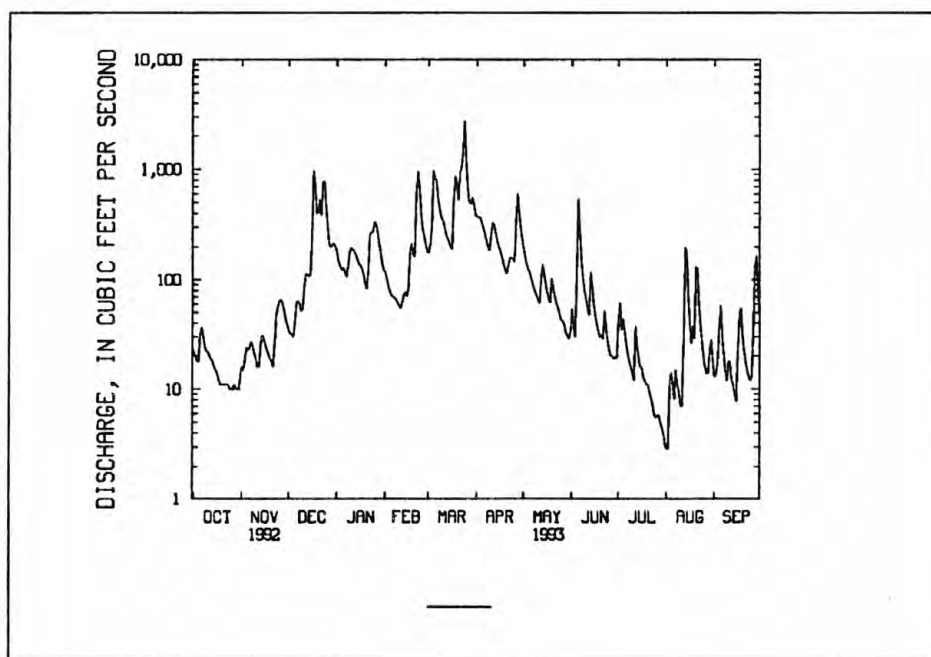
a Aug. 1, 2.

b From rating curve extended above 3,000 ft³/s on basis of slope-area measurement of peak flow.

c Site and datum then in use.

d Aug. 17-19, 1988.

e Estimated.



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 sea level.

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, 6,190 ft³/s, Mar. 5, gage height, 9.74 ft; minimum gage height, 2.11 ft, Sept. 2.

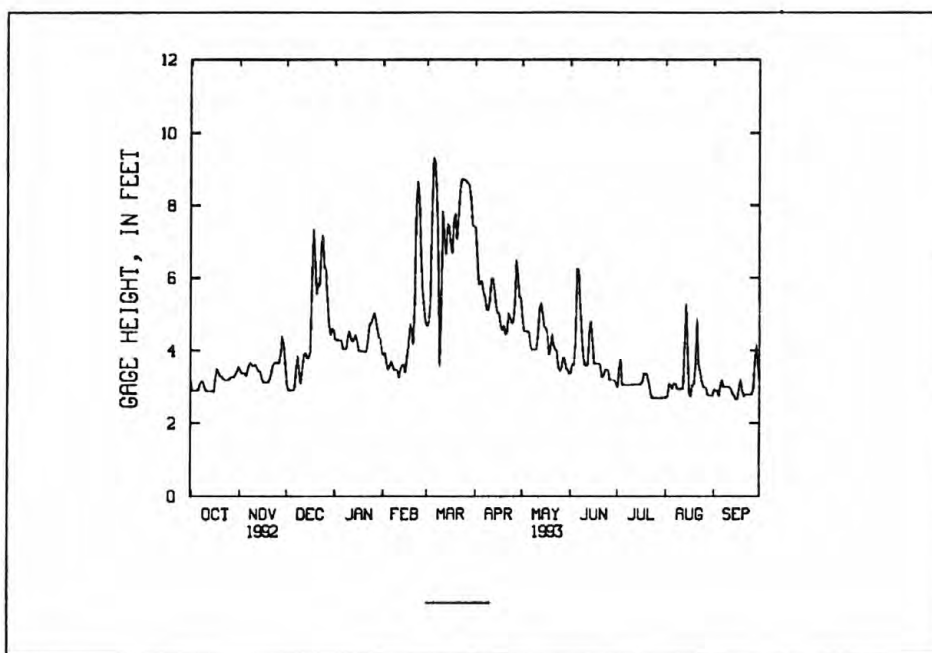
GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.90	3.49	3.09	4.30	3.87	4.67	7.39	4.90	3.41	2.99	2.72	2.94
2	2.90	3.38	2.91	4.28	3.95	4.77	6.60	4.52	3.64	3.54	2.73	2.89
3	2.90	3.38	2.91	4.28	3.67	5.31	5.82	4.52	3.61	3.78	3.09	2.91
4	2.90	3.38	2.91	4.27	3.48	7.74	5.85	4.51	4.25	3.06	3.05	2.75
5	2.92	3.30	2.92	4.27	3.58	9.34	5.91	4.51	6.25	3.06	2.94	3.06
6	3.07	3.50	2.92	4.04	3.72	9.25	5.59	4.19	6.26	3.06	3.11	3.20
7	3.15	3.63	3.55	4.03	3.60	8.45	5.46	4.02	5.26	3.06	3.11	3.00
8	3.15	3.67	3.87	4.04	3.47	6.67	5.11	4.03	4.46	3.06	2.95	3.00
9	2.99	3.59	3.42	4.35	3.47	3.58	5.10	4.02	3.86	3.06	2.94	3.00
10	2.89	3.58	3.09	4.52	3.47	5.19	5.33	4.04	3.61	3.06	2.94	3.01
11	2.88	3.63	3.50	4.33	3.25	7.85	5.97	4.45	3.60	3.07	2.95	2.98
12	2.88	3.51	3.89	4.23	3.50	7.09	5.99	5.14	3.63	3.07	2.96	2.92
13	2.88	3.44	3.94	4.32	3.62	6.64	5.71	5.30	4.60	3.07	4.13	2.79
14	2.89	3.44	3.80	4.41	3.62	7.50	5.23	5.03	4.79	3.07	5.26	2.75
15	2.86	3.26	3.79	4.28	3.39	7.42	5.01	4.65	4.20	3.07	4.07	2.65
16	3.28	3.12	3.96	3.99	3.81	6.93	5.01	4.61	3.66	3.09	2.80	2.68
17	3.52	3.12	5.81	3.99	4.17	6.69	4.67	4.49	3.65	3.16	2.74	3.03
18	3.41	3.12	7.34	3.98	4.72	7.58	4.54	3.89	3.65	3.38	3.06	3.21
19	3.30	3.12	6.66	3.98	4.53	7.78	4.68	4.05	3.64	3.38	3.05	2.92
20	3.30	3.20	5.55	3.97	4.17	7.06	4.43	4.45	3.59	3.33	3.59	2.75
21	3.23	3.38	5.84	3.98	5.40	7.69	4.47	4.16	3.28	3.12	4.87	2.79
22	3.19	3.58	5.77	4.32	7.99	8.45	5.02	4.02	3.30	2.88	3.66	2.79
23	3.19	3.67	6.85	4.71	8.66	8.73	4.90	4.00	3.48	2.70	3.44	2.79
24	3.19	3.67	7.19	4.74	8.16	8.73	4.75	3.57	3.48	2.70	3.18	2.79
25	3.21	3.67	6.28	4.87	6.72	8.71	4.75	3.46	3.47	2.70	3.02	2.80
26	3.27	3.66	6.25	5.03	5.65	8.67	5.23	3.51	3.19	2.70	2.98	2.92
27	3.27	3.88	5.40	4.85	5.15	8.62	6.51	3.79	3.19	2.69	2.97	3.69
28	3.27	4.38	4.72	4.55	4.76	8.56	6.11	3.81	3.19	2.69	2.77	4.16
29	3.35	4.20	4.42	4.33	---	8.15	5.46	3.54	3.19	2.70	2.76	3.62
30	3.44	3.73	4.60	4.32	---	7.45	5.45	3.48	3.10	2.70	2.76	3.19
31	3.57	---	4.56	3.96	---	7.42	---	3.36	---	2.71	2.76	---
MEAN	3.13	3.52	4.57	4.31	4.56	7.38	5.40	4.19	3.88	3.02	3.21	3.00
MAX	3.57	4.38	7.34	5.03	8.66	9.34	7.39	5.30	6.26	3.78	5.26	4.16
MIN	2.86	3.12	2.91	3.96	3.25	3.58	4.43	3.36	3.10	2.69	2.72	2.65

WTR YR 1993 MEAN 4.18 MAX 9.34 MIN 2.65

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 sea level. Prior to Oct. 1, 1962, at datum 1.32 ft lower.

REMARKS.--No estimated daily discharges. Records good. Flow regulated since February 1980 by R. D. Bailey Lake at mile 112. U.S. Army Corps of Engineers satellite telemeter at station.

PEAK DISCHARGE FOR CURRENT YEAR.--Maximum discharge, 14,400 ft³/s, Mar. 24, gage height, 16.57 ft.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	207	321	314	884	521	1130	3690	1370	374	274	62	90
2	116	270	169	801	559	1170	3520	977	337	219	68	118
3	116	307	143	774	476	1510	2330	929	373	435	95	141
4	124	262	136	751	389	7030	2250	900	496	368	158	177
5	141	259	162	768	354	9880	2050	870	2610	209	131	137
6	138	234	181	711	389	7670	1970	800	2190	181	134	165
7	153	327	182	606	394	5630	1660	628	1430	169	186	189
8	163	334	420	692	342	4280	1540	609	919	161	151	136
9	176	338	426	796	327	1230	1350	600	664	157	106	134
10	138	280	302	972	324	1110	1470	618	446	154	98	185
11	114	313	500	919	330	3850	1710	629	405	162	133	161
12	109	327	798	799	310	3590	1920	1060	387	295	185	139
13	104	301	841	793	436	2190	1620	1250	674	191	563	124
14	100	278	717	838	501	3340	1470	1190	1000	199	1240	92
15	98	271	678	811	403	3180	1200	812	728	186	1070	93
16	96	196	834	665	515	3140	1200	864	522	190	324	102
17	207	163	2900	619	953	3640	1140	755	390	187	144	121
18	261	161	4170	589	1130	5060	851	744	377	195	108	173
19	211	158	3160	552	1140	5300	954	602	453	235	158	198
20	188	156	2160	530	897	3660	901	778	400	268	181	135
21	191	189	2280	619	2520	5030	923	743	342	201	982	87
22	170	335	2100	772	6720	6140	1300	580	383	159	579	93
23	162	448	3310	962	5490	8250	1410	554	327	119	314	90
24	162	431	4790	1160	4660	11300	1220	474	334	80	260	94
25	164	424	2480	1310	2980	7160	1150	382	314	76	199	122
26	173	404	2170	1370	1860	5880	1470	345	300	74	162	167
27	185	388	1810	1290	1510	5590	2460	369	237	75	154	367
28	187	540	1150	1040	1230	5440	2560	452	223	71	152	656
29	186	724	1070	825	---	5170	1650	391	235	70	113	559
30	228	478	1000	758	---	3830	1550	348	226	66	98	278
31	268	---	1090	712	---	3650	---	326	---	62	93	---
TOTAL	5036	9617	42443	25688	37660	145030	50489	21949	18096	5488	8401	5323
MEAN	162	321	1369	829	1345	4678	1683	708	603	177	271	177
MAX	268	724	4790	1370	6720	11300	3690	1370	2610	435	1240	656
MIN	96	156	136	530	310	1110	851	326	223	62	62	87

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	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MAX	427	739	1491	1995	1984	2606	1921	1398	796	462	493	319
(WY)	1462	2111	3582	5381	5021	5732	3891	2471	3578	1592	2107	1142
MIN	1977	1978	1973	1974	1972	1975	1977	1975	1979	1979	1972	1966
(WY)	48.8	69.0	67.5	125	857	813	526	362	171	122	90.1	83.2
	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 - 1993, BY WATER YEAR (WY)
[REGULATED, UNADJUSTED]

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	444	679	1120	1311	2058	2163	1856	1615	794	436	303	261
MAX	2211	1649	2255	2606	3579	4678	5213	3828	3430	1693	740	602
(WY)	1990	1980	1992	1991	1990	1993	1987	1984	1981	1980	1980	1989
MIN	162	98.9	373	416	690	449	353	708	174	120	89.1	115
(WY)	1993	1988	1981	1981	1988	1988	1986	1993	1988	1988	1987	1990

SUMMARY STATISTICS

FOR 1992 CALENDAR YEAR

FOR 1993 WATER YEAR

WATER YEARS 1980 - 1993

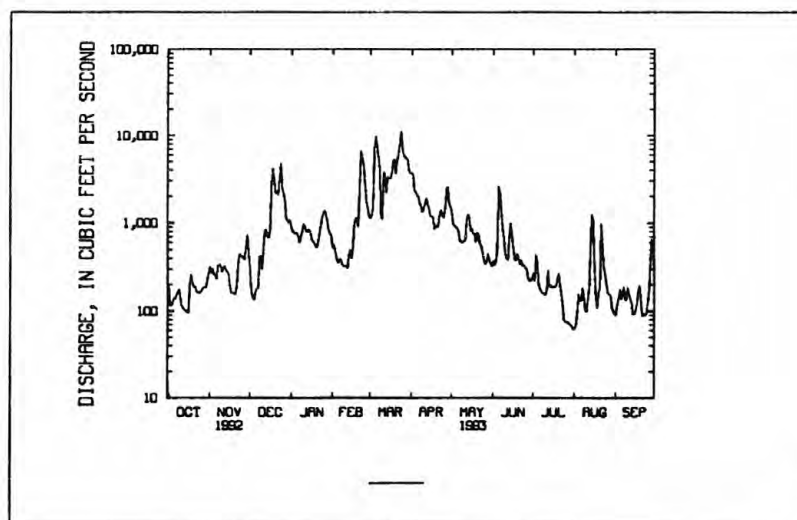
ANNUAL TOTAL	350126	375220	
ANNUAL MEAN	957	1028	1081
HIGHEST ANNUAL MEAN			1439
LOWEST ANNUAL MEAN			432
HIGHEST DAILY MEAN	5850	Mar 12	11300
LOWEST DAILY MEAN	96	Oct 16	62
ANNUAL SEVEN-DAY MINIMUM	108	Oct 10	68
INSTANTANEOUS PEAK FLOW			14400
INSTANTANEOUS PEAK STAGE			16.57
INSTANTANEOUS LOW FLOW			61
10 PERCENT EXCEEDS	2160	2730	2770
50 PERCENT EXCEEDS	630	424	552
90 PERCENT EXCEEDS	175	122	146

a From rating curve extended above 26,000 ft³/s on basis of slope-area measurements at gage heights 25.60 ft and 34.98 ft.

b July 31, Aug. 1.

c July 10, Aug. 18, 1988.

d July 30, 31, Aug. 1, 2.



GUYANDOTTE RIVER BASIN

03204000 GUYANDOTTE RIVER AT BRANCLAND, WV
(National stream-quality accounting network station)

LOCATION.--Lat 38°13'15", long 82°12'10", Lincoln County, Hydrologic Unit 05070102, on right bank at upstream side of highway bridge at Branchland, opposite mouth of Fourmile Creek, and at mile 35.3. Records include flow of Fourmile Creek.

DRAINAGE AREA.--1,224 mi², includes that of Fourmile Creek.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1915 to September 1917, October 1917 to September 1922 (gage heights only), December 1928 to current year. Prior to October 1959, published as Guyandot River at Branchland. Monthly discharge only for July to September 1916, published in WSP 1305.

REVISED RECORDS.--WSP 853: 1918(M). WSP 1335: 1916-17, 1929-30, 1932-35. WDR WV-82-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 547.91 ft above sea level. Prior to June 20, 1932, nonrecording gage and June 20, 1932, to Oct. 24, 1968, water-stage recorder at site 20 ft downstream at same datum. Oct. 1, 1942, to Jan. 23, 1969, auxiliary nonrecording gage and Jan. 24, 1969, to Dec. 12, 1986, auxiliary water-stage recorder 4.0 mi upstream from base gage at datum 4.99 ft higher.

REMARKS.--Water-discharge records good except those for periods of estimated daily discharges (backwater effect), which are poor. Flow regulated since February 1980 by R. D. Bailey Lake at mile 112. U.S. Army Corps of Engineers satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood, probably in 1907, reached a stage of about 44 ft, from floodmark, discharge, 43,500 ft³/s.

PEAK DISCHARGE FOR CURRENT YEAR.--Maximum discharge, 19,000 ft³/s, Mar. 24, gage height, 26.22 ft.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	207	302	550	1370	958	1880	6110	2010	522	393	105	123
2	244	347	412	1130	773	1860	5870	1670	494	393	104	116
3	171	344	298	1060	766	2070	4650	1330	427	328	107	119
4	162	373	243	1020	659	6710	3620	1250	535	559	146	210
5	168	313	246	1030	561	e14000	3210	1210	3990	476	204	241
6	186	313	270	1030	524	e10000	3010	1140	3690	313	258	181
7	179	304	288	927	566	e8000	2540	1020	2560	270	295	162
8	181	341	289	915	562	6530	2260	855	1680	249	259	215
9	217	361	480	1080	484	4330	2010	813	1170	235	220	171
10	235	362	581	1210	452	2100	1940	791	951	225	166	171
11	200	325	802	1300	435	2860	1990	806	704	218	149	230
12	162	338	1070	1280	510	4410	2270	893	610	281	175	208
13	154	394	1210	1250	560	3630	2230	1500	588	399	429	184
14	146	369	1130	1280	688	3250	1980	1480	1100	281	1090	168
15	142	327	942	1250	765	3790	1720	1310	1200	286	1310	151
16	140	312	894	1180	903	3870	1580	1020	858	283	1010	162
17	140	271	1840	995	1470	5580	1530	1080	645	254	382	212
18	189	223	5000	917	1760	8160	1370	984	511	256	222	177
19	276	219	4510	838	1720	7860	1160	1330	489	249	169	185
20	252	215	3960	775	1520	6540	1220	1080	546	289	182	230
21	223	214	4060	837	3400	6880	1280	1090	489	338	236	212
22	226	244	3340	1170	10200	8230	1570	966	599	270	993	168
23	214	445	2880	1260	8990	9520	1990	797	587	223	534	136
24	199	550	5150	1500	6780	e16000	1940	739	439	191	338	133
25	204	613	4530	1960	5140	e10000	1730	629	416	148	280	135
26	208	578	3170	2000	3460	e8000	1890	531	423	129	238	426
27	212	518	2700	1950	2570	7590	2550	476	417	128	208	523
28	228	479	2050	1700	2090	7730	3470	483	328	125	199	657
29	233	617	1550	1420	---	7440	2880	556	303	123	187	726
30	233	736	1400	1140	---	6210	2200	485	316	118	157	591
31	256	---	1380	1050	---	5080	---	477	---	111	129	---
TOTAL	6187	11347	57225	37824	59266	200110	73770	30801	27587	8141	10481	7323
MEAN	200	378	1846	1220	2117	6455	2459	994	920	263	338	244
MAX	276	736	5150	2000	10200	16000	6110	2010	3990	559	1310	726
MIN	140	214	243	775	435	1860	1160	476	303	111	104	116

e Estimated

GUYANDOTTE RIVER BASIN

03204000 GUYANDOTTE RIVER AT BRANCLAND, 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	3.6
10 PERCENT EXCEEDS	4020
50 PERCENT EXCEEDS	700
90 PERCENT EXCEEDS	100

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1980 - 1993, BY WATER YEAR (WY)
[REGULATED, UNADJUSTED]

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	592	1011	1684	1819	3013	3116	2698	2169	1211	628	405	352
MAX	3000	2553	3321	3613	5080	6455	7513	5255	4403	2173	928	977
(WY)	1990	1980	1992	1991	1990	1993	1987	1989	1981	1980	1980	1989
MIN	200	157	558	629	1094	864	481	876	227	157	131	166
(WY)	1993	1988	1981	1981	1988	1988	1986	1991	1988	1988	1987	1985

SUMMARY STATISTICS

FOR 1992 CALENDAR YEAR

FOR 1993 WATER YEAR

WATER YEARS 1980 - 1993

ANNUAL TOTAL	486907	530062	
ANNUAL MEAN	1330	1452	1550
HIGHEST ANNUAL MEAN			2052
LOWEST ANNUAL MEAN			643
HIGHEST DAILY MEAN	7370	Mar 12	e16000
LOWEST DAILY MEAN	140	(b)	104
ANNUAL SEVEN-DAY MINIMUM	153	Oct 12	113
INSTANTANEOUS PEAK FLOW			19000
INSTANTANEOUS PEAK STAGE			26.22
INSTANTANEOUS LOW FLOW			103
10 PERCENT EXCEEDS	2940		3910
50 PERCENT EXCEEDS	923		581
90 PERCENT EXCEEDS	234		171

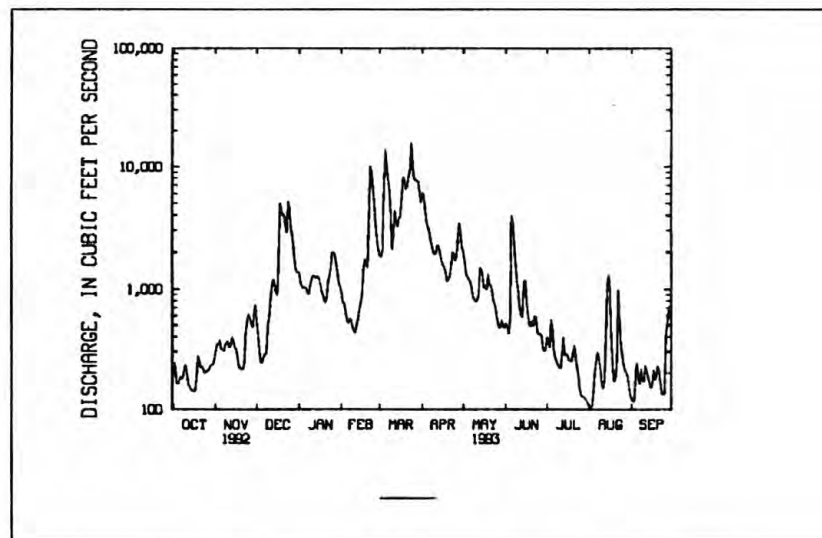
a Computed by using fall as a factor.

b Oct. 16, 17.

c Backwater.

d Aug. 1, 2.

e Estimated.



GUYANDOTTE RIVER BASIN

03204000 GUYANDOTTE RIVER AT BRANCLAND, 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 1992 TO SEPTEMBER 1993

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	TUR- BID- ITY (NTU) (00076)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (MG/L) (00301)	COLI- FORM, FECAL, UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)
NOV 1992												
25...	1155	640	500	7.9	12.0	6.6	748	9.2	87	430	130	120
MAR 1993												
31...	1300	E4980	200	7.0	11.0	23	735	10.2	96	1700	220	65
MAY												
28...	1130	474	482	7.2	20.0	1.0	748	8.3	93	38	K13	140
JUL												
30...	1230	119	713	7.7	26.5	1.1	745	6.5	83	K60	K31	170
SEP												
29...	1215	726	540	7.6	17.0	30	751	8.1	85	K780	390	140

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)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)
NOV 1992												
25...	28	13	52	3.6	126	0	103	120	13	0.10	2.3	301
MAR 1993												
31...	14	7.2	9.5	1.8	27	0	22	61	3.9	<0.10	7.4	130
MAY												
28...	32	14	40	3.0	84	0	69	130	21	0.30	4.7	281
JUL												
30...	39	18	83	4.8	149	0	122	180	41	0.30	3.7	439
SEP												
29...	33	15	55	3.8	123	0	101	140	16	0.20	5.5	308

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

E: Estimated.

GUYANDOTTE RIVER BASIN

03204000 GUYANDOTTE RIVER AT BRANCHLAND, WV--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L) (00631)	NITRO- GEN, AMMONIA TOTAL (MG/L) (00610)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L) (00608)	NITRO- GEN, ORGANIC TOTAL (MG/L) (00605)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L) (00625)	PHOS- PHORUS TOTAL (MG/L) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L) (00671)	ALUM- INUM, DIS- SOLVED (UG/L) (01106)	BARIUM, DIS- SOLVED (UG/L) (01005)
NOV 1992												
25...	297	<0.010	0.550	0.020	<0.010	0.18	0.20	0.040	<0.010	<0.010	20	55
MAR 1993												
31...	121	<0.010	0.580	--	0.030	--	<0.20	0.020	<0.010	<0.010	--	--
MAY												
28...	289	<0.010	0.530	--	0.030	--	<0.20	<0.010	<0.010	<0.010	30	65
JUL												
30...	446	<0.010	0.390	--	0.020	0.18	0.20	<0.010	<0.010	<0.010	40	98
SEP												
29...	333	<0.010	0.840	--	0.050	--	<0.20	0.020	<0.010	0.020	20	58
DATE	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)	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 % FINER THAN .062 MM (70331)
NOV 1992												
25...	<3	16	20	8	<1	<1	<1.0	460	<6	13	22	99
MAR 1993												
31...	--	--	--	--	--	--	--	--	--	48	--	97
MAY												
28...	<3	13	21	35	2	<1	<1.0	540	<6	5	6.4	84
JUL												
30...	<3	8	27	75	1	<1	<1.0	720	<6	18	5.8	95
SEP												
29...	<3	13	18	8	<1	<1	<1.0	550	<6	63	123	99

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, 48.66 ft, Mar. 6; minimum, 24.96 ft, May 28, 29.

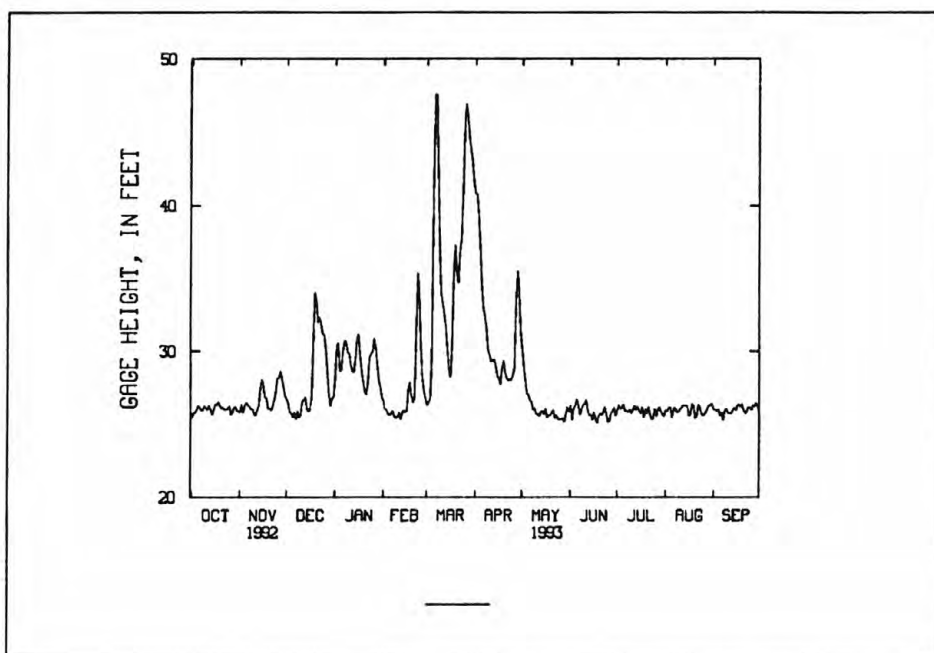
GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25.40	25.78	26.65	28.18	26.55	26.26	40.80	30.21	26.26	25.94	25.91	25.96
2	25.68	26.29	26.39	30.37	25.96	26.42	40.79	28.85	25.25	26.26	25.86	25.95
3	25.76	25.77	25.81	30.56	26.00	26.70	39.30	27.97	26.04	26.00	26.05	25.86
4	25.97	26.21	25.69	28.60	25.66	29.52	37.18	27.06	26.25	26.08	26.13	25.97
5	26.23	26.43	25.43	28.74	25.58	40.50	34.68	26.94	26.65	26.32	25.42	25.52
6	26.13	26.27	25.78	30.04	25.63	47.55	32.95	26.59	26.29	25.86	26.02	25.79
7	25.92	26.21	25.33	30.71	25.89	47.58	32.39	26.44	25.64	25.89	26.09	25.22
8	25.93	26.00	25.85	30.63	25.48	42.66	31.63	25.95	25.92	25.79	25.80	25.98
9	26.23	26.02	25.42	29.94	25.39	37.15	30.13	26.09	26.25	25.96	25.80	26.02
10	26.07	25.68	25.65	29.85	25.43	33.91	29.74	25.68	26.35	25.73	25.96	25.76
11	25.93	25.55	26.58	29.03	25.78	33.28	29.28	25.61	26.59	25.95	26.06	25.69
12	26.28	25.86	26.53	28.58	25.26	32.51	29.35	25.49	25.99	26.23	26.23	25.66
13	25.94	26.25	26.82	28.54	25.70	31.66	29.42	25.84	25.55	25.93	26.20	25.88
14	25.63	27.26	25.99	29.55	25.92	30.13	28.99	25.87	25.62	26.18	26.26	26.09
15	25.92	28.02	25.84	30.96	25.76	28.73	28.24	25.64	25.25	25.88	26.19	25.92
16	26.34	27.71	26.00	31.15	25.89	28.17	28.08	26.05	25.78	25.69	25.52	26.20
17	26.26	26.78	26.84	29.69	27.35	30.20	27.69	25.42	25.33	26.13	25.63	26.33
18	26.49	26.73	30.74	28.64	27.83	35.48	28.82	25.55	25.06	25.41	26.31	26.15
19	26.22	26.06	34.05	27.81	26.88	37.32	29.35	25.56	25.51	26.01	26.28	26.33
20	26.05	26.01	33.39	27.18	26.45	35.46	28.53	25.81	25.69	25.68	25.37	25.93
21	26.09	25.91	31.95	27.02	26.81	34.70	28.09	25.92	25.59	26.16	25.49	25.71
22	25.95	26.12	32.31	27.93	31.30	36.77	27.97	25.37	25.76	25.64	26.29	25.79
23	25.96	26.65	31.84	29.55	35.39	37.84	27.99	25.57	26.15	25.27	26.14	26.13
24	26.03	27.12	31.16	29.84	33.96	41.13	28.02	25.31	25.66	25.41	25.70	26.13
25	26.22	28.10	31.14	29.98	30.41	45.58	28.37	25.26	25.12	26.06	25.55	25.92
26	25.64	28.12	30.13	30.87	28.11	46.90	28.87	25.30	25.18	25.48	25.61	26.27
27	25.76	28.61	28.52	30.27	27.31	45.98	33.31	25.35	25.72	25.99	25.81	26.14
28	26.09	28.02	27.06	29.07	26.72	44.60	35.54	25.09	25.85	26.14	26.08	26.43
29	26.17	27.53	26.22	27.98	---	43.80	34.18	25.70	26.11	25.84	26.21	26.15
30	25.88	26.91	26.67	27.54	---	42.94	31.28	26.11	25.53	25.61	26.31	25.77
31	25.86	---	26.83	26.77	---	41.58	---	25.80	---	25.49	26.31	---
MEAN	26.00	26.67	27.89	29.21	27.16	36.87	31.37	26.11	25.80	25.87	25.95	25.95
MAX	26.49	28.61	34.05	31.15	35.39	47.58	40.80	30.21	26.65	26.32	26.31	26.43
MIN	25.40	25.55	25.33	26.77	25.26	26.26	27.69	25.09	25.06	25.27	25.37	25.22

WTR YR 1993 MEAN 27.92 MAX 47.58 MIN 25.06

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 sea level. Prior to Dec. 22, 1964, nonrecording gage at same site and 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 840 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage Height (ft)	Date	Time	Discharge (ft ³ /s)	Gage Height (ft)
Feb. 21	1800	1,230	10.32	Mar. 24	0930	918	9.57
Mar. 4	2300	*1,800	*11.45				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.3	2.2	5.4	35	32	72	363	42	18	9.3	.73	.80
2	2.0	3.8	6.2	30	25	78	281	36	7.9	19	.89	.88
3	1.9	7.5	7.4	28	23	106	180	31	5.7	30	1.0	1.1
4	1.9	5.7	6.5	27	21	1000	126	29	83	21	.90	8.8
5	2.2	4.3	12	34	19	934	97	28	420	12	1.4	4.2
6	2.2	5.5	11	30	19	291	78	23	126	8.1	25	1.9
7	2.0	4.9	11	30	17	175	61	20	56	5.6	11	1.3
8	1.7	3.7	9.8	39	17	124	53	17	36	4.3	4.2	.97
9	3.5	3.0	8.2	42	15	85	49	15	27	3.6	2.7	.93
10	4.7	2.6	30	41	14	78	51	14	22	2.9	2.1	8.3
11	2.1	2.3	80	40	14	65	44	12	18	13	2.9	4.2
12	1.5	3.3	74	51	28	57	41	11	15	39	4.3	1.9
13	1.7	8.7	61	64	34	51	37	15	15	12	49	1.2
14	1.6	5.7	45	67	38	e45	36	12	15	7.6	18	.88
15	1.9	3.8	36	61	37	e40	34	9.6	11	8.6	8.3	1.5
16	1.7	2.9	31	53	113	82	34	9.1	9.1	6.2	5.0	20
17	1.4	2.5	168	45	139	312	31	11	7.3	5.2	3.8	7.4
18	1.4	2.3	154	36	104	329	27	12	6.2	4.5	3.1	3.8
19	1.2	2.2	84	30	77	238	25	26	5.2	4.2	2.6	2.7
20	1.1	2.0	273	26	61	198	25	16	4.5	6.7	2.8	2.1
21	1.1	2.2	221	41	613	362	38	13	4.3	3.8	4.6	6.1
22	1.1	7.0	120	55	535	277	50	11	24	2.7	2.9	4.2
23	1.1	20	124	50	214	416	50	9.1	9.5	2.1	2.0	2.6
24	1.2	13	115	88	123	742	49	7.9	5.9	1.8	1.6	2.1
25	1.1	18	89	129	82	308	45	7.0	4.5	1.6	1.4	3.8
26	1.1	16	75	105	75	173	69	6.1	7.8	1.5	1.3	50
27	1.2	11	56	81	73	155	72	5.1	5.4	1.4	1.2	82
28	1.2	8.8	51	61	66	169	66	4.5	3.9	1.4	1.1	31
29	1.2	7.0	44	49	---	171	58	4.1	3.3	1.2	.99	16
30	1.3	5.6	40	37	---	139	50	3.9	4.1	.98	.94	10
31	2.1	---	38	35	---	137	---	13	---	.83	.87	---
TOTAL	53.7	187.5	2086.5	1540	2628	7409	2220	473.4	980.6	242.11	168.62	282.66
MEAN	1.73	6.25	67.3	49.7	93.9	239	74.0	15.3	32.7	7.81	5.44	9.42
MAX	4.7	20	273	129	613	1000	363	42	420	39	49	82
MIN	1.1	2.0	5.4	26	14	40	25	3.9	3.3	.83	.73	.80
CFSM	.04	.16	1.75	1.29	2.44	6.21	1.92	.40	.85	.20	.14	.24
IN.	.05	.18	2.02	1.49	2.54	7.16	2.15	.46	.95	.23	.16	.27

e Estimated

TWELVEPOLE CREEK BASIN

03206600 EAST FORK TWELVEPOLE CREEK NEAR DUNLOW, WV--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1965 - 1993, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	12.9	32.2	75.1	75.7	97.4	106	94.6	62.4	35.2	16.8	13.3	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

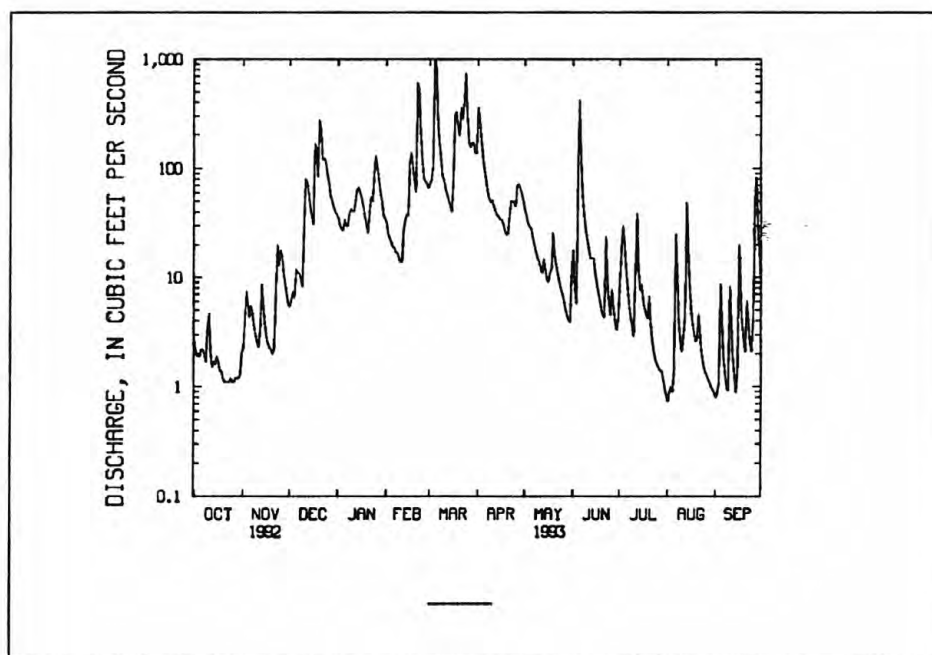
SUMMARY STATISTICS	FOR 1992 CALENDAR YEAR		FOR 1993 WATER YEAR		WATER YEARS 1965 - 1993	
ANNUAL TOTAL	14714.3		18272.09			
ANNUAL MEAN	40.2		50.1		52.4	
HIGHEST ANNUAL MEAN					98.3	1979
LOWEST ANNUAL MEAN					18.9	1988
HIGHEST DAILY MEAN	435	Jun 14	1000	Mar 4	3110	Dec 9 1978
LOWEST DAILY MEAN	1.1	(a)	.73	Aug 1	.01	(b)
ANNUAL SEVEN-DAY MINIMUM	1.1	Oct 20	.93	Jul 29	.01	Sep 18 1967
INSTANTANEOUS PEAK FLOW			1800	Mar 4	c5040	Dec 9 1978
INSTANTANEOUS PEAK STAGE			11.45	Mar 4	15.84	Dec 9 1978
INSTANTANEOUS LOW FLOW			.62	Sep 9	.01	(d)
ANNUAL RUNOFF (CFSM)	1.04		1.30		1.36	
ANNUAL RUNOFF (INCHES)	14.22		17.66		18.51	
10 PERCENT EXCEEDS	105		123		121	
50 PERCENT EXCEEDS	24		14		19	
90 PERCENT EXCEEDS	2.4		1.4		1.3	

a Oct. 20-23, 25, 26.

b July 3-6, 8-12, 1966, Sept. 18-27, 1967.

c From rating curve extended above 1,300 ft³/s on basis of slope-area measurement of peak flow.

d 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 sea level.

REMARKS.--Records good except those for periods of estimated daily discharges (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)
Mar. 4	1530	2,810	9.14	Mar. 23	2400	*3,180	*9.60

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	45	41	33	89	71	167	e700	246	165	105	46	65
2	44	39	33	81	68	173	e640	233	151	97	47	46
3	48	40	28	76	64	196	e560	222	146	97	47	41
4	60	45	28	73	61	1700	e450	219	248	94	43	62
5	95	47	44	81	63	1310	e500	210	231	91	45	51
6	55	48	40	78	62	732	e470	201	172	87	45	43
7	53	47	38	75	61	557	e430	193	156	84	45	41
8	43	46	34	109	60	531	e400	189	149	81	43	39
9	41	44	35	140	59	506	355	195	142	77	41	42
10	44	41	42	127	58	475	463	527	136	63	40	52
11	47	41	52	113	56	418	472	392	136	62	54	49
12	42	43	55	115	59	367	434	470	138	60	59	49
13	43	48	51	110	71	391	388	836	188	73	201	48
14	44	46	48	102	69	349	364	473	147	97	152	47
15	35	44	47	94	77	302	340	368	134	85	71	47
16	28	43	60	91	82	314	336	313	128	93	59	51
17	30	39	189	88	87	473	306	278	113	88	54	51
18	29	35	172	83	86	690	289	264	103	80	52	56
19	28	34	102	77	75	664	274	e280	105	87	48	52
20	27	33	150	74	83	595	263	e260	99	88	80	40
21	26	33	167	79	349	1150	282	241	96	75	65	37
22	26	40	115	82	1050	1290	278	223	100	71	53	32
23	27	42	405	76	430	1640	269	210	105	69	47	31
24	28	41	309	81	271	2180	262	201	105	69	45	31
25	37	39	172	87	213	1320	251	192	101	68	44	42
26	36	36	134	80	199	981	296	187	102	66	46	62
27	35	36	101	80	188	818	292	176	101	58	45	96
28	35	35	102	80	169	733	283	171	97	49	44	66
29	35	31	99	78	---	698	271	165	112	49	44	45
30	37	33	95	72	---	654	260	160	102	46	43	38
31	42	---	91	70	---	607	---	164	---	44	41	---
TOTAL	1245	1210	3071	2741	4241	22981	11178	8459	4008	2353	1789	1452
MEAN	40.2	40.3	99.1	88.4	151	741	373	273	134	75.9	57.7	48.4
MAX	95	48	405	140	1050	2180	700	836	248	105	201	96
MIN	26	31	28	70	56	167	251	160	96	44	40	31
CF5M	.23	.23	.57	.51	.87	4.26	2.14	1.57	.77	.44	.33	.28
IN.	.27	.26	.66	.59	.91	4.91	2.39	1.81	.86	.50	.38	.31

e Estimated

BIG SANDY RIVER BASIN

03212750 TUG FORK AT WELCH, WV--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1985 - 1993, BY WATER YEAR (WY)

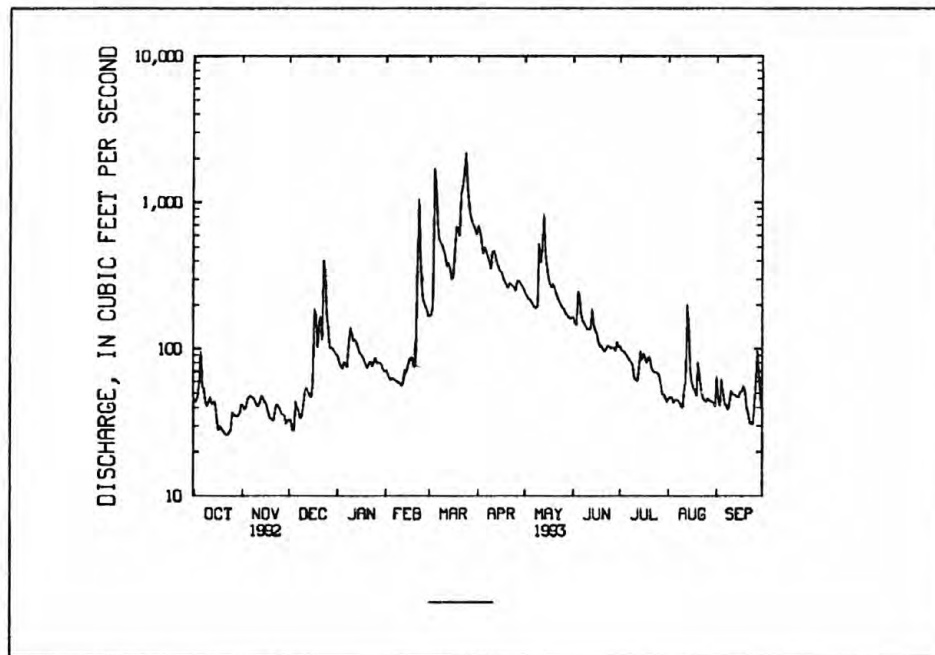
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	69.6	85.9	152	203	335	391	380	307	165	99.5	75.0	63.0
MAX	189	171	348	405	704	741	1206	648	260	124	101	112
(WY)	1990	1990	1992	1990	1990	1993	1987	1989	1992	1992	1985	1989
MIN	37.9	38.5	61.8	68.6	98.2	83.3	155	128	74.1	56.6	39.3	39.1
(WY)	1988	1988	1988	1988	1988	1988	1986	1988	1988	1988	1988	1987

SUMMARY STATISTICS	FOR 1992 CALENDAR YEAR		FOR 1993 WATER YEAR		WATER YEARS 1985 - 1993	
ANNUAL TOTAL	67912		64728			
ANNUAL MEAN	186		177		197	
HIGHEST ANNUAL MEAN					274	
LOWEST ANNUAL MEAN					75.9	
HIGHEST DAILY MEAN	1320		Mar 11		4300	
LOWEST DAILY MEAN	26		(a)		26	
ANNUAL SEVEN-DAY MINIMUM	27		Oct 18		27	
INSTANTANEOUS PEAK FLOW			2180		Mar 24	
INSTANTANEOUS PEAK STAGE			26		(a)	
INSTANTANEOUS LOW FLOW			27		Oct 18	
ANNUAL RUNOFF (CFSM)	1.07		1.02		1.13	
ANNUAL RUNOFF (INCHES)	14.52		13.84		15.36	
10 PERCENT EXCEEDS	375		432		404	
50 PERCENT EXCEEDS	146		81		119	
90 PERCENT EXCEEDS	40		38		43	

a Oct. 21, 22.

b Oct. 20, 21, 22, Dec. 4.

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, 0.4 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 sea level.

REMARKS.--No estimated daily discharges. Records good except those for the period May 10 to July 15, 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)
Mar. 4	1530	*5,680	*9.13	Mar. 24	0300	5,080	8.71

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	29	33	28	121	85	208	612	267	139	130	30	30
2	29	29	29	104	75	228	583	244	116	93	31	29
3	29	28	29	97	72	273	518	227	106	98	33	30
4	30	26	30	93	75	3070	464	216	152	105	30	42
5	71	28	43	94	70	2200	438	205	190	87	30	39
6	66	29	36	96	74	966	417	190	127	70	30	33
7	47	31	39	95	75	639	388	178	109	60	33	27
8	38	34	36	139	71	603	367	168	102	53	29	25
9	36	33	32	264	66	633	358	168	96	48	27	26
10	34	29	33	233	65	560	476	453	97	47	25	26
11	30	27	45	197	62	450	525	552	94	45	29	22
12	30	26	62	181	66	364	493	321	117	47	37	23
13	28	30	57	173	79	390	425	553	217	52	74	25
14	25	30	48	160	78	348	380	372	156	65	87	25
15	26	32	46	141	73	291	341	279	118	58	52	24
16	27	32	58	129	99	308	320	225	101	124	38	27
17	27	31	286	121	164	637	286	197	92	114	33	26
18	25	29	328	109	173	1250	259	192	86	69	31	25
19	34	28	168	95	143	1150	245	294	88	59	28	22
20	31	26	169	86	142	915	234	345	82	63	35	21
21	26	25	265	85	454	2140	248	264	76	56	128	22
22	26	26	182	92	2120	2270	270	222	74	47	58	22
23	26	33	569	89	812	2280	268	191	71	44	42	23
24	25	35	585	93	435	3810	263	171	68	43	38	23
25	25	40	275	112	298	1560	252	162	63	41	40	24
26	25	39	196	104	261	998	292	159	64	38	35	34
27	25	33	138	102	240	785	340	140	63	41	34	72
28	28	31	119	105	211	692	338	127	61	40	33	68
29	29	28	127	104	---	730	313	122	71	37	30	43
30	30	27	136	98	---	688	287	117	81	32	29	33
31	35	---	129	88	---	601	---	122	---	29	29	---
TOTAL	992	908	4323	3800	6638	32037	11000	7443	3077	1935	1238	911
MEAN	32.0	30.3	139	123	237	1033	367	240	103	62.4	39.9	30.4
MAX	71	40	585	264	2120	3810	612	553	217	130	128	72
MIN	25	25	28	85	62	208	234	117	61	29	25	21
CFSM	.15	.14	.67	.59	1.13	4.94	1.75	1.15	.49	.30	.19	.15
IN.	.18	.16	.77	.68	1.18	5.70	1.96	1.32	.55	.34	.22	.16

BIG SANDY RIVER BASIN

03212980 DRY FORK AT BEARTOWN, WV--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1985 - 1993, BY WATER YEAR (WY)

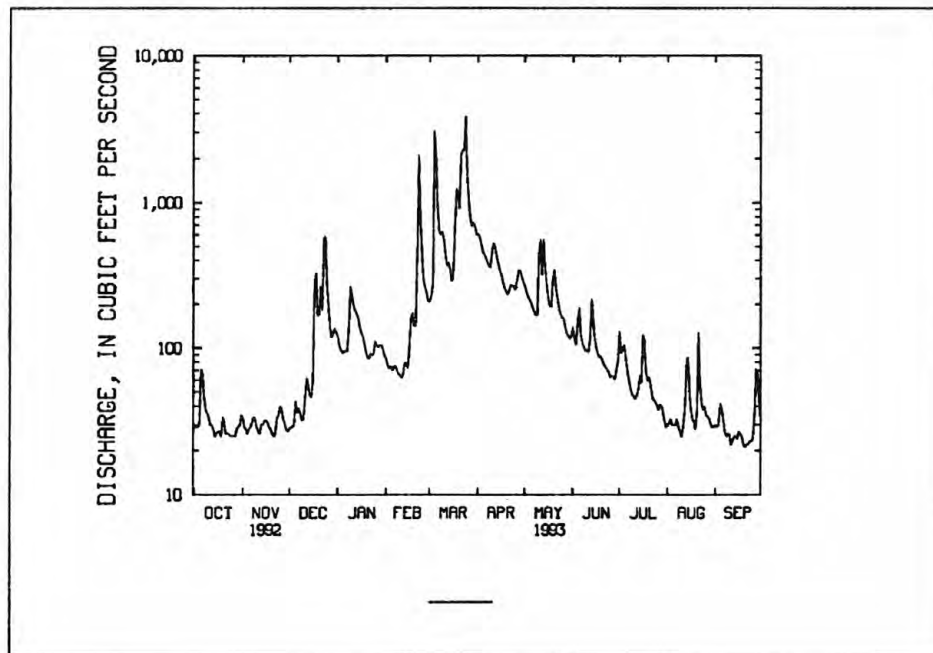
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	77.6	93.2	207	256	421	458	411	320	163	74.5	55.5	60.0
MAX	347	246	572	500	780	1033	1455	799	409	99.6	99.0	221
(WY)	1990	1990	1992	1990	1990	1993	1987	1989	1989	1991	1989	1989
MIN	25.2	25.3	67.0	85.5	135	93.7	110	104	39.3	28.2	22.4	26.9
(WY)	1986	1988	1988	1986	1988	1988	1986	1988	1988	1988	1988	1985

SUMMARY STATISTICS	FOR 1992 CALENDAR YEAR	FOR 1993 WATER YEAR	WATER YEARS 1985 - 1993
ANNUAL TOTAL	70666	74302	
ANNUAL MEAN	193	204	223
HIGHEST ANNUAL MEAN			317
LOWEST ANNUAL MEAN			75.0
HIGHEST DAILY MEAN	2280	Mar 11	5080
LOWEST DAILY MEAN	25	Oct 14	15
ANNUAL SEVEN-DAY MINIMUM	25	Oct 21	18
INSTANTANEOUS PEAK FLOW			6840
INSTANTANEOUS PEAK STAGE			9.13
INSTANTANEOUS LOW FLOW			20
ANNUAL RUNOFF (CFSM)	.92	.97	13
ANNUAL RUNOFF (INCHES)	12.58	13.23	14.50
10 PERCENT EXCEEDS	430	453	485
50 PERCENT EXCEEDS	127	79	105
90 PERCENT EXCEEDS	29	27	29

a Oct. 29, 1987 and Sept. 3, 1988.

b Sept. 11, 12, 22.

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 September 1993 (discontinued).

GAGE.--Water-stage recorder. Datum of gage is 695.00 ft above sea level.

REMARKS.--Records good except those for period of estimated daily discharges (ice effect), which is fair. 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)
Feb. 22	1100	8,430	11.19	Mar. 22	0700	7,700	10.70
Mar. 4	2200	*20,300	*17.31	Mar. 24	1000	16,500	15.61

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	117	132	124	588	343	953	2450	1020	527	313	113	96
2	115	132	125	488	309	1040	2490	910	404	393	122	111
3	115	149	130	428	268	1390	2250	820	349	285	332	122
4	119	137	123	393	259	9050	1980	760	589	334	178	162
5	213	133	132	394	248	10500	1850	719	1540	280	137	173
6	297	150	150	381	242	4120	1840	647	777	237	147	139
7	207	152	161	354	242	2740	1770	593	524	207	166	115
8	165	144	150	411	239	2420	1620	551	431	189	143	101
9	150	136	137	647	227	2500	1470	537	382	178	125	95
10	137	129	152	797	214	2240	1530	806	354	167	115	103
11	126	123	308	716	208	1900	1630	1200	331	160	156	100
12	123	121	432	672	274	1530	1570	952	316	202	188	101
13	122	132	457	645	444	e1400	1390	1580	611	180	660	97
14	112	137	387	588	589	e1300	1270	1340	614	178	783	99
15	110	133	337	534	557	1210	1170	973	428	234	429	98
16	109	125	347	493	733	1290	1110	790	352	418	232	123
17	104	123	1440	458	1140	2720	1030	683	311	335	172	142
18	97	121	2000	411	1040	4760	924	624	282	284	146	133
19	95	116	1020	356	799	4310	855	752	265	226	133	119
20	94	108	888	316	668	3260	814	850	261	324	122	111
21	99	109	1320	329	1930	6000	909	734	247	252	200	105
22	95	143	1030	365	7330	6950	1140	648	251	198	263	101
23	92	191	2220	356	3500	6410	1150	561	236	172	164	93
24	92	204	3120	395	1920	13000	1090	508	224	160	132	88
25	90	198	1500	584	1320	6590	1010	464	219	155	119	92
26	92	187	1010	588	1130	4030	1200	454	211	170	118	122
27	98	172	714	534	1060	3150	1560	427	222	273	110	236
28	99	155	647	487	932	2880	1480	386	215	184	109	321
29	99	143	714	441	---	2990	1300	367	212	155	107	220
30	104	132	737	381	---	2830	1140	352	218	132	104	149
31	122	---	670	347	---	2440	---	372	---	120	100	---
TOTAL	3809	4267	22682	14877	28165	117903	42992	22380	11903	7095	6125	3867
MEAN	123	142	732	480	1006	3803	1433	722	397	229	198	129
MAX	297	204	3120	797	7330	13000	2490	1580	1540	418	783	321
MIN	90	108	123	316	208	953	814	352	211	120	100	88
CFSM	.16	.18	.94	.62	1.29	4.89	1.84	.93	.51	.29	.25	.17
IN.	.18	.20	1.08	.71	1.35	5.64	2.06	1.07	.57	.34	.29	.18

e Estimated

BIG SANDY RIVER BASIN

03213620 TUG FORK AT VULCAN, WV--Continued

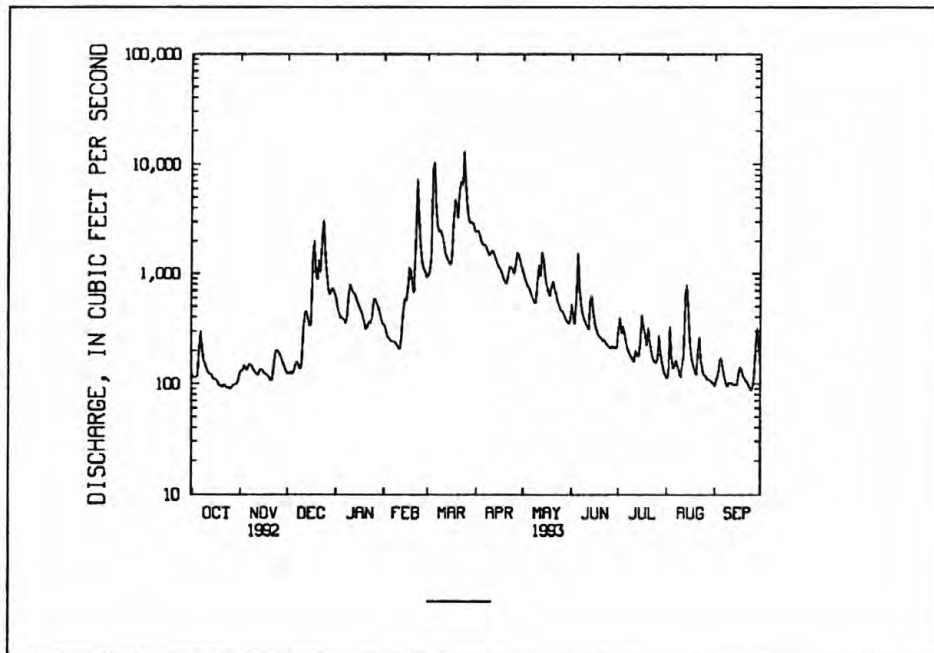
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1985 - 1993, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	338	430	907	993	1628	1729	1592	1117	569	275	211	212
MAX	1674	885	2148	1663	3020	3803	5270	2824	1273	349	314	611
(WY)	1990	1990	1992	1990	1990	1993	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 1992 CALENDAR YEAR			FOR 1993 WATER YEAR			WATER YEARS 1985 - 1993		
ANNUAL TOTAL	275547			286065					
ANNUAL MEAN	753			784			848		
HIGHEST ANNUAL MEAN							1171		
LOWEST ANNUAL MEAN							313		
HIGHEST DAILY MEAN	6200			Mar 11			17300		
LOWEST DAILY MEAN	90			Oct 25			63		
ANNUAL SEVEN-DAY MINIMUM	93			Oct 20			67		
INSTANTANEOUS PEAK FLOW							33300		
INSTANTANEOUS PEAK STAGE							22.15		
INSTANTANEOUS LOW FLOW							62		
ANNUAL RUNOFF (CFSM)	.97			1.01			1.09		
ANNUAL RUNOFF (INCHES)	13.18			13.68			14.81		
10 PERCENT EXCEEDS	1730			1800			1870		
50 PERCENT EXCEEDS	459			324			424		
90 PERCENT EXCEEDS	126			110			107		

a Sept. 24, 25.

b 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 above sea level, 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 October, November, and December, 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)
Feb. 22	1700	9,070	15.37	Mar. 24	1600	16,900	22.79
Mar. 5	0600	*18,800	*24.37				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	145	e170	144	882	509	1240	3030	1270	585	321	143	120
2	133	e200	135	763	475	1340	3090	1140	535	448	154	117
3	134	183	141	678	424	1790	2880	1020	445	386	319	144
4	142	167	139	628	387	6790	2540	947	753	416	278	188
5	205	155	154	609	377	14800	2330	895	2000	373	190	217
6	330	165	175	584	364	5820	2340	822	1150	309	190	188
7	297	176	201	544	360	3710	2260	750	725	263	198	155
8	216	166	202	594	356	3050	2090	698	574	237	164	131
9	203	151	183	777	339	3050	1900	674	503	219	139	118
10	180	140	232	1020	320	2780	1860	654	467	207	e120	158
11	163	134	484	959	309	2410	1950	1360	436	200	140	126
12	149	133	647	891	426	1970	1900	1260	401	246	203	121
13	147	144	673	858	627	e1700	1730	1540	546	228	619	116
14	141	147	580	795	862	e1600	1570	1710	754	208	920	114
15	130	143	488	728	848	1560	1450	1190	564	256	657	122
16	130	135	460	678	1020	1660	1380	957	449	490	357	148
17	131	e130	1500	642	1550	3240	1280	824	389	400	252	167
18	123	e130	2720	588	1450	5660	1160	764	372	386	209	174
19	112	e120	1570	524	1140	5310	1070	919	324	296	184	152
20	107	e120	1410	467	933	4130	1010	968	310	353	170	139
21	112	e120	1800	503	1530	6030	1160	916	303	333	171	130
22	117	145	1550	563	7860	8020	1500	817	347	255	299	121
23	111	223	2520	560	5030	7270	1560	700	302	213	236	116
24	110	259	4030	607	2690	14700	1440	629	275	193	180	109
25	110	265	2200	865	1840	9350	1310	579	261	187	159	124
26	110	242	1470	903	1540	5360	1430	552	266	251	146	150
27	111	219	1090	815	1420	4170	1850	534	264	453	142	245
28	120	193	958	731	1280	3830	1850	488	265	281	130	371
29	123	173	988	660	---	3850	1640	456	290	216	132	307
30	128	155	1030	586	---	3680	1440	439	252	180	129	215
31	157	---	970	531	---	3180	---	442	---	156	123	---
TOTAL	4627	5003	30844	21533	36266	143050	54000	26914	15107	8960	7453	4803
MEAN	149	167	995	695	1295	4615	1800	868	504	289	240	160
MAX	330	265	4030	1020	7860	14800	3090	1710	2000	490	920	371
MIN	107	120	135	467	309	1240	1010	439	252	156	120	109
CFSM	.16	.18	1.06	.74	1.38	4.93	1.92	.93	.54	.31	.26	.17
IN.	.18	.20	1.23	.86	1.44	5.69	2.15	1.07	.60	.36	.30	.19

e Estimated

BIG SANDY RIVER BASIN

03213700 TUG FORK AT WILLIAMSON, WV--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1968 - 1993, BY WATER YEAR (WY)

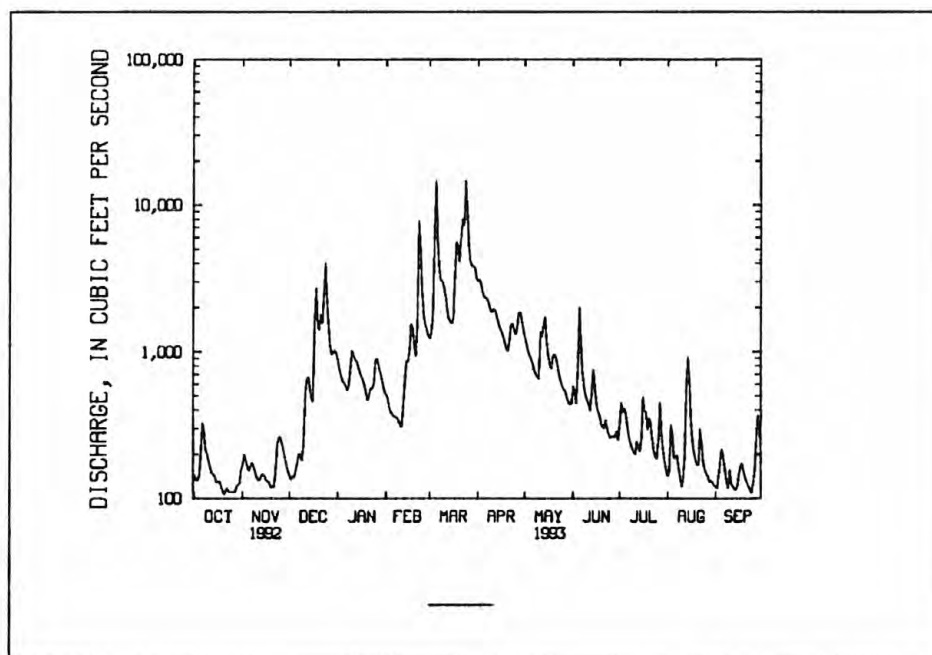
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	401	664	1111	1568	1945	2113	2055	1578	872	445	382	277
MAX	2059	2363	3631	4515	3782	5328	5745	4318	3263	1257	1419	839
(WY)	1990	1978	1973	1974	1972	1975	1987	1984	1979	1979	1972	1989
MIN	71.7	113	290	279	626	448	506	429	156	119	105	97.0
(WY)	1970	1970	1981	1981	1988	1988	1986	1976	1988	1988	1988	1969

SUMMARY STATISTICS	FOR 1992 CALENDAR YEAR				FOR 1993 WATER YEAR				WATER YEARS 1968 - 1993			
ANNUAL TOTAL	326621				358560							
ANNUAL MEAN	892				982				1113			
HIGHEST ANNUAL MEAN									1729			
LOWEST ANNUAL MEAN									353			
HIGHEST DAILY MEAN	4880				Mar 11				74000			
LOWEST DAILY MEAN	107				Oct 20				59			
ANNUAL SEVEN-DAY MINIMUM	111				Oct 20				62			
INSTANTANEOUS PEAK FLOW					18800				Mar 5			
INSTANTANEOUS PEAK STAGE					24.37				Mar 5			
INSTANTANEOUS LOW FLOW					UNKNOWN				59			
ANNUAL RUNOFF (CFSM)	.95				1.05				1.19			
ANNUAL RUNOFF (INCHES)	12.98				14.25				16.16			
10 PERCENT EXCEEDS	1960				2220				2480			
50 PERCENT EXCEEDS	628				436				595			
90 PERCENT EXCEEDS	145				130				141			

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

b From floodmarks.

c Oct. 18-20, 1969.



BIG SANDY RIVER BASIN

03214500 TUG FORK AT KERMIT, WV

LOCATION.--Lat 37°50'14", long 82°24'32", Mingo County, Hydrologic Unit 05070201, behind fire station, at Kermit, 0.8 mi downstream from Wolf Creek, and at mile 34.9.

DRAINAGE AREA.--1,280 mi².

PERIOD OF RECORD.--October 1915 to September 1917, October 1917 to December 1920 (gage heights only), January 1929 to September 1934, February 1985 to current year.

GAGE.--Water-stage recorder. Datum of gage is 574.74 ft above sea level.

REMARKS.--Records good except those from December 24 to April 24, 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)
Feb. 22	2000	11,100	20.77	Mar. 24	2200	18,900	30.20
Mar. 5	1200	*19,700	*31.10				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	187	176	224	1180	755	1800	5220	1730	678	403	180	144
2	173	198	215	1030	684	1890	5080	1520	673	450	195	138
3	167	244	212	912	612	2500	4340	1340	536	526	308	142
4	169	247	208	e840	563	7910	3650	1220	871	569	409	282
5	213	219	224	854	538	18400	3240	1180	3760	501	260	252
6	294	234	239	811	523	10400	3140	1070	2220	409	287	240
7	352	232	260	e770	508	5450	2940	968	1270	348	347	204
8	272	229	274	e850	498	4150	2750	897	957	307	270	170
9	263	214	261	e1000	474	3820	2540	853	796	280	222	153
10	240	200	332	e1200	449	3520	2410	825	733	266	192	216
11	204	190	791	e1300	434	3090	2420	1220	782	295	210	200
12	188	191	1030	e1200	623	2600	2340	1390	625	363	268	151
13	178	211	1050	e1200	876	2370	2140	1510	893	309	1010	146
14	171	210	928	e1100	1200	e2100	1940	2050	1040	343	1240	136
15	165	206	767	e1100	1250	2060	1800	1420	1010	354	936	158
16	156	200	681	e980	1790	2210	1730	1130	752	497	569	368
17	153	187	1810	e930	2520	4870	1610	993	592	548	375	236
18	150	178	3780	e860	2330	7940	1460	927	516	475	293	220
19	150	173	2430	e760	1800	7250	1340	1170	542	401	251	208
20	139	167	2650	e670	1450	5750	1260	1100	442	387	223	182
21	131	163	3020	e730	2840	7240	1450	1100	426	415	214	169
22	132	191	2410	e910	9770	9630	1940	1000	613	336	250	154
23	131	344	2960	e860	7860	9110	2170	872	493	270	329	144
24	124	356	5560	e930	4130	16800	2030	771	400	234	238	137
25	124	447	3550	e1300	2780	14800	1830	691	361	217	200	180
26	125	387	2270	e1400	2280	7670	1940	649	348	243	182	391
27	127	337	1640	e1300	2130	5750	2380	616	366	600	172	654
28	127	303	1370	e1100	1900	5460	2480	573	344	423	162	585
29	131	268	1320	1030	---	5540	2250	528	422	280	156	468
30	131	244	1330	890	---	5180	1980	503	361	241	156	338
31	152	---	1280	798	---	4460	---	573	---	198	152	---
TOTAL	5419	7146	45076	30795	53567	191720	73800	32389	23822	11488	10256	7166
MEAN	175	238	1454	993	1913	6185	2460	1045	794	371	331	239
MAX	352	447	5560	1400	9770	18400	5220	2050	3760	600	1240	654
MIN	124	163	208	670	434	1800	1260	503	344	198	152	136
CFSM	.14	.19	1.14	.78	1.49	4.83	1.92	.82	.62	.29	.26	.19
IN.	.16	.21	1.31	.89	1.56	5.57	2.14	.94	.69	.33	.30	.21

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, 1985-1993, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	416	697	1493	1917	2869	3717	2375	1591	803	492	450	278
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

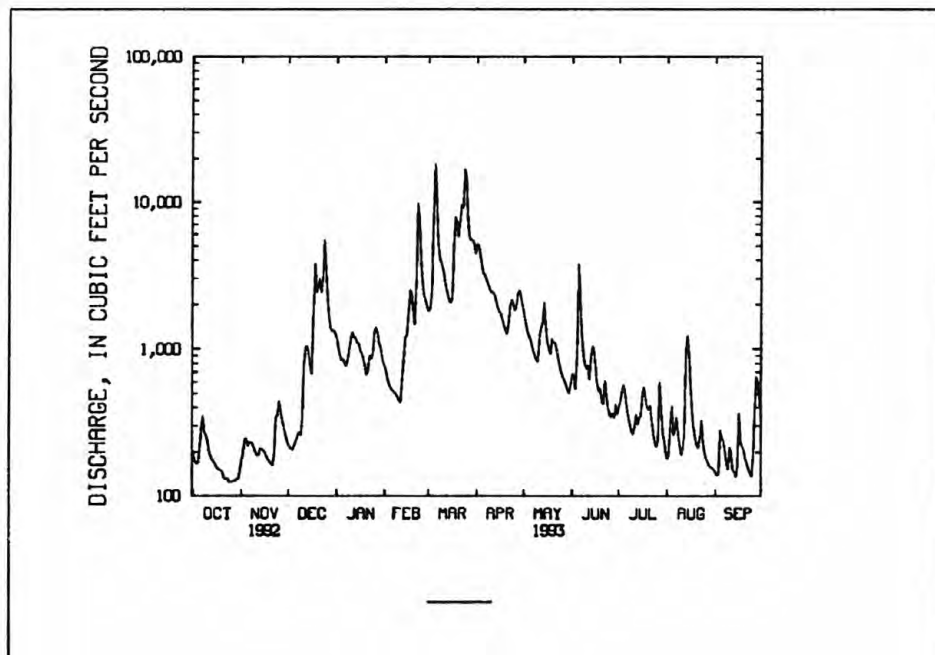
SUMMARY STATISTICS	FOR 1992 CALENDAR YEAR			FOR 1993 WATER YEAR			WATER YEARS 1916 - 1993		
ANNUAL TOTAL	432515			492644					
ANNUAL MEAN	1182			1350			1417		
HIGHEST ANNUAL MEAN							2178		
LOWEST ANNUAL MEAN							476		
HIGHEST DAILY MEAN	7470			Mar 12			18400		
LOWEST DAILY MEAN	124			(a)			124		
ANNUAL SEVEN-DAY MINIMUM	127			Oct 23			127		
INSTANTANEOUS PEAK FLOW							19700		
INSTANTANEOUS PEAK STAGE							31.10		
INSTANTANEOUS LOW FLOW							122		
ANNUAL RUNOFF (CFSM)	.92			1.05			1.11		
ANNUAL RUNOFF (INCHES)	12.57			14.32			15.04		
10 PERCENT EXCEEDS	2710			3050			3390		
50 PERCENT EXCEEDS	891			585			640		
90 PERCENT EXCEEDS	200			169			114		

a Oct 24,25.

b Instantaneous peak flow prior to 1985, undetermined.

c Several higher peaks outside period of record (see EXTREMES on previous page).

d Instantaneous low flow 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 1990 to September 1992, (mean daily discharges). 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 1982 to September 1983, October 1992 to September 1993, (gage heights, occasional discharge measurements, and annual maximum discharge only).

REVISED RECORDS.--WDR WV-78-1: 1977.

GAGE.--Water-stage recorder. Datum of gage is 536.57 ft above sea level.

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 17,100 ft³/s, Mar. 5, gage height, 27.20 ft; minimum gage height, 2.40 ft, Oct. 25, 26, 27, 29.

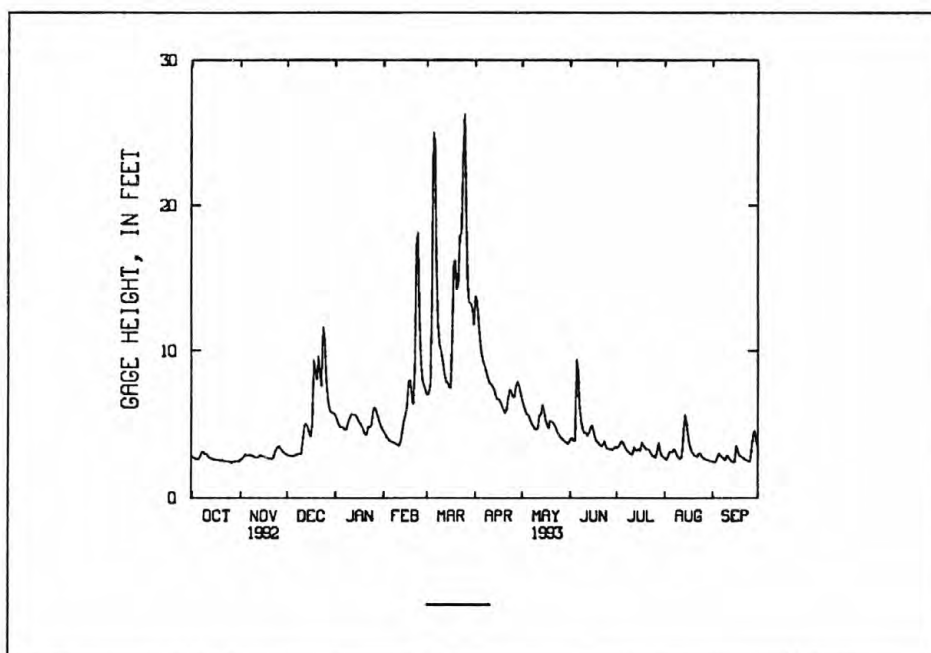
GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.76	2.59	2.90	5.60	4.51	7.03	13.80	6.69	4.00	3.40	2.65	2.46
2	2.68	2.66	2.86	5.31	4.34	7.09	13.45	6.29	4.10	3.48	2.60	2.43
3	2.63	2.78	2.84	5.01	4.13	7.74	11.99	5.95	3.87	3.68	2.80	2.43
4	2.61	2.94	2.82	4.81	3.99	13.41	10.69	5.70	3.87	3.86	3.14	2.81
5	2.64	2.88	2.83	4.81	3.87	25.08	9.70	5.67	9.42	3.75	3.11	3.05
6	2.87	2.85	2.90	4.78	3.81	24.37	9.27	5.36	8.60	3.51	3.14	2.85
7	3.13	2.91	2.92	4.63	3.77	15.59	8.93	5.11	6.20	3.30	3.35	2.77
8	3.12	2.86	2.98	4.67	3.73	11.68	8.55	4.90	5.20	3.15	3.08	2.64
9	2.93	2.83	2.99	5.08	3.68	10.43	8.13	4.73	4.67	3.05	2.86	2.53
10	2.96	2.77	3.03	5.43	3.60	9.98	7.84	4.62	4.43	2.97	2.71	2.88
11	2.81	2.72	4.00	5.71	3.54	9.33	7.71	4.78	4.45	2.96	2.65	2.82
12	2.70	2.72	4.92	5.67	3.85	8.52	7.60	5.65	4.25	3.47	2.91	2.62
13	2.64	2.84	5.04	5.66	4.57	7.90	7.35	5.71	4.46	3.26	4.62	2.47
14	2.61	2.88	4.84	5.64	5.24	7.86	6.99	6.36	4.79	3.22	5.71	2.44
15	2.58	2.80	4.47	5.41	5.61	7.55	6.71	6.01	4.94	3.36	4.97	2.44
16	2.56	2.78	4.20	5.22	6.25	7.45	6.73	5.33	4.53	3.20	4.25	3.55
17	2.56	2.75	5.00	5.03	7.91	10.64	6.54	5.00	4.07	3.77	3.59	3.27
18	2.53	2.69	9.39	4.83	8.02	16.18	6.26	4.76	3.80	3.59	3.24	2.88
19	2.51	2.65	8.57	4.57	7.07	16.25	6.00	5.26	3.78	3.46	3.04	2.81
20	2.53	2.64	8.06	4.33	6.34	14.23	5.80	5.20	3.61	3.29	2.91	2.73
21	2.51	2.62	9.67	4.30	8.74	14.69	5.98	5.10	3.49	3.32	2.82	2.67
22	2.46	2.69	8.28	4.86	17.08	17.96	6.74	4.93	3.64	3.25	2.78	2.58
23	2.47	3.06	7.63	4.83	18.16	18.09	7.36	4.70	3.89	3.04	3.02	2.53
24	2.45	3.35	11.67	4.92	12.45	23.48	7.24	4.42	3.49	2.88	2.99	2.49
25	2.42	3.46	10.78	5.87	9.19	26.32	6.89	4.23	3.34	2.79	2.78	2.47
26	2.40	3.52	8.15	6.18	7.95	20.10	6.87	4.10	3.32	2.75	2.69	3.48
27	2.44	3.31	6.78	6.00	7.65	14.52	7.60	4.00	3.32	3.21	2.62	4.30
28	2.44	3.16	6.09	5.62	7.25	13.30	7.92	3.91	3.27	3.75	2.58	4.63
29	2.46	3.06	5.84	5.29	---	13.30	7.63	3.79	3.36	3.18	2.53	3.85
30	2.48	2.97	5.80	4.95	---	12.91	7.14	3.71	3.48	2.89	2.50	3.45
31	2.50	---	5.77	4.67	---	11.84	---	3.74	---	2.77	2.48	---
MEAN	2.63	2.89	5.61	5.15	6.65	13.70	8.05	5.02	4.39	3.28	3.13	2.91
MAX	3.13	3.52	11.67	6.18	18.16	26.32	13.80	6.69	9.42	3.86	5.71	4.63
MIN	2.40	2.59	2.82	4.30	3.54	7.03	5.80	3.71	3.27	2.75	2.48	2.43

WTR YR 1993 MEAN 5.28 MAX 26.32 MIN 2.40

BIG SANDY RIVER BASIN

03214900 TUG FORK AT GLENHAYES, WV--Continued



WATER RESOURCES DATA - WEST VIRGINIA, 1993

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

Station name and number	Location and drainage area	Period of record	<u>Water year 1993 maximum</u>			<u>Period of record maximum</u>		
			Date	Gage height (ft)	Dis- charge (ft ³ /s)	Date	Gage height (ft)	Dis- charge (ft ³ /s)

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*, 1976-93a	12-17-92	12.41	8,670	07-04-32	27.38	42,500
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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*, 1963-93a	03-23-93	11.68	11,000	03-12-63	24.78	49,000
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* 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 1992 TO SEPTEMBER 1993

01604500 - PATTERSON CREEK NEAR HEADSVILLE, 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 (PER- CENT SATUR- ATION) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)
JAN 1993								
15...	1015	231	173	4.9	3.5	760	12.2	92
APR								
09...	1330	412	167	7.6	10.5	765	11.0	98
MAY								
05...	1330	228	199	7.7	17.5	765	9.5	99
JUL								
08...	1530	12	300	7.9	30.5	760	8.0	107

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 (PER- CENT SATUR- ATION) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)
OCT 1992								
14...	1100	5.8	200	7.0	12.0	--	10.4	--
NOV								
12...	1130	9.0	157	7.9	10.5	716	10.3	98
MAR 1993								
18...	1030	630	85	6.7	2.0	731	13.8	104
APR								
29...	1000	158	110	7.3	12.0	725	10.9	106
JUN								
23...	1030	9.6	170	7.3	21.0	720	7.7	92
AUG								
03...	1040	6.0	165	8.2	23.5	722	8.1	101
SEP								
17...	1030	11	165	7.2	21.5	728	8.7	103

MISCELLANEOUS FIELD DETERMINATIONS

WATER QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

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 1992					
05...	1305	6.5	650	4.7	15.0
22...	0930	8.9	625	4.1	8.5
NOV					
04...	0850	58	410	4.5	10.0
18...	1210	54	320	4.6	5.0
DEC					
02...	0930	50	340	4.5	3.0
18...	0815	1330	165	4.9	5.0
JAN 1993					
06...	0830	376	215	5.2	6.0
20...	1220	75	380	4.3	0.5
FEB					
01...	1030	103	390	4.3	2.0
MAR					
01...	0945	77	330	4.5	0.0
25...	1115	722	220	3.9	7.0
APR					
01...	1000	400	340	4.0	10.0
14...	0800	164	265	4.5	9.0
26...	1110	280	235	5.3	12.0
MAY					
05...	0900	79	350	3.7	16.0
17...	0900	43	400	3.6	16.0
JUN					
08...	0800	27	400	3.8	20.0
24...	0915	14	450	4.1	21.0
JUL					
06...	1120	14	550	4.1	26.0
09...	1100	6.5	505	4.9	27.0
12...	1205	4.7	560	4.0	26.0
16...	0815	4.4	600	4.3	23.0
19...	1100	3.4	710	4.2	24.5
23...	1000	2.8	725	4.2	22.5
26...	0930	1.8	725	4.4	23.0
AUG					
02...	1030	5.8	600	4.3	22.0
06...	1005	5.4	710	4.2	21.0
12...	0830	3.1	670	4.1	23.0
16...	1100	1.4	330	3.7	24.0
18...	0850	8.4	780	3.6	24.0
23...	0940	2.0	775	3.8	22.0
27...	1230	1.0	700	4.1	26.5
SEP					
10...	0840	5.8	560	4.0	21.0
23...	1120	7.6	675	4.3	19.0

MISCELLANEOUS FIELD DETERMINATIONS

WATER QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

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 (PER- CENT SATUR- ATION) (00300) (00301)
OCT 1992						
07...	0850	112	7.1	16.0	740	91
21...	1250	115	7.1	14.5	742	97
NOV						
04...	1115	124	6.6	13.0	728	95
18...	1430	123	6.3	10.0	738	94
DEC						
02...	1150	135	6.6	8.0	725	94
18...	1015	137	6.8	6.0	741	95
JAN 1993						
06...	1200	140	6.6	5.0	739	97
20...	1000	134	6.5	4.0	747	97
FEB						
01...	1230	134	7.2	4.0	735	98
MAR						
03...	0950	135	6.8	3.5	728	99
APR						
01...	0815	135	6.5	4.5	721	98
14...	1115	128	6.5	5.0	730	96
26...	1245	100	7.0	12.0	734	107
MAY						
05...	1240	105	6.4	10.0	736	97
19...	1400	105	7.0	11.0	727	98
JUN						
08...	1100	101	6.7	18.0	734	95
24...	1300	102	7.2	20.5	740	98
JUL						
09...	0810	102	7.3	21.0	734	94
13...	1400	102	7.0	23.0	737	89
16...	1015	104	6.3	21.0	737	95
19...	1230	120	6.5	22.0	733	92
23...	0740	102	6.6	21.0	736	93
26...	1200	104	6.8	23.0	734	96
AUG						
02...	1200	106	6.9	22.0	731	94
06...	0800	104	6.7	21.0	733	90
12...	1140	101	6.9	23.0	736	93
16...	1320	90	6.4	24.0	734	95
18...	1040	100	6.7	23.0	735	92
23...	1100	80	6.8	23.5	736	93
27...	0940	100	6.9	24.0	737	95
SEP						
09...	1130	102	6.8	23.0	730	98
24...	0845	107	6.9	18.5	738	92

ANALYSES OF SAMPLES COLLECTED AT PARTIAL-RECORD, SPECIAL STUDY, AND MISCELLANEOUS SITES

WATER QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

Samples are collected at partial-record, special study, and miscellaneous sites to give better areal coverage. The results of these samples are given herein.

03110830 - KINGS CREEK AT WEIRTON, 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- TOCOCCHI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD- NESS TOTAL AS CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)
OCT 1992												
28...	1000	6.5	440	7.4	6.0	742	12.7	105	230	K43	210	61
NOV												
17...	1000	31	390	7.4	4.0	744	12.4	97	900	180	160	44
DEC												
08...	1015	29	410	7.1	1.0	750	14.2	102	250	100	170	49
JAN 1993												
12...	1010	61	380	7.0	4.0	748	12.8	100	180	130	160	44
FEB												
09...	0945	9.0	460	7.1	0.0	749	15.4	107	1300	90	180	51
MAR												
23...	0930	224	250	6.2	5.0	746	12.3	98	300	250	120	34
APR												
13...	1000	57	420	6.3	6.5	745	13.2	110	130	400	180	49
MAY												
18...	0940	20	440	7.8	12.0	740	10.1	97	500	240	200	57
JUN												
09...	0930	76	410	7.4	17.0	741	8.8	94	K2200	1400	180	52
JUL												
20...	1000	9.4	490	8.0	22.0	743	8.4	99	1500	650	220	64
AUG												
04...	0950	1.1	500	7.5	19.0	746	7.6	84	1800	610	220	61
SEP												
08...	1010	4.8	520	8.1	18.0	743	9.4	102	2600	770	240	67

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- LITY WAT DIS TOT IT FIELD (MG/L AS CACO3 (39086)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)
OCT 1992											
28...	15	13	2.2	128	0	105	110	18	0.20	5.4	286
NOV											
17...	11	8.7	1.8	76	0	62	83	13	0.10	7.3	234
DEC											
08...	12	9.0	1.7	91	0	75	92	12	0.10	6.4	233
JAN 1993											
12...	11	7.6	1.6	73	0	60	92	12	<0.10	8.3	233
FEB											
09...	13	9.0	1.5	85	0	70	100	14	0.10	7.2	240
MAR											
23...	8.1	5.6	1.4	37	0	30	67	9.3	<0.10	8.4	171
APR											
13...	13	7.4	1.5	61	0	50	100	11	0.10	6.9	226
MAY											
18...	15	9.4	2.0	116	0	95	110	12	0.10	3.2	268
JUN											
09...	13	8.1	2.1	85	0	70	110	9.2	0.20	9.1	254
JUL											
20...	15	14	2.7	134	0	110	110	17	0.20	5.0	290
AUG											
04...	16	19	2.8	110	0	90	120	25	0.20	2.3	314
SEP											
08...	17	22	3.3	140	0	115	110	34	0.20	5.3	340

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 1992 TO SEPTEMBER 1993

03110830 - KINGS CREEK AT WEIRTON, WV--Continued

DATE	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	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)
OCT 1992 28...	288	<0.010	<0.050	<0.010	<0.010	--	--	--	--	--	--
NOV 17...	209	0.020	0.510	0.010	0.010	--	--	--	--	--	--
DEC 08...	229	0.010	0.520	0.010	<0.010	<10	<1	31	1	<1.0	<5
JAN 1993 12...	216	<0.010	0.710	<0.010	<0.010	--	--	--	--	--	--
FEB 09...	241	0.040	0.740	0.010	<0.010	--	--	--	--	--	--
MAR 23...	156	<0.010	0.940	0.010	<0.010	50	<1	32	<0.5	<1.0	<5
APR 13...	221	<0.010	0.360	0.010	<0.010	--	--	--	--	--	--
MAY 18...	267	<0.010	0.180	0.020	<0.010	--	--	--	--	--	--
JUN 09...	249	<0.010	0.610	0.050	0.020	50	<1	37	<0.5	<1.0	<5
JUL 20...	294	<0.010	0.052	0.030	<0.010	--	--	--	--	--	--
AUG 04...	300	<0.010	<0.050	0.040	<0.010	--	--	--	--	--	--
SEP 08...	329	<0.010	0.300	0.030	0.010	30	<1	53	<0.5	<1.0	<5

DATE	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	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)	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 1992 28...	--	--	12	--	--	5	--	--	--	--	--
NOV 17...	--	--	18	--	--	8	--	--	--	--	--
DEC 08...	<3	<10	7	<10	<4	9	<10	<1.0	170	<6	<3
JAN 1993 12...	--	--	10	--	--	10	--	--	--	--	--
FEB 09...	--	--	8	--	--	11	--	--	--	--	--
MAR 23...	<3	<10	43	<10	4	23	<10	<1.0	110	<6	13
APR 13...	--	--	7	--	--	14	--	--	--	--	--
MAY 18...	--	--	6	--	--	11	--	--	--	--	--
JUN 09...	<3	<10	19	<10	8	12	<10	<1.0	180	<6	10
JUL 20...	--	--	25	--	--	10	--	--	--	--	--
AUG 04...	--	--	14	--	--	9	--	--	--	--	--
SEP 08...	<3	<10	7	<10	5	16	<10	<1.0	250	<6	<3

ANALYSES OF SAMPLES COLLECTED AT PARTIAL-RECORD, SPECIAL STUDY, AND MISCELLANEOUS SITES

WATER QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

382628081550401 - CROOKED CREEK NR SCOTT DEPOT, 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- 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 1992												
30...	1300	0.05	294	7.0	12.0	744	4.0	38	K12	460	120	37
NOV												
20...	1245	0.12	279	7.0	11.0	750	9.2	85	49	160	100	30
DEC												
30...	1230	0.92	207	7.2	10.5	747	11.1	102	100	290	77	22
JAN 1993												
27...	1300	1.7	176	7.1	4.0	742	12.6	99	300	74	66	18
FEB												
25...	1115	1.6	169	7.3	0.5	753	15.7	110	870	240	65	18
MAR												
30...	1515	3.8	157	7.0	12.0	742	10.5	100	580	1600	59	16
APR												
28...	1200	2.0	162	6.8	12.5	751	10.8	103	K3200	610	63	17
MAY												
25...	1245	0.14	260	7.1	20.0	744	9.2	104	1200	1000	100	30
JUN												
24...	1600	<0.10	285	7.6	26.0	745	10.3	130	K2200	K1200	110	35
JUL												
26...	1400	<0.10	238	7.4	29.0	743	11.0	147	K110	330	97	30
AUG												
30...	1345	<0.10	237	7.0	30.0	--	8.4	--	210	120	110	33
SEP												
08...	1145	<0.10	273	6.8	22.0	--	8.2	--	570	700	110	33

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)
OCT 1992											
30...	7.3	7.9	4.1	138	0	113	18	7.8	<0.10	12	175
NOV											
20...	6.4	11	3.5	110	0	90	29	12	0.10	8.4	162
DEC											
30...	5.4	8.1	2.2	66	0	54	32	9.6	0.10	5.8	127
JAN 1993											
27...	5.0	6.0	1.8	51	0	42	29	6.7	<0.10	7.9	102
FEB											
25...	4.9	5.9	1.7	67	0	55	30	6.7	0.10	8.0	104
MAR											
30...	4.6	5.3	1.5	35	0	29	28	5.5	<0.10	7.6	98
APR											
28...	4.9	5.6	1.5	50	0	41	25	5.5	0.10	6.8	106
MAY											
25...	6.7	11	2.7	101	0	83	25	10	0.20	6.0	148
JUN											
24...	6.5	11	3.9	111	0	91	29	10	0.20	8.8	168
JUL											
26...	5.3	6.7	3.0	111	0	91	19	0.10	0.10	9.9	142
AUG											
30...	5.6	6.5	2.8	115	0	94	17	5.4	0.10	9.8	138
SEP											
08...	5.7	7.6	3.2	117	0	96	26	6.7	0.20	11	155

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 1992 TO SEPTEMBER 1993

382628081550401 - CROOKED CREEK NR SCOTT DEPOT, WV--Continued

DATE	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L) AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L) AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L) AS N) (00608)	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)
OCT 1992											
30...	167	0.010	<0.050	0.030	0.020	--	--	--	--	--	--
NOV											
20...	156	<0.010	0.110	0.040	<0.010	--	--	--	--	--	--
DEC											
30...	120	0.010	0.300	0.020	<0.010	<10	--	43	<0.5	<1.0	<5
JAN 1993											
27...	102	0.020	0.410	0.030	<0.010	--	--	--	--	--	--
FEB											
25...	111	<0.010	0.470	0.060	<0.010	--	--	--	--	--	--
MAR											
30...	87	<0.010	0.280	0.030	<0.010	50	<1	37	<0.5	<1.0	<5
APR											
28...	92	<0.010	0.077	0.020	<0.010	--	--	--	--	--	--
MAY											
25...	143	0.010	0.110	0.130	<0.010	--	--	--	--	--	--
JUN											
24...	161	0.010	0.180	0.070	<0.010	<10	<1	55	<0.5	<1.0	<5
JUL											
26...	129	<0.010	0.058	0.040	<0.010	--	--	--	--	--	--
AUG											
30...	138	<0.010	0.099	0.070	0.030	--	--	--	--	--	--
SEP											
08...	153	<0.010	0.170	0.070	<0.010	20	<1	64	<0.5	<1.0	<5

DATE	COBALT, DIS- SOLVED (UG/L) AS CO) (01035)	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)	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 1992											
30...	--	--	450	--	--	4200	--	--	--	--	--
NOV											
20...	--	--	290	--	--	550	--	--	--	--	--
DEC											
30...	<3	<10	200	<10	<4	280	<10	<1.0	97	<6	<3
JAN 1993											
27...	--	--	280	--	--	240	--	--	--	--	--
FEB											
25...	--	--	200	--	--	260	--	--	--	--	--
MAR											
30...	<3	<10	68	<10	<4	160	<10	<1.0	74	<6	5
APR											
28...	--	--	54	--	--	140	--	--	--	--	--
MAY											
25...	--	--	110	--	--	720	--	--	--	--	--
JUN											
24...	<3	<10	58	<10	<4	410	<10	<1.0	160	<6	<3
JUL											
26...	--	--	51	--	--	330	--	--	--	--	--
AUG											
30...	--	--	19	--	--	480	--	--	--	--	--
SEP											
08...	<3	<10	17	<10	<4	530	<10	<1.0	160	<6	<3

ANALYSES OF SAMPLES COLLECTED AT PARTIAL-RECORD, SPECIAL STUDY, AND MISCELLANEOUS SITES

WATER QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

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)	TUR- BID- ITY (NTU) (00076)	BARO- METRIC PRES- SURE (MM OF HG) (00025)
JUN 1993							
03...	1745	16	96	8.3	21.5	--	679
09...	1015	32	75	7.3	20.5	15	677
16...	1215	8.1	91	6.8	18.5	7.0	687
17...	1410	11	100	7.2	--	8.0	685
18...	1611	6.5	103	8.4	28.5	7.0	681
19...	1600	6.3	106	8.5	28.0	8.0	685
20...	1530	--	--	--	--	8.0	--
21...	1915	7.0	116	6.7	21.0	8.0	681
23...	0820	7.1	132	6.8	17.0	--	684
JUL							
01...	0915	4.6	147	7.7	19.5	4.0	678
08...	0930	4.2	133	7.6	20.0	8.0	--

DATE	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)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
JUN 1993							
03...	8.3	106	47	K9	--	--	--
09...	7.7	97	430	170	--	--	--
16...	7.9	94	K22	100	6	0.13	100
17...	7.6	--	K19	K23	6	0.18	100
18...	8.2	119	K16	K18	9	0.16	93
19...	8.5	121	K40	K27	7	0.12	100
20...	8.0	--	40	41	8	--	100
21...	7.9	100	60	--	--	--	--
23...	7.8	90	--	--	--	--	--
JUL							
01...	7.4	91	K140	100	8	0.09	97
08...	7.2	--	54	84	13	0.15	96

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 1992 TO SEPTEMBER 1993

390552079242201 - C17 BLACKWATER RIVER ABOVE NORTH BRANCH

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)
JUN 1993							
04...	0900	15	79	7.3	16.5	--	--
09...	1145	34	70	7.1	21.5	14	--
16...	1330	12	81	6.6	17.5	8.0	686
17...	1155	9.0	82	6.5	21.0	8.0	684
18...	1322	--	91	7.3	23.5	8.0	682
19...	1345	--	91	7.3	25.0	10	689
20...	1400	--	--	--	--	10	--
21...	1138	11	103	6.8	21.5	7.0	683
22...	1120	--	100	6.8	19.0	8.0	682
JUL							
01...	1253	6.4	107	7.4	21.5	6.0	680
08...	1230	4.0	105	7.3	25.0	8.0	--

DATE	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)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
JUN 1993							
04...	7.6	--	K29	K25	--	--	--
09...	6.9	--	150	44	--	--	--
16...	7.6	88	25	24	7	0.23	100
17...	7.5	94	K42	33	8	0.18	100
18...	8.0	106	21	32	19	--	77
19...	8.2	110	110	K23	17	--	65
20...	--	--	--	44	--	--	--
21...	6.5	82	43	--	8	0.22	100
22...	6.9	83	--	--	16	--	72
JUL							
01...	7.3	93	K610	K27	8	0.14	94
08...	6.8	--	27	36	13	0.14	98

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 1992 TO SEPTEMBER 1993

390548079242601 - C20 NORTH BRANCH @ 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)	TUR- BID- ITY (NTU) (00076)	BARO- METRIC PRES- SURE (MM OF HG) (00025)
JUN 1993							
04...	0955	3.8	113	--	16.5	--	684
09...	1145	13	85	7.0	20.5	13	--
16...	1510	2.8	121	6.4	15.5	10	685
17...	1300	2.4	122	6.8	24.0	11	683
18...	1400	--	129	7.5	25.5	12	688
19...	1230	--	134	7.6	26.5	16	--
20...	1300	--	--	--	--	14	--
21...	1255	1.8	144	6.2	--	16	682
22...	1203	--	134	7.6	20.5	14	682
JUL							
01...	1408	1.5	155	7.6	23.0	6.0	681
08...	1300	1.4	159	7.6	25.5	13	--

DATE	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)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
JUN 1993							
04...	8.5	97	460	K44	--	--	--
09...	6.2	--	550	60	--	--	--
16...	8.0	89	170	29	14	0.11	99
17...	7.8	104	310	26	18	0.12	98
18...	8.3	113	290	53	23	--	58
19...	8.1	--	130	58	15	--	91
20...	--	--	97	48	--	--	--
21...	5.7	--	200	--	37	0.18	75
22...	7.1	88	--	--	35	--	89
JUL							
01...	7.7	101	K610	K27	23	0.09	89
08...	6.9	--	K360	39	23	0.09	92

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 1992 TO SEPTEMBER 1993

390744079232201 - C22 LITTLE BLACKWATER RIVER @ 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)	TUR- BID- ITY (NTU) (00076)	BARO- METRIC PRES- SURE (MM OF HG) (00025)
JUN 1993							
03...	1315	4.4	46	7.1	19.0	--	684
09...	2015	14	30	6.2	22.0	15	682
16...	1500	3.8	50	7.3	24.0	15	--
22...	1107	3.6	66	7.1	19.0	10	--
30...	1000	2.7	77	7.1	19.0	10	681
JUL							
07...	1100	0.93	62	7.0	23.5	9.0	--
DATE		OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00300)	COLI- FORM, FECAL, UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	SEDI- MENT, CHARGE, SUS- PENDE (MG/L) (80154)	SEDI- MENT, CHARGE, SUS- PENDE (MG/L) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
JUN 1993							
03...	8.8	106	80	K5	--	--	--
09...	6.5	83	320	58	--	--	--
16...	8.0	--	190	400	22	0.23	96
22...	--	--	--	--	20	0.19	85
30...	6.9	83	K2400	470	14	0.10	93
JUL							
07...	6.8	--	25	64	26	0.06	62

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 1992 TO SEPTEMBER 1993

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)	TUR- BID- ITY (NTU) (00076)	BARO- METRIC PRES- SURE (MM OF HG) (00025)
JUN 1993							
03...	1215	25	75	6.7	16.5	--	676
10...	1500	58	60	6.7	21.0	--	--
16...	1730	22	--	--	--	8.0	--
17...	0620	21	75	7.3	17.5	--	--
21...	1715	18	95	6.9	22.0	13	--
23...	0715	20	99	7.2	19.0	8.0	676
30...	0845	15	104	7.2	19.5	9.0	681
JUL							
07...	0945	12	106	7.1	24.0	6.0	--
DATE		OXYGEN, DIS- SOLVED (PER- CENT SATUR- (MG/L) (00300)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	SEDI- MENT, CHARGE, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
JUN 1993							
03...	8.5	98	--	--	--	--	--
10...	7.1	--	310	--	--	--	--
16...	--	--	--	460	11	0.65	84
17...	--	--	65	--	--	--	--
21...	6.5	--	K110	--	27	1.3	68
23...	6.0	73	--	--	15	0.81	94
30...	6.2	76	E30000	200	14	0.57	88
JUL							
07...	6.9	--	K7	K7	44	1.4	78

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

ANALYSES OF SAMPLES COLLECTED AT PARTIAL-RECORD, SPECIAL STUDY, AND MISCELLANEOUS SITES

WATER QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

390740079271801 - BLACKWATER RIVER ABOVE MOUTH BEAVER CREEK

		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)
DATE	TIME						
JUN 1993							
02...	1930	39	64	7.0	16.0	--	678
10...	1230	73	54	7.3	20.5	--	--
17...	0645	--	65	6.7	17.0	8.0	--
18...	0600	--	74	7.2	20.5	8.0	--
18...	1830	--	71	7.3	22.5	18	--
19...	0630	--	79	7.0	21.5	12	--
19...	1820	--	81	7.4	24.5	34	--
20...	0615	--	78	7.2	21.0	20	--
20...	1815	--	73	7.3	23.5	22	--
21...	1540	E17	76	6.5	20.5	14	--
30...	1520	--	82	7.5	20.0	10	--
JUL							
07...	1600	--	94	7.7	28.5	5.0	680
		OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00300)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)	
DATE							

JUN 1993

02...	8.1	92	40	K11	--	--
10...	7.6	--	K71	--	--	--
17...	7.4	--	38	310	--	--
18...	7.5	--	360	K350	10	91
18...	6.8	--	360	410	27	93
19...	7.0	--	K62	K4	25	60
19...	7.2	--	460	1000	70	89
20...	7.0	--	--	K85	24	87
20...	6.6	--	--	130	31	88
21...	7.4	--	K210	--	17	91
30...	8.1	--	>20000	K26	13	89
JUL						
07...	6.8	99	K17	K8	11	79

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

ANALYSES OF SAMPLES COLLECTED AT PARTIAL-RECORD, SPECIAL STUDY, AND MISCELLANEOUS SITES

WATER QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

390754079273301 - BEAVER CREEK NEAR 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)	TUR- BID- ITY (NTU) (00076)	BARO- METRIC PRES- SURE (MM OF HG) (00025)
JUN 1993							
02...	1730	9.1	168	4.6	15.5	--	681
10...	1330	25	200	5.4	20.5	--	--
17...	0645	--	155	5.5	19.0	8.0	--
18...	0630	--	161	4.5	20.5	14	--
18...	1915	--	170	4.4	25.0	21	--
19...	0715	--	176	4.3	21.5	38	--
19...	1905	--	173	4.4	26.0	24	--
20...	0700	--	189	4.3	21.0	57	--
20...	1830	--	180	4.5	26.0	14	687
21...	1515	6.8	176	4.4	21.5	10	--
30...	1430	--	181	4.3	21.0	4.0	--
JUL							
07...	1510	--	217	4.2	30.0	2.0	--
DATE		OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (MG/L) (00300)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
JUN 1993							
02...	8.7	98	K150	K83	--	--	--
10...	7.3	--	130	--	--	--	--
17...	7.4	--	K73	340	10	--	88
18...	6.5	--	360	K500	13	--	93
18...	6.7	--	580	580	27	--	96
19...	6.3	--	K73	K300	27	--	99
19...	6.2	--	3900	730	26	--	92
20...	5.8	--	--	K200	41	--	90
20...	5.8	80	--	920	13	--	90
21...	6.3	--	900	--	14	0.26	89
30...	7.5	--	K6400	K100	7	--	85
JUL							
07...	5.4	--	K7	K3	--	--	--

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 1992 TO SEPTEMBER 1993

390740079274201 - BLACKWATER RIVER @ RT. 32 BRIDGE DAVIS, WV

DATE	TIME	SPE- CIFIC CON- DUCT- (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)
JUN 1993 20...	1200	94	7.3	24.5	6.6	420	260

ANALYSES OF SAMPLES COLLECTED AT PARTIAL-RECORD, SPECIAL STUDY, AND MISCELLANEOUS SITES

WATER QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

03066000 - BLACKWATER R AT 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)	TUR- BID- ITY (NTU) (00076)	BARO- METRIC PRES- SURE (MM OF HG) (00025)
JUN 1993							
02...	1915	25	85	7.0	16.0	--	678
10...	1115	102	104	6.6	19.5	--	--
16...	1345	39	85	7.0	18.5	8.0	688
17...	0710	35	89	6.2	18.0	8.0	--
17...	1200	27	88	6.9	--	8.0	--
17...	1830	32	101	7.4	25.0	9.0	--
18...	0015	--	100	7.2	24.0	--	--
18...	0715	32	97	7.0	20.5	--	683
18...	1230	--	92	6.7	22.5	10	--
18...	1800	29	101	6.8	24.5	20	--
19...	0745	28	103	6.8	22.0	18	--
19...	1230	--	97	6.5	22.0	18	--
19...	2000	24	109	6.8	25.0	26	--
20...	0820	--	106	6.7	21.5	27	--
20...	1300	26	116	7.0	24.0	--	--
20...	1735	21	109	7.0	26.0	24	687
21...	1255	24	110	6.8	22.5	16	--
23...	0800	36	111	6.8	19.5	9.0	676
30...	1510	31	131	6.7	21.0	10	--

JUL							
07...	1410	15	123	7.0	27.5	5.0	680

DATE	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED CENT SATUR- ATION) (00301)	COLI- FORM, FECAL, UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
JUN 1993							
02...	9.1	104	K1200	360	--	--	--
10...	7.5	--	K1900	--	--	--	--
16...	8.0	95	K3100	450	8	0.84	100
17...	6.8	--	1100	2200	8	0.76	98
17...	--	--	E6700	950	10	0.73	76
17...	7.7	--	K16000	K2600	14	1.2	91
18...	6.6	--	5700	1000	12	--	95
18...	6.7	83	3500	1000	--	--	--
18...	7.2	--	K15000	2000	12	--	99
18...	6.9	--	E7600	470	21	1.6	93
19...	6.2	--	1700	1000	19	1.4	92
19...	6.7	--	K28000	4000	14	--	99
19...	6.5	--	K13000	2900	22	1.4	99
20...	5.5	--	8200	310	24	--	98
20...	--	--	--	1800	25	1.8	90
20...	6.5	89	--	2200	--	--	--
21...	6.0	--	K15000	--	21	1.4	89
23...	--	--	--	--	16	1.6	83
30...	6.8	--	E100000	540	11	0.92	100
JUL							
07...	6.7	96	K7800	190	7	0.28	97

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

ANALYSES OF SAMPLES COLLECTED AT PARTIAL-RECORD, SPECIAL STUDY, AND MISCELLANEOUS SITES

WATER QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

390655079284901 - BLACKWATER RIVER @ BRIDGE UPSTREAM BLACKWATER FALLS

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)
JUN 1993 20...	1338	104	7.4	25.5	7.6	210

ANALYSES OF SAMPLES COLLECTED AT PARTIAL-RECORD, SPECIAL STUDY, AND MISCELLANEOUS SITES

WATER QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

01614010 - HARLAN RN NR SPRING MILLS, WV

DATE	TIME	TEMPER- ATURE WATER (DEG C) (00010)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00300)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	NITRO- GEN DIS- SOLVED (MG/L AS N) (00602)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)		
SEP 1993 08...	1245	16.0	751	5.8	591	8.7	90	7.6	318	7.4	7.4	0.72	
DATE		NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N) (00607)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) (00618)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS PO4) (00660)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00665)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)		
SEP 1993 08...	0.72	0.980	0.190	5.51	5.51	1.7	1.7	5.70	0.09	0.050	0.040	0.030	
DATE		HARD- NESS TOTAL (MG/L AS CACO3) (00900)	HARD- NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00932)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00935)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SiO2) (00955)	
SEP 1993 08...	300	39	82	23	4.7	0.1	3	5.2	11	26	0.20	10	
DATE		IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	PROP- CHLOR, WATER, DISS, REC (UG/L) (04024)	BUTYL- ATE, WATER, DISS, REC (UG/L) (04028)	SI- MAZINE, WATER, DISS, REC (UG/L) (04035)	PRO- METON, WATER, DISS, REC (UG/L) (04037)	DEETHYL ATRA- ZINE, WATER, DISS, REC (UG/L) (04040)	CYANA- ZINE, WATER, DISS, REC (UG/L) (04041)	FONOFOS WATER DISS REC (UG/L) (04095)	ALPHA BHC DIS- SOLVED (UG/L) (34253)	CHLOR- PYRIFOS DIS- SOLVED (UG/L) (34653)	CHLOR- PYRIFOS DIS- SOLVED (UG/L) (38933)
SEP 1993 08...	6	10	<0.015	<0.008	0.019	0.019	0.10	<0.013	<0.008	<0.007	<0.010	<0.005	
DATE		ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	LINDANE DIS- SOLVED (UG/L) (39341)	DI- ELDRIN DIS- SOLVED (UG/L) (39381)	METO- LACHLOR DIS- SOLVED (UG/L) (39415)	MALA- THION, DIS- SOLVED (UG/L) (39532)	PARA- THION, DIS- SOLVED (UG/L) (39542)	DI- AZINON, DIS- SOLVED (UG/L) (39572)	ATRA- ZINE, WATER, DISS, REC (UG/L) (39632)	ALA- CHLOR, WATER, DISS, REC (UG/L) (46342)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED PER DAY (TONS) (70302)
SEP 1993 08...	261	<0.011	<0.020	0.014	0.006	<0.022	<0.008	0.089	<0.009	291	345	4.56	

ANALYSES OF SAMPLES COLLECTED AT PARTIAL-RECORD, SPECIAL STUDY, AND MISCELLANEOUS SITES

WATER QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

01614010 - HARLAN RN NR SPRING MILLS, WV--Continued

DATE	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4) (71846)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS NO3) (71851)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS NO2) (71856)	METRI- BUZIN SENCOR WATER (UG/L) (82630)	2,6-DI- ETHYL ANALINE WAT FLT 0.7 U (UG/L) (82660)	TRI- FLUR- ALIN WAT FLT 0.7 U (UG/L) (82661)	DIMETH- OATE WATER FLTRD 0.7 U (UG/L) (82662)	ETHAL- FLUR- ALIN WAT FLT 0.7 U (UG/L) (82663)	PHORATE WATER FLTRD 0.7 U (UG/L) (82664)	TER- BACIL WATER FLTRD 0.7 U (UG/L) (82665)	LIN- URON WATER FLTRD 0.7 U (UG/L) (82666)
SEP 1993 08...	0.40	1.3	24	0.62	<0.012	0.001	0.003	<0.024	<0.013	<0.020	<0.030	<0.039
DATE	METHYL PARA- THION WAT FLT 0.7 U GF, REC (UG/L) (82667)	EPTC WATER FLTRD 0.7 U GF, REC (UG/L) (82668)	PEB- ULATE WATER FLTRD 0.7 U GF, REC (UG/L) (82669)	TEBU- THIURON WATER FLTRD 0.7 U GF, REC (UG/L) (82670)	MOL- INATE WATER FLTRD 0.7 U GF, REC (UG/L) (82671)	ETHO- PROP WATER FLTRD 0.7 U GF, REC (UG/L) (82672)	BEN- FLUR- ALIN WAT FLD 0.7 U GF, REC (UG/L) (82673)	CARBO- FURAN WATER FLTRD 0.7 U GF, REC (UG/L) (82674)	TER- BUFOS WATER FLTRD 0.7 U GF, REC (UG/L) (82675)	PRON- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82676)	DISUL- FOTON WATER FLTRD 0.7 U GF, REC (UG/L) (82677)	TRIAL- LATE WATER FLTRD 0.7 U GF, REC (UG/L) (82678)
SEP 1993 08...	<0.035	<0.005	<0.009	0.007	<0.007	<0.012	<0.013	<0.013	<0.012	<0.009	<0.020	<0.008
DATE	PRO- PANIL WATER FLTRD 0.7 U GF, REC (UG/L) (82679)	CAR- BARYL WATER FLTRD 0.7 U GF, REC (UG/L) (82680)	THIO- BENCARB WATER FLTRD 0.7 U GF, REC (UG/L) (82681)	DCPA WATER FLTRD 0.7 U GF, REC (UG/L) (82682)	PENDI- METH- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82683)	NAPROP- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82684)	PRO- PARGITE WATER FLTRD 0.7 U GF, REC (UG/L) (82685)	METHYL AZIN- PHOS WAT FLT 0.7 U GF, REC (UG/L) (82686)	PER- METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L) (82687)	DIAZ- INON D10 SRG WAT FLT 0.7 U GF, REC PERCENT (91063)	TERBUTH YLAZINE SURROGT WAT FLT 0.7 U GF, REC PERCENT (91064)	HCH ALPHA D6 SRG WAT FLT 0.7 U GF, REC PERCENT (91065)
SEP 1993 08...	<0.016	<0.046	<0.008	<0.004	<0.018	0.006	<0.010	<0.038	<0.016	91	91	88

ANALYSES OF SAMPLES COLLECTED AT PARTIAL-RECORD, SPECIAL STUDY, AND MISCELLANEOUS SITES

WATER QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

01617010 - TUSCARORA C AT MARTINSBURG, WV

DATE	TIME	TEMPER- ATURE (DEG C) (00010)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NITRATE TOTAL (MG/L AS N) (00620)
SEP 1993 07...	1730	17.5	767	8.4	590	8.8	92	7.8	342	0.030	<0.010	3.60
DATE		NITRO- GEN, AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS P) (00660)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	HARD- NESS NONCARB DISSOLV TOTAL (MG/L AS CACO3) (00900)	HARD- NESS NONCARB DISSOLV TOTAL (MG/L AS CACO3) (00904)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)
SEP 1993 07...		<0.20	<0.20	3.60	0.06	0.040	0.010	0.020	320	40	92	22
DATE		SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00932)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00935)	SULFATE DIS- SOLVED (MG/L AS SO4) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00945)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00950)	IRON, DIS- SOLVED (MG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (MG/L AS MN) (01056)	PROP- CHLOR, WATER, DISS, REC (UG/L) (04024)	
SEP 1993 07...		7.6	0.2	5	3.1	13	31	0.30	11	<3	4	<0.015
DATE		BUTYL- ATE, WATER, DISS, REC (UG/L) (04028)	SI- MAZINE, WATER, DISS, REC (UG/L) (04035)	PRO- METON, WATER, DISS, REC (UG/L) (04037)	DEETHYL ATRA- ZINE, WATER, DISS, REC (UG/L) (04040)	CYANA- ZINE, WATER, DISS, REC (UG/L) (04041)	FONOFOS WATER, DISS, REC (UG/L) (04095)	ALPHA BHC DIS- SOLVED (UG/L) (34253)	P, P' DDE DISSOLV (UG/L) (34653)	CHLOR- PYRIFOS DIS- SOLVED (UG/L) (38933)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	LINDANE DIS- SOLVED (UG/L) (39341)
SEP 1993 07...		<0.008	0.017	0.039	0.045	<0.013	<0.008	<0.007	<0.010	<0.005	280	<0.011
DATE		DI- ELDRIN DIS- SOLVED (UG/L) (39381)	METO- LACHLOR WATER DISSOLV (UG/L) (39415)	MALA- THION, DIS- SOLVED (UG/L) (39532)	PARA- THION, DIS- SOLVED (UG/L) (39542)	DI- AZINON, DIS- SOLVED (UG/L) (39572)	ATRA- ZINE, WATER, DISS, REC (UG/L) (39632)	ALA- CHLOR, WATER, DISS, REC (UG/L) (46342)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED (TONS PER DAY) (70302)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)
SEP 1993 07...		<0.020	0.22	<0.010	<0.022	<0.008	0.065	<0.009	367	364	8.32	0.50

ANALYSES OF SAMPLES COLLECTED AT PARTIAL-RECORD, SPECIAL STUDY, AND MISCELLANEOUS SITES

WATER QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

01617010 - TUSCARORA C AT MARTINSBURG, WV--Continued

DATE	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4) (71846)	METRI- BUZIN SENCOR WATER DISSOLV (UG/L) (82630)	2,6-DI- ETHYL ANALINE WAT FLT 0.7 U (UG/L) (82660)	TRI- FLUR- ALIN WAT FLT 0.7 U (UG/L) (82661)	DIMETH- OATE WATER FLTRD 0.7 U (UG/L) (82662)	ETHAL- FLUR- ALIN WAT FLT 0.7 U (UG/L) (82663)	PHORATE WATER FLTRD 0.7 U (UG/L) (82664)	TER- BACIL WATER FLTRD 0.7 U (UG/L) (82665)	LIN- URON WATER FLTRD 0.7 U (UG/L) (82666)	METHYL PARA- THON WAT FLT 0.7 U (UG/L) (82667)	EPTC WATER FLTRD 0.7 U (UG/L) (82668)
SEP 1993 07...	0.04	0.016	<0.006	<0.012	<0.024	<0.013	<0.020	<0.030	<0.039	<0.035	<0.005
DATE	PEB- ULATE WATER FLTRD 0.7 U GF, REC (UG/L) (82669)	TEBU- THIURON WATER FLTRD 0.7 U GF, REC (UG/L) (82670)	MOL- INATE WATER FLTRD 0.7 U GF, REC (UG/L) (82671)	ETHO- PROP WATER FLTRD 0.7 U GF, REC (UG/L) (82672)	BEN- FLUR- ALIN WAT FLD 0.7 U GF, REC (UG/L) (82673)	CARBO- FURAN WATER FLTRD 0.7 U GF, REC (UG/L) (82674)	TER- BUFOS WATER FLTRD 0.7 U GF, REC (UG/L) (82675)	PRON- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82676)	DISUL- FOTON WATER FLTRD 0.7 U GF, REC (UG/L) (82677)	TRIAL- LATE WATER FLTRD 0.7 U GF, REC (UG/L) (82678)	PRO- PANIL WATER FLTRD 0.7 U GF, REC (UG/L) (82679)
SEP 1993 07...	<0.009	0.006	<0.007	<0.012	<0.013	<0.013	<0.012	<0.009	<0.020	<0.008	<0.016
DATE	CAR- BARYL WATER FLTRD 0.7 U GF, REC (UG/L) (82680)	THIO- BENCARB WATER FLTRD 0.7 U GF, REC (UG/L) (82681)	DCPA WATER FLTRD 0.7 U GF, REC (UG/L) (82682)	PENDI- METH- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82683)	NAPROP- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82684)	PRO- PARGITE WATER FLTRD 0.7 U GF, REC (UG/L) (82685)	METHYL AZIN- PHOS WAT FLT 0.7 U GF, REC (UG/L) (82686)	PER- METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L) (82687)	DIAZ- INON D10 SRG WAT FLT 0.7 U GF, REC (UG/L) (91063)	TERBUTH YLAZINE SURROGT WAT FLT 0.7 U GF, REC (UG/L) (91064)	HCH ALPHA D6 SRG WAT FLT 0.7 U GF, REC (UG/L) (91065)
SEP 1993 07...	<0.046	<0.008	<0.004	<0.018	<0.010	<0.010	<0.038	<0.016	78	84	86

ANALYSES OF SAMPLES COLLECTED AT PARTIAL-RECORD, SPECIAL STUDY, AND MISCELLANEOUS SITES

WATER QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

01618200 - RATTLESNAKE RN NR SHEPHERDSTOWN, WV

DATE	TIME	TEMPER- ATURE WATER (DEG C) (00010)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	NITRO- GEN DIS- SOLVED (MG/L AS N) (00602)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	
SEP 1993 08...	0835	19.0	767	1.3	523	7.1	76	7.7	298	5.2	5.2	0.40	
DATE		NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N) (00607)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) (00618)	NITRO- GEN, TOTAL (MG/L AS N) (00620)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS PO4) (00660)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)
SEP 1993 08...	0.40	0.100	0.080	4.62	4.62	0.50	0.50	4.70	0.06	0.040	0.030	0.020	
DATE		HARD- NESS TOTAL (MG/L AS CACO3) (00900)	HARD- NESS NONCARB FLD. AS CACO3 (MG/L) (00904)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)
SEP 1993 08...	280	36	81	19	3.5	0.1	9.6	24	0.30	11	11	34	
DATE		PROP- CHLOR, WATER, DISS, REC (UG/L) (04024)	BUTYL- ATE, WATER, DISS, REC (UG/L) (04028)	SI- MAZINE, WATER, DISS, REC (UG/L) (04035)	PRO- METON, WATER, DISS, REC (UG/L) (04037)	DEETHYL ATRA- ZINE, WATER, DISS, REC (UG/L) (04040)	CYANA- ZINE, WATER, DISS, REC (UG/L) (04041)	FONOFOS WATER, DISS, REC (UG/L) (04095)	ALPHA BHC DIS- SOLVED (UG/L) (34253)	P,P' DDE DISSOLV (UG/L) (34653)	CHLOR- PYRIFOS DIS- SOLVED (UG/L) (38933)	WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	
SEP 1993 08...	<0.015	<0.008	0.048	0.044	0.23	<0.013	<0.008	<0.007	<0.010	<0.005	244		
DATE		LINDANE DIS- SOLVED (UG/L) (39341)	DI- ELDRIN DIS- SOLVED (UG/L) (39381)	METO- LACHLOR WATER DISSOLV (UG/L) (39415)	MALA- THON, DIS- SOLVED (UG/L) (39532)	PARA- THON, DIS- SOLVED (UG/L) (39542)	DI- AZINON, DIS- SOLVED (UG/L) (39572)	ATRA- ZINE, WATER, DISS, REC (UG/L) (39632)	ALA- CHLOR, WATER, DISS, REC (UG/L) (46342)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4) (71846)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS NO3) (71851)	
SEP 1993 08...	<0.011	<0.020	0.022	<0.010	<0.022	<0.008	0.27	<0.009	310	0.13	20		

ANALYSES OF SAMPLES COLLECTED AT PARTIAL-RECORD, SPECIAL STUDY, AND MISCELLANEOUS SITES

WATER QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

01618200 - RATTLESNAKE RN NR SHEPHERDSTOWN, WV--Continued

DATE	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS NO2) (71856)	METRI- BUZIN SENCOR WATER (UG/L) (82630)	2,6-DI- ETHYL ANALINE WAT FLT (UG/L) (82660)	TRI- FLUR- ALIN WAT FLT (UG/L) (82661)	DIMETH- OATE WATER FLTRD (UG/L) (82662)	ETHAL- FLUR- ALIN WAT FLT (UG/L) (82663)	PHORATE WATER FLTRD (UG/L) (82664)	TER- BACIL WATER FLTRD (UG/L) (82665)	LIN- URON WATER FLTRD (UG/L) (82666)	METHYL PARA- THION WAT FLT (UG/L) (82667)	EPTC WATER FLTRD (UG/L) (82668)
SEP 1993 08...	0.26	<0.012	<0.006	<0.012	<0.024	<0.013	<0.020	<0.030	<0.039	<0.035	<0.005
DATE	PEB- ULATE WATER FLTRD 0.7 U GF, REC (UG/L) (82669)	TEBU- THIURON WATER FLTRD 0.7 U GF, REC (UG/L) (82670)	MOL- INATE WATER FLTRD 0.7 U GF, REC (UG/L) (82671)	ETHO- PROP WATER FLTRD 0.7 U GF, REC (UG/L) (82672)	BEN- FLUR- ALIN WAT FLD 0.7 U GF, REC (UG/L) (82673)	CARBO- FURAN WATER FLTRD 0.7 U GF, REC (UG/L) (82674)	TER- BUFOS WATER FLTRD 0.7 U GF, REC (UG/L) (82675)	PRON- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82676)	DISUL- FOTON WATER FLTRD 0.7 U GF, REC (UG/L) (82677)	TRIAL- LATE WATER FLTRD 0.7 U GF, REC (UG/L) (82678)	PRO- PANIL WATER FLTRD 0.7 U GF, REC (UG/L) (82679)
SEP 1993 08...	<0.009	<0.015	<0.007	<0.012	<0.013	<0.013	<0.012	<0.009	<0.020	<0.008	<0.016
DATE	CAR- BARYL WATER FLTRD 0.7 U GF, REC (UG/L) (82680)	THIO- BENCARB WATER FLTRD 0.7 U GF, REC (UG/L) (82681)	DCPA WATER FLTRD 0.7 U GF, REC (UG/L) (82682)	PENDI- METH- ALIN WAT FLT (UG/L) (82683)	NAPROP- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82684)	PRO- PARGITE WATER FLTRD 0.7 U GF, REC (UG/L) (82685)	METHYL AZIN- PHOS WAT FLT 0.7 U GF, REC (UG/L) (82686)	PER- METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L) (82687)	DIAZ- INON D10 SRG WAT FLT 0.7 U GF, REC (91063)	TERBUTH YLAZINE SURROGT WAT FLT 0.7 U GF, REC (91064)	HCH ALPHA D6 SRG WAT FLT 0.7 U GF, REC (91065)
SEP 1993 08...	0.012	<0.008	<0.004	<0.018	<0.010	<0.010	<0.038	<0.016	76	85	81

ANALYSES OF SAMPLES COLLECTED AT PARTIAL-RECORD, SPECIAL STUDY, AND MISCELLANEOUS SITES

WATER QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

01636460 - BULLSKIN RUN ABOVE KABLETOWN, WV

DATE	TIME	TEMPER- ATURE WATER (DEG C) (00010)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00300)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	NITRO- GEN DIS- SOLVED (MG/L AS N) (00602)	NITRO- GEN, TOTAL (MG/L AS N) (00605)		
SEP 1993 08...	1145	17.0	766	8.3	506	9.1	94	8.0	285	6.9	7.0	0.16	
DATE	TIME	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N) (00607)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) (00618)	NITRO- GEN,AM- MONIA + ORGANIC DIS- SOLVED (MG/L AS N) (00620)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00623)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00625)	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS PO4) (00631)	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)	
SEP 1993 08...	0.26	0.040	0.020	6.68	6.68	0.30	0.20	6.70	0.03	0.020	0.040	0.010	
DATE	TIME	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	HARD- NESS NONCARB FLD. AS CACO3 (MG/L) (00904)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (MG/L AS CL) (00931)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)
SEP 1993 08...	270	40	90	12	3.8	0.1	11	18	0.20	11	4	6	
DATE	TIME	PROP- CHLOR, WATER, DISS, REC (UG/L) (04024)	BUTYL- ATE, WATER, DISS, REC (UG/L) (04028)	SI- MAZINE, WATER, DISS, REC (UG/L) (04035)	PRO- METON, WATER, DISS, REC (UG/L) (04037)	DEETHYL ATRA- ZINE, WATER, DISS, REC (UG/L) (04040)	CYANA- ZINE, WATER, DISS, REC (UG/L) (04041)	FONOFOS WATER, DISS, REC (UG/L) (04095)	ALPHA BHC DIS- SOLVED (UG/L) (34253)	P,P' DDE DISSOLV (UG/L) (34653)	CHLOR- PYRIFOS DIS- SOLVED (UG/L) (38933)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	
SEP 1993 08...	<0.015	<0.008	0.044	0.037	0.18	<0.013	<0.008	<0.007	<0.010	<0.005	234		
DATE	TIME	LINDANE DIS- SOLVED (UG/L) (39341)	DI- ELDRIN DIS- SOLVED (UG/L) (39381)	METO- LACHLOR WATER DISSOLV (UG/L) (39415)	MALA- THION, DIS- SOLVED (UG/L) (39532)	PARA- THION, DIS- SOLVED (UG/L) (39542)	DI- AZINON, DIS- SOLVED (UG/L) (39572)	ATRA- ZINE, WATER, DISS, REC (UG/L) (39632)	ALA- CHLOR, WATER, DISS, REC (UG/L) (46342)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4) (71846)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS NO3) (71851)	
SEP 1993 08...	<0.011	<0.020	0.11	<0.010	<0.022	<0.008	0.23	<0.009	275	0.05	30		

ANALYSES OF SAMPLES COLLECTED AT PARTIAL-RECORD, SPECIAL STUDY, AND MISCELLANEOUS SITES

WATER QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

01636460 - BULLSKIN RUN ABOVE KABLETOWN, WV--Continued

DATE	NITRO- GEN, NITRITE DIS- SOLVED (MG/L (71856)	METRI- BUZIN SENCOR WATER DISSOLV (UG/L) (82630)	2,6-DI- ETHYL ANALINE WAT FLT 0.7 U (UG/L) (82660)	TRI- FLUR- ALIN WAT FLT 0.7 U (UG/L) (82661)	DIMETH- OATE WATER FLTRD GG, REC (UG/L) (82662)	ETHAL- FLUR- ALIN WAT FLT 0.7 U (UG/L) (82663)	PHORATE WATER FLTRD GF, REC (UG/L) (82664)	TER- BACIL WATER FLTRD GF, REC (UG/L) (82665)	LIN- URON WATER FLTRD GF, REC (UG/L) (82666)	METHYL PARA- THION WAT FLT 0.7 U (UG/L) (82667)	EPTC WATER FLTRD 0.7 U (UG/L) (82668)
SEP 1993 08...	0.07	<0.012	<0.006	<0.012	<0.024	<0.013	<0.020	<0.030	<0.039	<0.035	<0.005
DATE	PEB- ULATE WATER FLTRD 0.7 U GF, REC (UG/L) (82669)	TEBU- THIURON WATER FLTRD 0.7 U GF, REC (UG/L) (82670)	MOL- INATE WATER FLTRD 0.7 U GF, REC (UG/L) (82671)	ETHO- PROP WATER FLTRD 0.7 U GF, REC (UG/L) (82672)	BEN- FLUR- ALIN WAT FLD 0.7 U GF, REC (UG/L) (82673)	CARBO- FURAN WATER FLTRD 0.7 U GF, REC (UG/L) (82674)	TER- BUFOS WATER FLTRD 0.7 U GF, REC (UG/L) (82675)	PRON- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82676)	DISUL- FOTON WATER FLTRD 0.7 U GF, REC (UG/L) (82677)	TRIAL- LATE WATER FLTRD 0.7 U GF, REC (UG/L) (82678)	PRO- PANIL WATER FLTRD 0.7 U GF, REC (UG/L) (82679)
SEP 1993 08...	<0.009	<0.015	<0.007	<0.012	<0.013	<0.013	<0.012	<0.009	<0.020	<0.008	<0.016
DATE	CAR- BARYL WATER FLTRD 0.7 U GF, REC (82680)	THIO- BENCARB WATER FLTRD 0.7 U GF, REC (82681)	DCPA WATER FLTRD 0.7 U GF, REC (82682)	PENDI- METH- ALIN WAT FLT 0.7 U GF, REC (82683)	NAPROP- AMIDE WATER FLTRD 0.7 U GF, REC (82684)	PRO- PARGITE WATER FLTRD 0.7 U GF, REC (82685)	METHYL AZIN- PHOS WAT FLT 0.7 U GF, REC (82686)	PER- METHRIN CIS WAT FLT 0.7 U GF, REC (82687)	DIAZ- INON D10 SRG WAT FLT 0.7 U GF, REC (91063)	TERBUTH YLAZINE SURROGT WAT FLT 0.7 U GF, REC (91064)	HCH ALPHA D6 SRG WAT FLT 0.7 U GF, REC (91065)
SEP 1993 08...	<0.046	<0.008	<0.004	<0.018	<0.010	<0.010	<0.038	<0.016	81	83	80

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WATER RESOURCES DATA - WEST VIRGINIA 1993

GROUND-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.

GROUND-WATER RECORDS

GROUND-WATER LEVELS

BERKELEY COUNTY

392725077582401. Local number 20-5-7.

LOCATION.--Lat 39°27'25", long 77°58'24", Hydrologic Unit 02070004, at John Street and Porter Avenue, Martinsburg.
Owner: Martinsburg Mills, Inc.

AQUIFER.--Beekmantown Group of Lower Ordovician age.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 8 in., depth 250 ft, cased with steel to 10 ft.

INSTRUMENTATION.--Digital water-level recorder--60-minute punch.

DATUM.--Elevation of land-surface datum is about 445 ft above sea level. Measuring point: Top edge of recorder shelter base, 3.30 ft above land-surface datum.

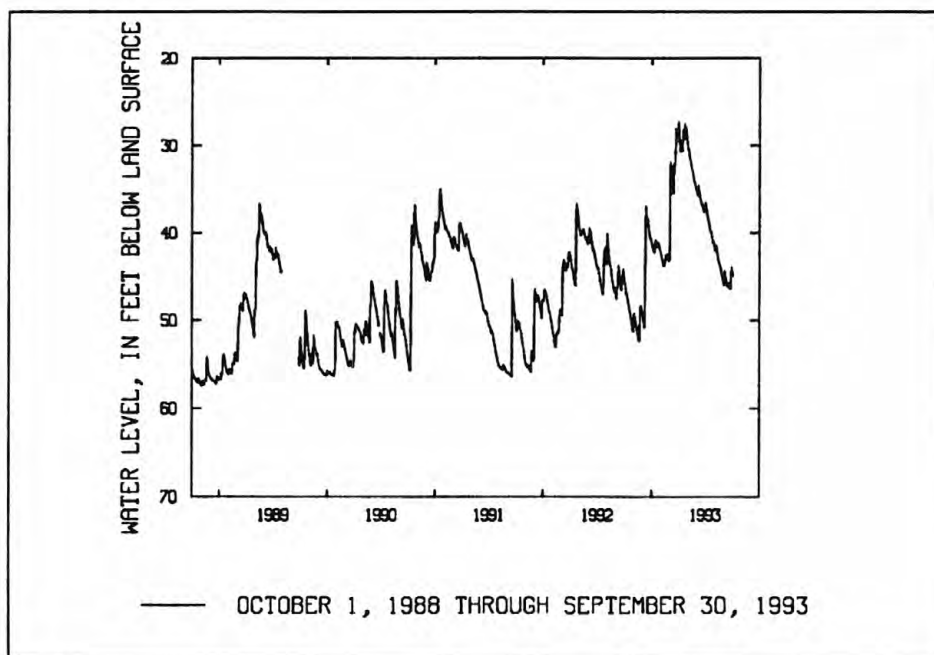
PERIOD OF RECORD.--November 1956 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 23.00 ft, estimated, below land-surface datum, June 24, 1972;
lowest, 68.45 ft below land-surface datum, Dec. 7, 1969.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
NOON VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	46.07	49.35	49.88	41.63	42.93	32.49	28.91	30.53	35.38	37.02	42.07	44.38
10	46.99	50.37	50.87	42.17	43.70	33.88	30.06	31.44	34.87	38.13	41.95	45.23
15	48.04	51.27	38.02	40.87	43.35	35.33	30.62	32.21	35.95	39.06	43.01	46.18
20	48.94	52.29	38.58	41.51	42.79	32.25	29.13	32.96	36.88	39.78	43.70	46.20
25	49.92	48.38	39.96	41.24	42.66	28.27	28.63	33.95	37.23	40.53	44.57	46.47
EOM	51.13	48.94	40.86	42.05	43.05	29.04	28.93	34.82	37.37	41.27	45.57	44.22

WATER YEAR 1993 HIGHEST 27.31 APR 2, 1993 LOWEST 52.37 NOV 21, 1992



GROUND-WATER LEVELS

BROOKE COUNTY

401216080362703.

LOCATION.--Lat 40°12'16", long 80°36'27", Hydrologic Unit 05030106, about 2.5 mi west of Bethany on hilltop about 1,700 ft west of Buffalo Creek.

Owner: C. E. Reeves.

AQUIFER.--Waynesburg coal in the Monongahela Group of Upper Pennsylvanian age.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 6 in., depth 50.5 ft, cased with steel to 46.5 ft and set in bentonite clay seal.

INSTRUMENTATION.--Continuous strip-chart water-level recorder.

DATUM.--Elevation of land-surface datum is about 1,150 ft above sea level. Measuring point: Top of casing, 2.20 ft above land-surface datum.

REMARKS.--No water-level record Oct. 22-27, due to recorder malfunction. Aquifer test data available.

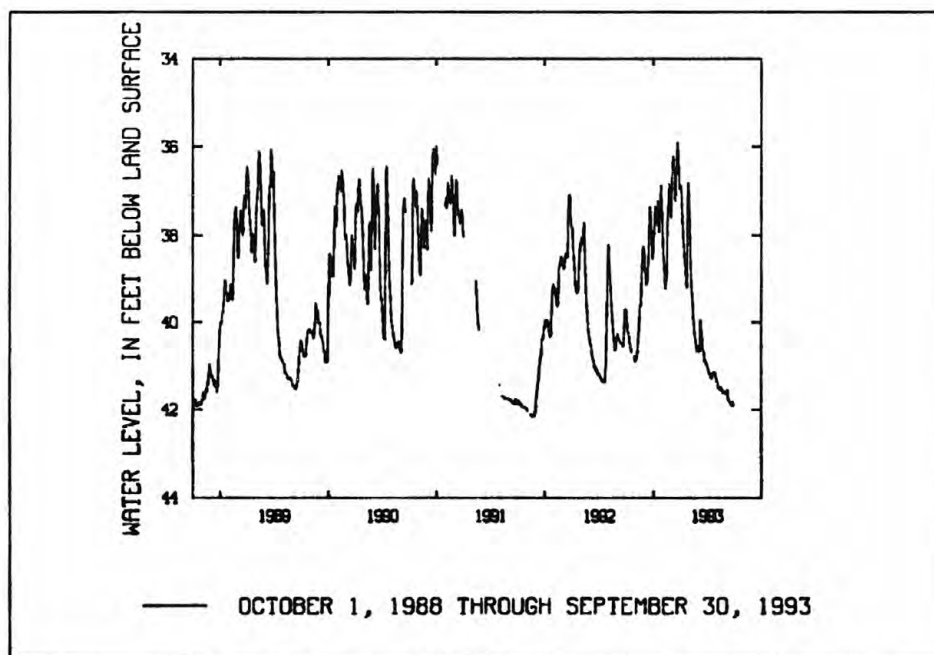
PERIOD OF RECORD.--July 1982 to current year.

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 1992 TO SEPTEMBER 1993
NOON VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	39.94	40.82	38.77	37.80	38.52	36.76	36.85	37.76	40.54	41.05	41.37	41.58
10	40.25	40.62	39.06	37.56	39.10	36.20	37.52	39.00	39.95	41.18	41.50	41.59
15	40.49	40.03	38.74	37.34	39.04	36.96	38.23	39.58	40.29	41.23	41.55	41.80
20	40.69	39.62	37.35	37.87	37.35	36.56	38.71	40.11	40.67	41.20	41.54	41.87
25	---	38.59	37.77	37.16	36.88	35.95	39.20	40.41	40.89	41.14	41.58	41.91
EOM	40.86	38.30	38.52	37.36	37.30	36.94	36.79	40.60	40.96	41.24	41.62	41.91

WATER YEAR 1993 HIGHEST 35.90 MAR 24, 1993 LOWEST 41.91 SEP 22, 1993



GROUND-WATER LEVELS

FAYETTE COUNTY

380154080571301.

LOCATION.--Lat 38°01'54", long 80°57'13", Hydrologic Unit 05050005, 1.6 mi south of U.S. Route 60 along State Route 11, near Clifftop.

Owner: Nuttall heirs.

AQUIFER.--New River Formation of Lower Pennsylvanian age.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 6 in., depth 41.5 ft, cased with wrought iron.

INSTRUMENTATION.--Weekly measurement with chalked tape by USGS personnel.

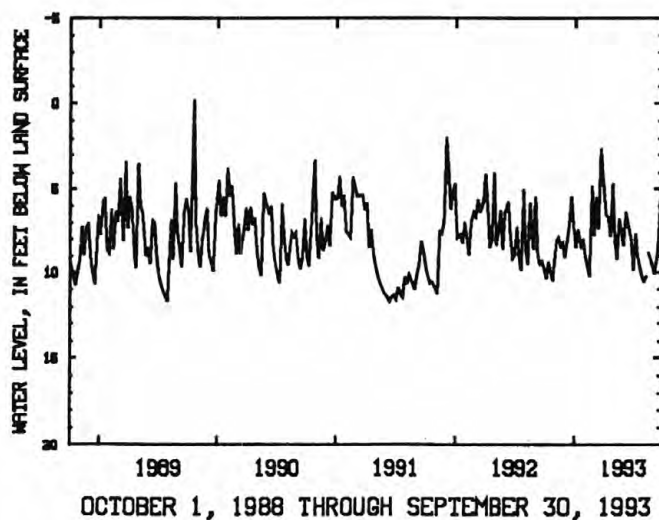
DATUM.--Elevation of land-surface datum is about 2,280 ft above sea level. Measuring point: Top of casing cover, 1.00 ft above land-surface datum.

PERIOD OF RECORD.--February 1986 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.23 ft above land-surface datum, Oct. 17, 1989; lowest measured, 12.00 ft below land-surface datum, July 12, 1988.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 06	10.33	DEC 08	8.09	FEB 09	9.68	APR 13	6.68	JUN 15	7.32	AUG 17	8.82
13	9.34	15	7.07	16	10.23	20	7.88	22	8.03	24	9.42
20	9.99	22	5.40	23	4.78	27	4.64	29	9.82	31	10.04
27	10.47	28	7.20	MAR 02	7.80	MAY 04	8.09	JUL 06	7.67	SEP 07	9.37
NOV 03	8.15	JAN 05	8.50	09	5.51	11	9.20	13	8.99	14	8.57
10	7.91	12	7.41	16	7.38	18	6.78	20	9.67	21	5.25
17	8.45	19	8.55	23	2.60	25	7.52	27	10.24	28	4.42
24	8.26	26	8.01	30	5.03	JUN 01	8.36	AUG 03	10.47		
DEC 01	9.05	FEB 02	9.00	APR 06	6.56	08	6.37	10	10.23		
WATER YEAR 1993		HIGHEST	2.60	MAR 23, 1993	LOWEST	10.47	OCT 27, 1992	AUG 03, 1993			



GROUND-WATER LEVELS

GILMER COUNTY

385604080495901. Local number, 33-3-1.

LOCATION.--Lat 38°56'04", long 80°49'59", Hydrologic Unit 05030203, at Glenville State College Campus, Glenville.

Owner: Glenville State College.

AQUIFER.--Conemaugh Formation of Upper Pennsylvanian age.

WELL CHARACTERISTICS.--Dug unused water-table well, diameter 3 ft, depth 25 ft, cased with concrete tile. July 1988, installed 4-in plastic casing fitted with screened well point, and backfilled dug well with gravel and sand.

INSTRUMENTATION.--Weekly measurement with chalked tape by observer.

DATUM.--Elevation of land-surface datum is about 820 ft above sea level. Measuring point: Top of concrete cover at land-surface datum.

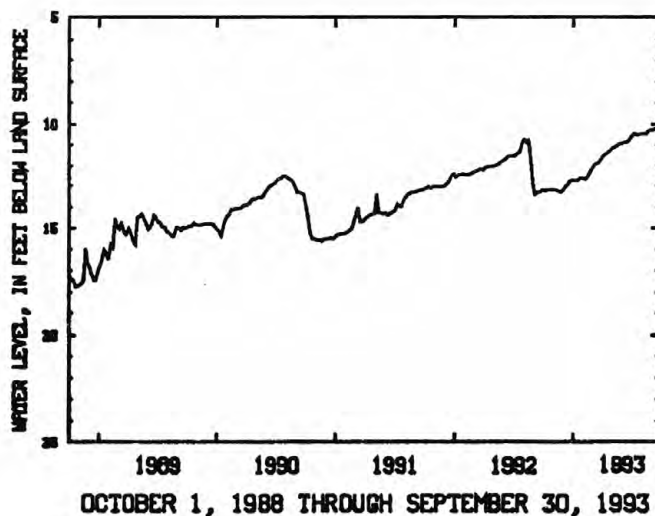
REMARKS.--West Virginia index well.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 9.94 ft below land-surface datum, Sept. 27, 1993; lowest measured, 18.75 ft below land-surface datum, Nov. 30, 1953.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 05	13.22	DEC 07	13.05	FEB 08	12.66	APR 12	11.45	JUN 21	10.84	AUG 23	10.33
12	13.20	14	12.92	15	12.54	19	11.36	28	10.67	30	10.28
19	13.17	21	12.76	22	12.30	MAY 03	11.13	JUL 05	10.49	SEP 06	10.25
26	13.19	28	12.73	MAR 01	12.18	10	11.10	12	10.48	13	10.20
NOV 02	13.17	JAN 04	12.72	08	11.97	17	11.04	19	10.50	20	10.14
09	13.20	11	12.71	15	11.91	24	10.93	26	10.49	27	9.94
16	13.23	18	12.72	22	11.86	31	10.92	AUG 02	10.49		
23	13.26	25	12.61	29	11.71	JUN 07	10.89	09	10.48		
30	13.17	FEB 01	12.63	APR 05	11.52	14	10.86	16	10.45		
WATER YEAR 1993		HIGHEST	9.94	SEP 27, 1993	LOWEST	13.26	NOV 23, 1992				



GROUND-WATER LEVELS

GRANT COUNTY

391652079181401.

LOCATION.--Lat 39°16'52", long 79°18'14", Hydrologic Unit 02070002, about 200 ft north of U.S. Route 50, about 3.5 mi west of Mount Storm.

Owner: Buffalo Coal Company.

AQUIFER.--Thin bed of coal in the Conemaugh Group of Upper Pennsylvanian age.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 6 in., depth 24 ft, cased with plastic to 23 ft.

INSTRUMENTATION.--Digital water-level recorder--60-minute punch.

DATUM.--Elevation of land-surface datum is about 2,890 ft above sea level. Measuring point: Top edge of recorder shelter base, 1.50 ft above land-surface datum.

REMARKS.--Well is near reclaimed surface mine. No water-level record Jan. 7 to Mar. 3 due to recorder malfunction.

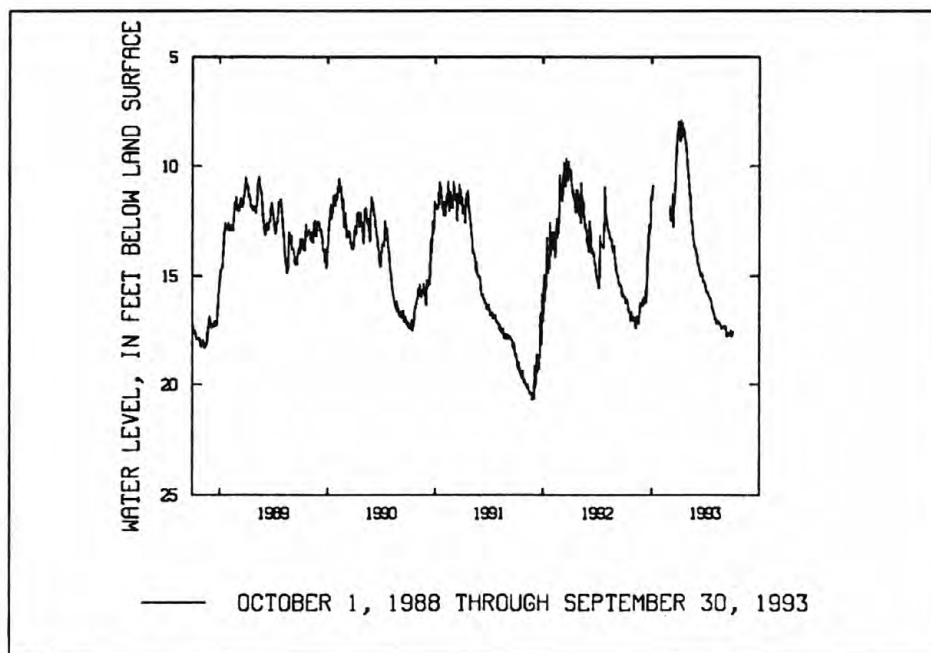
PERIOD OF RECORD.--June 1978 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 6.33 ft below land-surface datum, Mar. 11-15, 1979; lowest, 21.24 ft below land-surface datum, Nov. 28, 29, 1982.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
NOON VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	16.06	16.88	16.21	10.89	---	12.03	8.54	10.20	14.08	15.64	17.00	17.34
10	16.10	17.35	15.97	---	---	12.01	7.90	11.19	14.56	15.80	17.17	17.29
15	16.56	16.97	16.06	---	---	12.79	8.67	12.08	14.74	15.91	17.13	17.59
20	16.82	17.19	13.74	---	---	11.65	8.55	12.70	14.98	16.02	17.10	17.66
25	16.61	16.47	12.77	---	---	9.71	8.79	13.51	15.26	16.44	17.37	17.64
EOM	16.95	16.29	11.37	---	---	8.37	9.25	13.65	15.34	16.73	17.32	17.77

WATER YEAR 1993 HIGHEST 7.90 APR 10, 1993 LOWEST 17.77 SEP 13, 1993



GROUND-WATER LEVELS

GREENBRIER COUNTY

374804080174001. Local number, 45-8-2.

LOCATION.--Lat 37°48'04", long 80°17'40", Hydrologic Unit 05050003, at Fish Culture Station, U.S. Fish and Wildlife Service Hatchery, White Sulphur Springs.
Owner: U.S. Government.

AQUIFER.--Marcellus Formation and Harrell Shale of Middle Devonian age.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 6 in., depth 61 ft, cased with steel.

INSTRUMENTATION.--Weekly measurement with chalked tape by observer.

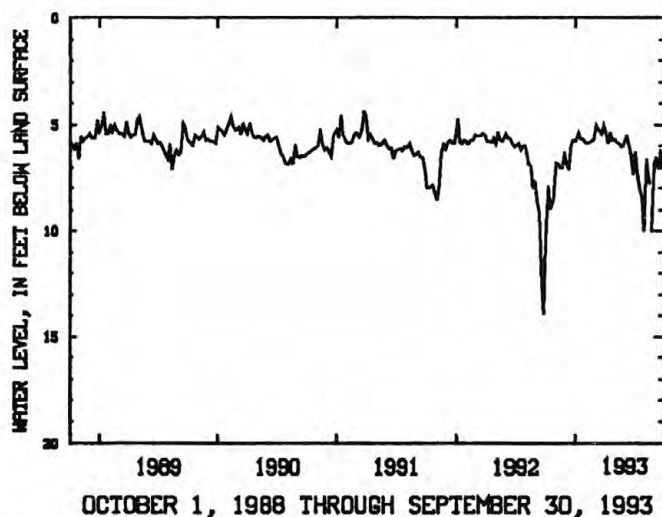
DATUM.--Elevation of land-surface datum is about 1,875 ft above sea level. Measuring point: Top of casing, 0.90 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.80 ft below land-surface datum, Mar. 16, 1955; lowest measured, 14.82 ft below land-surface datum, Aug. 29, 1981.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 03	10.20	DEC 05	6.85	FEB 06	5.90	APR 10	5.90	JUN 12	5.92	AUG 14	7.72
10	7.88	12	7.10	13	5.80	17	5.34	19	6.39	21	10.00
17	8.95	19	5.97	20	5.75	24	5.70	26	7.30	28	6.85
24	8.50	26	5.70	27	5.65	MAY 01	5.65	JUL 03	6.30	SEP 04	6.50
31	6.78	JAN 02	5.76	MAR 06	5.02	08	5.80	10	7.33	11	7.05
NOV 07	6.85	09	5.35	13	5.20	15	5.90	17	8.03	18	6.20
14	7.00	16	5.65	20	5.40	22	6.01	24	8.40	25	6.92
21	7.00	23	5.69	27	5.01	29	5.97	31	10.00		
28	6.30	30	5.80	APR 03	5.35	JUN 05	5.45	AUG 07	6.60		
WATER YEAR 1993		HIGHEST	5.01	MAR 27, 1993	LOWEST	10.20	OCT 03, 1992				



GROUND-WATER LEVELS

HAMPSHIRE COUNTY

391257078404601. Local number, 23-6-46.

LOCATION.--Lat 39°12'57", long 78°40'46", Hydrologic Unit 02070003, about 4 mi south of Augusta on State Route 29.
Owner: Loring Hott.

AQUIFER.--Hampshire Formation of Upper Devonian age.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 6 in., depth 24 ft, cased with tile.

INSTRUMENTATION.--Continuous strip-chart water-level recorder February 1972 to September 1991. Digital water-level recorder--60-minute punch, March 1992 to current year.

DATUM.--Elevation of land-surface datum is about 1,400 ft above sea level. Measuring point: Top of extended casing, 3.00 ft above land-surface datum. May 10, 1988, to March 3, 1992, top edge of shelter base 0.35 ft above land-surface datum. Prior to May 10, 1988, measuring point was top of casing at land-surface datum.

REMARKS.--No water-level record Nov. 10-18 and Dec. 14 to Jan. 3, due to recorder malfunction.

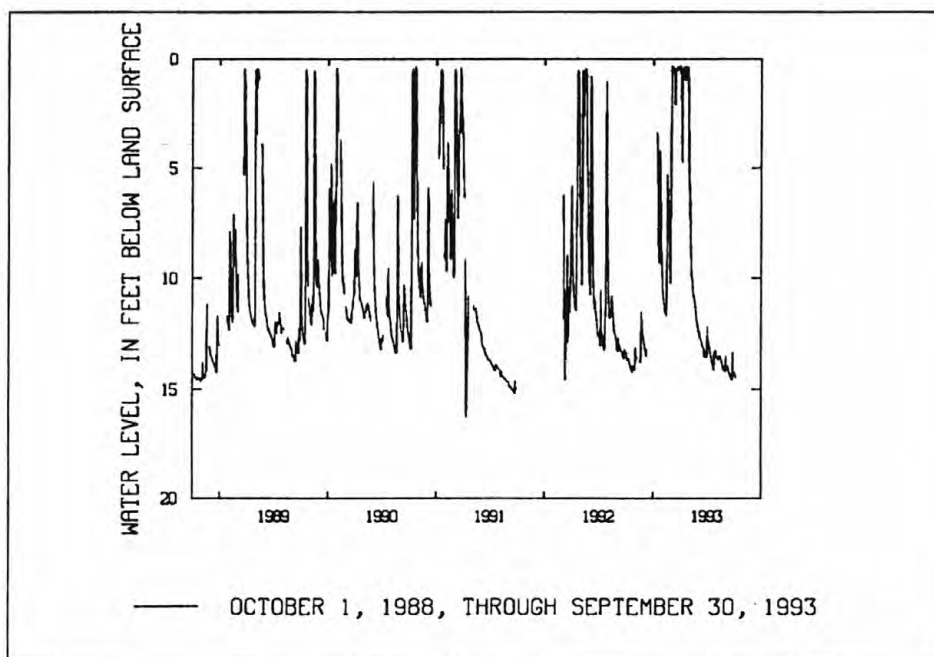
PERIOD OF RECORD.--February 1972 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 0.29 ft below land-surface datum, Mar. 4, Apr. 1, 2, 1993; lowest, 16.69 ft, estimated, below land-surface datum, July 15, 1973.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
NOON VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	13.50	13.56	13.10	---	10.99	.37	.83	6.01	12.42	12.68	13.58	13.97
10	13.63	---	13.51	---	11.49	.44	.57	9.59	12.66	13.02	13.65	13.94
15	13.84	---	---	3.74	11.71	1.23	.94	10.49	12.85	13.45	13.50	14.24
20	14.09	13.74	---	8.95	6.10	.56	1.00	10.87	13.09	13.73	13.68	14.47
25	13.95	12.25	---	4.62	8.28	.40	.72	11.48	13.53	14.06	14.01	14.56
EOM	14.10	12.68	---	9.44	9.97	.51	1.22	12.07	13.54	13.27	14.15	14.31

WATER YEAR 1993 HIGHEST .32 MAR 4, 1993 LOWEST 14.56 SEP 25, 1993



GROUND-WATER LEVELS

HARDY COUNTY

385714078441301. Local number, 25-4-5.

LOCATION.--Lat 38°57'14", long 78°44'13", Hydrologic Unit 02070003, about 3 mi east of Lost River near entrance to Trout Pond Recreation Area.

Owner: U.S. Forest Service.

AQUIFER.--Helderberg Group of Early Devonian age and Tonoloway Formation of Late Silurian age.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 6 in., depth 460 ft, cased with steel to 190 ft.

INSTRUMENTATION.--Continuous strip-chart water-level recorder prior to November 1976, then periodic measurement with chalked tape by USGS personnel.

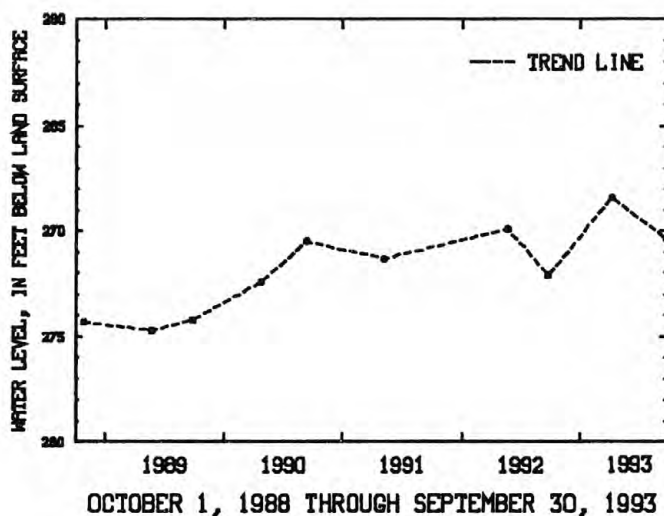
DATUM.--Elevation of land-surface datum is about 1,920 ft above sea level. Measuring point: Top of well casing, 0.90 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 263.00 ft, estimated, below land-surface datum, July 15, 1972; lowest, 274.80 ft below land-surface datum, Oct. 1, 1985.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	WATER LEVEL	DATE	WATER LEVEL
APR 07	268.40	SEP 20	270.35



GROUND-WATER LEVELS

JEFFERSON COUNTY

391142077551701. Local number 037166.

LOCATION.--Lat 39°11'42", long 77°55'17", Hydrologic Unit 02070007, about 6 mi south of Charles Town adjacent to U.S. Route 340.

Owner: James Louthan.

AQUIFER.--Conococheague Formation of Upper Cambrian age.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 6 in., depth 153 ft, cased with steel.

INSTRUMENTATION.--Digital water-level recorder--60-minute punch.

DATUM.--Elevation of land-surface datum is about 572 ft above sea level. Measuring point: Top edge of recorder shelter base, at land-surface datum.

REMARKS.--Water-quality and well log data available. No water-level record July 31 to Aug. 3, due to recorder malfunction.

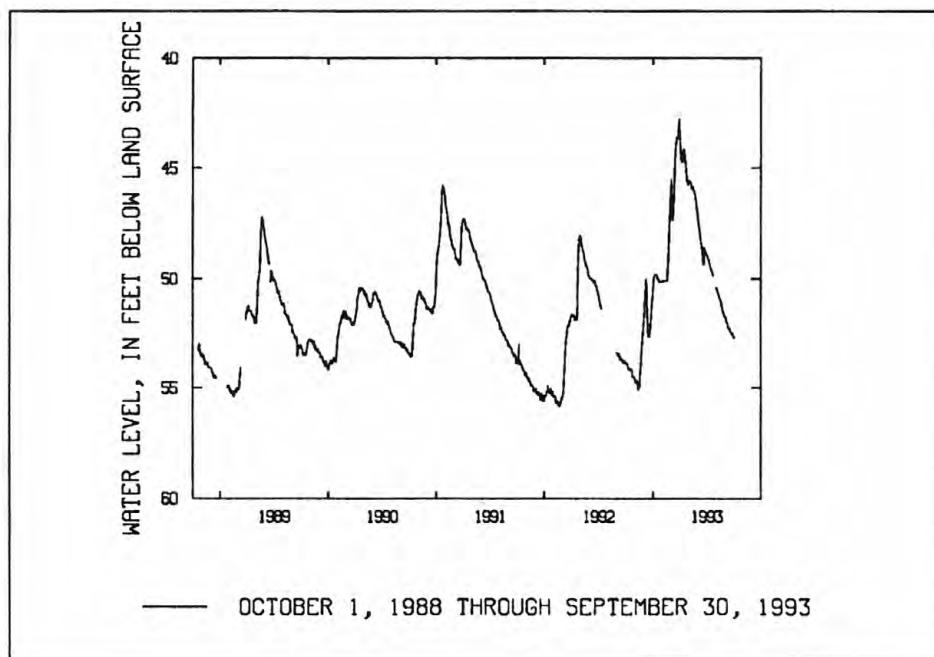
PERIOD OF RECORD.--March 1988 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 42.70 ft, below land-surface datum, March 31, 1993; lowest, 61.89 ft below land-surface datum, Sept. 28, 1988.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
NOON VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	53.89	54.77	51.16	49.85	50.11	45.89	44.42	45.62	47.53	48.96	50.48	51.82
10	54.07	54.66	50.01	49.82	50.10	47.24	44.74	45.66	48.01	49.17	50.66	52.02
15	54.12	54.98	52.25	49.81	50.09	45.58	44.13	45.86	48.45	49.48	50.89	52.27
20	54.11	54.26	52.70	50.01	49.70	43.90	44.58	46.02	49.10	49.66	51.06	52.46
25	54.46	53.23	51.99	50.14	47.92	43.67	45.35	46.34	48.63	---	51.43	52.56
EOM	54.56	52.23	50.87	50.13	46.78	42.79	45.77	46.92	48.84	---	51.71	52.66

WATER YEAR 1993 HIGHEST 42.79 MAR 31, 1993 LOWEST 55.09 NOV 13, 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 sea level. Measuring point: Top edge of recorder shelter base, 2.40 ft above land-surface datum.

REMARKS.--Water-quality and well log data available. No water-level record Mar. 3-30, due to recorder malfunction.

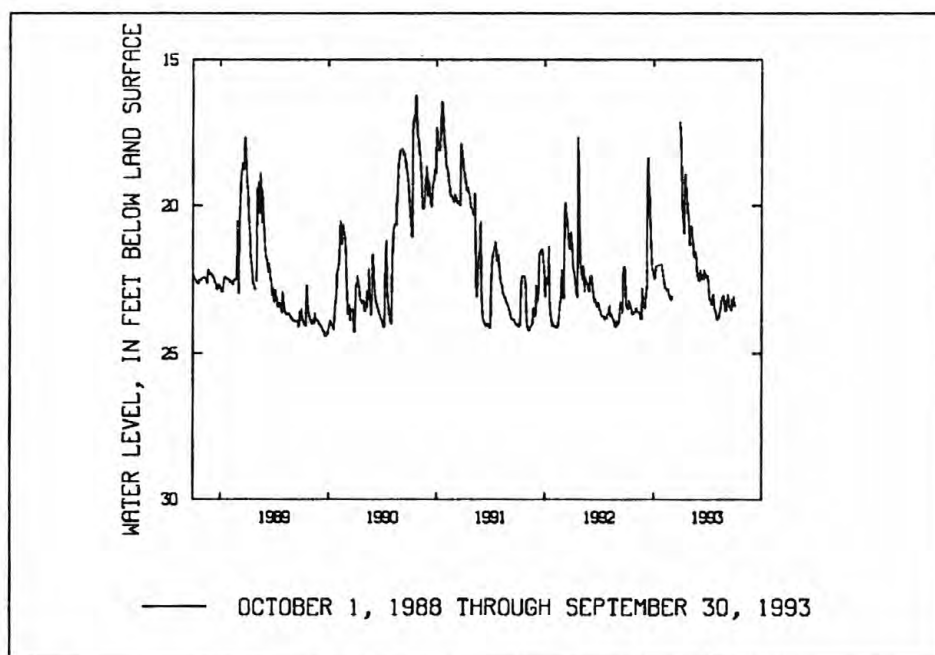
PERIOD OF RECORD.--March 1988 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 15.85 ft, below land-surface datum, May 21, 22, 1988; lowest, 24.41 ft below land-surface datum, Dec. 22, 23, 1989.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
NOON VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	23.48	23.46	23.37	22.45	22.49	---	18.25	21.35	22.53	22.48	23.86	23.17
10	23.20	23.60	22.69	22.05	22.76	---	20.44	20.70	22.24	23.16	23.80	22.97
15	23.33	23.61	18.79	22.01	22.82	---	20.96	21.24	22.44	23.27	23.52	23.45
20	23.49	23.83	19.83	22.00	22.81	---	19.12	21.74	22.47	23.10	23.18	23.54
25	23.66	22.95	21.54	21.99	23.06	---	20.01	21.67	22.30	23.30	23.04	23.41
EOM	23.59	23.38	22.20	22.14	23.13	17.13	20.43	22.30	22.41	23.66	23.43	23.14

WATER YEAR 1993 HIGHEST 17.13 MAR 31, 1993 LOWEST 23.86 AUG 5, 1993



GROUND-WATER LEVELS

LEWIS COUNTY

390553080280802. Local number, 16-1-9.

LOCATION.--Lat 39°05'53", long 80°28'08", Hydrologic Unit 05020002, at Jackson's Mill State 4-H Camp, Jackson's Mill.
Owner: West Virginia University.

AQUIFER.--Conemaugh Group and Allegheny Formation of Upper and Middle Pennsylvanian age.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 12 in., depth 122 ft, cased.

INSTRUMENTATION.--Weekly measurement with chalked tape by observer prior to October 1977, then periodic measurement by USGS personnel.

DATUM.--Elevation of land-surface datum is about 1,020 ft above sea level. Measuring point: Drilled hole in steel plate covering casing at land-surface datum.

REMARKS.--Water level affected by stage of West Fork River.

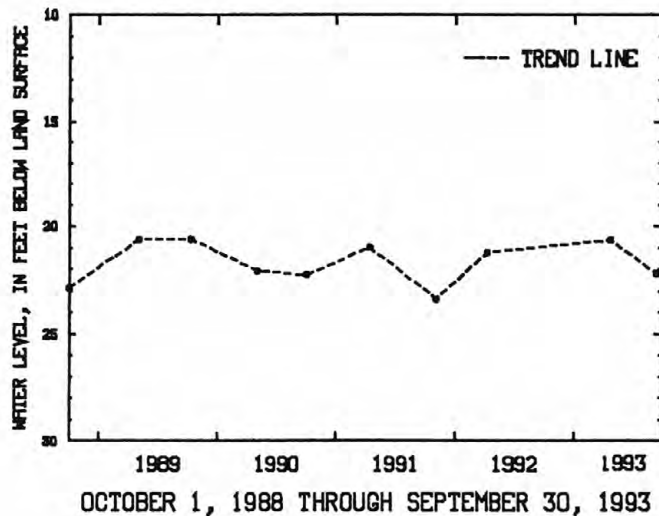
PERIOD OF RECORD.--May 1961 to May 1976, October 1977 to current year. No measurements May 1976 to October 1977.

REVISED RECORDS.--WDR WV-85-1: Highest water level.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 12.00 ft below land-surface datum, Dec. 11, 1972; lowest measured, 24.80 ft below land-surface datum, Oct. 6, 1977.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	WATER LEVEL	DATE	WATER LEVEL
APR 22	20.64	SEP 09	22.18



GROUND-WATER LEVELS

MARION COUNTY

393101080150501.

LOCATION.--Lat 39°31'01", long 80°15'05", Hydrologic Unit 05020003, about 1,250 ft north of State Route 91 and 100 ft west of State Route 15 in Farmington.

Owner: State of West Virginia.

AQUIFER.--Open to a mine in Pittsburgh coal, Member of Monongahela Group of Upper Pennsylvanian age.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 6 in., depth 266 ft, cased with steel to 252 ft.

INSTRUMENTATION.--Daily water-level measurements by observer prior to March 1992, then periodic measurement by USGS personnel.

DATUM.--Elevation of land-surface datum is about 970 ft above sea level. Measuring point: Top of steel plate at land-surface datum.

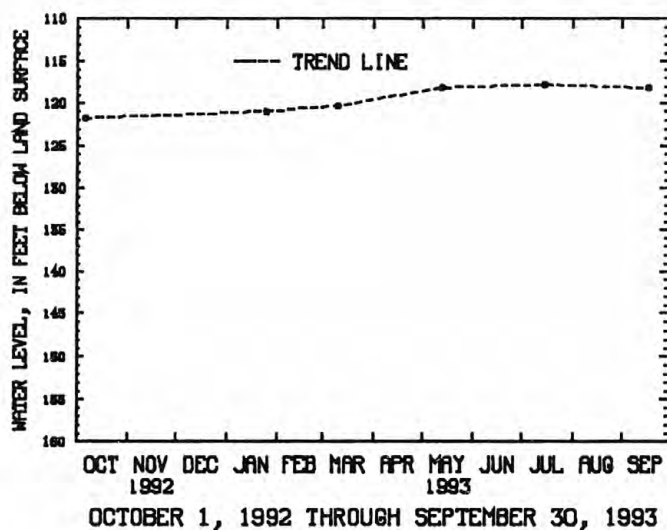
REMARKS.--Well formerly used by U.S. Bureau of Mines to back-fill abandoned mine with shale slurry. Water level possibly affected by mine pumpage. No water-level record Dec. 12 to Sept. 30 except for USGS periodic measurement Aug. 12.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 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 1992 TO SEPTEMBER 1993
DAILY VALUES

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 06	121.71	JAN 25	120.95	MAR 10	120.30	MAY 13	118.12	JUL 15	117.78	SEP 17	118.17
WATER YEAR 1993		HIGHEST	117.78	JUL 15, 1993	LOWEST	121.71	OCT 06, 1992				



GROUND-WATER LEVELS

MERCER COUNTY

372149081055001. Local number, 48-5-1.

LOCATION.--Lat 37°21'49", long 81°05'50", Hydrologic Unit 05050002, at Princeton Water Service, Company No. 1 well, Princeton. Owner: West Virginia Service Company.

AQUIFER.--Hinton Formation of Upper Mississippian age.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 6 in., depth 249 ft, cased. Measured depth 165 ft, Oct. 24, 1985.

INSTRUMENTATION.--Weekly measurement with chalked tape by observer.

DATUM.--Elevation of land-surface datum is about 2,387 ft above sea level. Measuring point: Top of casing extension, 5.50 ft above land-surface datum. Prior to September 1975 measuring point was top of casing at land-surface datum.

REMARKS.--Water level affected by nearby pumping. Geophysical logs available. Casing extension installed Oct. 24, 1985.

PERIOD OF RECORD.--March 1960 to current year.

REVISED RECORDS.--WDR WV-79-1: 1977-78 (water levels).

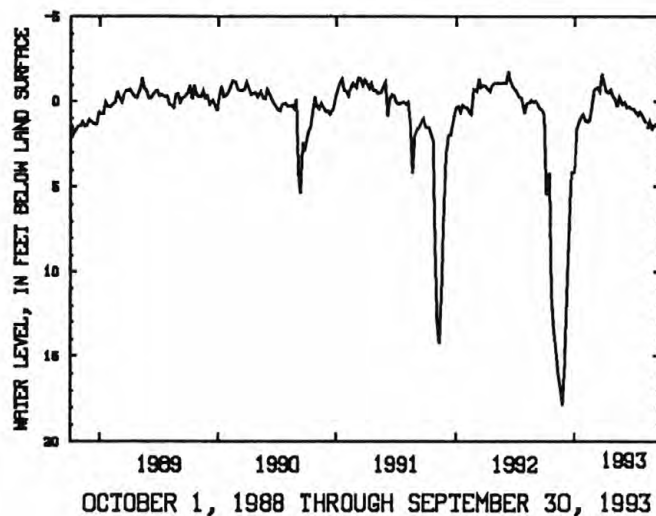
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.14 ft above land-surface datum, Apr. 15, 1987, (flowing at land-surface datum, many days 1968 to 1985); lowest measured, 90.58 ft below land-surface datum, Dec. 10, 1969.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 07	5.39	DEC 09	11.39	FEB 10	1.20	APR 14	++.56	JUN 16	.30	AUG 18	1.12
14	4.16	16	7.60	17	1.06	21	++.72	23	.39	25	1.57
21	11.37	23	4.13	24	.26	28	++.33	30	.39	SEP 01	1.40
28	13.40	30	4.13	MAR 03	++.71	MAY 05	++.15	JUL 07	.59	08	1.29
NOV 04	14.57	JAN 06	1.65	10	++.84	12	.30	14	.80	15	1.60
11	15.98	13	1.19	17	++.60	19	++.30	21	.60	22	1.53
18	16.83	20	.92	24	*+1.72	26	.16	28	.82	29	1.10
25	17.85	27	.72	31	*+1.15	JUN 02	.03	AUG 04	1.20		
DEC 02	15.53	FEB 03	1.13	APR 07	*+.60	09	.37	11	1.51		

WATER YEAR 1993 HIGHEST +1.72 MAR 24, 1993 LOWEST 17.85 NOV 25, 1992

* Flowing well; readings are above land-surface datum.



GROUND-WATER LEVELS

MINERAL COUNTY

392114079081101. Local number, 22-5-23.

LOCATION.--Lat 39°21'14", long 79°08'11", Hydrologic Unit 02070002, 2.20 mi north of U.S. Route 50 on State Route 42 at Sulphur City near Elk Garden.

Owner: Gerald Whisner.

AQUIFER.--Conemaugh Group of Upper Pennsylvanian age.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 6 in., depth 37 ft, cased with steel.

INSTRUMENTATION.--Weekly measurement with chalked tape by observer 1968 to 1976, periodic measurement with chalked tape by USGS personnel 1977 to current year.

DATUM.--Elevation of land-surface datum is about 2,480 ft above sea level. Measuring point: Top of casing extension, 0.70 ft above land-surface datum.

REMARKS.--Well flows at times. Water level affected by pumpage at times from a nearby dug well of 6 ft depth.

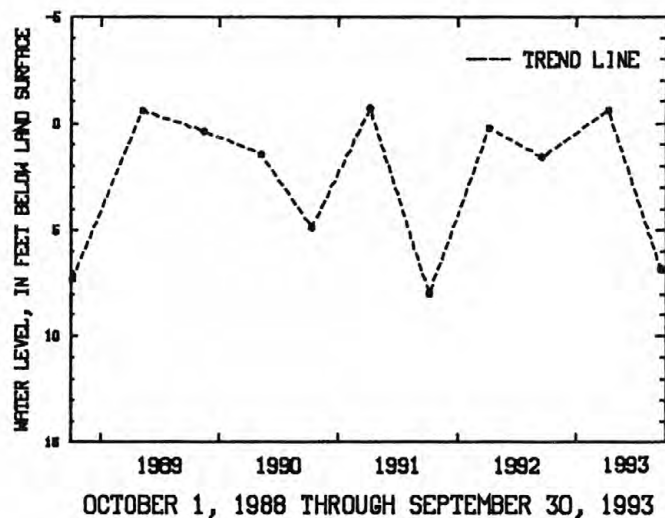
PERIOD OF RECORD.--August 1968 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.70 ft above land-surface datum, Aug. 4, 1972, Apr. 11, 1985, and Apr. 8, 1991; lowest measured, 10.81 ft below land-surface datum, Oct. 29, 1968.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	WATER LEVEL	DATE	WATER LEVEL
APR 08	*+.61	SEP 15	6.80

* Flowing well; reading is above land-surface datum.



GROUND-WATER LEVELS

MINGO COUNTY

373554081493401.

LOCATION.--Lat 37°35'54", long 81°49'34", Hydrologic Unit 05070101, downstream of toe of R. D. Bailey Dam northeast of Justice.
 Owner: U.S. Army Corps of Engineers.

AQUIFER.--New River Formation of Lower Pennsylvanian age.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 8 in., depth 66 ft, cased with steel.

INSTRUMENTATION.--Digital water-level recorder--60-minute punch.

DATUM.--Elevation of land-surface datum is about 920 ft above sea level. Measuring point: Top edge of recorder shelter base, flush with top of casing, 1.00 ft above land-surface datum.

REMARKS.--No water-level record July 19 to Sept. 9, due to recorder malfunction. At times, water level affected by Guyandotte River.

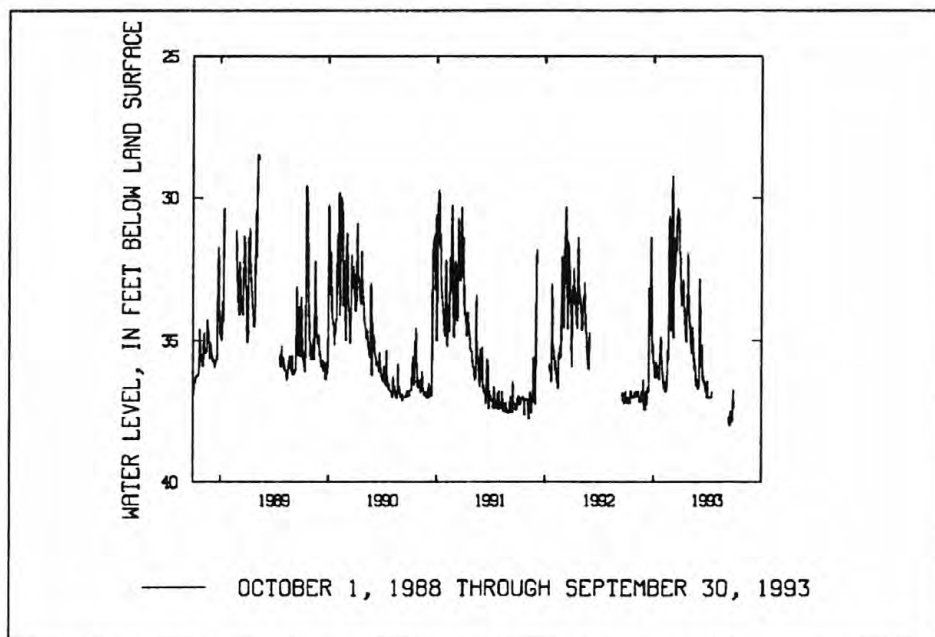
PERIOD OF RECORD.--March 1980 to current year.

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 1992 TO SEPTEMBER 1993
 NOON VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	37.24	37.03	37.46	36.00	36.71	30.24	33.23	34.59	32.86	37.05	---	---
10	37.24	36.87	37.30	35.78	36.75	34.60	33.47	35.45	35.71	37.07	---	37.74
15	37.25	37.04	36.83	35.89	36.78	32.26	33.94	35.28	35.76	37.04	---	38.01
20	36.97	37.20	34.79	36.39	35.71	31.83	34.95	35.63	36.30	---	---	37.91
25	37.06	36.84	32.87	35.07	32.38	30.43	34.01	36.56	36.56	---	---	37.87
EOM	36.84	36.75	35.12	36.08	34.64	31.89	33.42	36.73	36.89	---	---	37.39

WATER YEAR 1993 HIGHEST 29.24 MAR 6, 1993 LOWEST 38.01 SEPT 15, 1993



GROUND-WATER LEVELS

MONONGALIA COUNTY

392923079571801. Local number, 9-7-33.

LOCATION.--Lat 39°29'23", long 79°57'18", Hydrologic Unit 05020003, 1 mi northwest of Halleck on Secondary State Route 79.
Owner: Paul H. Price.

AQUIFER.--Buffalo Mahoning sandstone member of Conemaugh Group of Upper Pennsylvanian age.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 6 in., depth 141 ft, cased with steel to 21 ft.

INSTRUMENTATION.--Digital water-level recorder, 1961-62, 1978 to 1985; monthly measurement with chalked tape by USGS personnel, 1953 to 1961, 1962 to 1978, 1985 to current year.

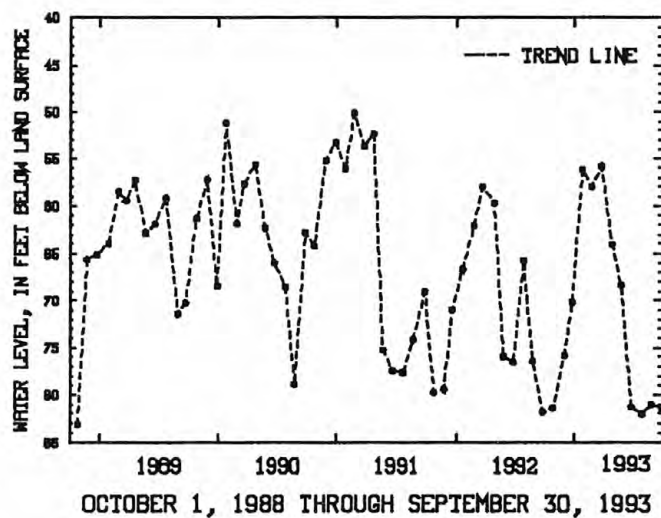
DATUM.--Elevation of land-surface datum is about 1,850 ft above sea level. Measuring point: Top of casing, 0.35 ft above land-surface datum.

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 1992 TO SEPTEMBER 1993

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26	81.40	DEC 24	70.17	FEB 22	57.94	APR 26	64.02	JUN 25	81.29	AUG 25	81.02
NOV 30	75.83	JAN 25	56.17	MAR 25	55.82	MAY 24	68.32	JUL 26	82.00	SEP 24	81.33
WATER YEAR 1993		HIGHEST	55.82	MAR 25, 1993		LOWEST	82.00	JUL 26, 1993			



GROUND-WATER LEVELS

MONONGALIA COUNTY (Continued)

394006080194801. Local number, 9-1-47.

LOCATION.--Lat 39°40'06", long 80°19'48", Hydrologic Unit 05020005, 1 mi east of Wadestown on State Route 7.

Owner: Howard Shriver.

AQUIFER.--Dunkard Group of Upper Pennsylvanian and Permian age.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 6 in., depth 65 ft, cased with steel.

INSTRUMENTATION.--Weekly measurement with chalked tape by observer.

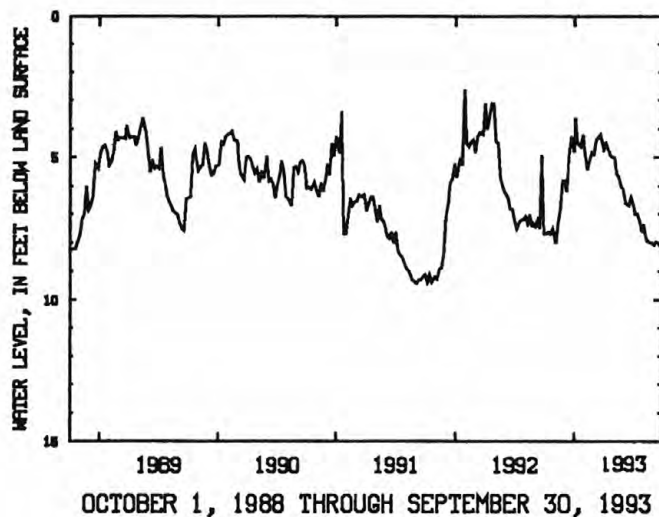
DATUM.--Elevation of land-surface datum is about 1,060 ft above sea level. Measuring point: Top of casing, 1.20 ft above land-surface datum.

PERIOD OF RECORD.--July 1971 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.58 ft below land-surface datum, Jan. 28, 1992; lowest measured, 11.35 ft below land-surface datum, Aug. 6, 1971.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 06	7.69	DEC 08	6.19	FEB 09	5.39	APR 13	4.68	JUN 15	6.69	AUG 17	7.96
13	7.58	15	4.90	16	5.09	20	4.90	22	6.38	24	8.00
20	7.69	21	4.37	23	4.80	27	5.00	29	6.60	31	8.06
27	7.50	31	4.80	MAR 02	4.86	MAY 04	4.98	JUL 06	6.98	SEP 07	7.96
NOV 03	8.00	JAN 05	3.58	09	4.38	11	5.56	13	6.98	14	7.98
10	7.30	12	4.48	16	4.28	18	5.69	20	7.20	21	8.08
17	6.80	19	4.58	23	4.19	25	5.98	27	7.57	28	7.59
24	5.80	26	4.18	30	4.69	JUN 01	6.08	AUG 03	7.38		
DEC 01	5.80	FEB 02	4.88	APR 06	4.50	08	6.58	10	7.86		
WATER YEAR 1993		HIGHEST	3.58	JAN 05, 1993	LOWEST	8.08	SEP 21, 1993				



GROUND-WATER LEVELS

MORGAN COUNTY

393043078174001. Local number, 19-5-14.

LOCATION.--Lat 39°30'43", long 78°17'40", Hydrologic Unit 02070004, on Cacapon State Park south of Berkeley Springs on U.S. Route 522.

Owner: West Virginia Department of Natural Resources.

AQUIFER.--Tonoloway Formation of Upper Silurian age.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 8 in., reported depth 250 ft, cased with steel to 33 ft.

INSTRUMENTATION.--Weekly measurement with chalked tape by observer, 1971-75; monthly measurement with chalked tape by USGS personnel, 1976-77; digital water-level recorder--60-minute punch, 1977 to current year.

DATUM.--Elevation of land-surface datum is about 875 ft above sea level. Measuring point: Top edge of recorder shelter base, 1.10 ft above land-surface datum. Prior to Aug. 16, 1977 measuring point was 1.20 ft above land-surface datum.

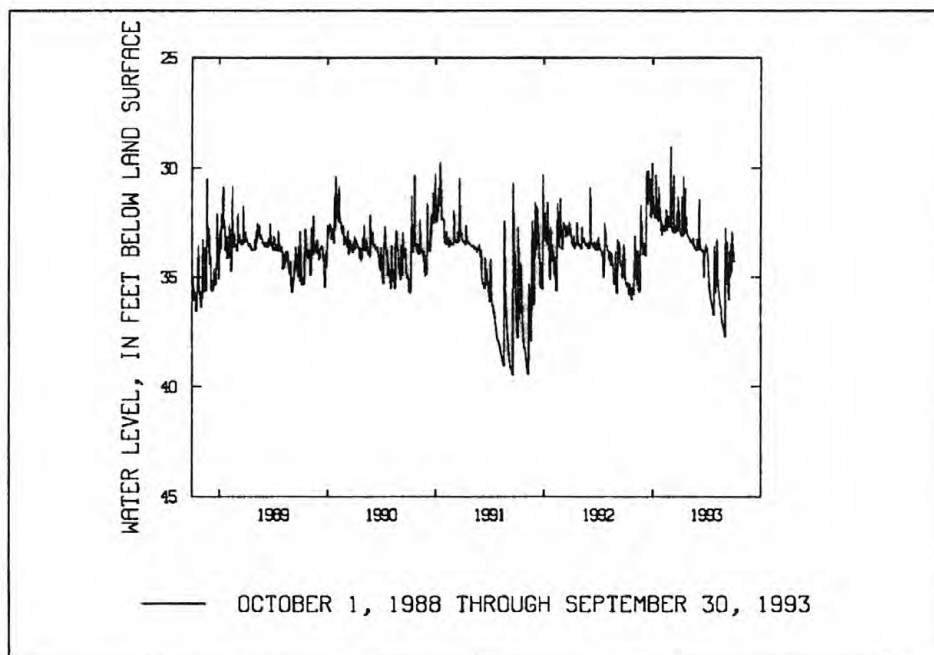
PERIOD OF RECORD.--July 1971 to July 1973, November 1974 to March 1975, July 1976 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 27.80 ft below land-surface datum, June 22, 1989; lowest measured, 39.52 ft below land-surface datum, Sept. 19, 1991.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
NOON VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	35.34	33.70	33.44	31.27	32.61	32.12	32.90	33.17	33.48	33.67	35.28	33.41
10	35.25	35.23	33.64	32.26	32.88	32.89	31.26	33.39	33.44	34.96	34.97	33.36
15	35.47	35.19	31.15	31.53	32.61	32.67	33.08	33.39	33.73	35.78	35.87	35.78
20	35.79	35.54	30.73	32.40	32.63	32.92	32.98	33.47	33.78	36.23	36.41	34.44
25	35.46	32.43	31.71	31.81	32.68	32.55	32.91	33.60	34.42	36.65	37.13	34.79
EOM	35.23	33.82	29.79	32.41	32.63	32.72	33.04	33.73	33.50	34.55	37.49	33.79

WATER YEAR 1993 HIGHEST 29.03 MAR 4, 1993 LOWEST 37.74 SEP 3, 1993



GROUND-WATER LEVELS

NICHOLAS COUNTY

381513081094201.

LOCATION.--Lat 38°15'13", long 81°09'42", Hydrologic Unit 05050005, about 3 mi east of Belva and Route 16 on left of Secondary Route 20/21.

Owner: Burt Whiston.

AQUIFER.--Kanawha Formation of Lower Pennsylvanian age.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 6 in., depth 95 ft, cased with galvanized iron to 13 ft.

INSTRUMENTATION.--Digital water-level recorder--60-minute punch.

DATUM.--Elevation of land-surface datum is 742.6 ft above sea level. Measuring point: Top of casing, 2.00 ft above land-surface datum.

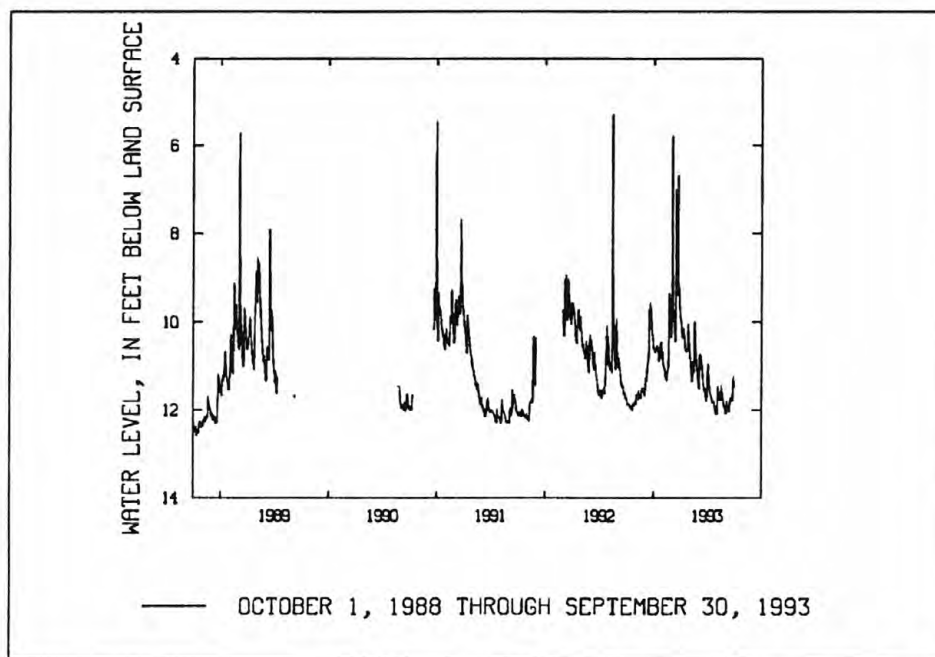
PERIOD OF RECORD.--July 1982 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level 2.52 ft below land-surface datum, Apr. 25, 1983; lowest, 12.71 ft below land-surface datum, Aug. 21, 1987.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
NOON VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	11.85	11.71	11.50	10.67	11.02	5.78	10.05	10.90	10.80	10.99	11.84	11.80
10	11.86	11.73	11.22	10.65	11.22	9.73	10.26	11.26	10.76	11.51	11.77	11.89
15	11.94	11.72	10.85	10.61	11.33	10.44	10.35	11.03	11.11	11.70	11.75	12.04
20	11.95	11.72	9.91	10.88	10.99	9.41	10.67	9.98	11.51	11.81	11.57	11.79
25	11.88	11.49	9.72	10.66	10.02	8.36	10.65	10.82	11.68	11.84	11.83	11.75
EOM	11.87	11.53	10.38	10.59	10.33	9.70	10.29	11.32	11.75	12.09	11.98	11.49

WATER YEAR 1993 HIGHEST 5.78 MAR 5, 1993 LOWEST 12.09 JUL 31, 1993



GROUND-WATER LEVELS

POCAHONTAS COUNTY

380653080155301.

LOCATION.--Lat 38°06'53", long 80°15'53", Hydrologic Unit 05050003, on Droop Mountain State Park north of Droop on U.S. Route 219.

Owner: West Virginia Department of Natural Resources.

AQUIFER.--Mauch Chunk Group of Upper Mississippian age.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 6 in., depth 86 ft, cased with steel.

INSTRUMENTATION.--Weekly measurement with chalked tape by observer, 1970-76; periodic measurement by USGS personnel, 1978-80; digital water-level recorder--60-minute punch, 1980 to current year.

DATUM.--Elevation of land-surface datum is about 3,000 ft above sea level. Measuring point: Top edge of recorder shelter base at land-surface datum. May 28, 1980 to July 7, 1983, measuring point 0.65 ft above land-surface datum. Prior to May 28, 1980 measuring point was top of casing at land-surface datum.

REMARKS.--No water-level record Dec. 29 to Feb. 17 and July 14 to Sept. 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.

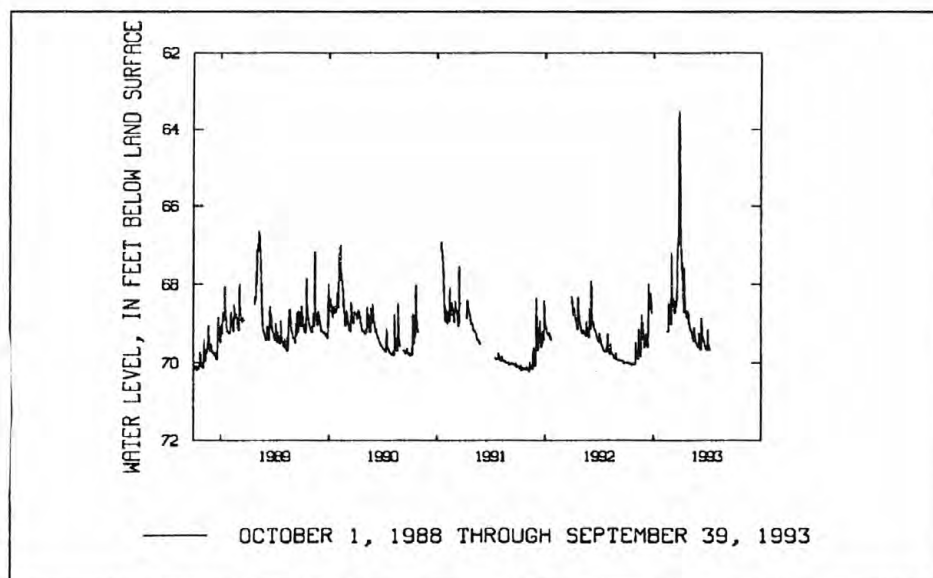
REVISED RECORDS.--WDR WV-79-1: Well location, well characteristics, and water levels. WDR WV-83-1: Station identification number and lowest water level.

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 1992 TO SEPTEMBER 1993
NOON VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	69.99	69.66	69.45	---	---	68.21	67.01	69.08	69.23	69.13	---	---
10	69.99	69.90	69.26	---	---	68.37	67.76	69.20	69.66	69.63	---	---
15	70.03	69.63	69.41	---	---	68.72	68.71	69.38	68.86	---	---	---
20	70.05	69.84	68.52	---	69.20	68.53	68.70	69.20	69.43	---	---	---
25	70.02	68.97	68.30	---	68.69	67.03	68.86	69.46	69.56	---	---	---
EOM	70.04	69.34	---	---	68.92	64.53	68.79	69.53	69.65	---	---	---

WATER YEAR 1993 HIGHEST 63.54 MAR 30, 1993 LOWEST 70.06 OCT 22, 1992



GROUND-WATER LEVELS

PRESTON COUNTY

393306079474501. Local number, 11-3-8.

LOCATION.--Lat 39°33'06", long 79°47'45", Hydrologic Unit 05020003, East Depot Street, Masontown.

Owner: G. E. Lemmons.

AQUIFER.--Pottsville Group of Lower Pennsylvanian age.

WELL CHARACTERISTICS.--Drilled domestic artesian well, diameter 8 in., depth 785 ft, cased to 350 ft, perforated at or near Upper Freeport coal. Measured depth approximately 330 ft, September 1984.

INSTRUMENTATION.--Weekly measurement with chalked tape by observer, 1941-46, and 1948-50; digital water-level recorder--60-minute punch, 1946-48; monthly measurement by USGS personnel, 1950 to current year.

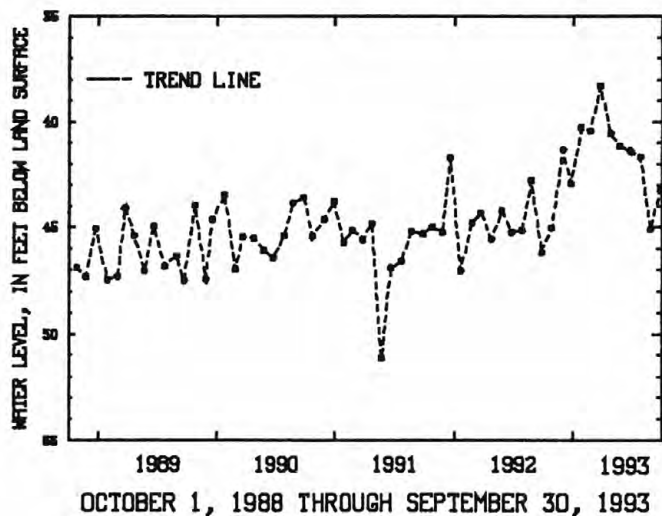
DATUM.--Elevation of land-surface datum is about 1,770 ft above sea level. Measuring point: Top of extended casing, 3.53 ft above land-surface datum. Prior to July 1978 measuring point was 3.00 ft below land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 7.15 ft below land-surface datum, Jan. 20, 1947; lowest measured, 108 ft below land-surface datum, Feb. 3, 1959.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26	45.01	DEC 24	42.92	FEB 22	40.42	APR 26	40.53	JUN 25	41.36	AUG 25	45.09
NOV 30	41.30	JAN 25	40.26	MAR 25	38.29	MAY 24	41.15	JUL 26	41.65	SEP 24	43.23
WATER YEAR 1993		HIGHEST	38.29	MAR 25, 1993		LOWEST	45.09	AUG 25, 1993			



GROUND-WATER LEVELS

RANDOLPH COUNTY

385100079522901.

LOCATION.--Lat 38°51'00", long 79°52'29", Hydrologic Unit 05020001, 1,800 ft west of U.S. Route 250 and 0.60 mi north of intersection of State Route 33 and U.S. Route 250, at Beverly.

Owner: Edsel Lucas.

AQUIFER.--Shale of Upper-Middle Devonian age.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 6 in., depth 98 ft, cased with plastic to 14 ft.

INSTRUMENTATION.--Periodic measurement with chalked tape by USGS personnel, 1978-79, and 1982 to current year; digital water-level recorder--60-minute punch, 1979-82.

DATUM.--Elevation of land-surface datum is about 1,940 ft above sea level. Measuring point: Top of casing 3.00 ft above land-surface datum.

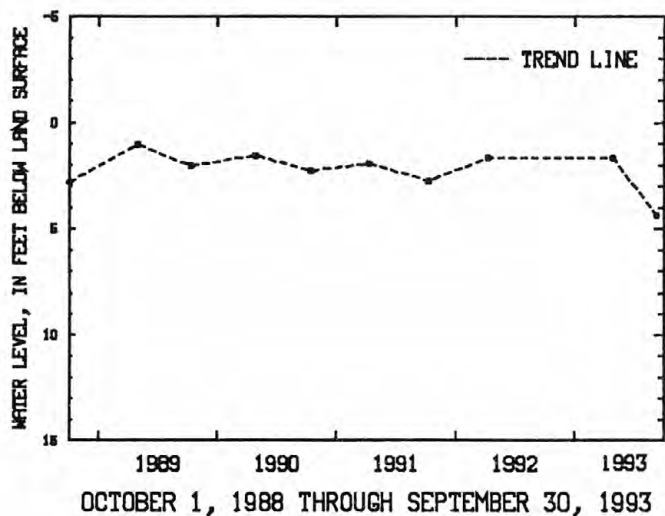
REMARKS.--U.S. Geological Survey Test Well No. 2. Geologic log and aquifer test data available. At times, water level affected by stage of Tygart Valley River.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 3.00 ft above land-surface datum, Mar. 20, 1982; lowest, 4.34 ft below land-surface datum, Sept. 9, 1993.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	WATER LEVEL	DATE	WATER LEVEL
APR 28	1.65	SEP 09	4.34



GROUND-WATER LEVELS

RANDOLPH COUNTY (Continued)

385341079575401. Local number, 18-3-110.

LOCATION.--Lat 38°53'41", long 79°57'54", Hydrologic Unit 05020001, 0.20 mi east of Coalton High School, Coalton.
Owner: Presbyterian Church.

AQUIFER.--Homewood Sandstone Member of Kanawha Formation of Lower Pennsylvanian age.

WELL CHARACTERISTICS.--Drilled exploratory water-table well, diameter 6 in., depth 155 ft, cased to 18 ft.

INSTRUMENTATION.--Monthly measurement with chalked tape by USGS personnel, 1966-67; digital water-level recorder--60-minute punch, 1968-77; periodic measurement with chalked tape by USGS personnel, 1977 to current year.

DATUM.--Elevation of land-surface datum is 2,171 ft above sea level. Measuring point: Top of casing, 1.60 ft above land-surface datum. Prior to Jan. 4, 1983, measuring point was 2.45 ft above land-surface datum.

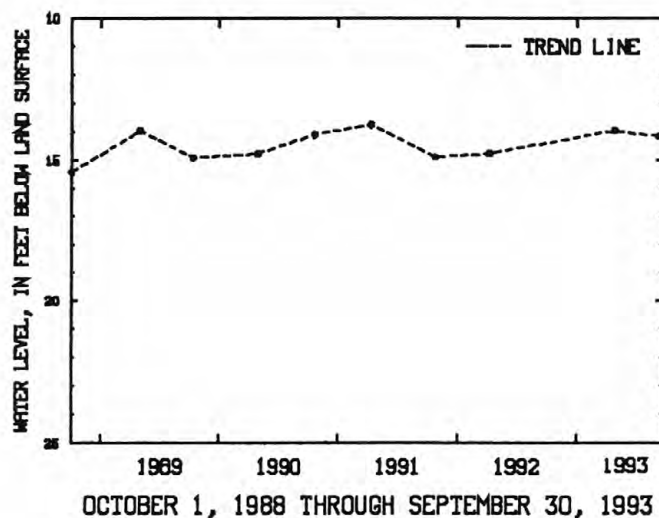
REMARKS.--Water level affected by nearby pumping.

PERIOD OF RECORD.--December 1966 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 10.85 ft below land-surface datum, Dec. 12, 1966; lowest, 23.35 ft below land-surface datum, Oct. 28, 1971.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	WATER LEVEL	DATE	WATER LEVEL
APR 26	13.95	SEP 09	14.15



GROUND-WATER LEVELS

RITCHIE COUNTY

391226081024901. Local number, 28-3-3.

LOCATION.--Lat 39°12'26", long 81°02'49", Hydrologic Unit 05030203, at Stout and East South Street, Harrisville.

Owner: Terry Stonestreet.

AQUIFER.--Dunkard Group of Upper Pennsylvanian and Permian age.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 6 in., depth 118 ft, cased with steel.

INSTRUMENTATION.--Weekly measurements with chalked tape by observer, 1966; graphic water-level recorder, 1968-70; digital water-level recorder--60-minute punch, 1970-75; monthly measurements with chalked tape by USGS personnel, 1975-76; digital water-level recorder--60-minute punch, 1976 to current year.

DATUM.--Elevation of land-surface datum is about 840 ft above sea level. Measuring point: Top of casing, 1.20 ft above land-surface datum.

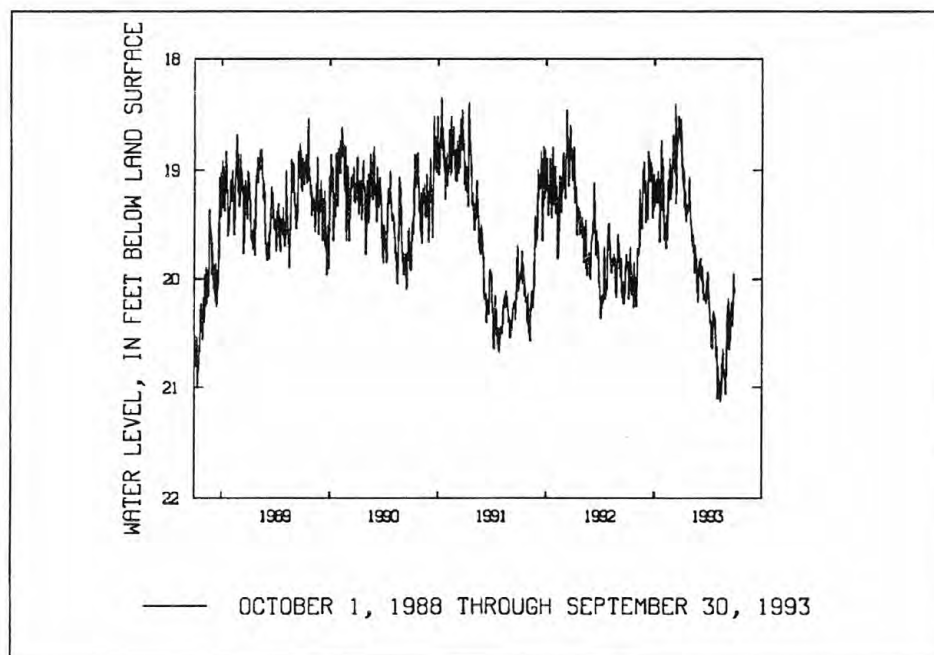
REMARKS.--Formerly public-supply well.

PERIOD OF RECORD.--August 1966 to October 1966, April 1968 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 17.46 ft below land-surface datum, Jan. 25, 1978; lowest measured, 22.03 ft below land-surface datum, July 18, 1988.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
NOON VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	20.05	19.73	19.41	19.18	19.52	18.68	18.87	19.51	19.85	20.14	20.91	20.38
10	19.87	19.72	18.99	19.29	19.70	18.70	19.00	19.69	20.00	20.41	20.99	20.28
15	20.03	19.42	18.93	19.17	19.63	19.30	19.18	19.73	19.90	20.56	21.10	20.54
20	20.09	19.53	18.94	19.56	19.15	18.75	19.30	19.74	20.19	20.43	20.74	20.24
25	19.98	19.00	19.04	19.11	19.26	18.65	19.32	19.93	20.20	20.39	20.89	20.26
EOM	20.23	19.19	19.04	18.96	19.19	18.66	19.13	19.89	19.98	20.73	20.92	20.12
WATER YEAR 1993			HIGHEST	18.40	MAR 13, 1993		LOWEST	21.13	AUG 14, 1993			



GROUND-WATER LEVELS

TUCKER COUNTY

390135079275601. Local number, 15-6-17.

LOCATION.--Lat 39°01'35", long 79°27'56", Hydrologic Unit 05020004, at Canaan Valley State Park off W. Va. State Route 32.
Owner: West Virginia Department of Natural Resources.

AQUIFER.--Pocono Group of Lower Mississippian age.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 8 in., depth 281 ft, cased with steel.

INSTRUMENTATION.--Weekly measurement with chalked tape by observer, 1971-75; periodic measurement by USGS personnel, 1978-80; digital water-level recorder--60-minute punch, 1980 to current year.

DATUM.--Elevation of land-surface datum is about 3,275 ft above sea level. Measuring point: Top of recorder shelter base, 1.60 ft above land-surface datum. Prior to May 29, 1980 measuring point was top of casing, 1.55 ft above land-surface datum.

REMARKS.--No water-level record Mar. 4 to Apr. 28, due to recorder malfunction.

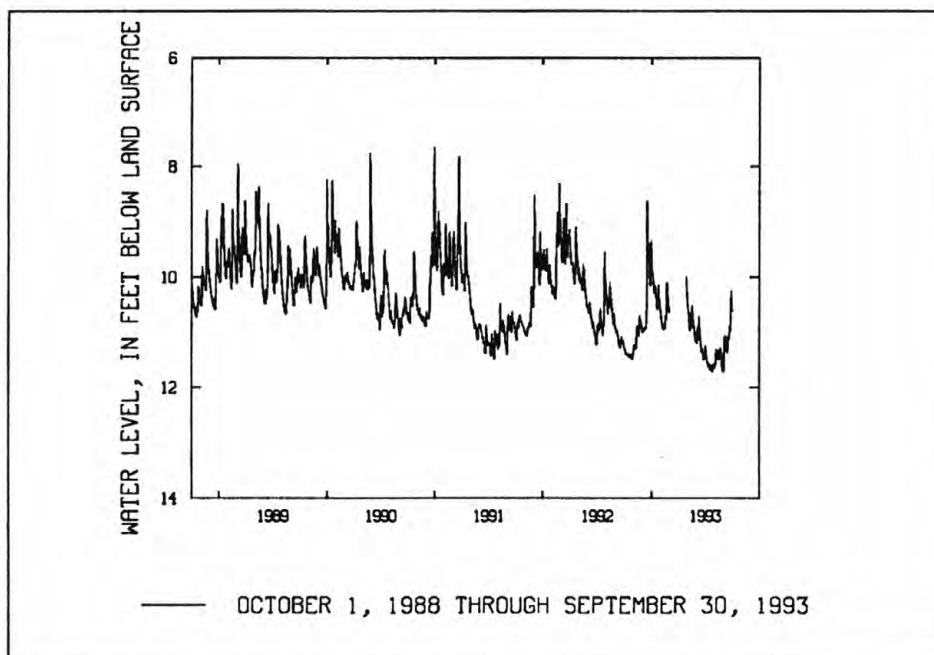
PERIOD OF RECORD.--June 1971 to December 1975, April 1978 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 5.48 ft below land-surface datum, Nov. 5, 1985; lowest measured, 11.79 ft below land-surface datum, Aug. 21, 1987.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
NOON VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	11.32	11.27	10.96	9.91	10.82	---	---	10.55	10.98	11.33	11.62	11.06
10	11.38	11.30	10.94	10.24	10.94	---	---	10.88	10.95	11.55	11.32	11.14
15	11.44	11.03	10.87	10.23	10.94	---	---	10.79	11.04	11.58	11.45	11.38
20	11.40	11.05	9.61	10.57	10.78	---	---	10.56	11.32	11.60	11.32	11.13
25	11.41	10.76	9.59	10.14	10.24	---	---	10.87	11.41	11.69	11.43	10.98
EOM	11.42	10.91	9.51	10.56	10.51	---	10.10	11.17	11.38	11.59	11.70	10.54

WATER YEAR 1993 HIGHEST 8.62 DEC 18, 1992 LOWEST 11.73 JUL 26, 1993



GROUND-WATER LEVELS

TYLER COUNTY

393211081021201.

LOCATION.--Lat 39°32'11", long 81°02'12", Hydrologic Unit 05030201, 2.50 mi southwest of Sistersville along Route 2, 15 ft northwest of gravel road, between railroad and river.

Owner: U.S. Geological Survey.

AQUIFER.--Monongahela Formation of the Upper Pennsylvanian age.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 6 in., depth 70 ft, cased with steel to 58 ft.

INSTRUMENTATION.--Digital water-level recorder--60-minute punch.

DATUM.--Elevation of land-surface datum is about 620 ft above sea level. Measuring point: Top of well casing, 3.90 ft above land-surface datum.

REMARKS.--Aquifer test data available. No water-level record October 8-13 and May 20, due to recorder malfunction.

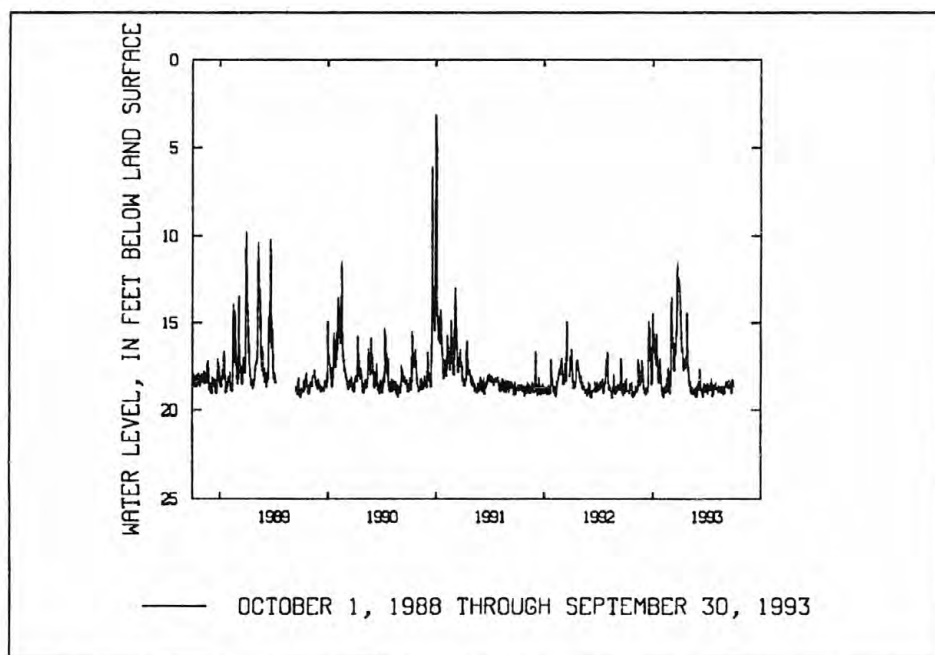
PERIOD OF RECORD.--November 1983 to current year.

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 1992 TO SEPTEMBER 1993
NOON VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	18.22	18.79	18.97	16.11	19.13	14.05	14.22	18.64	18.89	18.53	18.73	18.39
10	---	19.02	18.88	16.76	18.68	15.83	16.52	18.85	17.67	18.83	18.86	18.70
15	18.91	17.27	18.97	15.63	19.05	17.80	17.50	19.08	19.03	18.90	18.81	18.39
20	18.71	18.60	16.25	18.40	18.75	16.82	17.36	---	19.27	18.76	19.06	18.54
25	19.04	18.04	16.65	17.26	18.40	11.51	17.50	19.16	18.52	18.88	18.65	18.78
EOM	19.13	18.01	17.93	18.51	18.48	12.59	16.62	18.98	18.99	18.81	18.78	18.33

WATER YEAR 1993 HIGHEST 11.51 MAR 25, 1993 LOWEST 19.32 OCT 26, 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.

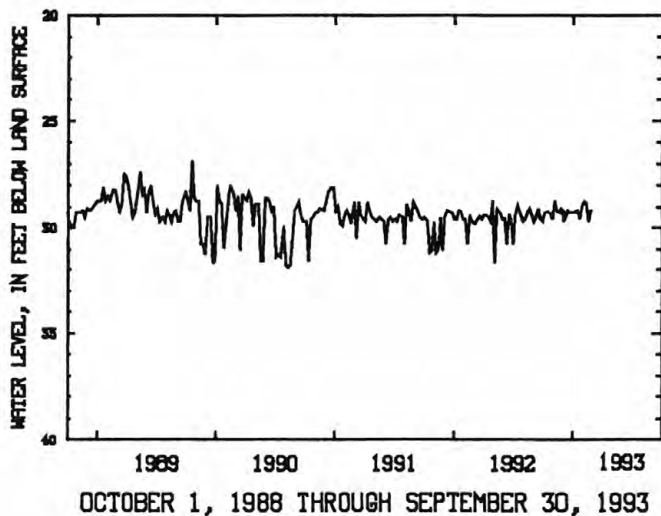
DATUM.--Elevation of land-surface datum is about 740 ft above sea level. Measuring point: Top of casing cover, 1.33 ft above land-surface datum. Prior to Nov. 27, 1979 measuring point was top of casing, 1.30 ft above land-surface datum.

PERIOD OF RECORD.--May 1971 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 26.87 ft below land-surface datum, Oct. 18, 1989; lowest measured, 32.17 ft below land-surface datum, July 21, 1982.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 07	29.27	NOV 04	28.67	NOV 30	29.17	DEC 23	29.27	JAN 20	29.57	FEB 17	29.67
14	29.22	11	29.17	DEC 02	29.67	30	29.27	27	28.97	23	29.17
21	29.30	20	29.27	09	29.47	JAN 06	29.22	FEB 03	28.77		
28	29.57	24	29.07	16	29.17	13	29.17	10	28.82		
WATER YEAR 1993		HIGHEST	28.67	NOV 04, 1992	LOWEST	29.67	DEC 02, 1992	FEB 17, 1993			



GROUND-WATER LEVELS

WEBSTER COUNTY

382008080292801.

LOCATION.--Lat 38°20'08", long 80°29'28", Hydrologic Unit 05050005, at Bishop Knob Campground about 0.50 mi from junction of U.S. Forest Service Roads 81 and 82 and about 4 mi from Dyer.

Owner: U.S. Forest Service.

AQUIFER.--Kanawha Formation of Lower Pennsylvanian age.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 6 in., depth 80 ft, cased with galvanized iron to 60 ft.

INSTRUMENTATION.--Periodic measurement with chalked tape by USGS personnel, 1980-82; digital water-level recorder--60-minute punch, 1982 to current year.

DATUM.--Elevation of land-surface datum is about 3,100 ft above sea level. Measuring point: Top of extended casing, 2.00 ft above land-surface datum.

PERIOD OF RECORD.--March 1980 to current year.

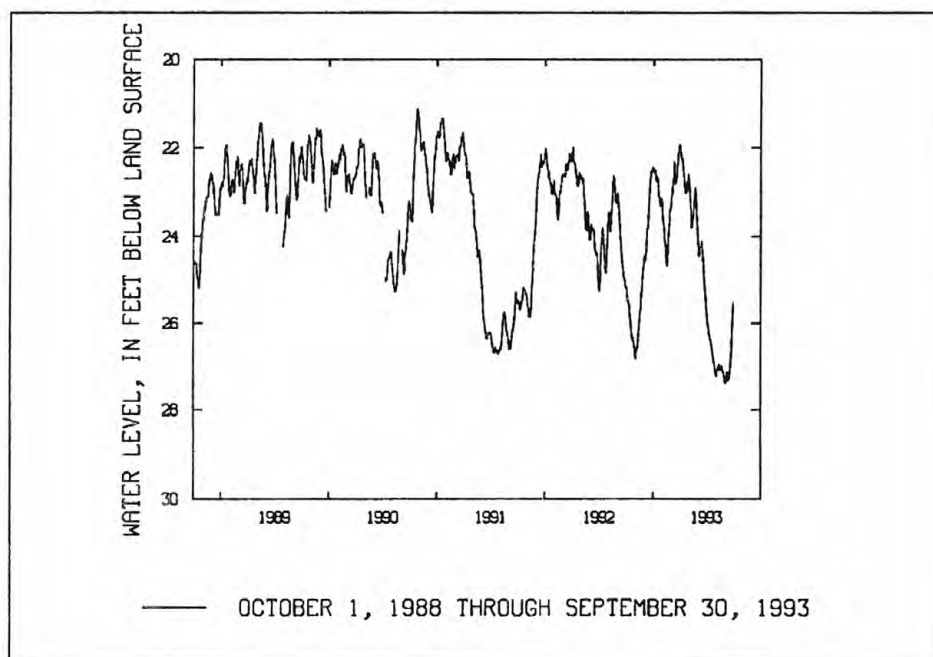
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 21.05 ft below land-surface datum, Jan. 7, 1985; lowest, 27.51 ft below land-surface datum, Aug. 22, 1988.

REVISION.--The lowest water level for period of record reported in 1988 water year as 27.67 ft is in error.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
NOON VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	25.28	26.59	24.50	22.48	23.72	23.08	22.06	23.05	24.34	25.96	27.22	27.36
10	25.54	26.51	23.99	22.69	24.14	22.69	22.23	23.74	24.23	26.25	27.06	27.13
15	25.87	25.99	23.64	22.77	24.59	22.78	22.63	23.65	24.10	26.38	27.06	27.29
20	26.20	25.66	22.93	23.09	24.32	22.74	23.01	23.11	24.47	26.57	27.01	27.03
25	26.33	25.14	22.50	23.32	23.70	22.35	22.93	22.98	25.07	26.85	27.09	26.42
EOM	26.65	24.63	22.43	23.15	23.40	21.96	22.59	23.71	25.57	27.13	27.26	25.52

WATER YEAR 1993 HIGHEST 21.91 APR 1, 1993 LOWEST 27.39 SEP 3, 1993



GROUND-WATER LEVELS

WYOMING COUNTY

373839081255201. Local number, 54-2-12.

LOCATION.--Lat 37°38'39", long 81°25'52", Hydrologic Unit 05070101, at Twin Falls State Park.

Owner: U.S. Geological Survey.

AQUIFER.--New River Formation of Lower Pennsylvanian age.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 6 in., depth 80 ft, cased with steel to 28 ft.

INSTRUMENTATION.--Digital water-level recorder--60-minute punch.

DATUM.--Elevation of land-surface datum is about 2,015 ft above sea level. Measuring point: Top of recorder shelter floor, 2.62 ft above land-surface datum.

REMARKS.--Aquifer test data available. Water-level record affected by nearby pumping at times.

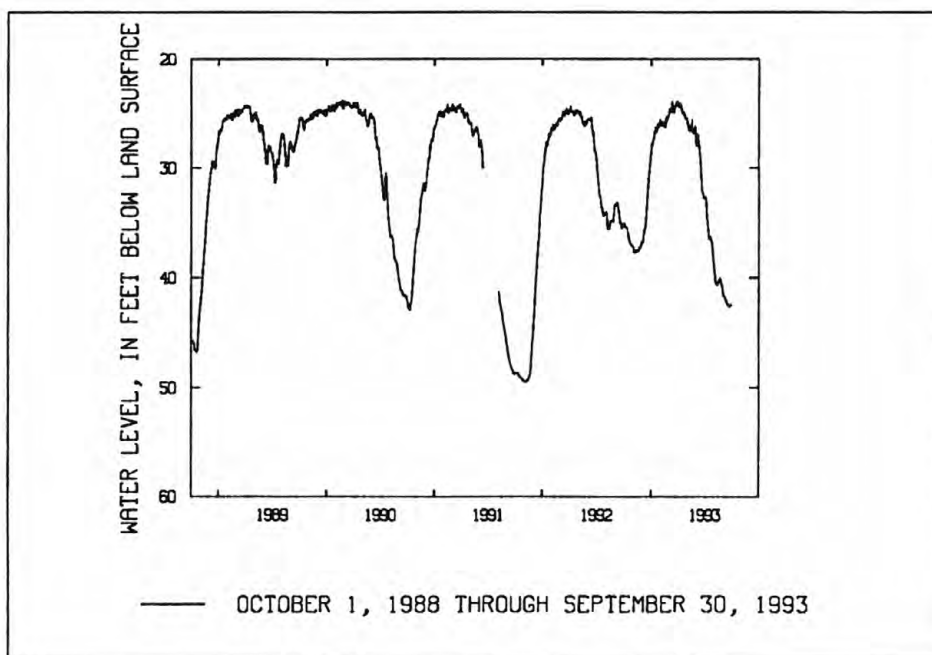
PERIOD OF RECORD.--December 1976 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 19.19 ft below land-surface datum, Mar. 13, 1980; lowest, 52.40 ft below land-surface datum, Nov. 24, 1987.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
NOON VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	35.23	37.66	36.70	27.82	26.08	24.69	24.13	26.04	27.96	32.67	39.54	41.71
10	35.42	37.61	35.45	27.36	26.11	24.52	24.05	26.43	27.15	34.67	40.47	41.90
15	35.94	37.53	34.68	26.64	26.16	24.87	24.67	26.20	28.41	36.16	40.52	42.23
20	36.56	37.58	32.55	26.74	25.85	24.78	24.85	25.55	30.62	36.23	40.26	42.50
25	36.98	37.34	30.75	26.29	25.67	24.32	25.22	26.85	32.28	36.64	40.15	42.59
EOM	37.13	36.72	28.92	25.55	25.35	23.94	25.49	26.12	32.79	38.41	40.90	42.43

WATER YEAR 1993 HIGHEST 23.85 MAR 13, 1993 LOWEST 42.62 SEP 24, 1993



SPECIAL STUDY AND MISCELLANEOUS SITES

WATER QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

BERKELEY COUNTY 393319077560801 - GCV18-1

DATE	TIME	TEMPER- ATURE WATER (DEG C) (00010)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	OXYGEN, DIS- SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	ALKA- LINITY WAT WH TOT IT FIELD MG/L AS CACO3 (00419)	BICAR- BONATE WATER WH IT FIELD MG/L AS HCO3 (00450)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NITRATE TOTAL (MG/L AS N) (00620)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	
JUN 1993 07...	1130	14.0	853	4.4	7.1	217	265	0.020	<0.010	4.30	<0.20	4.30	
DATE	TIME	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681)	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)	SODIUM AD- SORP- TION RATIO (00931)	SODIUM PERCENT (00932)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)
JUN 1993 07...	<0.010	<0.010	0.7	290	80	22	33	0.8	19	17	47	68	
DATE	TIME	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	PROP- CHLOR, WATER, DISS, REC (UG/L) (04024)	BUTYL- ATE, WATER, DISS, REC (UG/L) (04028)	BRO- MACIL, WATER, DISS, REC (UG/L) (04029)	SI- MAZINE, WATER, DISS, REC (UG/L) (04035)	PRO- METON, WATER, DISS, REC (UG/L) (04037)	DEETHYL ATRA- ZINE, WATER, DISS, REC (UG/L) (04040)	CYANA- ZINE, WATER, DISS, REC (UG/L) (04041)	FONOFOS WATER DISS REC (UG/L) (04095)
JUN 1993 07...	0.20	11	<3	<1	<0.015	<0.008	<0.05	<0.010	0.004	<0.020	<0.013	<0.008	
DATE	TIME	URANIUM NATURAL TOTAL (UG/L AS U) (28011)	ALPHA BHC DIS- SOLVED (UG/L) (34253)	P,P' DDE DISSOLV (UG/L) (34653)	CHLOR- PYRIFOS DIS- SOLVED (UG/L) (38933)	LINDANE DIS- SOLVED (UG/L) (39341)	DI- ELDRIN DIS- SOLVED (UG/L) (39381)	METO- LACHLOR WATER DISSOLV (UG/L) (39415)	MALA- THION, DIS- SOLVED (UG/L) (39532)	PARA- THION, DIS- SOLVED (UG/L) (39542)	DI- AZINON, DIS- SOLVED (UG/L) (39572)	ATRA- ZINE, WATER, DISS, REC (UG/L) (39632)	2,4-D, DIS- SOLVED (UG/L) (39732)
JUN 1993 07...	2.9	<0.007	0.002	<0.005	<0.011	<0.020	<0.009	<0.010	<0.022	<0.008	0.011	<0.05	
DATE	TIME	2,4,5-T DIS- SOLVED (UG/L) (39742)	SILVEX, DIS- SOLVED (UG/L) (39762)	ALA- CHLOR, WATER, DISS, REC (UG/L) (46342)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4) (71846)	BROMIDE DIS- SOLVED (MG/L AS BR) (71870)	DEPTH OF WELL, TOTAL (FEET) (72008)	DEPTH TO TOP OF SAMPLE INTER- VAL (FT) (72015)	DEPTH TO BOT- TOM OF SAMPLE INTER- VAL (FT) (72016)	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET) (72019)
JUN 1993 07...	<0.05	<0.05	<0.009	433	428	0.59	0.03	0.060	123.00	42	123	39.94	

BERKELEY COUNTY 393319077560801 - GCV18-1--Continued

DATE	URANIUM			2,6-DI-	TRI-	DIMETH-	ETHAL-	TER-	LIN-	METHYL		
	NATURAL	RN-222		ETHYL	FLUR-	OATE	FLUR-	BACIL	URON	PARA-		
	2 SIGMA	2 SIGMA		ANALINE	ALIN	WATER	ALIN	WATER	WATER	THION		
	WATER	WATER,	RADON	SENCOR	WAT FLT	WAT FLT	FLTRD	WAT FLT	FLTRD	FLTRD	WAT FLT	
	WHOLE	WHOLE,	222	WATER	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	
	TOTAL	TOTAL,	TOTAL	DISSOLV	GF, REC	GF, REC	GG, REC	GF, REC	GF, REC	GF, REC	GF, REC	
	(UG/L)	(PCI/L)	(PCI/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	
	(75993)	(76002)	(82303)	(82630)	(82660)	(82661)	(82662)	(82663)	(82664)	(82665)	(82666)	(82667)
JUN 1993												
07...	0.94	25	190	<0.012	<0.006	<0.012	<0.024	<0.013	<0.020	0.26	<0.039	<0.035
	EPTC	PEB-	TEBU-	MOL-	ETHO-	BEN-	CARBO-	TER-	PRON-	DISUL-	TRIAL-	PRO-
	WATER	ULATE	THIURON	INATE	PROP	FLUR-	FURAN	BUFOS	AMIDE	FOTON	LATE	PANIL
	FLTRD	FILTRD	FLTRD	FLTRD	FLTRD	WAT FLD	FLTRD	FLTRD	FLTRD	FLTRD	FLTRD	FLTRD
	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U
DATE	GF, REC	GF, REC	GF, REC	GF, REC	GF, REC	GF, REC	GF, REC	GF, REC	GF, REC	GF, REC	GF, REC	GF, REC
	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)
	(82668)	(82669)	(82670)	(82671)	(82672)	(82673)	(82674)	(82675)	(82676)	(82677)	(82678)	(82679)
JUN 1993												
07...	<0.005	<0.009	<0.015	<0.007	<0.012	<0.013	<0.013	<0.012	<0.009	<0.020	<0.008	<0.016
	CAR-	THIO-		PENDI-	NAPROP-	PRO-	METHYL	PER-	DIAZ-	TERBUTH	HCH	
	BARYL	BENCARB	DCPA	METH-	AMIDE	PARGITE	AZIN-	METHRIN	INON	YLAZINE	ALPHA	
	WATER	WATER	WATER	ALIN	WATER	WATER	PHOS	CIS	D10 SRG	SURROGT	D6 SRG	
	FLTRD	FLTRD	FLTRD	WAT FLT	FLTRD	FLTRD	WAT FLT	WAT FLT	WAT FLT	WAT FLT	WAT FLT	
	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	
DATE	GF, REC	GF, REC	GF, REC	GF, REC	GF, REC	GF, REC	GF, REC	GF, REC	GF, REC	GF, REC	GF, REC	
	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	PERCENT	PERCENT	PERCENT	
	(82680)	(82681)	(82682)	(82683)	(82684)	(82685)	(82686)	(82687)	(91063)	(91064)	(91065)	
JUN 1993												
07...	<0.046	<0.008	<0.004	<0.018	<0.010	<0.010	<0.038	<0.016	77	100	86	

SPECIAL STUDY AND MISCELLANEOUS SITES

WATER QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

JEFFERSON COUNTY 392929077530201 - GVC19-4--Continued

DATE	1,1,2- TRI- CHLORO- ETHANE TOTAL (UG/L) (34511)	ETHANE, 1,1,2,2 TETRA- CHLORO- WAT UNF REC (UG/L) (34516)	BENZENE O- CHLORO- WATER UNFLTRD REC (UG/L) (34536)	1,2-DI- CHLORO- PROPANE TOTAL (UG/L) (34541)	TRANS- DI- CHLORO- ETHENE TOTAL (UG/L) (34546)	BENZENE 1,2,4- TRI- CHLORO- WAT UNF REC (UG/L) (34551)	BENZENE 1,3-DI- CHLORO- WATER UNFLTRD REC (UG/L) (34566)	BENZENE 1,4-DI- CHLORO- WATER UNFLTRD REC (UG/L) (34571)	P, P' DDE DISSOLV (UG/L) (34653)	DI- CHLORO- DI- FLUORO- METHANE TOTAL (UG/L) (34668)	NAPHTH- ALENE TOTAL (UG/L) (34696)	TRANS- 1,3-DI- CHLORO- PROPENE TOTAL (UG/L) (34699)
JUL 1993 27...	<0.2	<0.2	<0.20	<0.2	<0.2	<0.20	<0.20	<0.20	<0.010	<0.2	<0.2	<0.2
DATE	CIS 1,3-DI- CHLORO- PROPENE TOTAL (UG/L) (34704)	CHLOR- PYRIFOS DIS- SOLVED (UG/L) (38933)	VINYL CHLO- RIDE TOTAL (UG/L) (39175)	TRI- CHLORO- ETHYL- ENE TOTAL (UG/L) (39180)	LINDANE DIS- SOLVED (UG/L) (39341)	DI- ELDRIN DIS- SOLVED (UG/L) (39381)	METO- LACHLOR WATER DISSOLV (UG/L) (39415)	MALA- THION, DIS- SOLVED (UG/L) (39532)	PARA- THION, DIS- SOLVED (UG/L) (39542)	DI- AZINON, DIS- SOLVED (UG/L) (39572)	ATRA- ZINE, WATER, DISS, REC (UG/L) (39632)	HEXA- CHLORO- BUT- ADIENE TOTAL (UG/L) (39702)
JUL 1993 27...	<0.2	<0.005	<0.2	<0.2	<0.011	<0.020	0.009	<0.010	<0.022	<0.008	0.32	<0.2
DATE	ALA- CHLOR, WATER, DISS, REC (UG/L) (46342)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4) (71846)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS NO3) (71851)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS NO2) (71856)	BROMIDE DIS- SOLVED (MG/L AS BR) (71870)	DEPTH OF WELL, TOTAL (FEET) (72008)	DEPTH TO BOT- TOM OF SAMPLE INTER- VAL (FT) (72016)	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET) (72019)	URANIUM NATURAL 2 SIGMA WHOLE TOTAL (UG/L) (75993)
JUL 1993 27...	<0.009	453	424	0.62	0.01	19	0.07	0.050	135.00	135	62.75	0.27
DATE	RN-222 2 SIGMA WATER, WHOLE, TOTAL (PCI/L) (76002)	CIS-1,2 -DI- CHLORO- ETHENE WATER TOTAL (UG/L) (77093)	STYRENE TOTAL (UG/L) (77128)	1,1-DI- CHLORO- PRO- PENE, WAT, WH TOTAL (UG/L) (77168)	2,2-DI- CHLORO- PRO- PANE WAT, WH TOTAL (UG/L) (77170)	1,3-DI- CHLORO- PROPANE WAT, WH TOTAL (UG/L) (77173)	PSEUDO- CUMENE WATER UNFLTRD REC (UG/L) (77222)	ISO- PROPYL- BENZENE WATER WHOLE REC (UG/L) (77223)	BENZENE N-PROPY WATER UNFLTRD REC (UG/L) (77224)	MESIT- YLENE WATER UNFLTRD REC (UG/L) (77226)	O- CHLORO- TOLUENE WATER WHOLE TOTAL (UG/L) (77275)	TOLUENE P-CHLOR WATER UNFLTRD REC (UG/L) (77277)
JUL 1993 27...	74	<0.2	<0.2	<0.2	<0.2	<0.2	<0.20	<0.20	<0.20	<0.20	<0.2	<0.20
DATE	METHANE BROMO CHLORO- WAT UNFLTRD REC (UG/L) (77297)	BENZENE N-BUTYL WATER UNFLTRD REC (UG/L) (77342)	BENZENE SEC BUTYL- WATER UNFLTRD REC (UG/L) (77350)	BENZENE TERT- BUTYL- WATER UNFLTRD REC (UG/L) (77353)	P-ISO- PROPYL- TOLUENE WATER WHOLE REC (UG/L) (77356)	123-TRI CHLORO- PROPANE WATER WHOLE TOTAL (UG/L) (77443)	ETHANE, 1112- TRI- TETRA- CHLORO- WAT UNF REC (UG/L) (77562)	1,2,3- TRI- CHLORO BENZENE WAT, WH REC (UG/L) (77613)	1,2- DIBROMO ETHANE WATER WHOLE TOTAL (UG/L) (77651)	FREON- 113 WATER UNFLTRD REC (UG/L) (77652)	METHYL ETHER TERT- BUTYL WAT UNF REC (UG/L) (78032)	XYLENE WATER UNFLTRD REC (UG/L) (81551)
JUL 1993 27...	<0.20	<0.20	<0.20	<0.20	<0.20	<0.2	<0.2	<0.20	<0.2	<0.2	<0.2	<0.20

SPECIAL STUDY AND MISCELLANEOUS SITES

WATER QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

JEFFERSON COUNTY 392929077530201 - GVC19-4--Continued

	BROMO- BENZENE WATER, WHOLE, TOTAL (UG/L) (81555)	RADON 222 TOTAL (PCI/L) (82303)	DIBROMO- CHLORO- PROPANE WATER WHOLE TOT.REC (UG/L) (82625)	METRI- BUZIN SENCOR WATER DISSOLV (UG/L) (82630)	2,6-DI- ETHYL ANALINE WAT FLT (UG/L) (82660)	TRI- FLUR- ALIN WAT FLT (UG/L) (82661)	DIMETH- OATE WATER FLTRD (UG/L) (82662)	ETHAL- FLUR- ALIN WAT FLT (UG/L) (82663)	PHORATE WATER FLTRD (UG/L) (82664)	TER- BACIL WATER FLTRD (UG/L) (82665)	LIN- URON WATER FLTRD (UG/L) (82666)	METHYL PARA- THION WAT FLT (UG/L) (82667)
DATE												
JUL 1993 27...	<0.2	920	<1.0	<0.012	<0.006	<0.012	<0.024	<0.013	<0.020	<0.030	<0.039	<0.035
	EPTC WATER FLTRD 0.7 U GF, REC (UG/L) (82668)	PEB- ULATE WATER FILTRD 0.7 U GF, REC (UG/L) (82669)	TEBU- THIURON WATER FLTRD 0.7 U GF, REC (UG/L) (82670)	MOL- INATE WATER FLTRD 0.7 U GF, REC (UG/L) (82671)	ETHO- PROP WATER FLTRD 0.7 U GF, REC (UG/L) (82672)	BEN- FLUR- ALIN WAT FLT (UG/L) (82673)	CARBO- FURAN WATER FLTRD 0.7 U GF, REC (UG/L) (82674)	TER- BUFOS WATER FLTRD 0.7 U GF, REC (UG/L) (82675)	PRON- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82676)	DISUL- FOTON WATER FLTRD 0.7 U GF, REC (UG/L) (82677)	TRIAL- LATE WATER FLTRD 0.7 U GF, REC (UG/L) (82678)	PRO- PANIL WATER FLTRD 0.7 U GF, REC (UG/L) (82679)
DATE												
JUL 1993 27...	<0.005	<0.009	<0.015	<0.007	<0.012	<0.013	<0.013	<0.012	<0.009	<0.020	<0.008	<0.016
	CAR- BARYL WATER FLTRD 0.7 U GF, REC (UG/L) (82680)	THIO- BENCARB WATER FLTRD 0.7 U GF, REC (UG/L) (82681)	DCPA WATER FLTRD 0.7 U GF, REC (UG/L) (82682)	PENDI- METH- ALIN WAT FLT (UG/L) (82683)	NAPROP- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82684)	PRO- PARGITE WATER FLTRD 0.7 U GF, REC (UG/L) (82685)	METHYL AZIN- PHOS WAT FLT (UG/L) (82686)	PER- METHRIN CIS WAT FLT (UG/L) (82687)	DIAZ- INON D10 SRG WAT FLT PERCENT (91063)	TERBUTH YLAZINE SURROGT WAT FLT PERCENT (91064)	HCH ALPHA D6 SRG WAT FLT PERCENT (91065)	
DATE												
JUL 1993 27...	<0.046	<0.008	<0.004	<0.018	<0.010	<0.010	<0.038	<0.016	80	110	85	

SPECIAL STUDY AND MISCELLANEOUS SITES

WATER QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

JEFFERSON COUNTY 392033077530301 - GVC20-3

DATE	TIME	TEMPER- ATURE WATER (DEG C) (00010)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	ALKA- LINITY WAT WH TOT IT FIELD MG/L AS CACO3 (00419)	BICAR- BONATE WATER WH IT FIELD MG/L AS HCO3 (00450)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NITRATE TOTAL (MG/L AS N) (00620)	
JUN 1993 10...	0800	14.5	747	523	6.8	68	7.0	245	298	0.020	<0.010	3.00	
DATE		NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681)	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 AD- SORP- TION RATIO (00931)	SODIUM PERCENT (00932)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	
JUN 1993 10...	<0.20	3.00	<0.010	<0.010	0.4	260	97	4.9	5.5	0.1	4	1.6	
DATE		CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	PROP- CHLOR, WATER, DISS, REC (UG/L) (04024)	BUTYL- ATE, WATER, DISS, REC (UG/L) (04028)	BRO- MACIL, WATER, DISS, REC (UG/L) (04029)	SI- MAZINE, WATER, DISS, REC (UG/L) (04035)	PRO- METON, WATER, DISS, REC (UG/L) (04037)	DEETHYL ATRA- ZINE, WATER, DISS, REC (UG/L) (04040)
JUN 1993 10...	13	7.1	0.10	10	<3	<1	<0.015	<0.008	<0.05	0.026	0.086	0.021	
DATE		CYANA- ZINE, WATER, DISS, REC (UG/L) (04041)	FONOFOS WATER DISS REC (UG/L) (04095)	URANIUM NATURAL TOTAL (UG/L AS U) (28011)	ALPHA BHC DIS- SOLVED (UG/L) (34253)	P, P' DDE DISSOLV (UG/L) (34653)	CHLOR- PYRIFOS DIS- SOLVED (UG/L) (38933)	LINDANE DIS- SOLVED (UG/L) (39341)	DI- ELDRIN DIS- SOLVED (UG/L) (39381)	METO- LACHLOR WATER DISSOLV (UG/L) (39415)	MALA- THION, DIS- SOLVED (UG/L) (39532)	PARA- THION, DIS- SOLVED (UG/L) (39542)	DI- AZINON, DIS- SOLVED (UG/L) (39572)
JUN 1993 10...	<0.013	<0.008	<1.0	<0.007	<0.010	<0.005	<0.011	<0.020	0.002	<0.010	<0.022	<0.008	
DATE		ATRA- ZINE, WATER, DISS, REC (UG/L) (39632)	2, 4-D, DIS- SOLVED (UG/L) (39732)	2, 4, 5-T DIS- SOLVED (UG/L) (39742)	SILVEX, DIS- SOLVED (UG/L) (39762)	ALA- CHLOR, WATER, DISS, REC (UG/L) (46342)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4) (71846)	BROMIDE DIS- SOLVED (MG/L AS BR) (71870)	DEPTH OF WELL, TOTAL (FEET) (72008)	DEPTH TO BOT- TOM OF SAMPLE INTER- VAL (FT) (72016)
JUN 1993 10...	0.036	<0.05	<0.05	<0.05	<0.009	298	299	0.41	0.03	0.040	175.00	175	

SPECIAL STUDY AND MISCELLANEOUS SITES

WATER QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

JEFFERSON COUNTY 392033077530301 - GVC20-3--Continued

DATE	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET) (72019)	URANIUM NATURAL 2 SIGMA WATER WHOLE TOTAL (UG/L) (75993)	RN-222 2 SIGMA WATER, WHOLE, TOTAL, (PCI/L) (76002)	RADON 222 TOTAL (PCI/L) (82303)	METRI- BUZIN WATER DISSOLV (UG/L) (82630)	2,6-DI- ETHYL ANALINE WAT FLT 0.7 U GF, REC (UG/L) (82660)	TRI- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82661)	DIMETH- OATE WATER FLTRD 0.7 U GG, REC (UG/L) (82662)	ETHAL- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82663)	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L) (82664)	TER- BACIL WATER FLTRD 0.7 U GF, REC (UG/L) (82665)	LIN- URON WATER FLTRD 0.7 U GF, REC (UG/L) (82666)
JUN 1993 10...	42.37	0.25	57	870	<0.012	<0.006	<0.012	<0.024	<0.013	<0.020	<0.030	<0.039
DATE	METHYL PARA- THION WAT FLT 0.7 U GF, REC (UG/L) (82667)	EPTC WATER FLTRD 0.7 U GF, REC (UG/L) (82668)	PEB- ULATE WATER FILTRD 0.7 U GF, REC (UG/L) (82669)	TEBU- THIURON WATER FLTRD 0.7 U GF, REC (UG/L) (82670)	MOL- INATE WATER FLTRD 0.7 U GF, REC (UG/L) (82671)	ETHO- PROP WATER FLTRD 0.7 U GF, REC (UG/L) (82672)	BEN- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82673)	CARBO- FURAN WATER FLTRD 0.7 U GF, REC (UG/L) (82674)	TER- BUFOS WATER FLTRD 0.7 U GF, REC (UG/L) (82675)	PRON- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82676)	DISUL- FOTON WATER FLTRD 0.7 U GF, REC (UG/L) (82677)	TRIAL- LATE WATER FLTRD 0.7 U GF, REC (UG/L) (82678)
JUN 1993 10...	<0.035	<0.005	<0.009	0.086	<0.007	<0.012	<0.013	<0.013	<0.012	<0.009	<0.020	<0.008
DATE	PRO- PANIL WATER FLTRD 0.7 U GF, REC (UG/L) (82679)	CAR- BARYL WATER FLTRD 0.7 U GF, REC (UG/L) (82680)	THIO- BENCARB WATER FLTRD 0.7 U GF, REC (UG/L) (82681)	DCPA WATER FLTRD 0.7 U GF, REC (UG/L) (82682)	PENDI- METH- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82683)	NAPROP- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82684)	PRO- PARGITE WATER FLTRD 0.7 U GF, REC (UG/L) (82685)	METHYL AZIN- PHOS WAT FLT 0.7 U GF, REC (UG/L) (82686)	PER- METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L) (82687)	DIAZ- INON D10 SRG WAT FLT 0.7 U GF, REC PERCENT (91063)	TERBUTH YLAZINE SURROGT WAT FLT 0.7 U GF, REC PERCENT (91064)	HCH ALPHA D6 SRG WAT FLT 0.7 U GF, REC PERCENT (91065)
JUN 1993 10...	<0.016	<0.046	<0.008	<0.004	<0.018	<0.010	<0.010	<0.038	<0.016	76	93	7

SPECIAL STUDY AND MISCELLANEOUS SITES

WATER QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

JEFFERSON COUNTY 391317077555801 - GVC21-4

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SPECIAL STUDY AND MISCELLANEOUS SITES

WATER QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

JEFFERSON COUNTY 391317077555801 - GVC21-4--Continued

DATE	1,1,2-TRI-CHLORO-ETHANE TOTAL (UG/L) (34511)	ETHANE, 1,1,2,2-TETRA-CHLORO-WAT UNF REC (UG/L) (34516)	BENZENE O-CHLORO-WATER UNFLTRD (UG/L) (34536)	1,2-DI-CHLORO-PROPANE TOTAL (UG/L) (34541)	1,2-TRANSDI-CHLORO-ETHENE TOTAL (UG/L) (34546)	BENZENE 1,2,4-TRI-CHLORO-WAT UNF REC (UG/L) (34551)	BENZENE 1,3-DI-CHLORO-WATER UNFLTRD (UG/L) (34566)	BENZENE 1,4-DI-CHLORO-WATER UNFLTRD (UG/L) (34571)	P,P'DDE DISSOLV (UG/L) (34653)	DI-CHLORO-DI-FLUORO-METHANE TOTAL (UG/L) (34668)	NAPHTH-ALENE TOTAL (UG/L) (34696)	TRANS-1,3-DI-CHLORO-PROPENE TOTAL (UG/L) (34699)
JUL 1993 27...	<0.2	<0.2	<0.20	<0.2	<0.2	<0.20	<0.20	<0.20	<0.010	<0.2	<0.2	<0.2
DATE	CIS 1,3-DI-CHLORO-PROPENE TOTAL (UG/L) (34704)	CHLOR-PYRIFOS DIS-SOLVED (UG/L) (38933)	VINYL-CHLO-RIDE TOTAL (UG/L) (39175)	TRI-CHLORO-ETHYL-ENE TOTAL (UG/L) (39180)	LINDANE DIS-SOLVED (UG/L) (39341)	DI-ELDRIN DIS-SOLVED (UG/L) (39381)	METO-LACHLOR WATER DISSOLV (UG/L) (39415)	MALA-THION, DIS-SOLVED (UG/L) (39532)	PARA-THION, DIS-SOLVED (UG/L) (39542)	DI-AZINON, DIS-SOLVED (UG/L) (39572)	ATRA-ZINE, WATER, DISS, REC (UG/L) (39632)	HEXA-CHLORO-BUT-ADIENE TOTAL (UG/L) (39702)
JUL 1993 27...	<0.2	<0.005	<0.2	<0.2	<0.011	<0.020	0.013	<0.010	<0.022	<0.008	0.72	<0.2
DATE	ALA-CHLOR, WATER, DISS, REC, (UG/L) (46342)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS NH4) (71846)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS NO3) (71851)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS NO2) (71856)	BROMIDE DIS-SOLVED (MG/L AS BR) (71870)	DEPTH OF WELL, TOTAL (FEET) (72008)	DEPTH TO TOP OF SAMPLE INTER-VAL (FT) (72015)	DEPTH TO BOT-TOM OF SAMPLE INTER-VAL (FT) (72016)	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET) (72019)
JUL 1993 27...	<0.009	461	375	0.63	0.03	97	0.07	0.040	155.00	84	155	48.27
DATE	URANIUM NATURAL 2 SIGMA WATER WHOLE TOTAL (UG/L) (75993)	RN-222 2 SIGMA WATER, WHOLE, TOTAL, (PCI/L) (76002)	CIS-1,2-DI-CHLORO-ETHENE WATER TOTAL (UG/L) (77093)	1,1-DI-CHLORO-PRO-PENE, WAT, WH TOTAL (UG/L) (77168)	2,2-DI-CHLORO-PRO-PANE WAT, WH TOTAL (UG/L) (77170)	1,3-DI-CHLORO-PROPANE WAT. WH TOTAL (UG/L) (77173)	PSEUDO-CUMENE WATER UNFLTRD REC (UG/L) (77222)	ISO-PROPYL-BENZENE WATER WHOLE REC (UG/L) (77223)	BENZENE N-PROPY WATER UNFLTRD REC (UG/L) (77224)	MESIT-YLENE WATER UNFLTRD REC (UG/L) (77226)	O-CHLORO-TOLUENE WATER WHOLE TOTAL (UG/L) (77275)	
JUL 1993 27...	0.26	71	<0.2	<0.2	<0.2	<0.2	<0.2	<0.20	<0.20	<0.20	<0.20	<0.2
DATE	TOLUENE P-CHLOR WATER UNFLTRD REC (UG/L) (77277)	METHANE BROMO CHLORO-WAT UNFLTRD REC (UG/L) (77297)	BENZENE N-BUTYL WATER UNFLTRD REC (UG/L) (77342)	BENZENE SEC BUTYL-WATER UNFLTRD REC (UG/L) (77350)	BENZENE TERT-BUTYL-WATER UNFLTRD REC (UG/L) (77353)	P-ISO-PROPYL-TOLUENE WATER WHOLE REC (UG/L) (77356)	123-TRI-CHLORO-PROPANE WATER WHOLE TOTAL (UG/L) (77443)	ETHANE, 1112-TRI-CHLORO-TETRA-CHLORO-WAT UNF REC (UG/L) (77562)	1,2,3-TRI-CHLORO-BENZENE WAT, WH REC (UG/L) (77613)	1,2-DIBROMO ETHANE WATER WHOLE TOTAL (UG/L) (77651)	FREON-113 WATER UNFLTRD REC (UG/L) (77652)	METHYL ETHER TERT-BUTYL WAT UNF REC (UG/L) (78032)
JUL 1993 27...	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.2	<0.2	<0.20	<0.2	<0.2	<0.2

SPECIAL STUDY AND MISCELLANEOUS SITES

WATER QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

JEFFERSON COUNTY 391317077555801 - GVC21-4--Continued

DATE	XYLENE WATER UNFLTRD REC (UG/L) (81551)	BROMO- BENZENE WATER, WHOLE, TOTAL (UG/L) (81555)	RADON 222 TOTAL (PCI/L) (82303)	DIBROMO CHLORO- PROPANE WATER WHOLE TOT.REC (UG/L) (82625)	METRI- BUZIN SENCOR WATER DISSOLV (UG/L) (82630)	2,6-DI- ETHYL ANALINE WAT FLT 0.7 U GF, REC (UG/L) (82660)	TRI- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82661)	DIMETH- OATE WATER FLTRD 0.7 U GG, REC (UG/L) (82662)	ETHAL- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82663)	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L) (82664)	TER- BACIL WATER FLTRD 0.7 U GF, REC (UG/L) (82665)	LIN- URON WATER FLTRD 0.7 U GF, REC (UG/L) (82666)
JUL 1993 27...	<0.20	<0.2	560	<1.0	<0.012	<0.006	<0.012	<0.024	<0.013	<0.020	<0.030	<0.039
DATE	METHYL PARA- THION WAT FLT 0.7 U GF, REC (UG/L) (82667)	EPTC WATER FLTRD 0.7 U GF, REC (UG/L) (82668)	PEB- ULATE WATER FILTRD 0.7 U GF, REC (UG/L) (82669)	TEBU- THIURON WATER FLTRD 0.7 U GF, REC (UG/L) (82670)	MOL- INATE WATER FLTRD 0.7 U GF, REC (UG/L) (82671)	ETHO- PROP WATER FLTRD 0.7 U GF, REC (UG/L) (82672)	BEN- FLUR- ALIN WAT FLD 0.7 U GF, REC (UG/L) (82673)	CARBO- FURAN WATER FLTRD 0.7 U GF, REC (UG/L) (82674)	TER- BUFOS WATER FLTRD 0.7 U GF, REC (UG/L) (82675)	PRON- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82676)	DISUL- FOTON WATER FLTRD 0.7 U GF, REC (UG/L) (82677)	TRIAL- LATE WATER FLTRD 0.7 U GF, REC (UG/L) (82678)
JUL 1993 27...	<0.035	<0.005	<0.009	<0.015	<0.007	<0.012	<0.013	<0.013	<0.012	<0.009	<0.020	<0.008
DATE	PRO- PANIL WATER FLTRD 0.7 U GF, REC (UG/L) (82679)	CAR- BARYL WATER FLTRD 0.7 U GF, REC (UG/L) (82680)	THIO- BENCARB WATER FLTRD 0.7 U GF, REC (UG/L) (82681)	DCPA WATER FLTRD 0.7 U GF, REC (UG/L) (82682)	PENDI- METH- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82683)	NAPROP- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82684)	PRO- PARGITE WATER FLTRD 0.7 U GF, REC (UG/L) (82685)	METHYL AZIN- PHOS WAT FLT 0.7 U GF, REC (UG/L) (82686)	PER- METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L) (82687)	DIAZ- INON D10 SRG WAT FLT 0.7 U GF, REC (91063)	TERBUTH YLAZINE SURROGT WAT FLT 0.7 U GF, REC (91064)	HCH ALPHA D6 SRG WAT FLT 0.7 U GF, REC (91065)
JUL 1993 27...	<0.016	<0.046	<0.008	<0.004	<0.018	<0.010	<0.010	<0.038	<0.016	91	100	81

SPECIAL STUDY AND MISCELLANEOUS SITES

WATER QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

JEFFERSON COUNTY 391200077520401 - GVC29

DATE	TIME	TEMPER- ATURE WATER (DEG C) (00010)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	ALKA- LINITY WAT WH TOT IT FIELD MG/L AS CACO3 (00419)	BICAR- BONATE WATER WH IT FIELD MG/L AS HCO3 (00450)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NITRATE TOTAL (MG/L AS N) (00620)	
SEP 1993 09...	1000	14.0	748	1120	4.0	40	6.5	435	530	0.030	<0.010	4.20	
DATE		NITRO- GEN, AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681)	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)	SODIUM AD- SORP- TION RATIO (00931)	SODIUM PERCENT (00932)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)
SEP 1993 09...	<0.20	4.20	<0.010	<0.010	0.7	580	140	57	23	0.4	8	2.1	
DATE		CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED AS SIO2 (00955)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	PROP- CHLOR, WATER, DISS, REC (UG/L) (04024)	BUTYL- ATE, WATER, DISS, REC (UG/L) (04028)	SI- MAZINE, WATER, DISS, REC (UG/L) (04035)	PRO- METON, WATER, DISS, REC (UG/L) (04037)	DEETHYL ATRA- ZINE, WATER, DISS, REC (UG/L) (04040)	CYANA- ZINE, WATER, DISS, REC (UG/L) (04041)
SEP 1993 09...	130	23	0.40	13	7	<1	<0.015	<0.008	<0.010	<0.008	0.030	<0.013	
DATE		FONOFOS WATER DISS REC (UG/L) (04095)	URANIUM NATURAL TOTAL (UG/L AS U) (28011)	ALPHA BHC DIS- SOLVED (UG/L) (34253)	P, P' DDE DISSOLV (UG/L) (34653)	CHLOR- PYRIFOS DIS- SOLVED (UG/L) (38933)	LINDANE DIS- SOLVED (UG/L) (39341)	DI- ELDRIN DIS- SOLVED (UG/L) (39381)	METO- LACHLOR WATER DISSOLV (UG/L) (39415)	MALA- THION, DIS- SOLVED (UG/L) (39532)	PARA- THION, DIS- SOLVED (UG/L) (39542)	DI- AZINON, DIS- SOLVED (UG/L) (39572)	ATRA- ZINE, WATER, DISS, REC (UG/L) (39632)
SEP 1993 09...	<0.008	1.6	<0.007	<0.010	<0.005	<0.011	<0.020	<0.009	<0.010	<0.022	<0.008	0.068	
DATE		ALA- CHLOR, WATER, DISS, REC, (UG/L) (46342)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4) (71846)	BROMIDE DIS- SOLVED (MG/L AS BR) (71870)	DEPTH OF WELL, TOTAL (FEET) (72008)	DEPTH TO BOT- TOM OF SAMPLE INTER- VAL (FT) (72016)	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET) (72019)	URANIUM NATURAL 2 SIGMA WATER WHOLE TOTAL (UG/L) (75993)	RN-222 2 SIGMA WATER, WHOLE, TOTAL, (PCI/L) (76002)	
SEP 1993 09...	<0.009	1240	668	1.69	0.04	0.090	126.00	126	66.68	0.55	40		

SPECIAL STUDY AND MISCELLANEOUS SITES

WATER QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

JEFFERSON COUNTY 391200077520401 - GVC29--Continued

		METRI- BUZIN	2,6-DI- ETHYL ANALINE	TRI- FLUR- ALIN	DIMETH- OATE WATER	ETHAL- FLUR- ALIN	PHORATE WATER	TER- BACIL WATER	LIN- URON WATER	METHYL PARA- THION	EPTC WATER
	RADON 222	WATER	WAT FLT	WAT FLT	FLTRD	WAT FLT	FLTRD	FLTRD	FLTRD	WAT FLT	FLTRD
DATE	TOTAL (PCI/L)	DISSOLV (UG/L)	GF, REC (UG/L)	GF, REC (UG/L)	GG, REC (UG/L)	GF, REC (UG/L)	GF, REC (UG/L)	GF, REC (UG/L)	GF, REC (UG/L)	GF, REC (UG/L)	GF, REC (UG/L)
	(82303)	(82630)	(82660)	(82661)	(82662)	(82663)	(82664)	(82665)	(82666)	(82667)	(82668)
SEP 1993 09...	490	<0.012	<0.006	<0.012	<0.024	<0.013	<0.020	<0.030	<0.039	<0.035	<0.005
		PEB- ULATE WATER FLTRD 0.7 U	TEBU- THIURON WATER FLTRD 0.7 U	MOL- INATE WATER FLTRD 0.7 U	ETHO- PROP WATER FLTRD 0.7 U	BEN- FLUR- ALIN WAT FLD 0.7 U	CARBO- FURAN WATER FLTRD 0.7 U	TER- BUFOS WATER FLTRD 0.7 U	PRON- AMIDE WATER FLTRD 0.7 U	DISUL- FOTON WATER FLTRD 0.7 U	TRIAL- LATE WATER FLTRD 0.7 U
DATE	GF, REC (UG/L)	GF, REC (UG/L)	GF, REC (UG/L)	GF, REC (UG/L)	GF, REC (UG/L)	GF, REC (UG/L)	GF, REC (UG/L)	GF, REC (UG/L)	GF, REC (UG/L)	GF, REC (UG/L)	GF, REC (UG/L)
	(82669)	(82670)	(82671)	(82672)	(82673)	(82674)	(82675)	(82676)	(82677)	(82678)	(82679)
SEP 1993 09...	<0.009	<0.015	<0.007	<0.012	<0.013	<0.013	<0.012	<0.009	<0.020	<0.008	<0.016
		CAR- BARYL WATER FLTRD 0.7 U	THIO- BENCARB WATER FLTRD 0.7 U	DCPA WATER FLTRD 0.7 U	PENDI- METH- ALIN WAT FLT 0.7 U	NAPROP- AMIDE WATER FLTRD 0.7 U	PRO- PARGITE WATER FLTRD 0.7 U	METHYL AZIN- PHOS WAT FLT 0.7 U	PER- METHRIN CIS WAT FLT 0.7 U	DIAZ- INON D10 SRG WAT FLT 0.7 U	TERBUTH YLAZINE SURROGT WAT FLT 0.7 U
DATE	GF, REC (UG/L)	GF, REC (UG/L)	GF, REC (UG/L)	GF, REC (UG/L)	GF, REC (UG/L)	GF, REC (UG/L)	GF, REC (UG/L)	GF, REC (UG/L)	GF, REC (UG/L)	PERCENT (91063)	PERCENT (91064)
	(82680)	(82681)	(82682)	(82683)	(82684)	(82685)	(82686)	(82687)	(82688)	(91063)	(91064)
SEP 1993 09...	<0.046	<0.008	<0.004	<0.018	<0.010	<0.010	<0.038	<0.016	67	78	79

SPECIAL STUDY AND MISCELLANEOUS SITES

WATER QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

03068690 - NORTH SPRING AT BOWDEN, WV

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 (PER- CENT 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)	RN-222 2 SIGMA WATER, TOTAL, (PCI/L) (76002)	RADON 222 TOTAL (PCI/L) (82303)
MAR 1993											
25...	0830	109	6.6	9.0	710	10.0	93	K2	K6	--	--
JUL											
27...	1110	108	6.6	16.0	709	2.7	29	K2	K12	--	--
OCT											
19...	0835	104	6.9	11.5	710	5.2	51	K3	<2	31	550

372552081364301 - CITY OF WELCH #7

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 (PER- CENT 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)	TRITIUM TOTAL (PCI/L) (07000)	RN-222 2 SIGMA WATER, TOTAL, (PCI/L) (76002)	RADON 222 TOTAL (PCI/L) (82303)
MAR 1993												
22...	0830	1300	7.4	15.0	733	1.5	16	<1	<1	--	24	110
JUL												
19...	0945	1380	7.4	17.0	725	0.7	8	<1	<1	--	--	--
OCT												
11...	1325	1380	7.6	15.5	725	2.5	26	<1	<1	52	--	--

373213081003301 - PIPESTEM STATE PARK

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 (PER- CENT 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)	TRITIUM TOTAL (PCI/L) (07000)	RN-222 2 SIGMA WATER, TOTAL, (PCI/L) (76002)	RADON 222 TOTAL (PCI/L) (82303)
APR 1993												
14...	1050	440	7.4	13.5	719	4.1	42	<1	<1	--	12	310
JUL												
13...	0945	411	7.2	13.5	725	1.1	11	<1	K1	--	--	--
OCT												
12...	1420	420	6.9	13.0	722	2.6	26	<1	K30	30	--	--

374525080324501 - DAVIS SPRING

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 (PER- CENT 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)	RN-222 2 SIGMA WATER, TOTAL, (PCI/L) (76002)	RADON 222 TOTAL (PCI/L) (82303)
MAY 1993											
07...	1330	328	7.3	12.0	720	8.2	81	K43	K8	33	88
JUL											
13...	1320	380	7.0	13.5	724	6.5	66	60	K33	--	--
OCT											
12...	1700	421	6.9	12.5	719	5.1	51	51	140	--	--

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

SPECIAL STUDY AND MISCELLANEOUS SITES

WATER QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

374810080173001 - WHITE SULPHUR SPRINGS HATCHERY

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 (PER- CENT 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)	RN-222 2 SIGMA WATER, TOTAL, (PCI/L) (76002)	RADON 222 TOTAL (PCI/L) (82303)
APR 1993											
13...	1720	412	6.7	12.0	713	7.6	76	K1	K8	10	94
JUL											
14...	0920	606	6.8	14.0	720	5.0	51	<1	K2	--	--
OCT											
13...	0815	594	7.2	12.0	716	3.4	34	<1	K1	--	--

375416082005301 - CHIEF LOGAN STATE PARK

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 (PER- CENT 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)	TRITIUM TOTAL (PCI/L) (07000)	RN-222 2 SIGMA WATER, TOTAL, (PCI/L) (76002)	RADON 222 TOTAL (PCI/L) (82303)
MAR 1993												
22...	1300	345	7.1	13.0	752	1.4	13	<1	<1	--	23	160
JUN												
30...	1125	350	7.1	14.5	780	6.1	58	<1	<1	--	--	--
OCT												
07...	1320	350	6.8	13.0	749	3.8	37	<1	<1	37	--	--

375811082212401 - CABWAYLINGO STATE PARK

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 (PER- CENT 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)	TRITIUM TOTAL (PCI/L) (07000)	RN-222 2 SIGMA WATER, TOTAL, (PCI/L) (76002)	RADON 222 TOTAL (PCI/L) (82303)
APR 1993												
15...	1215	486	6.9	13.0	735	0.9	9	<1	38	--	--	--
JUN												
30...	1520	298	6.9	13.5	741	2.0	20	<1	<1	--	38	240
OCT												
07...	1045	310	6.8	12.0	752	0.5	5	<1	K5	34	--	--

380318081062701 - CITY OF FAYETTEVILLE

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 (PER- CENT 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)	TRITIUM TOTAL (PCI/L) (07000)	RN-222 2 SIGMA WATER, TOTAL, (PCI/L) (76002)	RADON 222 TOTAL (PCI/L) (82303)
APR 1993												
12...	1430	860	6.9	15.0	713	0.7	7	<1	<1	--	11	<80
JUL												
12...	1510	1040	7.3	15.0	713	0.4	4	<1	<1	--	--	--
OCT												
12...	1030	1100	7.2	16.0	712	0.3	3	<1	<1	49	--	--

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

SPECIAL STUDY AND MISCELLANEOUS SITES

WATER QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

381432081391501 - KANAWHA STATE FOREST

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 (PER- CENT 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)	TRITIUM TOTAL (PCI/L) (07000)	RN-222 2 SIGMA WATER, WHOLE, TOTAL, (PCI/L) (76002)	RADON 222 TOTAL (PCI/L) (82303)
MAR 1993												
01...	1130	250	6.7	12.0	740	1.0	10	<1	<1	--	23	110
JUN												
29...	1315	267	6.7	13.0	739	0.6	6	K1	<1	--	--	--
SEP												
14...	1045	244	6.1	13.0	750	0.1	1	<1	K5	42	--	--

381625080063001 - MCLAUGHLIN SPRING

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 (PER- CENT 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)	TRITIUM TOTAL (PCI/L) (07000)	RN-222 2 SIGMA WATER, WHOLE, TOTAL, (PCI/L) (76002)	RADON 222 TOTAL (PCI/L) (82303)
APR 1993												
13...	1400	100	6.6	8.0	700	10.7	98	K2	K2	7.0	<80	
JUL												
14...	1300	197	7.0	10.0	706	9.0	86	K8	23	--	--	
OCT												
13...	1025	157	7.5	10.0	704	8.2	79	K10	21	--	--	

383038081505201 - CANNERY LANE WELL

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 (PER- CENT 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)	TRITIUM TOTAL (PCI/L) (07000)	RN-222 2 SIGMA WATER, WHOLE, TOTAL, (PCI/L) (76002)	RADON 222 TOTAL (PCI/L) (82303)
APR 1993												
15...	1605	700	8.3	14.5	738	1.5	15	<1	<1	--	36	2900
JUN												
29...	1545	680	8.2	14.0	749	2.5	25	<1	<1	--	--	--
SEP												
14...	1425	700	7.8	14.0	752	0.9	9	<1	<1	15	--	--

383409081080801 - WALLBACK PUBLIC HUNTING AREA

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 (PER- CENT 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)	TRITIUM TOTAL (PCI/L) (07000)	RN-222 2 SIGMA WATER, WHOLE, TOTAL, (PCI/L) (76002)	RADON 222 TOTAL (PCI/L) (82303)
MAY 1993												
07...	1245	1070	7.9	14.5	747	1.2	12	<1	<1	--	41	2000
JUL												
20...	1040	970	7.1	15.0	747	1.2	12	<1	K4	--	--	--
OCT												
06...	1620	1060	7.3	14.0	751	1.6	16	<1	<1	8.0	--	--

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

SPECIAL STUDY AND MISCELLANEOUS SITES

WATER QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

383912080224801 - HOLLY RIVER STATE PARK

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 (PER- CENT SATUR- ATION) (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)	TRITIUM TOTAL (PCI/L) (07000)	RN-222 2 SIGMA WATER, WHOLE, TOTAL, (PCI/L) (76002)	RADON 222 TOTAL (PCI/L) (82303)
APR 1993												
13...	0930	114	6.2	9.5	724	0.2	2	<1	<1	--	7.0	<80
JUL												
14...	1650	121	6.3	11.5	727	0.1	1	<1	<1	--	--	--
OCT												
13...	1515	114	6.0	12.0	726	1.1	11	<1	<1	45	--	--

385332078553601 - LOST RIVER STATE PARK

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 (PER- CENT SATUR- ATION) (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)	TRITIUM TOTAL (PCI/L) (07000)	RN-222 2 SIGMA WATER, WHOLE, TOTAL, (PCI/L) (76002)	RADON 222 TOTAL (PCI/L) (82303)
MAR 1993												
25...	1400	94	6.2	9.0	714	9.2	85	K18	<1	--	--	--
JUL												
28...	1800	170	6.6	11.0	708	5.0	49	K6	K8	--	--	--
OCT												
19...	1315	155	6.1	11.5	714	3.7	36	K2	<1	31	34	800

385422082072201 - CITY OF POINT PLEASANT WELL #4

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 (PER- CENT SATUR- ATION) (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)	TRITIUM TOTAL (PCI/L) (07000)	RN-222 2 SIGMA WATER, WHOLE, TOTAL, (PCI/L) (76002)	RADON 222 TOTAL (PCI/L) (82303)
MAY 1993												
06...	1230	440	7.4	13.0	753	2.6	25	<1	<1	25	290	
JUL												
09...	1400	E500	6.8	13.0	748	4.2	--	<1	<1	--	--	--
OCT												
06...	1200	325	7.0	12.5	758	2.0	19	<1	<1	--	--	--

390202081234201 - PALESTINE HATCHERY

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 (PER- CENT SATUR- ATION) (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)	TRITIUM TOTAL (PCI/L) (07000)	RN-222 2 SIGMA WATER, WHOLE, TOTAL, (PCI/L) (76002)	RADON 222 TOTAL (PCI/L) (82303)
MAY 1993												
04...	1200	580	7.2	14.5	748	0.6	6	<1	<1	--	42	2600
JUL												
08...	1500	600	8.3	16.0	747	2.8	29	<1	<1	--	--	--
OCT												
06...	0830	590	7.4	15.0	757	3.1	31	<1	<1	22	--	--

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

E: Estimated.

SPECIAL STUDY AND MISCELLANEOUS SITES

WATER QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

390324079232501 - SAND SPRING

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)	COLI- FORM, FECAL, UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	TRITIUM TOTAL (PCI/L) (07000)	RN-222 2 SIGMA WATER, WHOLE, TOTAL, (PCI/L) (76002)	RADON 222 TOTAL (PCI/L) (82303)
MAR 1993												
24...	1445	31	5.2	5.0	682	9.3	81	K4	<1	--	--	--
JUL												
27...	0840	167	6.7	10.5	682	9.3	93	21	35	--	--	--
OCT												
18...	1620	152	7.0	9.0	678	13.4	130	K4	K4	54	30	370

391019080243301 - WATERS SMITH STATE PARK

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)	COLI- FORM, FECAL, UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	TRITIUM TOTAL (PCI/L) (07000)	RN-222 2 SIGMA WATER, WHOLE, TOTAL, (PCI/L) (76002)	RADON 222 TOTAL (PCI/L) (82303)
MAR 1993												
23...	1300		96	6.1	12.0	739	8.9	85	K250		K900	
JUL												
26...	1420		1630	6.8	16.0	736	5.7	60	73		K640	

391718081333101 - CITY OF PARKERSBURG WELL #3

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)	COLI- FORM, FECAL, UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	TRITIUM TOTAL (PCI/L) (07000)	RN-222 2 SIGMA WATER, WHOLE, TOTAL, (PCI/L) (76002)	RADON 222 TOTAL (PCI/L) (82303)
MAY 1993												
06...	0915	432	6.7	14.0	753	0.7	7	<1	<1	--	28	600
JUL												
09...	1000	430	6.4	19.5	748	0.8	9	<1	<1	--	--	--
OCT												
05...	1525	554	6.8	22.0	755	1.5	17	<1	K1	84	--	--

391950078032900 - LEFEVRE SPRING

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)	COLI- FORM, FECAL, UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	TRITIUM TOTAL (PCI/L) (07000)	RN-222 2 SIGMA WATER, WHOLE, TOTAL, (PCI/L) (76002)	RADON 222 TOTAL (PCI/L) (82303)
MAR 1993												
10...	1100	620	6.8	10.0	746	8.7	79	K5	K6	39	850	
JUL												
08...	1105	604	6.9	12.0	751	6.0	57	K2	K8	--	--	
OCT												
20...	0840	604	6.6	12.0	753	6.4	60	K4	K10	26	540	

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

SPECIAL STUDY AND MISCELLANEOUS SITES

WATER QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

392010077455201 - HARPERS FERRY SPRING

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 (PER- CENT 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)	RN-222 2 SIGMA WATER, WHOLE, TOTAL, (PCI/L) (76002)	RADON 222 TOTAL (PCI/L) (82303)
MAR 1993											
10...	1500	557	6.9	11.0	751	8.7	80	<1	<1	30	1600
JUL											
28...	0900	648	6.8	11.0	756	5.7	52	K3	86	--	--
OCT											
20...	1045	650	6.6	13.5	759	7.0	68	K8	240	--	--

393738078134601 - BERKELEY SPRINGS STATE PARK

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 (PER- CENT 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)	RN-222 2 SIGMA WATER, WHOLE, TOTAL, (PCI/L) (76002)	RADON 222 TOTAL (PCI/L) (82303)
MAR 1993											
10...	0830	292	6.9	23.0	746	4.0	47	<1	<1	26	400
JUL											
28...	1400	308	6.9	22.0	748	3.6	42	K1	K5	--	--
OCT											
19...	1730	298	6.8	23.0	752	3.8	45	<1	<1	25	330

394047079463801 - CHESTNUT RIDGE PARK

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 (PER- CENT 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)	RN-222 2 SIGMA WATER, WHOLE, TOTAL, (PCI/L) (76002)	RADON 222 TOTAL (PCI/L) (82303)
MAR 1993											
23...	1530	218	6.7	10.5	709	3.2	31	<1	K530	--	--
JUL											
26...	1705	239	6.5	11.0	705	4.0	39	<1	<1	--	--
OCT											
18...	1310	230	6.8	11.0	708	1.9	19	K1	<1	50	48 1500

394050080514201 - CITY OF NEW MARTINSVILLE WELL #1

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 (PER- CENT 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)	RN-222 2 SIGMA WATER, WHOLE, TOTAL, (PCI/L) (76002)	RADON 222 TOTAL (PCI/L) (82303)
MAY 1993											
05...	1730	752	7.1	14.0	749	4.0	40	<1	<1	25	430
JUL											
15...	1630	780	7.5	14.5	747	6.6	66	<1	<1	--	--
OCT											
05...	1135	810	6.9	13.0	754	5.1	49	<1	<1	--	--

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

SPECIAL STUDY AND MISCELLANEOUS SITES

WATER QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

402003080360501 - CITY OF FOLLANSBEE

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 (PER- CENT SATUR- ATION) (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)	TRITIUM TOTAL (PCI/L) (07000)	RN-222 2 SIGMA WATER, WHOLE, TOTAL, (PCI/L) (76002)	RADON 222 TOTAL (PCI/L) (82303)
MAY 1993												
05...	0945	557	6.4	16.5	748	1.4	15	<1	<1	--	38	240
JUL												
15...	1330	400	7.3	14.5	750	1.4	14	<1	<1	--	--	--
OCT												
05...	0830	558	6.6	12.5	751	1.3	12	<1	<1	75	--	--

403038080332401 - OAKLAND PUBLIC SERVICE DISTRICT

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 (PER- CENT SATUR- ATION) (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)	TRITIUM TOTAL (PCI/L) (07000)	RN-222 2 SIGMA WATER, WHOLE, TOTAL, (PCI/L) (76002)	RADON 222 TOTAL (PCI/L) (82303)
MAY 1993												
05...	1300	499	7.0	12.0	739	2.2	21	<1	<1	--	28	430
JUL												
15...	1030	415	7.4	14.0	741	--	--	<1	K1	--	--	--
OCT												
04...	1630	454	6.8	12.5	734	0.6	6	<1	K1	53	--	--

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

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CONVERSION FACTORS AND VERTICAL DATUM

Multiply	By	To obtain
<i>Length</i>		
inch (in.)	2.54×10^1	millimeter
	2.54×10^{-2}	meter
foot (ft)	3.048×10^{-1}	meter
mile (mi)	1.609×10^0	kilometer
<i>Area</i>		
acre	4.047×10^3	square meter
	4.047×10^{-1}	square hectometer
	4.047×10^{-3}	square kilometer
square mile (mi ²)	2.590×10^0	square kilometer
<i>Volume</i>		
gallon (gal)	3.785×10^0	liter
	3.785×10^0	cubic decimeter
	3.785×10^{-3}	cubic meter
million gallons (Mgal)	3.785×10^3	cubic meter
	3.785×10^{-3}	cubic hectometer
cubic foot (ft ³)	2.832×10^1	cubic decimeter
	2.832×10^{-2}	cubic meter
cubic-foot-per-second day [(ft ³ /s) d]	2.447×10^3	cubic meter
	2.447×10^{-3}	cubic hectometer
acre-foot (acre-ft)	1.233×10^3	cubic meter
	1.233×10^{-3}	cubic hectometer
	1.233×10^{-6}	cubic kilometer
<i>Flow</i>		
cubic foot per second (ft ³ /s)	2.832×10^1	liter per second
	2.832×10^1	cubic decimeter per second
	2.832×10^{-2}	cubic meter per second
gallon per minute (gal/min)	6.309×10^{-2}	liter per second
	6.309×10^{-2}	cubic decimeter per second
	6.309×10^{-5}	cubic meter per second
million gallons per day (Mgal/d)	4.381×10^1	cubic decimeter per second
	4.381×10^{-2}	cubic meter per second
<i>Mass</i>		
ton (short)	9.072×10^{-1}	megagram or metric ton

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

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