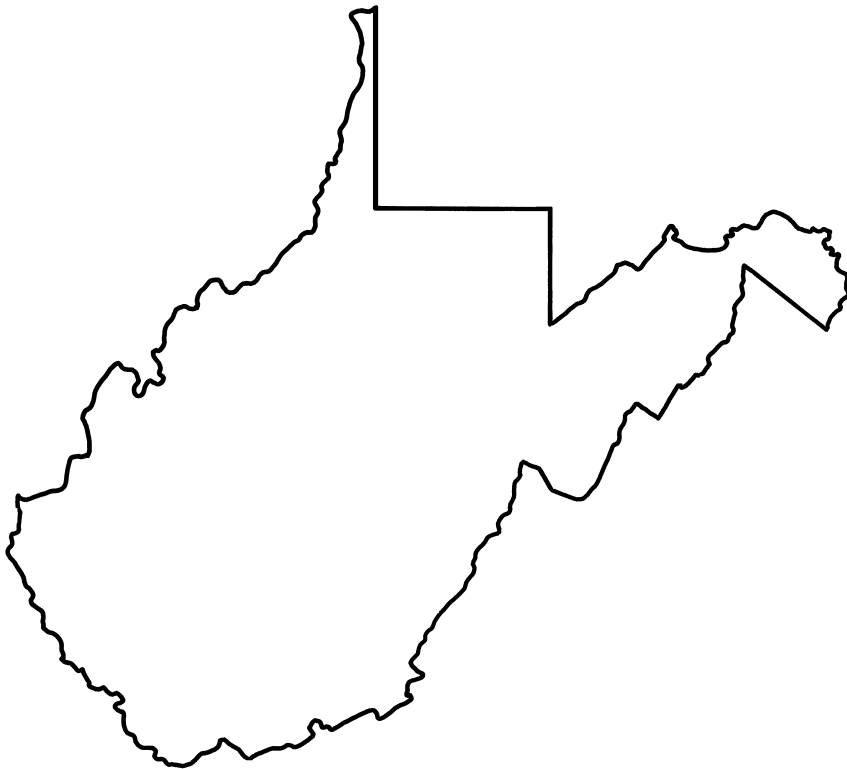


Water Resources Data West Virginia Water Year 2005



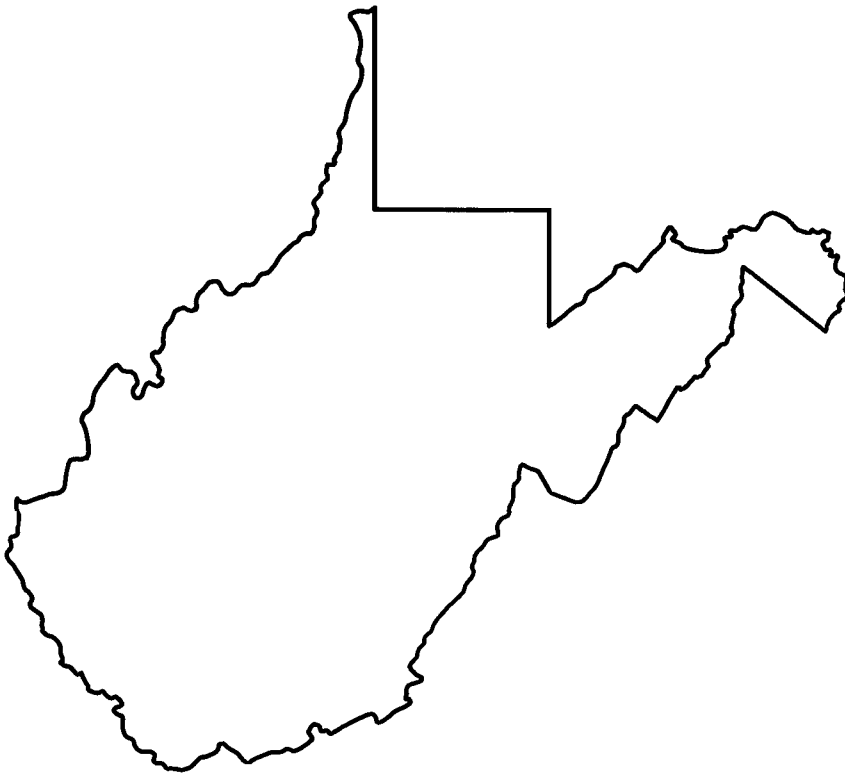
Water-Data Report WV-05-1



Water Resources Data West Virginia Water Year 2005

By S.M. Ward and G.R. Crosby

Water-Data Report WV-05-1



Prepared in cooperation with the
State of West Virginia and with other agencies

U.S. Department of the Interior
U.S. Geological Survey



U.S. Department of the Interior

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PREFACE

This volume of the annual hydrologic data report for West Virginia is one of a series of annual reports that documents 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 under the general supervision of Hugh E. Bevans, Director, West Virginia Water Science Center:

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13. ABSTRACT <i>(Maximum 200 words)</i> Water-resources data for the 2005 water year for West Virginia consist of records of stream discharge, reservoir and ground-water levels, and water quality of streams and ground-water wells. This report contains discharge records for 64 streamflow-gaging stations; discharge records provided by adjacent states for 1 streamflow-gaging station; annual maximum discharge at 17 crest-stage partial-record stations; stage records for 14 detention reservoirs; water-quality records for 8 stations; and water-level records for 11 observation wells. Locations of streamflow, detention reservoir, and water-quality stations are shown on figure 4. Locations of ground-water observation wells are shown on figure 5. Additional water-quality 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.			
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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, (e) stage, (c) chemical, (b) biological, (m) microbiological, (sK) conductance, (pH) pH units, (t) water temperature, (DO) dissolved oxygen, (s) sediment, (a) annual maximum]

Station number Page

NORTH ATLANTIC SLOPE BASINS

POTOMAC RIVER BASIN

North Branch Potomac River at Steyer, MD (d)	01595000	*
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*Records published by Maryland Water Science Center, USGS. See water-data report WDR-ME-DE-DC-05-1.

**Discharge records furnished by Maryland Water Science Center, USGS.

***Water-quality records are published by the Maryland Water Science Center, USGS.

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

Letters after station name designate type of data collected: (d) discharge, (e) stage, (c) chemical, (b) biological, (m) microbiological, (sK) conductance, (pH) pH units, (t) water temperature, (DO) dissolved oxygen, (s) sediment, (a) annual maximum]

OHIO RIVER BASIN--Continued

MONONGAHELA RIVER BASIN--Continued

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West Fork River below Stonewall Jackson Dam (sK, pH, t, DO).....	03058000	114
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Little Kanawha River at Grantsville (a)	03153500	236
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North Fork Hughes River near Cairo (e)	03155405	158

MILL CREEK RIVER BASIN

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

[Letters after station name designate type of data collected: (d) discharge, (e) stage, (c) chemical, (b) biological, (m) microbiological, (sK) conductance, (pH) pH units, (t) water temperature, (DO) dissolved oxygen, (s) sediment, (a) annual maximum]

OHIO RIVER BASIN--Continued

KANAWHA RIVER BASIN

New River at Glen Lyn, VA (d)	03176500	****
Middle Fork Brush Creek at Edison (e)	03178150	162
Bluestone River near Pipestem (d)	03179000	164
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Marlin Run at Marlinton (e)	03182050	168
Greenbrier River at Buckeye (d)	03182500	170
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Meadow River near Mount Lookout (d)	03190400	188
Peters Creek near Lockwood (d)	03191500	190
Gauley River above Belva (d)	03192000	192
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Elk River near Frametown (a)	03196600	237
Elk River at Clay (a)	03196800	237
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Unnamed Tributary to Elk Twomile Creek near Charleston (e)	03197910	200
Kanawha River at Charleston (d)	03198000	202
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GUYANDOTTE RIVER BASIN

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

Letters after station name designate type of data collected: (d) discharge, (e) stage, (c) chemical, (b) biological, (m) microbiological, (sK) conductance, (pH) pH units, (t) water temperature, (DO) dissolved oxygen, (s) sediment, (a) annual maximum]

OHIO RIVER BASIN--Continued

GUYANDOTTE RIVER BASIN--Continued

Guyandotte River at Logan (d)	03203600	216
Guyandotte River at Branchland (a)	03204000	237
Mud River at Palermo (e)	03204250	218
Ohio River at Huntington (a)	03206000	238

TWELVEPOLE CREEK BASIN

East Fork Twelvepole Creek near Dunlow (d)	03206600	220
East Fork Twelvepole Creek below East Lynn Dam (a)	03206790	238
Twelvepole Creek below Wayne (a)	03207020	238

BIG SANDY RIVER BASIN

Tug Fork at Welch (d)	03212750	224
Dry Fork at Beartown (d)	03212980	226
Panther Creek near Panther (d)	03213500	228
Tug Fork at Williamson (d)	03213700	230
Tug Fork at Kermit (d)	03214500	232

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

<u>County</u>	<u>Well number</u>	<u>Local number</u>	<u>Location</u>	<u>Page</u>
BERKELEY	392725077582401	Ber-0445	Martinsburg	246
BROOKE	401216080362703	Brk-0066	Bethany	247
GRANT	391652079181401	Grt-0090	Mount Storm	248
HARDY	390333078370801	Hrd-0301	Wardensville	249
JEFFERSON	392104077554801	Jef-0526	Leetown	250
MINERAL	392200078532001	Min-0173	Elk Garden	251
MINGO	373554081493401	Mig-0131	Justice	252
POCAHONTAS	380653080155301	Poc-0256	Droop Mountain State Park	253
WAYNE	382205082304501	Way-0144	Camp Mad Anthony Wayne	254
WEBSTER	382008080292801	Web-0167	Dyer	255
WYOMING	373839081255201	Wyo-0148	Twin Falls State Park	256

**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	Last year of revisions published
<u>NORTH ATLANTIC SLOPE BASINS</u>				
<u>POTOMAC RIVER BASIN</u>				
Abram Creek at Oakmont	01595300	42.6	1956-1982	
New Creek near Keyser	01599500	46.5	1930-1931 1948-1963	
South Branch Potomac River:				
Friends Run near Franklin.....	01605600	4.39	1969-1977	
South Mill Creek:				
Spring Run:				
Big Spring at Masonville.....	01607000	---	1946-1959 1968-1969	
Fort Run near Moorefield.....	01608050	4.85	1969-1977	
South Branch Potomac River near Moorefield.....	01608070	1,241	1994-2002	
Buffalo Creek near Romney.....	01608400	4.33	1969-1977	
Potomac River:				
Little Cacapon River near Levels	01609800	108	1967-1977	
Lost River at McCauley near Baker	01610200	155	1972-1980	1997
Cacapon River above Wardensville.....	01610300	181	1972-1973	
Cacapon River at Yellow Spring	01610500	306	1940-1952	
Back Creek near Jones Springs.....	01614000	235	1929-1931 1939-1975	
Tuscarora Creek above Martinsburg.....	01617000	11.3	1949-1963 1968-1977	
<u>OHIO RIVER BASIN</u>				
<u>MONONGAHELA RIVER BASIN</u>				
Tygart Valley River near Elkins	03050500	271	1945-2004	
Roaring Creek at Norton.....	03050800	29.2	1965-1969	
Grassy Run at Norton	03050900	2.86	1965-1969	
Middle Fork River at Midvale	03051500	122	1915-1942	1998
Tygart Valley River at Tygart Dam near Grafton.....	03056000	1,182	1938-1983 1987-1991	
Tygart Valley River at Fetterman	03056500	1,304	1907-1939	
Tygart Valley River at Colfax	03057000	1,363	1939-1995	
West Fork River at Walkersville	03057300	28.8	1984-1992	
Skin Creek near Brownsville	03057500	25.7	1946-1960	
West Fork River below Stonewall Jackson Dam near Weston	03058000	101	1991	
(Formerly West Fork River at Brownsville)		101	1946-1984	
(Formerly West Fork River at Bendale).....	03058006	105	1985-1990	
West Fork River at Butcherville	03058500	181	1915-2000	
West Fork River at Clarksburg	03059000	384	1923-1983	1998
Elk Creek at Quiet Dell.....	03059500	84.6	1944-1970	
Tennile Creek:				
Salem Fork:				
Salem Fork at Salem.....	03060500	8.32	1951-1969	

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

	Station number	Drainage area (mi ²)	Period of record	Last year of revisions published
<u>OHIO RIVER BASIN--Continued</u>				
<u>MONONGAHELA RIVER BASIN--Continued</u>				
Monongahela River:				
Buffalo Creek:				
Owen Davy Fork:				
Laurel Run at Curtisville	03061410	1.11	1978-1980	
Dents Run:				
Hibbs Run near Mannington	03061435	1.42	1978-1979	
Davy Run at Katy	03061495	1.76	1978-1979	
Monongahela River at Lock 15, at Hoult	03062000	2,388	1915-1926 1939-1965 1967	
Indian Creek:				
Stewart Run at Crown	03062213	2.43	1978-1979	
Indian Creek at Crown	03062215	11.8	1978-1980	
Cobun Creek at Morgantown.....	03062400	11.0	1965-1994 1998-2002	
Dry Fork (head of Cheat River):				
Horsecamp Run at Harman	03063600	6.57	1969-1977	
Blackwater River at Canaan Valley State Park.....	03065050	9.48	1992	
Blackwater River at Cortland.....	03065200	18.5	1992-1993	
Tub Run near Douglas.....	03066630	1.17	1980-1984	
Big Run near Douglas	03066720	1.30	1980-1982	
West Fork Big Run near Douglas.....	03066730	1.07	1980-1982	
Black Fork (continuation of Dry Fork):				
Shavers Fork:				
Shavers Fork at Bemis	03068000	115	1922-1926 1974-1979	
Shavers Fork at Flint	03068500	124	1925-1932	
Shavers Fork above Bowden.....	03068600	138	1975-1980	
Taylor Run near Alpena	03068604	1.06	1979-1980	
Stalnaker Run near Bowden	03068607	1.55	1979-1980	
Taylor Run at Bowden	03068610	5.06	1973-1982	1997
North Spring at Bowden.....	03068690	---	1975-1981	
South Spring at Bowden.....	03068710	---	1975-1980	
Shavers Fork at Parsons	03069000	213	1911-1926 1941-1993	1997
Buffalo Creek near Rowlesburg.....	03069880	12.2	1967-1977	
Cheat River at Rowlesburg	03070000	939	1924-1996	1997
Cheat River at Albright.....	03070260	1,044	1997	
Conner Run near Valley Point	03070310	0.38	1982-1983	
Cheat River near Mt. Nebo	03070350	1,132	1997-1998	
Cheat River near Pisgah.....	03071000	1,354	1928-1958	1998
Cheat River near Morgantown.....	03071500	1,380	1902-1906 1909-1919 1923-1926	
Youghiogheny River:				
Muddy Creek:				
Hayes Run near Cranesville	03075650	0.93	1980-1982	
Muddy Creek near Cranesville.....	03075670	5.09	1980-1982	
White Oak Springs Run:				
Cupp Run near Cranesville.....	03075680	1.42	1980-1982	

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

	Station number	Drainage area (mi ²)	Period of record	Last year revisions published
<u>OHIO RIVER BASIN--Continued</u>				
Ohio River at Martins Ferry	03111534	24,620	1978-1995	
<u>LITTLE GRAVE CREEK BASIN</u>				
Little Grave Creek near Glendale	03113700	4.95	1970-1977	1997
<u>MIDDLE ISLAND CREEK BASIN</u>				
Middle Island Creek at Little.....	03114500	458	1915-1916 1929-1995	
Buffalo Run near Little	03114650	4.19	1969-1977	
Ohio River at St. Marys.....	03115000	26,820	1938-1972	
Ohio River at Parkersburg.....	03151000	35,650	1940-1968	
<u>LITTLE KANAWHA RIVER BASIN</u>				
Little Kanawha River near Burnsville	03151500	155	1938-1974	
Little Kanawha River below Burnsville Dam	03151520	163	1976-1982 1987-1993	
Little Kanawha River at Burnsville	03151600	248	1974-1978	
Little Kanawha River at Glenville.....	03152000	387	1929-1983 1985-2000	
Leading Creek:				
Buck Run near Leopold	03152200	2.91	1970-1977	
Leading Creek near Glenville	03152500	144	1938-1952	
Steer Creek near Grantsville	03153000	162	1938-1975	
Little Kanawha River at Grantsville.....	03153500	913	1929-1978	
West Fork Little Kanawha River at Rocksdale	03154000	205	1929-1931 1938-1975	1997
Spring Creek:				
Tanner Run at Spencer	03154250	2.82	1969-1977	
Reedy Creek near Reedy.....	03154500	79.4	1952-1978	2001
South Fork Hughes River at MacFarlan	03155200	210	1915-1916 1938-1952	
North Bend Run near Cairo	03155410	0.14	1985-1987	
Hughes River at Cisco	03155500	453	1929-1931 1938-1994	1997
Robinson Run near Petroleum	03155520	0.07	1985-1987	
Ohio River at Belleville Dam.....	03159530	39,360	1975-1985	
Ohio River at Racine Dam	03159870	40,130	1980	
Ohio River at Pomeroy, OH.....	03160000	40,190	1940-1968	
<u>KANAWHA RIVER BASIN</u>				
New River:				
Rich Creek near Peterstown	03177000	50.6	1942-1951	
Indian Creek at Indian Mills	03177500	189	1942-1951	
Bluestone River:				
Bluestone River near Spanishburg.....	03178000	199	1945-1952 1997-1998	

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

	Station number	Drainage area (mi ²)	Period of record	Last year revisions published
<u>OHIO RIVER BASIN--Continued</u>				
<u>KANAWHA RIVER BASIN--Continued</u>				
New River:				
Bluestone River:				
Camp Creek near Camp Creek.....	03178500	32.0	1947-1971	
Bluestone River at Lilly	03179500	438	1908-1916 1930-1948	
New River at Bluestone Dam	03180000	4,602	1924-1969 1976-1983	
East Fork Greenbrier River at Frank.....	03180300	67.1	1988-1994	
Stoney Creek:				
Indian Draft near Marlinton	03181200	3.06	1968-1977	
Greenbrier River at Marlinton	03181500	408	1909-1916	
Knapp Creek at Marlinton.....	03182000	108	1946-1958	1997
Spring Creek at Spring Creek	03182650	120	1972-1973	
Anthony Creek near Anthony	03182700	144	1972-1982	
Howard Creek at Caldwell	03182950	84.4	1972-1978	
Second Creek near Second Creek	03183000	80.8	1946-1973 1997-1998	
Davis Spring at Fort Spring	03183200	---	1972-1973	
Big Creek near Bellepoint.....	03184200	8.27	1969-1977	
New River at Hinton.....	03184500	6,256	1936-2003	
New River at Caperton	03185500	6,826	1929-1958	
New River at Fayette	03186000	6,850	1895-1901 1903-1904 1908-1916	2005
Gauley River:				
Gauley River at Camden-on-Gauley.....	03187000	236	1909-1916 1930-1975	
Cranberry River:				
North Fork Cranberry River near Hillsboro	03187300	9.78	1969-1982	
Cherry River at Richwood	03188500	85.0	1908-1916	
Cherry River at Fenwick	03189000	150	1930-1969 1980-1982	1997
Gauley River near Summersville.....	03189500	680	1909-1916 1929-1965	
Gauley River below Summersville Dam	03189600	806	1966-1982 1987-2003	
Collison Creek near Nallen	03189650	2.78	1967-1977	
Meadow River at McRoss.....	03189890	163	1980-1982	
Meadow River at Nallen	03190000	287	1909-1916 1929-1971	
Twentymile Creek at Vaughan.....	03192200	46.2	2000	
Gauley River at Belva.....	03192500	1,402	1908-1916	1998
Slaughter Creek:				
Right Fork Little Creek near Chelyan	03193776	0.91	1983	
Little Creek near Chelyan	03193778	1.44	1982-1984	

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

	Station number	Drainage area (mi ²)	Period of record	Last year of revisions published
<u>OHIO RIVER BASIN--Continued</u>				
<u>KANAWHA RIVER BASIN--Continued</u>				
Elk River:				
Gilmer Run near Marlinton.....	03193830	1.80	1968-1977	
Elk River at Webster Springs.....	03194000	168	1908-1916	
Elk River below Back Fork at Webster Springs	03194500	242	1930-1934	
Elk River at Centralia	03195000	281	1935-1963	1997
Right Fork Holly River at Guardian	03195100	51.9	1974-1978 1986-1987	1998
Left Fork Holly River near Replete	03195250	46.5	1974-1978 1986-1987	1998
Elk River at Sutton.....	03195500	542	1939-1992	
Granny Creek at Sutton.....	03195600	6.98	1967-1977	
Elk River at Gassaway	03196000	578	1908-1916	
Birch River at Herold.....	03196500	124	1974-1975 1979-1984	
Elk River near Frametown.....	03196600	751	1959-1981	
Buffalo Creek at Clay.....	03196750	114	1974-1975	
Elk River at Clay.....	03196800	992	1959-1978	
Big Sandy Creek:				
Left Hand Creek near Clendenin.....	03197440	27.8	1974-1975	
Elk River at Clendenin.....	03197500	1,290	1908-1916	
Elk River at Blue Creek	03197680	1,336	1985-1986	
Little Sandy Creek near Elkview	03197790	43.6	1985-1987	
Davis Creek:				
Trace Fork at Ruth	03198020	2.73	1980-1984	
Track Fork downstream Dryden Hollow at Ruth	03198022	4.72	1980-1984	
Coal River:				
Big Coal River:				
Drawdy Creek near Peytona.....	03198450	7.75	1969-1977	
Big Coal River near Alum Creek.....	03198550	445	1975-1982	
Spruce Fork at Sharples	03198690	44.1	2000-2001	
Little Coal River at Danville.....	03199000	269	1930-1984	1997
Rock Creek near Danville	03199300	12.2	1979-1984	2003
Little Coal River at Julian	03199400	318	1975-1984	*1983
Coal River at Alum Creek	03199700	837	1975-1979	
Coal River at Fuqua	03200000	849	1912-1916	
Pocatalico River:				
Pocatalico River at Sissonville	03201000	238	1908-1916 1930-1931 1937-1978 1979-1980 1997-1998	1997
Hurricane Creek:				
Poplar Fork at Teays	03201410	8.71	1967-1978	1997
Ohio River at Point Pleasant	03201500	52,740	1940-1977	

* Discharge revised for water years 1975-82 in 1983 annual report.

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

	Station number	Drainage area (mi ²)	Period of record	Last year revisions published
<u>OHIO RIVER BASIN--Continued</u>				
<u>GUYANDOTTE RIVER BASIN</u>				
Guyandotte River:				
Allen Creek at Allen Junction.....	03202240	8.43	1978-1979	
Slab Fork:				
Marsh Fork at Maben.....	03202245	4.85	1978-1980	2003
Still Run at Itmann.....	03202255	7.12	1978-1979	
Cabin Creek:				
Black Fork above Black Fork Falls near Mullens.....	03202260	2.68	1981-1983	
Black Fork at Mouth near Mullens	03202262	2.76	1981-1983	
Rockcastle Creek:				
Bearhole Fork at Pineville.....	03202310	6.27	1978-1979	
Indian Creek:				
Brier Creek at Fanrock.....	03202480	7.34	1969-1977	2003
Indian Creek at Fanrock.....	03202490	41.3	1974-1981	1997
Clear Fork:				
Laurel Fork:				
Milam Fork at McGraws	03202695	6.64	1978-1979	
Guyandotte River near Justice	03202900	512	1963-1968	
Guyandotte River below R.D. Bailey Dam	03202915	535	1979-1982 1987-1991	
Guyandotte River at Man	03203000	758	1929-1962	1997
Island Creek:				
Copperas Mine Fork:				
Whitman Creek at Whitman.....	03203670	10.9	1969-1977	
Guyandotte River at Branchland	03204000	1,224	1915-1917 1929-1995	
Unnamed Tributary to Ballard Fork near Mud	03204205	0.19	2000-2003	
Spring Branch near Mud	03204210	0.53	2000-2003	
Ballard Fork near Mud	03204215	2.12	2000-2003	
Mud River at Mud	03204220	17.0	2000-2001	
Mud River near Milton	03204500	256	1938-1980	1997
Ohio River at Huntington.....	03206000	55,850	1935-1986	
Fourpole Creek at Huntington	03206500	21.5	1940-1948	
<u>TWELVEPOLE CREEK BASIN</u>				
East Fork Twelvepole Creek below East Lynn Dam.....	03206790	138	1968-1982	
East Fork Twelvepole Creek near East Lynn	03206800	139	1962-1967	
West Fork Twelvepole Creek above Wayne at Echo	03206980	108	1979-1981	
Twelvepole Creek at Wayne.....	03207000	291	1915-1917 1927-1931 1947-1954 1956-1966	
Twelvepole Creek below Wayne.....	03207020	300	1915-1917 1927-1931 1947-1954 1956-1982	1998
Beech Fork below Beech Fork Dam.....	03207057	79.2	1976-1982	

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

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	Station number	Drainage area (mi ²)	Period of record	Last year revisions published
<u>OHIO RIVER BASIN--Continued</u>				
<u>BIG SANDY RIVER BASIN</u>				
Tug Fork:				
Indian Creek:				
Puncheoncamp Branch at Leckie	03212558	1.36	1980-1982	
South Fork:				
Freeman Branch near Skygusty	03212567	0.30	1980-1982	
Sandlick Creek:				
Left Fork Sandlick Creek at Elbert	03212580	1.78	1980-1982	
Right Fork Sandlick Creek near Gary	03212585	1.21	1980-1982	
Tug Fork at Welch	03212600	85.9	1979-1981	
Elkhorn Creek at Maitland.....	03212700	69.9	1979-1980	
Elkhorn Creek Tributary at Welch.....	03212703	0.63	1980-1982	
Dry Fork at Avondale	03212985	225	1979-1981	
Tug Fork at Litwar.....	03213000	504	1930-1984	
Panther Creek:				
Crane Creek near Panther.....	03213495	0.54	1981-1982	
Tug Fork at Vulcan.....	03213620	778	1985-1993	
Pigeon Creek near Lenore.....	03213800	93.9	1979-1981	
Tug Fork near Kermit	03214000	1,188	1934-1985	
Rockcastle Creek at Inez, KY.....	03214700	63.1	1980-1981	
Tug Fork at Glenhayes	03214900	1,507	1976-1982 1991-1992	

NOTE.--The following revision is for extreme outside period of record in addition to those published on p. 467 of WDR WV-78-1.

03186000 NEW RIVER AT FAYETTE, WV

LOCATION.--Lat 38 03'55", long 81 04'40", Fayette County, Hydrologic Unit 05050004, at highway bridge at Fayette, 850 ft upstream from Wolf Creek.

DRAINAGE AREA.--6,850 mi².

PERIOD OF RECORD.--1896-1904, 1909-1916.

EXTREMES OUTSIDE PERIOD OF RECORD.--Date for the flood of 1878 was published in error as March 28. The correct month is September, and the exact day is unknown. Flood of September 1878 reached a stage of about 53 ft, from floodmark; discharge of about 310,000 ft³/s.

**DISCONTINUED 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	335	t	1961
South Branch Potomac River near Petersburg.....	01606500	676	t	1947-1953 1955-1973 sK 1968-1969
South Branch Potomac River near Springfield.....	01608500	1,486	sK, t	1968-1969
Lost River at McCauley near Baker	01610200	155	t	1975-1976
Cacapon River near Great Cacapon.....	01611500	675	t	1949-1953 1961
Cacapon River at Great Cacapon.....	01611600	---	t	1959-1964
Opequon Creek near Martinsburg.....	01616500	273	sK, t	1969-1970
Shenandoah River at Millville	01636500	3,040	sK, t	1980-1983
<u>OHIO RIVER BASIN</u>				
<u>MONONGAHELA RIVER BASIN</u>				
Tygart Valley River at Elkins.....	03050400	268	t	1947-1992
Roaring Creek at Norton.....	03050800	29.2	t, s	1965-1967
Grassy Run at Norton	03050900	2.86	t, s	1965-1967
Tennile Creek:				
Salem Fork:				
Salem F Subwatershed #11A Varner Hollow near Salem	03060000	---	t, s	1961
Salem Fork at Salem	03060500	8.32	s	1956-1958 1962
Monongahela River:				
Buffalo Creek at Barrackville	03061500	116	sK, t, s	1979-1981
Black Fork (continuation of Dry Fork):				
Blackwater River at Canaan Valley State Park.....	03065050	9.48	sK, pH	1991-1993 2001
			t, DO	1991-1993 2001
Blackwater River at Cortland.....	03065200	18.5	sK, pH	1991-1993 2001
			t, DO	1991-1993 2001
Blackwater River near Davis	03065400	54.7	sK, pH	1991-1993 1995-1997 2001
			t, DO	1991-1993 1995-1997 2001
Shavers Fork above Bowden.....	03068600	138	sK, s, U pH t	1975-1980 1978-1979 1976-1979

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

	Station number	Drainage area (mi ²)	Type of record	Period of record
<u>OHIO RIVER BASIN--Continued</u>				
<u>MONONGAHELA RIVER BASIN--Continued</u>				
Taylor Run at Bowden	03068610	5.06	sK pH t	1973-1980 1973-1974 1978-1979 1973-1974 1976-1979
North Spring at Bowden.....	03068690	---	s, U t U	1975-1980 1977-1981 1975-1980
South Spring at Bowden.....	03068710	---	t U	1977-1980 1975-1980
Shavers Fork below Bowden	03068800	151	sK pH t	1973-1981 1973-1974 1973-1979 1981
Shavers Fork at Parsons	03069000	213	s, U t	1975-1981 1956-1964 1974-1975
Cheat River at Lake Lynn, PA	03071600	1,411	t	1949-1957 1959-1992
<u>LITTLE KANAWHA RIVER BASIN</u>				
Little Kanawha River near Wildcat	03151400	112	sK, t, s	1979-1981
Little Kanawha River near Burnsville	03151500	155	t	1971-1974
Little Kanawha River at Glenville	03152000	387	t	1956-1963
Leading Creek:				
Leading Creek near Glenville	03152500	144	sK, t	1971-1974
West Fork Little Kanawha River at Rocksdale	03154000	205	t	1970-1974
Little Kanawha River at Parkersburg	03155600	---	t	1960-1961
<u>KANAWHA RIVER BASIN</u>				
Bluestone River near Spanishburg	03178000	199	t	1997-1998
New River at Bluestone Dam	03180000	4,602	t	1956-1967 1971-1983
Knapp Creek at Marlinton.....	03182000	108	t	1956-1983 1985-1987
Second Creek near Second Creek	03183000	80.8	t	1997-1998
Piney Creek at Raleigh	03185000	52.7	sK s	1979-1981 1981
New River at Thurmond.....	03185400	6,687	sK,pH,t,DO t	1991-1993 1997-1998
Williams River at Dyer	03186500	128	t	1997-1998
Cranberry River:				
Cranberry River near Richwood	03187500	80.4	sK pH t	1979-1980 1989 1982 1997-1998
			s	1980-1981

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

	Station number	Drainage area (mi ²)	Type of record	Period of record
<u>OHIO RIVER BASIN--Continued</u>				
<u>KANAWHA RIVER BASIN--Continued</u>				
Gauley River:				
Gauley River near Craigsville.....	03189100	529	sK t	1981-1982 1975-1977 1981-1982
Gauley River below Summersville Dam	03189600	806	sK t	1981-1982 1975-1977 1981-1982
Peters Creek near Lockwood	03191500	40.2	sK,pH,t	1997-1998
Kanawha River at Kanawha Falls	03193000	8,371	t	1958-1966 1968-1983 1997-1998
Kanawha River at Glasgow	03193742	8,631	t	1977-1992
Kanawha River at Cabin Creek	03193770	8,661	t	1956 1958-1977
Elk River below Webster Springs.....	03194700	266	t U	1974-1983 1974-1975
Right Fork Holly River at Guardian	03195100	51.9	t U	1974 1974-1975
Left Fork Holly River near Replete	03195250	46.5	t U	1974 1974-1975
Elk River at Sutton.....	03195500	542	sK t s U	1985-1987 1960-1983 1985-1987 1985-1987 1974-1975 1985-1987
Elk River near Frametown	03196600	751	t	1961-1967 1972-1975
Elk River at Clay.....	03196800	992	t	1961-1970
Elk River at Queen Shoals	03197000	1,145	sK, s, U t	1985-1986 1961-1975 1985-1986
Elk River at Blue Creek	03197680	1,336	sK,t,s,U	1985-1986
Kanawha River at Charleston	03198000	10,448	t	1953-1970 1972-1985
Davis Creek:				
Trace Fork at Ruth	03198020	2.73	sK t, s	1980-1983 1980-1984
Trace Fork downstream Dryden Hollow at Ruth.....	03198022	4.72	sK t, s	1980-1983 1980-1984
Coal River:				
Clear Fork at Whitesville	03198350	62.8	sK,pH,t	1997-1998
Big Coal River near Alum Creek	03198550	445	sK, s t	1975-1982 1975-1980
Little Coal River at Danville	03199000	269	sK t, s	1973-1983 1973-1984
Rock Creek near Danville	03199300	12.2	sK, t s	1979-1982 1979-1981

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

	Station number	Drainage area (mi ²)	Type of record	Period of record
<u>OHIO RIVER BASIN--Continued</u>				
<u>KANAWHA RIVER BASIN--Continued</u>				
Rock Creek at Rock Creek	03199320	13.3	sK, t	1979-1982
			s	1979-1981
Little Coal River at Julian	03199400	318	sK, t	1975-1982
			*s	1975-1981
Coal River at Alum Creek	03199700	837	sK, t	1975-1981
			s	1975-1980
Coal River at Tornado.....	03200500	862	sK	1973-1983
			t	1974-1984
			s	1973-1984
			U	1981-1991
Kanawha River at Poca.....	03200650	11,435	t	1976-1992
Kanawha River at Winfield	03201300	11,809	sK	1965-1970
				1974-1980
			pH, DO	1976-1980
			t	1957-1967
				1969-1971
				1974-1980
				1997-1998
<u>GUYANDOTTE RIVER BASIN</u>				
Guyandotte River:				
Allen Creek at Allen Junction.....	03202240	8.43	sK,t,s,U	1978-1980
			pH	1978-1979
Slab Fork:				
Marsh Fork at Maben.....	03202245	4.85	sK,t,s,U	1978-1980
			pH	1978-1979
Still Run at Itmann.....	03202255	7.12	sK,t,s,U	1978-1980
			pH	1978-1979
Rockcastle Creek:				
Bearhole Fork at Pineville.....	03202310	6.27	sK,t,s,U	1978-1980
			pH	1978-1979
Guyandotte River near Baileysville.....	03202400	306	sK	1971-1979
			t	1971-1982
			s	1973-1979
Indian Creek at Fanrock.....	03202490	41.3	sK, s	1974-1978
			t	1975-1981
Clear Fork:				
Laurel Fork:				
Milam Fork at McGraws	03202695	6.64	sK, U	1978-1980
			pH, t	1978-1979
			s	1979-1980
Clear Fork at Clear Fork	03202750	126	sK, s	1974-1978
			t	1975-1981
Guyandotte River at Logan.....	03203600	833	sK, t	1976
			s	1975-1976
Island Creek:				
Island Creek at Logan	03203700	---	sK,pH,t,U	1976-1977
			s	1977

*Suspended-sediment discharge revised for water years 1975-81 in 1983 annual report.

**DISCONTINUED 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 at Branchland	03204000	1,224	sK,t,s,U	1976-1977
Guyandotte River at Barboursville	03204200	1,309	sK, t, U	1976-1977
Mud River near Milton	03204500	256	sK, t	1976-1977
			s	1975-1977
Mud River at Barboursville	03205180	---	sK, t, U	1976-1977
Guyandotte River at Huntington.....	03205200	---	t	1960-1961
<u>TWELVEPOLE CREEK BASIN</u>				
East Fork Twelvepole Creek near Dunlow.....	03206600	38.5	sK, t	1974-1976
West Fork Twelvepole Creek above Wayne at Echo	03206980	108	sK	1979-1980
			t	1980
			s	1980-1981
<u>BIG SANDY RIVER BASIN</u>				
Tug Fork:				
Indian Creek:				
Puncheoncamp Branch at Leckie	03212558	1.36	s	1981
South Fork:				
Freeman Branch near Skygusty.....	03212567	0.30	s	1981
Sandlick Creek:				
Left Fork Sandlick Creek at Elbert.....	03212580	1.78	s	1981
Right Fork Sandlick Creek near Gary	03212585	1.21	s	1981
Tug Fork at Welch	03212600	85.9	sK	1979-1980
			t	1974-1976
			s	1979-1981
Elkhorn Creek at Maitland	03212700	69.9	sK	1979
			s	1979-1980
Elkhorn Creek Tributary at Welch	03212703	0.63	s	1981
Dry Fork at Avondale.....	03212985	225	sK, s	1979-1981
			t	1979
Tug Fork at Litwar	03213000	504	sK	1980
Panther Creek:				
Crane Creek near Panther.....	03213495	0.54	s	1981
Panther Creek near Panther.....	03213500	31.0	sK	1975
				1980-1981
			t	1973-1975
Pigeon Creek near Lenore.....	03213800	93.9	sK, t, s	1979-1981
Tug Fork near Kermit	03214000	1,188	t	1956
Tug Fork at Kermit	03214500	1,280	t	1947-1981
Rockcastle Creek at Inez, Ky	03214700	63.1	s	1980-1981
Tug Fork at Glenhayes.....	03214900	1,507	sK, s	1977-1980
			t	1979-1980

INTRODUCTION

The West Virginia Water Science Center of the U.S. Geological Survey, in cooperation with State and Federal agencies, obtains a large amount of data pertaining to the water resources of 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 titled *Water Resources Data - West Virginia*.

This report includes records on both surface and ground water in the State. Specifically, it contains: Discharge records for 64 streamflow-gaging stations; discharge records provided by adjacent states for 1 streamflow-gaging station; annual maximum discharge at 17 crest-stage partial-record stations; stage records for 14 detention reservoirs; water-quality records for 8 stations; and water-level records for 11 observation wells. Locations of streamflow, detention reservoir, and water-quality stations are shown on figure 4. Locations of ground-water observation wells are shown on figure 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-05-1. 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. Additional information, including current prices, for ordering specific reports may be obtained from the Water Science Center Director at the address given on the back of the title page or by telephone (304) 347-5130.

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 collection, compilation, and publication of the data in this report through joint-funding agreement with the Survey are:

West Virginia Conservation Agency, Truman Wolfe, Director.

West Virginia Department of Environmental Protection, Stephanie Timmermeyer, Secretary.
Division of Water and Waste Management, Lisa McClung, Director.
Division of Mining and Reclamation, Randy Huffman, Director.

West Virginia Department of Health and Human Resources, Martha Yeager Walker, Secretary.
Office of Environmental Health Services, Barbara S. Taylor, Director.

West Virginia Department of Military Affairs and Public Safety, James W. Spears, Secretary through
West Virginia Division of Homeland Security and Emergency Management, Jimmy Gianato, Director.

West Virginia Department of Transportation, Danny Ellis, Acting Secretary.

West Virginia Division of Natural Resources, Frank Jezioro, Director.

City of Hurricane, West Virginia, Raymond Peak, Mayor.

Assistance with funds or services was given by the U.S. Army Corps of Engineers, National Park Service, Office of Surface Mining and Reclamation, and U.S. Environmental Protection Agency.

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

Organizations that provided data are acknowledged in station descriptions.

SUMMARY OF HYDROLOGIC CONDITIONS

Surface Water

Monthly and annual mean discharges for the 2005 water year as compared to the median of mean monthly and yearly discharges for water years 1931-2003 for four streamflow stations in West Virginia are shown in figures 1 and 2. October through May monthly flows were generally greater than the median of monthly flows for 1931-2003. The year ended, however, with flows at or slightly below the median of 1931-2003 monthly flows for September. Mean, maximum, and minimum stream statistics for the 2005 water year for streamflow gaging stations in West Virginia are shown in table 1. Streamflow at stations in the Potomac and Monongahela River Basins was generally near long-term average. Streamflow at stations in the Kanawha River Basin was about 10-percent above average, and that of stations in the Big Sandy River Basin was about 20-percent above average. Baseflows of streams throughout the state were well maintained, and the minimum 7-day mean streamflows were significantly greater than the expected low at a 10-year recurrence interval. No peak flows exceeded the 5-year recurrence interval at any gaging station during the year.

Ground-Water Levels

The water year started with above normal ground-water levels in October everywhere within the State. Water levels in the previous year were typically near normal to well above normal. Except for the month of June in the central portion of the State and September in the Northern Panhandle, ground-water levels were normal to above normal statewide for the entire year. In the Eastern panhandle, water levels in Berkeley, Grant, and Jefferson Counties were slightly above normal during the months of October through January and April through July and near normal in the months of March, August, and September. In the southern part of the state, water levels were near normal in the months of January through June and slightly above normal in the months of October through December and August through September. In the western portion of the State, water levels in Wayne County were above normal from October through July and near normal in the months of August and September. In the northern panhandle in Brooke County, ground-water levels were above normal in the months of October through January and near normal the remainder of the year except for the months of June and September when water levels were below normal. In the central portion of the State in Webster and Pocahontas counties, ground-water levels were above normal in the months of October through December and near normal the remainder of the year except for the month of June when water levels were below normal. The major hurricanes that impacted the nation in 2005 did not appear to have significant impacts on ground-water levels in West Virginia.

Quality of Water

Surface water: Waites Run near Wardensville was sampled as part of the National Water Quality Assessment (NAWQA) of the Potomac River and Delmarva Peninsula Basins. This site, located in a relatively undisturbed forested basin, is used as a comparative reference condition for the Potomac/Delmarva study unit. More information on the NAWQA program is available in the Special Networks and Programs section of this report.

Nutrient and sediment samples were collected at four sites in the West Virginia portion of the Potomac River Basin; Patterson Creek near Headsville, South Branch Potomac River near Springfield, Cacapon River near Great Cacapon, and Opequon Creek near Martinsburg. Monthly samples were collected at each site from June through September 2005.

Temperature, specific conductance, pH, and dissolved oxygen concentration were continuously recorded at two sites in the Monongahela River Basin, West Fork River below Stonewall Jackson Dam near Weston beginning July 13 and West Fork River at Enterprise beginning August 8. Temperature, specific conductance, and pH were continuously recorded at South Branch Potomac River near Moorefield in the Potomac River Basin beginning May 19.

Ground water: Thirty wells are sampled in cooperation with the West Virginia Department of Environmental Protection, Division of Water and Waste Management, to ascertain the characteristics and quality of water in the state's major aquifers. In 2005, year two of the second five-year cycle of major river basin sampling, ambient ground water was sampled in the following basins: Cacapon River, West Fork, Dunkard Creek, Upper Ohio South, Lower Ohio, Upper Guyandotte River, and Twelvepole Creek Basins. An additional 30 wells were sampled in cooperation with the West Virginia Department of Environmental Protection, Division of Water and Waste Management and the West Virginia Department of Health and Human Resources, Bureau of Public Health to determine the occurrence and distribution of methane and other dissolved gasses. Sites were distributed throughout West Virginia based on historic data and data gaps. Detailed information on methane and dissolved gas sampling were published in *Dissolved-Gas Concentrations in Ground Water in West Virginia, 1997-2005* (White and Mathes, 2006), available online at <http://pubs.water.usgs.gov/ds156/>; and in *Methane in West Virginia Ground Water* (Mathes and White, 2006) available online at <http://pubs.usgs.gov/fs/2006/3011/>.

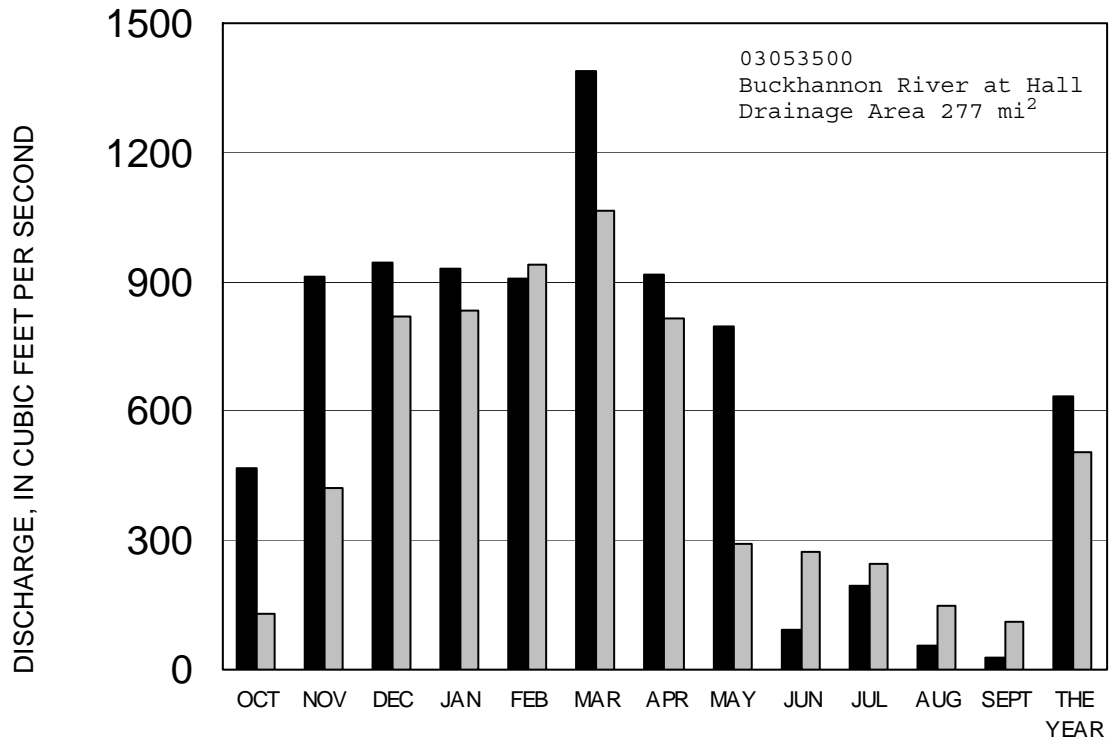
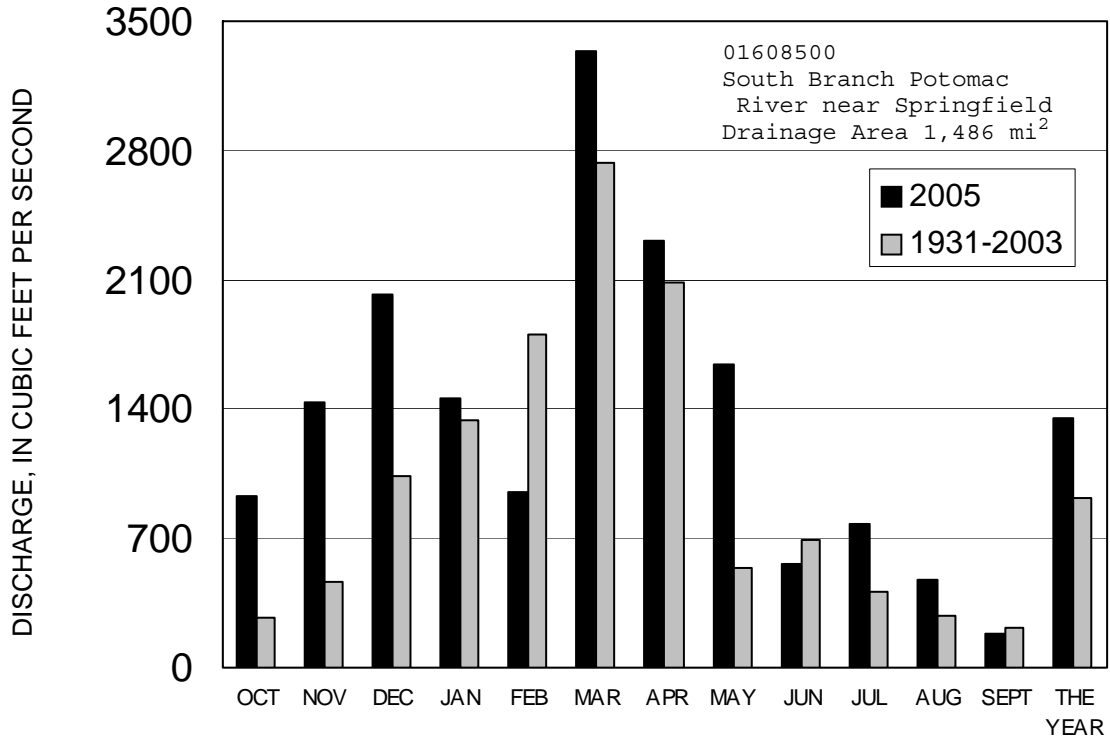


Figure 1. --Discharge at the South Branch Potomac River and the Buckhannon River index gaging stations during the 2005 water year compared to median discharge for the period 1931-2003.

WATER RESOURCES DATA—WEST VIRGINIA, 2005

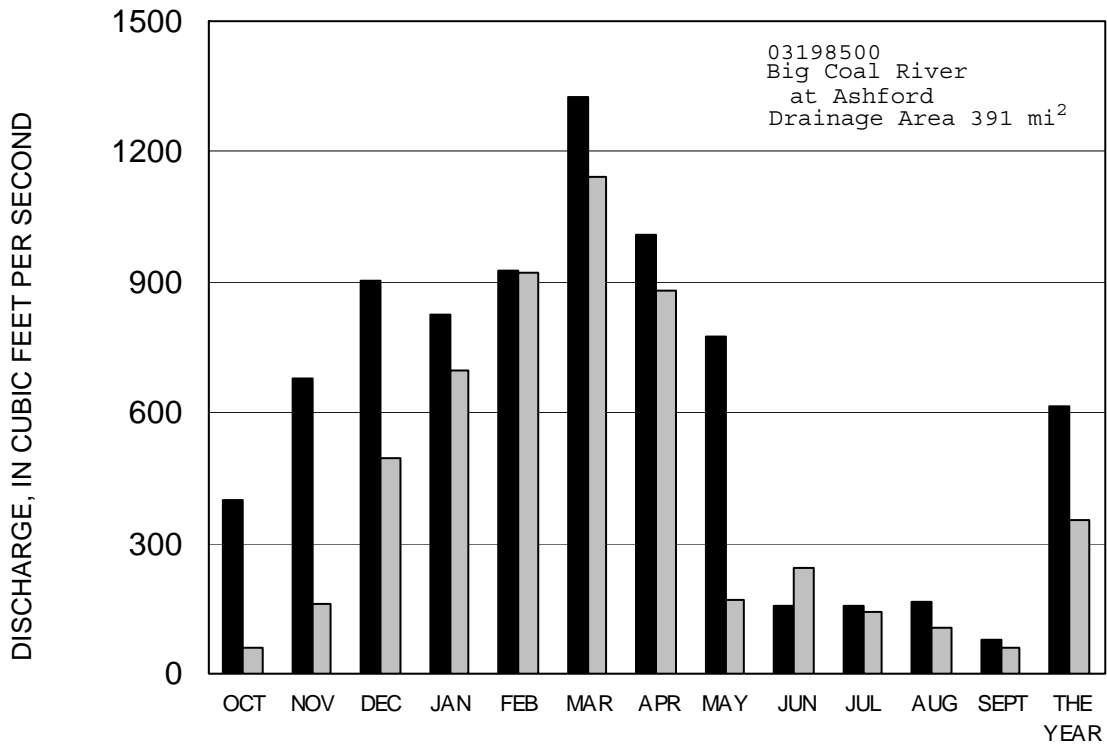
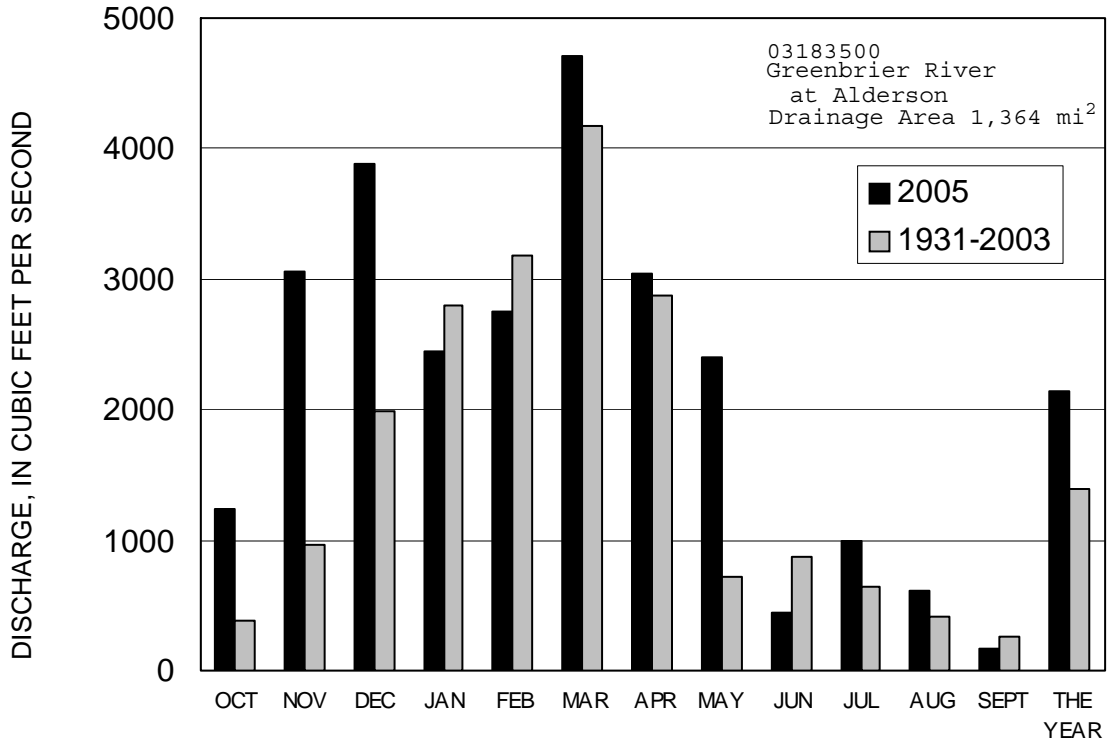


Figure 2. --Discharge at the Greenbrier River and the Big Coal River index gaging stations during the 2005 water year compared to median discharge for the period 1931-2003.

Table 1.--Mean, maximum, and minimum stream statistics for water year 2005 at selected stations in West Virginia.

[7Q₁₀: 7-day minimum mean streamflow for 10-year recurrence interval; R: regulated period only; ---: unknown or not applicable.]

Station number	Station name	Drainage Area (mi ²)	Years of Discharge Record	-----MEAN-----		-----MAXIMUM-----			-----MINIMUM-----		
				Daily Streamflow (ft ³ /s)	Percent of Average	Peak Stage (ft)	Peak Discharge (ft ³ /s)	Recurrence Interval (Years) (a)	7-day Mean Streamflow (ft ³ /s)	7Q ₁₀ Streamflow (ft ³ /s) (b)	
<u>POTOMAC RIVER BASIN</u>											
01595200	Stony River nr Mount Storm	48.7	44	91.3	92	6.65	1,680	Mar 29	---	4.3	---
01604500	Patterson Creek nr Headsville	211	68	182	105	9.83	4,150	Mar 29	2	6.9	2.91
01605500	South Branch Potomac R at Franklin	179	58	187	106	5.77	3,720	Mar 28	<2	38	25.6
01606000	NF South Branch Potomac River at Cabins	335	31	440	108	8.51	5,840	Mar 28	<2	17	6.97
01606500	South Branch Potomac River nr Petersburg	676	77	838	112	11.17	12,700	Mar 28	2	89	53.8
01607500	SF South Branch Potomac R at Brandywine	103	62	101	96	4.56	1,500	Mar 28	<2	7.7	2.64
01608000	SF South Branch Potomac R nr Moorefield	277	74	226	96	6.29	3,530	Mar 29	<2	17	9.09
01608070	South Branch Potomac River near Moorefield	1,241	---	---	---	15.80	---	Mar 29	---	---	---
01608500	South Branch Potomac River nr Springfield	1,486	81	1,347	99	14.99	21,400	Mar 29	<2	136	73.5
01611500	Cacapon River nr Great Cacapon	675	82	567	95	10.21	9,090	Mar 29	<2	68	39.2
01614000	Back Creek nr Jones Springs	235	41	221	112	12.76	6,560	Mar 29	<2	6.8	4.73
01616500	Opequon Creek nr Martinsburg	273	58	259	105	12.02	5,030	Mar 29	<2	65	35.8
01636500	Shenandoah River at Millville	3,022	90	2,802	101	8.57	16,300	Mar 30	<2	595	357
<u>MONONGAHELA RIVER BASIN</u>											
03050000	Tygart Valley River near Dailey	185	78	366	102	10.79	5,860	Mar 24	<2	3.7	1.07
03050500	Tygart Valley River nr Elkins	271	---	---	---	11.81	---	Mar 24	---	---	---
03051000	Tygart Valley River at Belington	406	98	835	101	11.61	7,130	Mar 25	<2	3.5	3.81
03052000	Middle Fork River at Audra	148	54	373	105	7.52	3,520	Mar 08	<2	1.8	0.62
03052500	Sand Run nr Buckhannon	14.3	59	28.0	100	4.54	421	Mar 08	<2	0.10	0.02
03052450	Buckhannon River at Buckhannon	217	---	---	---	16.47	---	Mar 24	---	---	---
03053500	Buckhannon River at Hall	277	90	636	105	8.87	3,920	Mar 08	<2	4.7	2.75
03054500	Tygart Valley River at Philippi	914	65	1,990	104	12.91	15,200	Mar 08	<2	14	11.5
03056250	Three Fork Creek nr Grafton	96.8	21	178	98	11.70	4,070	Jan 12	<2	1.2	0.83
03057000	Tygart Valley River at Colfax	1,363	---	---	---	12.66	---	Jan 12	---	---	---
03057300	West Fork River at Walkersville	28.8	---	---	---	10.36	---	Mar 28	---	---	---
03058500	West Fork River at Butcherville	181	---	---	---	5.01	---	Mar 28	---	---	---
03058975	West Fork River nr Mount Clare	368	---	---	---	9.00	---	Aug 30	---	---	---
03061000	West Fork River at Enterprise	759	R33	1,160	R97	14.03	12,500	Jan 05	---	56	---
03061500	Buffalo Creek at Barrackville	116	82	189	112	12.26	6,980	Jan 05	5	4.9	0.98
03062500	Deckers Creek at Morgantown	63.2	26	105	100	3.03	723	Jan 06	<2	2.4	---
03065000	Dry Fork at Hendricks	349	63	756	96	6.87	9,400	Mar 29	<2	22	11.2

Table 1.--Mean, maximum, and minimum stream statistics for water year 2005 at selected stations in West Virginia--Continued.

[7Q₁₀: 7-day minimum mean streamflow for 10-year recurrence interval; R: regulated period only; ---: unknown or not applicable.]

Station number	Station name	Drainage Area (mi ²)	Years of Discharge Record	-----MEAN-----		-----MAXIMUM-----			-----MINIMUM-----		
				Daily Streamflow (ft ³ /s)	Percent of Average	Peak Stage (ft)	Peak Discharge (ft ³ /s)	Date	Recurrence Interval (Years) (a)	7-day Mean Streamflow (ft ³ /s)	7Q ₁₀ Streamflow (ft ³ /s) (b)
<u>MONONGAHELA RIVER BASIN--Continued</u>											
03065400	Blackwater River nr Davis	54.7	14	122	77	5.72	1,270	Mar 29	---	5.0	---
03066000	Blackwater River at Davis	85.9	84	191	94	7.59	2,140	Mar 29	<2	7.5	4.79
03067510	Shavers Fork nr Cheat Bridge	60.2	4	168	86	13.38	5,360	Mar 28	---	7.3	---
03068800	Shavers Fork below Bowden	151	16	427	96	10.74	13,400	Mar 28	---	15	---
03069500	Cheat River nr Parsons	722	92	1,758	101	11.73	24,800	Mar 29	2	54	33.5
03069870	Cheat River at HWY 50 near Rowlesburg	912	8	2,395	92	12.17	25,700	Mar 29	---	60	---
03070500	Big Sandy Creek at Rockville	200	92	440	105	12.42	8,470	Jan 12	<2	6.0	2.88
<u>WHEELING CREEK BASIN</u>											
03110830	Kings Cr at Weirton	49.0	4	76.1	110	6.12	2,520	Jan 06	---	1.9	---
03112000	Wheeling Creek at Elm Grove	281	65	486	142	7.84	9,190	Jan 06	2	6.1	0.60
<u>LITTLE KANAWHA RIVER BASIN</u>											
03151400	Little Kanawha River nr Wildcat	112	30	218	95	8.45	2,340	Mar 08	<2	1.4	---
03151600	Little Kanawha River at Burnsville	248	---	---	---	8.52	---	Mar 08	---	---	---
03152000	Little Kanawha River at Glensville	387	---	---	---	15.71	---	Aug 30	---	---	---
03153500	Little Kanawha River at Grantsville	913	---	---	---	28.39	---	Aug 30	---	---	---
03154000	West Fork Little Kanawha River at Rocksedale	205	---	---	---	19.07	---	May 20	---	---	---
03155000	Little Kanawha River at Palestine	1,516	R38	2,267	R101	23.50	18,100	Aug 30	---	60	---
<u>KANAWHA RIVER BASIN</u>											
03179000	Bluestone River nr Pipestem	395	55	596	125	9.14	4,510	Dec 10	<2	39	12.6
03180500	Greenbrier River at Durbin	133	62	296	111	5.63	3,990	Mar 24	<2	13	2.27
03182500	Greenbrier River at Buckeye	540	76	931	104	10.99	14,100	Mar 28	<2	40	14.5
03183500	Greenbrier River at Alderson	1,364	110	2,146	107	11.14	23,700	Mar 29	<2	82	48.0
03184000	Greenbrier River at Hilldale	1,619	69	2,474	107	13.60	26,000	Mar 29	<2	86	51.5
03184500	New River at Hinton	6,256	---	---	---	8.28	---	Mar 29	---	---	---
03185000	Piney Creek at Raleigh	52.7	33	77.7	119	4.05	742	Dec 01	<2	5.3	0.64
03185400	New River at Thurmond	6,687	R24	10,310	R115	16.75	60,700	Mar 29	---	1460	---
03186500	Williams River at Dyer	128	76	350	104	10.01	8,050	Mar 28	2	8.7	2.21
03187000	Gauley River at Camden-on-Gauley	236	---	---	---	12.80	---	Mar 28	---	---	---
03187500	Cranberry River nr Richwood	80.4	46	249	106	8.37	5,360	Mar 28	2	5.0	3.47
03189100	Gauley River near Craigsville	529	20	1,472	103	18.10	20,100	Mar 28	<2	39	24.5
03189600	Gauley River below Summersville Dam	806	---	---	---	18.07	---	Apr 30	---	---	---
03190400	Meadow River nr Mt. Lookout	365	36	796	108	8.51	5,380	Apr 30	<2	29	5.52

Table 1.--Mean, maximum, and minimum stream statistics for water year 2005 at selected stations in West Virginia--Continued.

[7Q₁₀: 7-day minimum mean streamflow for 10-year recurrence interval; R: regulated period only; ---: unknown or not applicable.]

Station number	Station name	Drainage Area (mi ²)	Years of Discharge Record	-----MEAN-----		-----MAXIMUM-----			-----MINIMUM-----		
				Daily Streamflow (ft ³ /s)	Percent of Average	Peak Stage (ft)	Peak Discharge (ft ³ /s)	Recurrence Interval (Years) (a)	7-day Mean Streamflow (ft ³ /s)	7Q ₁₀ Streamflow (ft ³ /s) (b)	
<u>KANAWHA RIVER BASIN--Continued</u>											
03191500	Peters Creek nr Lockwood	40.2	33	82.0	126	8.07	707	Feb 21	<2	4.2	0.07
03192000	Gauley River above Belva	1,317	R41	3,118	R108	11.97	22,900	May 01	---	259	---
03193000	Kanawha River at Kanawha Falls	8,371	R67	13,940	R114	15.42	81,400	Mar 29	---	2520	---
03194700	Elk River below Webster Springs	266	45	635	91	10.06	10,400	Mar 24	<2	16	13.5
03195500	Elk River at Sutton	542	---	---	---	19.59	---	Mar 25	---	---	---
03196600	Elk River near Frametown	751	---	---	---	8.79	---	Mar 25	---	---	---
03196800	Elk River at Clay	992	---	---	---	9.51	---	Mar 25	---	---	---
03197000	Elk River at Queen Shoals	1,145	R47	2,199	R102	9.98	9,440	Mar 09	---	146	---
03197990	Kanawha River at Charleston	10,448	R66	18,110	R118	27.81	86,300	Mar 30	---	3070	---
03198350	Clear Fork at Whitesville	62.8	9	101	113	14.48	838	Apr 30	---	6.8	---
03198500	Big Coal River at Ashford	391	83	615	116	10.22	5,550	Apr 30	<2	48	5.91
03200500	Coal River at Tornado	862	47	1,369	112	19.47	16,200	Apr 30	<2	110	26.7
03201405	Hurricane Creek at Hurricane	26.8	8	43.1	117	14.38	1,820	Jul 27	---	0.96	---
<u>GUYANDOTTE RIVER BASIN</u>											
03202400	Guyandotte River nr Baileysville	306	37	470	110	6.92	2,850	Dec 01	<2	61	---
03202750	Clear Fork at Clear Fork	126	31	212	109	7.41	2,430	Dec 01	<2	13	---
03202915	Guyandotte River below R.D. Bailey Dam	535	---	---	---	9.39	---	Jul 24	---	---	---
03203000	Guyandotte River at Man	758	---	---	---	10.74	---	Dec 01	---	---	---
03203600	Guyandotte River at Logan	833	R26	1,287	R113	12.20	6,970	May 01	---	129	---
03204000	Guyandotte River at Branchland	1,224	---	---	---	22.11	---	Apr 30	---	---	---
<u>TWELVEPOLE CREEK BASIN</u>											
03206600	East Fork Twelvepole Creek nr Dunlow	38.5	41	53.6	103	12.73	2,350	Apr 30	5	0.86	---
03206790	EF Twelvepole Creek below East Lynn Dam	138	---	---	---	10.61	---	Dec 02	---	---	---
03207020	Twelvepole Creek below Wayne	291	---	---	---	17.75	---	Apr 30	---	---	---
<u>BIG SANDY RIVER BASIN</u>											
03212750	Tug Fork at Welch	174	17	251	120	6.98	1,310	Dec 09	<2	58	---
03212980	Dry Fork at Beartown	209	17	282	121	7.77	3,230	Dec 09	<2	29	---
03213500	Panther Creek nr Panther	31.0	42	40.7	115	5.55	504	Dec 01	<2	1.6	0.15
03213700	Tug Fork at Williamson	936	38	1,321	116	14.84	8,090	Dec 10	<2	156	---
03214500	Tug Fork at Kermit	1,280	28	1,778	119	25.03	15,300	Apr 30	<2	207	41.1

a. Based on U.S. Geological Survey Water-Resources Investigations Report 00-4080.

b. Based on U.S. Geological Survey Scientific Investigations Report 2006-5002.

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DOWNSTREAM ORDER AND STATION NUMBER

Since October 1, 1950, hydrologic-station records in USGS reports have been listed in order of downstream direction along the main stream. All stations on a tributary entering upstream from a main-stream station are listed before that station. A station on a tributary entering between two main-stream stations is listed between those stations. A similar order is followed in listing stations on first rank, second rank, and other ranks of tributaries. The rank of any tributary on which a station is located with respect to the stream to which it is immediately tributary is indicated by an indentation in that list of stations in the front of this report. Each indentation represents one rank. This downstream order and system of indentation indicates which stations are on tributaries between any two stations and the rank of the tributary on which each station is located.

As an added means of identification, each hydrologic station and partial-record station has been assigned a station number. These station numbers are in the same downstream order used in this report. In assigning a station number, 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 composed of both types of stations. Gaps are consecutive. The complete 8-digit (or 10-digit) number for each station such as 09004100, which appears just to the left of the station name, includes a 2-digit part number "09" plus the 6-digit (or 8-digit) downstream order number "004100." In areas of high station density, an additional two digits may be added to the station identification number to yield a 10-digit number. The stations are numbered in downstream order as described above between stations of consecutive 8-digit numbers.

NUMBERING SYSTEM FOR WELLS AND MISCELLANEOUS SITES

The USGS well and miscellaneous site-numbering system is based on the grid system of latitude and longitude. The system provides the geographic location of the well or miscellaneous site and a unique number for each site. The number consists of 15 digits. The first 6 digits denote the degrees, minutes, and seconds of latitude, and the next 7 digits denote degrees, minutes, and seconds of longitude; the last 2 digits are a sequential number for wells within a 1-second grid. In the event that the latitude-longitude coordinates for a well and miscellaneous site are the same, a sequential number such as "01," "02," and so forth, would be assigned as one would for wells (see fig. 3). The 8-digit, downstream order station numbers are not assigned to wells and miscellaneous sites where only random water-quality samples or discharge measurements are taken. 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.

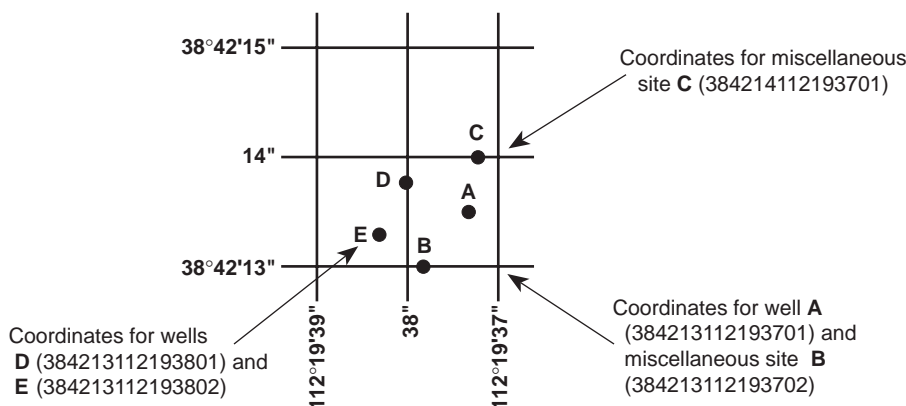


Figure 3.--System for numbering wells and miscellaneous sites (latitude and longitude).

Well records furnished by the State of West Virginia also included the well number that was based on an indexing system used by the State Water Resources Board.

SPECIAL NETWORKS AND PROGRAMS

Hydrologic Benchmark Network is a network of 61 sites in small drainage basins in 39 States that was established in 1963 to provide consistent streamflow data representative of undeveloped watersheds nationwide, and from which data could be analyzed on a continuing basis for use in comparison and contrast with conditions observed in basins more obviously affected by human activities. At selected sites, water-quality information is being gathered on major ions and nutrients, primarily to assess the effects of acid deposition on stream chemistry. Additional information on the Hydrologic Benchmark Program may be accessed from <http://ny.cf.er.usgs.gov/hbn/>.

National Stream-Quality Accounting Network (NASQAN) is a network of sites used to monitor the water quality of large rivers within the Nation's largest river basins. From 1995 through 1999, a network of approximately 40 stations was operated in the Mississippi, Columbia, Colorado, and Rio Grande River basins. For the period 2000 through 2004, sampling was reduced to a few index stations on the Colorado and Columbia Rivers so that a network of five stations could be implemented on the Yukon River. Samples are collected with sufficient frequency that the flux of a wide range of constituents can be estimated. The objective of NASQAN is to characterize the water quality of these large rivers by measuring concentration and mass transport of a wide range of dissolved and suspended constituents, including nutrients, major ions, dissolved and sediment-bound heavy metals, common pesticides, and inorganic and organic forms of carbon. This information will be used (1) to describe the long-term trends and changes in concentration and transport of these constituents; (2) to test findings of the National Water-Quality Assessment (NAWQA) Program; (3) to characterize processes unique to large-river systems such as storage and re-mobilization of sediments and associated contaminants; and (4) to refine existing estimates of off-continent transport of water, sediment, and chemicals for assessing human effects on the world's oceans and for determining global cycles of carbon, nutrients, and other chemicals. Additional information about the NASQAN Program may be accessed from <http://water.usgs.gov/nasqan/>.

The National Atmospheric Deposition Program/National Trends Network (NADP/NTN) is a network of monitoring sites that provides continuous measurement and assessment of the chemical constituents in precipitation throughout the United States. As the lead Federal agency, the USGS works together with over 100 organizations to provide a long-term, spatial and temporal record of atmospheric deposition generated from this network of 250 precipitation-chemistry monitoring sites. The USGS supports 74 of these 250 sites. This long-term, nationally consistent monitoring program, coupled with ecosystem research, provides critical information toward a national scorecard to evaluate the effectiveness of ongoing and future regulations intended to reduce atmospheric emissions and subsequent impacts to the Nation's land and water resources. Reports and other information on the NADP/NTN Program, as well as data from the individual sites, may be accessed from <http://bqs.usgs.gov/acidrain/>.

The USGS National Water-Quality Assessment (NAWQA) Program is a long-term program with goals to describe the status and trends of water-quality conditions for a large, representative part of the Nation's ground- and surface-water resources; to provide an improved understanding of the primary natural and human factors affecting these observed conditions and trends; and to provide information that supports development and evaluation of management, regulatory, and monitoring decisions by other agencies.

Assessment activities are being conducted in 42 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 is 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 water-resources managers to use in making decisions and a foundation for aggregation and comparison of findings to address water-quality issues of regional and national interest.

Communication and coordination between USGS personnel and other local, State, and Federal interests are critical components of the NAWQA Program. Each study unit has a local liaison committee consisting of representatives from key Federal, State, and local water-resources agencies, Indian nations, and universities in the study unit. Liaison committees typically meet semiannually to discuss their information needs, monitoring plans and progress, desired information products, and opportunities for collaboration among the agencies. Additional information about the NAWQA Program may be accessed from <http://water.usgs.gov/nawqa/>.

The USGS National Streamflow Information Program (NSIP) is a long-term program with goals to provide framework streamflow data across the Nation. Included in the program are creation of a permanent Federally funded streamflow network, research on the nature of streamflow, regional assessments of streamflow data and databases, and upgrades in the streamflow information delivery systems. Additional information about NSIP may be accessed from <http://water.usgs.gov/nsip/>.

EXPLANATION OF STAGE- AND WATER-DISCHARGE RECORDS

Data Collection and Computation

The base data collected at gaging stations (fig. 4) consist of records of stage and measurements of discharge of streams or canals, and stage, surface area, and volume of lakes or reservoirs. In addition, observations of factors affecting the stage-discharge relation or the stage-capacity relation, weather records, and other information are used to supplement base data in determining the daily flow or volume of water in storage. Records of stage are obtained from a water-stage recorder that is either downloaded

electronically in the field to a laptop computer or similar device or is transmitted using telemetry such as GOES satellite, land-line or cellular-phone modems, or by radio transmission. Measurements of discharge are made with a current meter or acoustic Doppler current profiler, using the general methods adopted by the USGS. These methods are described in standard textbooks, USGS Water-Supply Paper 2175, and the Techniques of Water-Resources Investigations of the United States Geological Survey (TWRI), Book 3, Chapters A1 through A19 and Book 8, Chapters A2 and B2, which may be accessed from <http://water.usgs.gov/pubs/twri/>. The methods are consistent with the American Society for Testing and Materials (ASTM) standards and generally follow the standards of the International Organization for Standardization (ISO).

For stream-gaging stations, discharge-rating tables for any stage are prepared from stage-discharge curves. If extensions to the rating curves are necessary to express discharge greater than measured, the extensions are made on the basis of indirect measurements of peak discharge (such as slope-area or contracted-opening measurements, or computation of flow over dams and weirs), step-backwater techniques, velocity-area studies, and logarithmic plotting. The daily mean discharge is computed from gage heights and rating tables, then the monthly and yearly mean discharges are computed from the daily values. If the stage-discharge relation is subject to change because of frequent or continual change in the physical features of the stream channel, the daily mean discharge is computed by the shifting-control method in which correction factors that are based on individual discharge measurements and notes by engineers and observers are used when applying the gage heights to the rating tables. If the stage-discharge relation for a station is temporarily changed by the presence of aquatic growth or debris on the controlling section, the daily mean discharge is computed by the shifting-control method.

The stage-discharge relation at some stream-gaging stations is affected by backwater from reservoirs, tributary streams, or other sources. Such an occurrence 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 at some distance from the base gage.

An index velocity is measured using ultrasonic or acoustic instruments at some stream-gaging stations, and this index velocity is used to calculate an average velocity for the flow in the stream. This average velocity along with a stage-area relation is then used to calculate average discharge.

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.

At some stream-gaging stations in the northern United States, the stage-discharge relation is affected by ice in the winter; therefore, computation of the discharge in the usual manner is impossible. Discharge for periods of ice effect is computed on the basis of gage-height record and occasional winter-discharge measurements. Consideration is given to the available information on temperature and precipitation, notes by gage observers and hydrologists, and comparable records of discharge from other stations in the same or nearby basins.

For a lake or reservoir station, capacity tables giving the volume or contents for any stage are prepared from stage-area relation curves defined by surveys. The application of the stage to the capacity table gives the contents, from which the daily, monthly, or yearly changes are computed.

If the stage-capacity curve is subject to changes because of deposition of sediment in the reservoir, periodic resurveys of the reservoir are necessary to define new stage-capacity curves. During the period between reservoir surveys, the computed contents may be increasingly in error due to the gradual accumulation of sediment.

For some stream-gaging stations, periods of time occur when no gage-height record is obtained or the recorded gage height is faulty and cannot be used to compute daily discharge or contents. Such a situation can happen when the recorder stops or otherwise fails to operate properly, the intakes are plugged, the float is frozen in the well, or for various other reasons. For such periods, the daily discharges are estimated on the basis of recorded range in stage, prior and subsequent records, discharge measurements, weather records, and comparison with records from other stations in the same or nearby basins. Likewise, lake or reservoir volumes may be estimated on the basis of operator's log, prior and subsequent records, inflow-outflow studies, and other information.

Data Presentation

The records published for each continuous-record surface-water discharge station (stream-gaging station) consist of five parts: (1) the station manuscript or description; (2) the data table of daily mean values of discharge for the current water year with summary data; (3) a tabular statistical summary of monthly mean flow data for a designated period, by water year; (4) 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; and (5) a hydrograph of discharge.

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 follow that clarify information presented under the various headings of the station description.

LOCATION.—Location information 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 term indicates the time period for which records have been published for the station or for an equivalent station. An equivalent station is one that was in operation at a time that the present station was not and whose location was such that its flow reasonably can be considered equivalent to flow at the present station.

REVISED RECORDS.—If a critical error in published records is discovered, a revision is included in the first report published following discovery of the error.

GAGE.—The type of gage in current use, the datum of the current gage referred to a standard datum, 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 either will be identified by date in this paragraph of the station description for water-discharge stations or flagged in the daily discharge table. (See section

titled Identifying Estimated Daily Discharge.) Information is presented relative to the accuracy of the records, to special methods of computation, and to conditions that affect natural flow at the station. 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, the outlet works and spillway, and the purpose and use of the reservoir.

COOPERATION.—Records provided by a cooperating organization or obtained for the USGS by a cooperating organization are identified here.

EXTREMES OUTSIDE PERIOD OF RECORD.—Information here documents 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 USGS.

REVISIONS.—Records are revised if errors in published records are discovered. Appropriate updates are made in the USGS distributed data system, NWIS, and subsequently to its Web-based national data system, NWISWeb (<http://water.usgs.gov/nwis/nwis>). Users are encouraged to obtain all required data from NWIS or NWISWeb to ensure that they have the most recent data updates. Updates to NWISWeb are made on an annual basis.

Although rare, occasionally the records of a discontinued gaging station may need revision. Because no current or, possibly, future station manuscript would be published for these stations 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 USGS Water Science Center (address given on the back of the title page of this report) to determine if the published records were revised after the station was discontinued. If, however, the data for a discontinued station were obtained by computer retrieval, the data would be current. 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 stage-capacity table when daily volumes are given.

Peak Discharge Greater than Base Discharge

Tables of peak discharge above base discharge are included for some stations where secondary instantaneous peak discharge data are used in flood-frequency studies of highway and bridge design, flood-control structures, and other flood-related projects. The base discharge value is selected so an average of three peaks a year will be reported. This base discharge value has a recurrence interval of approximately 1.1 years or a 91-percent chance of exceedence in any 1 year.

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 arithmetic 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 is 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). Values for cubic feet per second per square mile and runoff in inches or in acre-feet may be omitted if extensive regulation or diversion is in effect 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 volumes are given. These values are identified by a symbol and a corresponding footnote.

Statistics of Monthly Mean Data

A tabular summary of the mean (line headed MEAN), maximum (MAX), and minimum (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 values. 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. The designated period will consist of all of the station record within the specified water years, including complete months of record for partial water years, and may coincide with the period of record for the station. The water years for which the statistics are computed are 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 records within the specified water years, including complete months of record for partial water years, and may coincide with the period of record for the station. The water years for which the statistics are computed are 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 the dates of occurrence do not fall within the selected water years listed in the heading, it will be noted in the REMARKS paragraph or in footnotes. Selected streamflow duration-curve statistics and runoff data also are given. Runoff data may be omitted if extensive regulation or diversion of flow is in effect in the drainage basin.

The following summary statistics data are provided with each continuous record of discharge. Comments that 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.

ANNUAL MEAN.—The arithmetic mean for the individual daily mean discharges for the year noted or for the designated period.

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

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

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

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

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

MAXIMUM PEAK FLOW.—The maximum instantaneous peak discharge occurring for the water year or designated period. Occasionally the maximum flow for a year may occur at midnight at the beginning or end of the year, on a recession from or rise toward a higher peak in the adjoining year. In this case, the maximum peak flow is given in the table and the maximum flow may be reported in a footnote or in the REMARKS paragraph in the manuscript.

MAXIMUM PEAK STAGE.—The maximum instantaneous peak stage occurring for the water year or designated period. Occasionally the maximum stage for a year may occur at midnight at the beginning or end of the year, on a recession from or rise toward a higher peak in the adjoining year. In this case, the maximum peak stage is given in the table and the maximum stage may be reported in the REMARKS paragraph in the manuscript or in a footnote. If the dates of occurrence of the maximum peak stage and maximum peak flow are different, 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 square mile (CFSM) is the average number of cubic feet of water flowing per second from each square mile of area drained, assuming the runoff is distributed uniformly in time and area.

Inches (INCHES) indicate 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 table lists annual maximum stage and discharge at crest-stage stations, and the second table lists 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 often made in times of drought or flood to give better areal coverage to those events. Those measurements and others collected for a 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. This identification is shown either by flagging individual daily values with the letter “e” and noting in a table footnote, “e—Estimated,” or by listing the dates of the estimated record in the REMARKS paragraph of the station description.

Accuracy of Field Data and Computed Results

The accuracy of streamflow data 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 observations of stage, measurements of discharge, and interpretations of records.

The degree of accuracy of the records is stated in the REMARKS in the station description. “Excellent” indicates that about 95 percent of the daily discharges are within 5 percent of the true value; “good” within 10 percent; and “fair,” within 15 percent. “Poor” indicates that daily discharges have less than “fair” accuracy. Different accuracies may be attributed to different parts of a given record.

Values of daily mean discharge in this report are shown to the nearest hundredth of a cubic foot per second for discharges of less than 1 ft³/s; to the nearest tenths between 1.0 and 10 ft³/s; to whole numbers between 10 and 1,000 ft³/s; and to three significant figures above 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 discharge values listed for partial-record stations.

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, values 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 Data Records Available

Information of a more detailed nature than that published for most of the stream-gaging stations such as discharge measurements, gage-height records, and rating tables is available from the USGS Water

Science Center. Also, most stream-gaging station records are available in computer-usable form and many statistical analyses have been made.

Information on the availability of unpublished data or statistical analyses may be obtained from the USGS Water Science Center (see address that is shown on the back of the title page of this report).

EXPLANATION OF WATER-QUALITY RECORDS

Collection and Examination of Data

Surface-water samples for analysis usually are collected at or near stream-gaging stations. The quality-of-water records are given immediately following the discharge records at these stations.

The descriptive heading for water-quality records gives the period of record for all water-quality data; the period of daily record for parameters that are measured on a daily basis (specific conductance, water temperature, sediment discharge, and so forth); extremes for the current year; and general remarks.

For ground-water records, no descriptive statements are given; however, the well number, depth of well, sampling date, or other pertinent data are given in the table containing the chemical analyses of the ground water.

Water Analysis

Most of the methods used for collecting and analyzing water samples are described in the TWRI's, which may be accessed from <http://water.usgs.gov/pubs/twri/>.

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 considerably 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 at several verticals to obtain a representative sample needed for an accurate mean concentration and for use in calculating load.

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 and minimum values (and sometimes mean or median values) for each constituent measured and are based on 15-minute or 1-hour intervals of recorded data beginning at 0000 hours and ending at 2400 hours for the day of record.

SURFACE-WATER-QUALITY RECORDS

Records of surface-water quality ordinarily are obtained at or near stream-gaging stations because discharge data are useful in the interpretation of surface-water quality. Records of surface-water quality in this report 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 *continuous-record station* is a site where data are collected on a regularly scheduled basis. Frequency may be one 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 continuous- or partial-record station, where 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 *continuous records* as used in this report and *continuous recordings* that refer to a continuous graph or a series of discrete values recorded at short intervals. 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.

Accuracy of the Records

One of four accuracy classifications is applied for measured physical properties at continuous-record stations on a scale ranging from poor to excellent. The accuracy rating is based on data values recorded before any shifts or corrections are made. Additional consideration also is given to the amount of publishable record and to the amount of data that have been corrected or shifted.

Rating the accuracy of continuous water-quality records

[≤, less than or equal to; ±, plus or minus value shown; °C, degree Celsius; >, greater than; %, percent; mg/L, milligram per liter; pH unit, standard pH unit]

Measured field parameter	Ratings of accuracy (Based on combined fouling and calibration drift corrections applied to the record)			
	Excellent	Good	Fair	Poor
Water temperature	≤ ± 0.2 °C	> ± 0.2 – 0.5 °C	> ± 0.5 – 0.8 °C	> ± 0.8 °C
Specific conductance	≤ ± 3%	> ± 3 – 10%	> ± 10 – 15%	> ± 15%
Dissolved oxygen	≤ ± 0.3 mg/L or ≤ ± 5%, whichever is greater	> ± 0.3 – 0.5 mg/L or > ± 5 – 10%, whichever is greater	> ± 0.5 – 0.8 mg/L or > ± 10 – 15%, which- ever is greater	> ± 0.8 mg/L or > ± 15%, whichever is greater
pH	≤ ± 0.2 units	> ± 0.2 – 0.5 units	> ± 0.5 – 0.8 units	> ± 0.8 units
Turbidity	≤ ± 0.5 turbidity units or ≤ ± 5%, whichever is greater	> ± 0.5 – 1.0 turbidity units or > ± 5 – 10%, whichever is greater	> ± 1.0 – 1.5 turbidity units or > ± 10 – 15%, whichever is greater	> ± 1.5 turbidity units or > ± 15%, which- ever is greater

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.

Onsite Measurements and Sample Collection

In obtaining water-quality data, a major concern is assuring that the data obtained represent the naturally occurring quality of the water. To ensure this, certain measurements, such as water temperature, pH, and dissolved oxygen, must be made onsite when the samples are collected. To assure that measurements made in the laboratory also represent the naturally occurring water, carefully prescribed procedures must 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 TWRIs Book 1, Chapter D2; Book 3, Chapters A1, A3, and A4; and Book 9, Chapters A1-A9. Most of the methods used for collecting and analyzing water samples are described in the TWRIs, which may be accessed from <http://water.usgs.gov/pubs/twri/>. Also, detailed information on collecting, treating, and shipping samples can be obtained from the USGS Water Science Center (see address that is shown on the back of title page in this report).

Water Temperature

Water temperatures are measured at most of the water-quality stations. In addition, water temperatures are taken at the 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 USGS Water Science Center.

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 section.

During periods of rapidly changing flow or rapidly changing concentration, samples may be collected more frequently (twice daily or, in some instances, hourly). The published sediment discharges for days of rapidly changing flow or concentration are 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 are collected periodically at many verticals in the stream cross section. Although data collected periodically may represent conditions only at the time of observation, 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

Samples for biochemical oxygen demand (BOD) and indicator bacteria are analyzed locally. All other samples are analyzed in the USGS laboratory in Lakewood, Colorado, unless otherwise noted. Methods used in analyzing sediment samples and computing sediment records are given in TWRI, Book 5, Chapter C1. Methods used by the USGS laboratories are given in the TWRI, Book 1, Chapter D2; Book 3, Chapter C2; and Book 5, Chapters A1, A3, and A4. The TWRI publications may be accessed from <http://water.usgs.gov/pubs/twri/>. These methods are consistent with ASTM standards and generally follow ISO standards.

Data Presentation

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

In the descriptive headings, if the location is identical to that of the discharge gaging station, neither the LOCATION nor the DRAINAGE AREA statements are repeated. The following information 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 information in the EXPLANATION OF STAGE- AND WATER-DISCHARGE RECORDS section of this report (same comments apply).

DRAINAGE AREA.—See Data Presentation information in the EXPLANATION OF STAGE- AND WATER-DISCHARGE RECORDS section of this report (same comments apply).

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

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

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

COOPERATION.—Records provided by a cooperating organization or obtained for the USGS by a cooperating organization are identified here.

EXTREMES.—Maximums and minimums are given only for parameters measured daily or more frequently. For parameters measured weekly or less frequently, true maximums or minimums may not have been obtained. Extremes, when given, are provided for both the period of record and for the current water year.

REVISIONS.—Records are revised if errors in published water-quality records are discovered. Appropriate updates are made in the USGS distributed data system, NWIS, and subsequently to its Web-based national data system, NWISWeb (<http://waterdata.usgs.gov/nwis>). Users of USGS water-quality data are encouraged to obtain all required data from NWIS or NWISWeb to ensure that they have the most recent updates. Updates to the NWISWeb are made on an annual basis.

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 section:

Printed Output	Remark
E	Value is estimated.
>	Actual value is known to be greater than the value shown.
<	Actual value is known to be less than the value shown.
M	Presence of material verified, but not quantified.
N	Presumptive evidence of presence of material.
U	Material specifically analyzed for, but not detected.
A	Value is an average.
V	Analyte was detected in both the environmental sample and the associated blanks.
S	Most probable value.

Water-Quality Control Data

The USGS National Water Quality Laboratory collects quality-control data on a continuing basis to evaluate selected analytical methods to determine long-term method detection levels (LT-MDLs) and laboratory reporting levels (LRLs). These values are re-evaluated each year on the basis of the most recent quality-control data and, consequently, may change from year to year.

This reporting procedure limits the occurrence of false positive error. Falsely reporting a concentration greater than the LT-MDL for a sample in which the analyte is not present is 1 percent or less. Application of the LRL limits the occurrence of false negative error. The chance of falsely reporting a nondetection for a sample in which the analyte is present at a concentration equal to or greater than the LRL is 1 percent or less.

Accordingly, concentrations are reported as less than LRL for samples in which the analyte either was not detected or did not pass identification. Analytes detected at concentrations between the LT-MDL and the LRL and that pass identification criteria are estimated. Estimated concentrations will be noted with a remark code of "E." These data should be used with the understanding that their uncertainty is greater than that of data reported without the E remark code.

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

Blank Samples

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

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

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

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

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

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

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

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

Reference Samples

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

Replicate Samples

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

Concurrent samples—A type of replicate sample in which the samples are collected simultaneously with two or more samplers or by using one sampler and alternating the collection of samples into two or more compositing containers.

Sequential samples—A type of replicate sample in which the samples are collected one after the other, typically over a short time.

Split sample—A type of replicate sample in which a sample is split into subsamples, each subsample contemporaneous in time and space.

Spike Samples

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

EXPLANATION OF GROUND-WATER-LEVEL RECORDS

Generally, only ground-water-level data from selected wells with continuous recorders from a basic network of observation wells are published in this report. This basic network contains observation wells located so that the most significant data are obtained from the fewest wells in the most important aquifers.

Site Identification Numbers

Each well is identified by means of (1) a 15-digit number that is based on latitude and longitude and (2) a local number that is produced for local needs. (See NUMBERING SYSTEM FOR WELLS AND MISCELLANEOUS SITES in this report for a detailed explanation.)

Data Collection and Computation

Measurements are made in many types of wells, under varying conditions of access and at different temperatures; hence, neither the method of measurement nor the equipment can be standardized. At each observation well, however, the equipment and techniques used are those that will ensure that measurements at each well are consistent.

Most methods for collecting and analyzing water samples are described in the TWRI's referred to in the Onsite Measurements and Sample Collection and the Laboratory Measurements sections in this report. In addition, TWRI Book 1, Chapter D2, describes guidelines for the collection and field analysis of ground-water samples for selected unstable constituents. Procedures for onsite measurements and for collecting, treating, and shipping samples are given in TWRI's Book 1, Chapter D2; Book 3, Chapters A1, A3, and A4; and Book 9, Chapters A1 through A9. The TWRI publications may be accessed from <http://water.usgs.gov/pubs/twri/>. The values in this report represent water-quality conditions at the time of sampling, as much as possible, and that are consistent with available sampling techniques and methods of analysis. These methods are consistent with ASTM standards and generally follow ISO standards. Trained personnel collected all samples. The wells sampled were pumped long enough to ensure 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.

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 above sea level 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 of water of several hundred feet, the error in 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 only to a tenth of a foot or a larger unit.

Data Presentation

Water-level data are presented in alphabetical order by county. The primary identification number for a given well is the 15-digit site identification number that appears in the upper left corner of the table. The secondary identification number is the local or county well number. Well locations are shown and each well is identified by its local well or county well number on a map in this report (fig. 5).

Each well record consists of three parts: the well description, the data table of water levels observed during the water year, and, for most wells, a hydrograph following the data table. Well descriptions are presented in the headings preceding the tabular data.

The following comments clarify information presented in these various headings.

LOCATION.—This paragraph follows the well-identification number and reports the hydrologic-unit number and a geographic point of reference. Latitudes and longitudes used in this report are reported as North American Datum of 1927 unless otherwise specified.

AQUIFER.—This entry designates by name and geologic age the aquifer that the well taps.

WELL CHARACTERISTICS.—This entry describes the well in terms of depth, casing diameter and depth or screened interval, method of construction, use, and 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 continuous, monthly, or some other frequency of measurement.

DATUM.—This entry describes both the measuring point and the land-surface elevation at the well. The altitude of the land-surface datum is described in feet above the altitude datum; it is reported with a precision depending on the method of determination. The measuring point is described physically (such as top of casing, top of instrument shelf, and so forth), 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 National Geodetic Vertical Datum of 1929 (NGVD 29); it is reported with a precision depending on the method of determination.

REMARKS.—This entry describes factors that may affect the water level in a well or the measurement of the water level, when various methods of measurement were begun, and the network (climatic, terrane, local, or areal effects) or the special project to which the well belongs.

PERIOD OF RECORD.—This entry indicates the time period for which records are published for the well, the month and year at the start of publication of water-level records by the USGS, and the words “to current year” if the records are to be continued into the following year. Time periods for which water-level records are available, but are not published by the USGS, may be noted.

EXTREMES FOR PERIOD OF RECORD.—This entry contains the highest and lowest instantaneously recorded or measured water levels of the period of published record, with respect to land-surface datum or sea level, and the dates of occurrence.

Water-Level Tables

A table of water levels follows the well description for each well. Water-level measurements in this report are given in feet with reference to either sea level or land-surface datum (lsd). Missing records are indicated by dashes in place of the water-level value.

For wells not equipped with recorders, water-level measurements were obtained periodically by steel or electric tape. Tables of periodic water-level measurements in these wells show the date of measurement and the measured water-level value.

Hydrographs

Hydrographs are a graphic display of water-level fluctuations over a period of time. In this report, current water year and, when appropriate, period-of-record hydrographs are shown. Hydrographs that display periodic water-level measurements show points that may be connected with a dashed line from one measurement to the next. Hydrographs that display recorder data show a solid line representing the mean water level recorded for each day. Missing data are indicated by a blank space or break in a hydrograph. Missing data may occur as a result of recorder malfunctions, battery failures, or mechanical problems related to the response of the recorder's float mechanism to water-level fluctuations in a well.

GROUND-WATER-QUALITY DATA

Data Collection and Computation

The ground-water-quality data in this report were obtained as a part of special studies in specific areas. Consequently, a number of chemical analyses are presented for some wells within a county but not for others. As a result, the records for this year, by themselves, do not provide a balanced view of ground-water quality statewide.

Most methods for collecting and analyzing water samples are described in the TWRI, which may be accessed from <http://water.usgs.gov/pubs/twri/>. Procedures for onsite measurements and for collecting, treating, and shipping samples are given in TWRI, Book 1, Chapter D2; Book 5, Chapters A1, A3, and A4; and Book 9, Chapters A1-A6. Also, detailed information on collecting, treating, and shipping samples may be obtained from the USGS Water Science Center (see address shown on back of title page in this report).

Laboratory Measurements

Analysis for sulfide and measurement of alkalinity, pH, water temperature, specific conductance, and dissolved oxygen are performed onsite. All other sample analyses are performed at the USGS laboratory in Lakewood, Colorado, unless otherwise noted. Methods used by the USGS laboratory are given in TWRI, Book 1, Chapter D2 and Book 5, Chapters A1, A3, and A4, which may be accessed from <http://water.usgs.gov/pubs/twri/>.

ACCESS TO USGS WATER DATA

The USGS provides near real-time stage and discharge data for many of the gaging stations equipped with the necessary telemetry and historic daily mean and peak-flow discharge data for most current or discontinued gaging stations through the World Wide Web (WWW). These data may be accessed from <http://water.usgs.gov>.

Water-quality data and ground-water data also are available through the WWW. In addition, data can be provided in various machine-readable formats on various media. Information about the availability of specific types of data or products, and user charges, can be obtained locally from each USGS Water Science Center. (See address that is shown on the back of the title page of this report.)

DEFINITION OF TERMS

Specialized technical terms related to streamflow, water quality, and other hydrologic data, as used in this report, are defined below. Terms such as algae, water level, and precipitation are used in their common everyday meanings, definitions of which are given in standard dictionaries. Not all terms defined in this alphabetical list apply to every State. See also table for converting English units to International System (SI) Units. Other glossaries that also define water-related terms are accessible from <http://water.usgs.gov/glossaries.html>.

Acid neutralizing capacity (ANC) is the equivalent sum of all bases or base-producing materials, solutes plus particulates, in an aqueous system that can be titrated with acid to an equivalence point. This term designates titration of an “unfiltered” sample (formerly reported as alkalinity).

Acre-foot (AC-FT, acre-ft) is a unit of volume, commonly used to measure quantities of water used or stored, equivalent to the volume of water required to cover 1 acre to a depth of 1 foot and equivalent to 43,560 cubic feet, 325,851 gallons, or 1,233 cubic meters. (See also “Annual runoff”)

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

Adjusted discharge is discharge data that have been mathematically adjusted (for example, to remove the effects of a daily tide cycle or reservoir storage).

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. (See also “Biomass” and “Dry weight”)

Alkalinity is the capacity of solutes in an aqueous system to neutralize acid. This term designates titration of a “filtered” sample.

Annual runoff is the total quantity of water that is discharged (“runs off”) from a drainage basin in a year. Data reports may present annual runoff data as volumes in acre-feet, as discharges per unit of drainage area in cubic feet per second per square mile, or as depths of water on the drainage basin in inches.

Annual 7-day minimum is the lowest mean value for any 7-consecutive-day period in a year. Annual 7-day minimum values are reported herein for the calendar year and the water year (October 1 through September 30). Most low-flow frequency analyses use a climatic year (April 1–March 31), which tends to prevent the low-flow period from being artificially split between adjacent years. 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.)

Aroclor is the registered trademark for a group of polychlorinated biphenyls that were manufactured by the Monsanto Company prior to 1976. Aroclors are assigned specific 4-digit reference numbers dependent upon molecular type and degree of substitution of the biphenyl ring hydrogen atoms by chlorine atoms. The first two digits of a numbered aroclor represent the molecular type, and the last two digits represent the percentage weight of the hydrogen-substituted chlorine.

Artificial substrate is a device that purposely is 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 collected. Examples of artificial substrates are basket samplers (made of wire cages filled with clean streamside rocks) and multi-plate samplers (made of hardboard) for benthic organism collection, and plexiglass strips for periphyton collection. (See also “Substrate”)

Ash mass is the mass or amount of residue present after the residue from a dry-mass determination has been ashed in a muffle furnace at a temperature of 500 °C for 1 hour. Ash mass of zooplankton and phytoplankton is expressed in grams per cubic meter (g/m³), and periphyton and benthic organisms in grams per square meter (g/m²). (See also “Biomass” and “Dry mass”)

Aspect is the direction toward which a slope faces with respect to the compass.

Bacteria are microscopic unicellular organisms, typically spherical, rodlike, or spiral and threadlike in shape, often clumped into colonies. Some bacteria cause disease, whereas 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.

Bankfull stage, as used in this report, is the stage at which a stream first overflows its natural banks formed by floods with 1- to 3-year recurrence intervals.

Base discharge (for peak discharge) is a discharge value, determined for selected stations, above which peak discharge data are published. The base discharge at each

station is selected so that an average of about three peak flows per year will be published. (See also “Peak flow”)

Base flow is sustained flow of a stream in the absence of direct runoff. It includes natural and human-induced streamflows. Natural base flow is sustained largely by ground-water discharge.

Bed material is the sediment mixture of which a streambed, lake, pond, reservoir, or estuary bottom is composed. (See also “Bedload” and “Sediment”)

Bedload is material in transport that primarily is supported by the streambed. In this report, bedload is considered to consist of particles in transit from the bed to the top of the bedload sampler nozzle (an elevation ranging from 0.25 to 0.5 foot). These particles are retained in the bedload sampler. A sample collected with a pressure-differential bedload sampler also may contain a component of the suspended load.

Bedload discharge (tons per day) is the rate of sediment moving as bedload, reported as dry weight, that passes through a cross section in a given time. NOTE: Bedload discharge values in this report may include a component of the suspended-sediment discharge. A correction may be necessary when computing the total sediment discharge by summing the bedload discharge and the suspended-sediment discharge. (See also “Bedload,” “Dry weight,” “Sediment,” and “Suspended-sediment discharge”)

Benthic organisms are the group of organisms inhabiting the bottom of an aquatic environment. They include a number of types of organisms, such as bacteria, fungi, insect larvae and nymphs, snails, clams, and crayfish. They are useful as indicators of water quality.

Biochemical oxygen demand (BOD) is a measure of the quantity of dissolved oxygen, in milligrams per liter, necessary for the decomposition of organic matter by microorganisms, such as bacteria.

Biomass is the amount of living matter present at any given time, expressed as mass per unit area or volume of habitat.

Biomass pigment ratio is an indicator of the total proportion of periphyton that are autotrophic (plants). This also is called the Autotrophic Index.

Blue-green algae (*Cyanophyta*) are a group of phytoplankton and periphyton organisms with a blue pigment in addition to a green pigment called chlorophyll. Blue-green algae can cause nuisance water-quality conditions in lakes and slow-flowing rivers; however, they are found commonly in streams throughout the year. The abundance of blue-green algae in phytoplankton samples is expressed as the number of cells per milliliter (cells/mL) or biovolume

in cubic micrometers per milliliter ($\mu\text{m}^3/\text{mL}$). The abundance of blue-green algae in periphyton samples is given in cells per square centimeter (cells/cm²) or biovolume per square centimeter ($\mu\text{m}^3/\text{cm}^2$). (See also “Phytoplankton” and “Periphyton”)

Bottom material (See “Bed material”)

Bulk electrical conductivity is the combined electrical conductivity of all material within a doughnut-shaped volume surrounding an induction probe. Bulk conductivity is affected by different physical and chemical properties of the material including the dissolved-solids content of the pore water, and the lithology and porosity of the rock.

Canadian Geodetic Vertical Datum 1928 is a geodetic datum derived from a general adjustment of Canada’s first order level network in 1928.

Cell volume (biovolume) determination is one of several common methods used to estimate biomass of algae in aquatic systems. Cell members of algae are used frequently in aquatic surveys as an indicator of algal production. However, cell numbers alone cannot represent true biomass because of considerable cell-size variation among the algal species. Cell volume (μm^3) is determined by obtaining critical cell measurements or cell dimensions (for example, length, width, height, or radius) for 20 to 50 cells of each important species to obtain an average biovolume per cell. Cells are categorized according to the correspondence of their cellular shape to the nearest geometric solid or combinations of simple solids (for example, spheres, cones, or cylinders). Representative formulae used to compute biovolume are as follows:

$$\text{sphere } \frac{4}{3} \pi r^3 \quad \text{cone } \frac{1}{3} \pi r^2 h \quad \text{cylinder } \pi r^2 h.$$

pi (π) is the ratio of the circumference to the diameter of a circle; pi = 3.14159....

From cell volume, total algal biomass expressed as biovolume ($\mu\text{m}^3/\text{mL}$) is thus determined by multiplying the number of cells of a given species by its average cell volume and then summing these volumes for all species.

Cells/volume refers to the number of cells of any organism that 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 volume, and generally are reported as cells or units per milliliter (mL) or liter (L).

Cfs-day (See “Cubic foot per second-day”)

Channel bars, as used in this report, are the lowest prominent geomorphic features higher than the channel bed.

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 BOD or with carbonaceous organic pollution from sewage or industrial wastes. [See also “Biochemical oxygen demand (BOD)”]

***Clostridium perfringens* (*C. perfringens*)** is a spore-forming bacterium that is common in the feces of human and other warmblooded animals. Clostridial spores are being used experimentally as an indicator of past fecal contamination and the presence of microorganisms that are resistant to disinfection and environmental stresses. (See also “Bacteria”)

Coliphages are viruses that infect and replicate in coliform bacteria. They are indicative of sewage contamination of water and of the survival and transport of viruses in the environment.

Color unit is produced by 1 milligram per liter of platinum in the form of the chloroplatinate ion. Color is expressed in units of the platinum-cobalt scale.

Confined aquifer is a term used to describe an aquifer containing water between two relatively impermeable boundaries. The water level in a well tapping a confined aquifer stands above the top of the confined aquifer and can be higher or lower than the water table that may be present in the material above it. In some cases, the water level can rise above the ground surface, yielding a flowing well.

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

Continuous-record station is a site where data are collected with sufficient frequency to define daily mean values and variations within a day.

Control designates a feature in the channel that physically affects the water-surface elevation and thereby determines the stage-discharge relation at the gage. This feature may be a constriction of the channel, a bedrock outcrop, a gravel bar, 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 saltwater.

Cubic foot per second (CFS, ft³/s) is the rate of discharge representing a volume of 1 cubic foot passing a given point in 1 second. It is equivalent to approximately 7.48 gallons per second or approximately 449 gallons per minute, or 0.02832 cubic meters per second. The term “second-foot”

sometimes is used synonymously with “cubic foot per second” but is now obsolete.

Cubic foot per second-day (CFS-DAY, Cfs-day, [(ft³/s)/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, 1.98347 acre-feet, 646,317 gallons, or 2,446.6 cubic meters. The daily mean discharges reported in the daily value data tables numerically are equal to the daily volumes in cfs-days, and the totals also represent volumes in cfs-days.

Cubic foot per second per square mile [CFSM, (ft³/s)/mi²] is the average number of cubic feet of water flowing per second from each square mile of area drained, assuming the runoff is distributed uniformly in time and area. (See also “Annual runoff”)

Daily mean suspended-sediment concentration is the time-weighted mean concentration of suspended sediment passing a stream cross section during a 24-hour day. (See also “Sediment” and “Suspended-sediment concentration”)

Daily record station is a site where data are collected with sufficient frequency to develop a record of one or more data values per day. The frequency of data collection can range from continuous recording to data collection on a daily or near-daily basis.

Data collection platform (DCP) is an electronic instrument that collects, processes, and stores data from various sensors, and transmits the data by satellite data relay, line-of-sight radio, and/or landline telemetry.

Data logger is a microprocessor-based data acquisition system designed specifically to acquire, process, and store data. Data usually are downloaded from onsite data loggers for entry into office data systems.

Datum is a surface or point relative to which measurements of height and/or horizontal position are reported. A vertical datum is a horizontal surface used as the zero point for measurements of gage height, stage, or elevation; a horizontal datum is a reference for positions given in terms of latitude-longitude, State Plane coordinates, or Universal Transverse Mercator (UTM) coordinates. (See also “Gage datum,” “Land-surface datum,” “National Geodetic Vertical Datum of 1929,” and “North American Vertical Datum of 1988”)

Diatoms (*Bacillariophyta*) are unicellular or colonial algae with a siliceous cell wall. The abundance of diatoms in phytoplankton samples is expressed as the number of cells per milliliter (cells/mL) or biovolume in cubic micrometers per milliliter (μm³/mL). The abundance of diatoms in periphyton samples is given in cells per square centimeter

(cells/cm²) or biovolume per square centimeter (µm³/cm²). (See also “Phytoplankton” and “Periphyton”)

Diel is of or pertaining to a 24-hour period of time; a regular daily cycle.

Discharge, or **flow**, is the rate that matter passes through a cross section of a stream channel or other water body per unit of time. The term commonly refers to the volume of water (including, unless otherwise stated, any sediment or other constituents suspended or dissolved in the water) that passes a cross section in a stream channel, canal, pipeline, and so forth, within a given period of time (cubic feet per second). Discharge also can apply to the rate at which constituents, such as suspended sediment, bedload, and dissolved or suspended chemicals, pass through a cross section, in which cases the quantity is expressed as the mass of constituent that passes the cross section in a given period of time (tons per day).

Dissolved refers to that material in a representative water sample that passes through a 0.45-micrometer membrane filter. This is a convenient operational definition used by Federal and State agencies that collect water-quality data. Determinations of “dissolved” constituent concentrations are made on sample water that has been filtered.

Dissolved oxygen (DO) is the molecular oxygen (oxygen gas) dissolved in water. The concentration in water is a function of atmospheric pressure, temperature, and dissolved-solids concentration of the water. The ability of water to retain oxygen decreases with increasing temperature or dissolved-solids concentration. Photosynthesis and respiration by plants commonly cause diurnal variations in dissolved-oxygen concentration in water from some streams.

Dissolved-solids concentration in water is the quantity of dissolved material in a sample of water. It 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, the bicarbonate (generally a major dissolved component of water) is converted to carbonate. In the mathematical calculation, the bicarbonate value, in milligrams per liter, is multiplied by 0.4917 to convert it to carbonate. Alternatively, alkalinity concentration (as mg/L CaCO₃) can be converted to carbonate concentration by multiplying by 0.60.

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

$$\bar{d} = - \sum_{i \approx 1}^s \frac{n_i}{n} \log_2 \frac{n_i}{n},$$

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

Drainage area of a stream at a specific location is that area upstream from the location, measured in a horizontal plane, that has a common outlet at the site for its surface runoff from precipitation that normally drains by gravity into a stream. Drainage areas given herein include all closed basins, or noncontributing areas, within the area unless otherwise specified.

Drainage basin is a part of the Earth’s surface that contains a drainage system with a common outlet for its surface runoff. (See “Drainage area”)

Dry mass refers to the mass of residue present after drying in an oven at 105 °C, 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. (See also “Ash mass,” “Biomass,” and “Wet mass”)

Dry weight refers to the weight of animal tissue after it has been dried in an oven at 65 °C until a constant weight is achieved. Dry weight represents total organic and inorganic matter in the tissue. (See also “Wet weight”)

Embeddedness is the degree to which gravel-sized and larger particles are surrounded or enclosed by finer-sized particles. (See also “Substrate embeddedness class”)

Enterococcus bacteria commonly are found in the feces of humans and other warmblooded animals. Although some strains are ubiquitous and not related to fecal pollution, the presence of enterococci in water is an indication of fecal pollution and the possible presence of enteric pathogens. Enterococcus bacteria are those bacteria that produce pink to red colonies with black or reddish-brown precipitate after incubation at 41 °C on mE agar (nutrient medium for bacterial growth) and subsequent transfer to EIA medium. Enterococci include *Streptococcus feacalis*, *Streptococcus feacium*, *Streptococcus avium*, and their variants. (See also “Bacteria”)

EPT Index is the total number of distinct taxa within the insect orders Ephemeroptera, Plecoptera, and Trichoptera. This index summarizes the taxa richness within the aquatic insects that generally are considered pollution sensitive; the index usually decreases with pollution.

***Escherichia coli* (*E. coli*)** are bacteria present in the intestine and feces of warmblooded animals. *E. coli* are a member species of the fecal coliform group of indicator bacteria. In the laboratory, they are defined as those bacteria that produce yellow or yellow-brown colonies on a filter pad saturated with urea substrate broth after primary culturing for 22 to 24 hours at 44.5 °C on mTEC medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample. (See also “Bacteria”)

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

Euglenoids (*Euglenophyta*) are a group of algae that usually are free-swimming and rarely creeping. They have the ability to grow either photosynthetically in the light or heterotrophically in the dark. (See also “Phytoplankton”)

Extractable organic halides (EOX) are organic compounds that contain halogen atoms such as chlorine. These organic compounds are semivolatile and extractable by ethyl acetate from air-dried streambed sediment. The ethyl acetate extract is combusted, and the concentration is determined by microcoulometric determination of the halides formed. The concentration is reported as micrograms of chlorine per gram of the dry weight of the streambed sediment.

Fecal coliform bacteria are present in the intestines or feces of warmblooded animals. They often are 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. (See also “Bacteria”)

Fecal streptococcal bacteria are present in the intestines of warmblooded animals and are ubiquitous in the environment. They are characterized as gram-positive, cocci bacteria that are capable of growth in brain-heart infusion broth. In the laboratory, they are defined as all the organisms that 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. (See also “Bacteria”)

Filtered pertains to constituents in a water sample passed through a filter of specified pore diameter, most commonly 0.45 micrometer or less for inorganic analytes and 0.7 micrometer for organic analytes.

Filtered, recoverable is the amount of a given constituent that is in solution after the part of a representative water-suspended sediment sample that has passed through a filter has been extracted. Complete recovery is not achieved by the extraction procedure and thus the analytical determination represents something less than 95 percent of the total constituent concentration in the sample. To achieve comparability of analytical data, equivalent extraction procedures are required of all laboratories performing such analyses because different procedures are likely to produce different analytical results.

Fire algae (*Pyrrhophyta*) are free-swimming unicells characterized by a red pigment spot. (See also “Phytoplankton”)

Flow-duration percentiles are values on a scale of 100 that indicate the percentage of time for which a flow is exceeded. For example, the 90th percentile of river flow is the streamflow exceeded 90 percent of the time in the period of interest.

Gage datum is a horizontal surface used as a zero point for measurement of stage or gage height. This surface usually is located slightly below the lowest point of the stream bottom such that the gage height is usually slightly greater than the maximum depth of water. Because the gage datum is not an actual physical object, the datum is usually defined by specifying the elevations of permanent reference marks such as bridge abutments and survey monuments, and the gage is set to agree with the reference marks. Gage datum is a local datum that is maintained independently of any national geodetic datum. However, if the elevation of the gage datum relative to the national datum (North American Vertical Datum of 1988 or National Geodetic Vertical Datum of 1929) has been determined, then the gage readings can be converted to elevations above the national datum by adding the elevation of the gage datum to the gage reading.

Gage height (G.H.) is the water-surface elevation, in feet above the gage datum. If the water surface is below the gage datum, the gage height is negative. Gage height often is used interchangeably with the more general term “stage,” although gage height is more appropriate when used in reference to a reading on a gage.

Gage values are values that are recorded, transmitted, and/or computed from a gaging station. Gage values typically are collected at 5-, 15-, or 30-minute intervals.

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

Gas chromatography/flame ionization detector (GC/FID) is a laboratory analytical method used as a screening technique for semivolatile organic compounds that are extractable from water in methylene chloride.

Geomorphic channel units, as used in this report, are fluvial geomorphic descriptors of channel shape and stream velocity. Pools, riffles, and runs are types of geomorphic channel units considered for National Water-Quality Assessment (NAWQA) Program habitat sampling.

Green algae (*Chlorophyta*) are unicellular or colonial algae with chlorophyll pigments similar to those in terrestrial green plants. Some forms of green algae produce mats or floating “moss” in lakes. The abundance of green algae in phytoplankton samples is expressed as the number of cells per milliliter (cells/mL) or biovolume in cubic micrometers per milliliter ($\mu\text{m}^3/\text{mL}$). The abundance of green algae in periphyton samples is given in cells per square centimeter (cells/cm²) or biovolume per square centimeter ($\mu\text{m}^3/\text{cm}^2$). (See also “Phytoplankton” and “Periphyton”)

Habitat, as used in this report, includes all nonliving (physical) aspects of the aquatic ecosystem, although living components like aquatic macrophytes and riparian vegetation also are usually included. Measurements of habitat typically are made over a wider geographic scale than are measurements of species distribution.

Habitat quality index is the qualitative description (level 1) of instream habitat and riparian conditions surrounding the reach sampled. Scores range from 0 to 100 percent with higher scores indicative of desirable habitat conditions for aquatic life. Index only applicable to wadable streams.

Hardness of water is a physical-chemical characteristic that commonly is recognized by the increased quantity of soap required to produce lather. It is computed as the sum of equivalents of polyvalent cations (primarily calcium and magnesium) and is expressed as the equivalent concentration of calcium carbonate (CaCO₃).

High tide is the maximum height reached by each rising tide. The high-high and low-high tides are the higher and lower of the two high tides, respectively, of each tidal day. See NOAA Web site:
<http://www.csc.noaa.gov/text/glossary.html> (see “High water”)

Hilsenhoff’s Biotic Index (HBI) is an indicator of organic pollution that uses tolerance values to weight taxa abundances; usually increases with pollution. It is calculated as follows:

$$HBI = \frac{\sum(n)(a)}{N},$$

where n is the number of individuals of each taxon, a is the tolerance value of each taxon, and N is the total number of organisms in the sample.

Horizontal datum (See “Datum”)

Hydrologic index stations referred to in this report are continuous-record gaging stations that have been selected as representative of streamflow patterns for their respective regions. Station locations are shown on index maps.

Hydrologic unit is a geographic area representing part or all of a surface drainage basin or distinct hydrologic feature as defined by the former Office of Water Data Coordination and delineated on the State Hydrologic Unit Maps by the USGS. Each hydrologic unit is identified by an 8-digit number.

Inch (IN., in.), in reference to streamflow, as used in this report, refers to the depth to which the drainage area would be covered with water if all of the runoff for a given time period were distributed uniformly on it. (See also “Annual runoff”)

Instantaneous discharge is the discharge at a particular instant of time. (See also “Discharge”)

International Boundary Commission Survey Datum refers to a geodetic datum established at numerous monuments along the United States-Canada boundary by the International Boundary Commission.

Island, as used in this report, is a mid-channel bar that has permanent woody vegetation, is flooded once a year, on average, and remains stable except during large flood events.

Laboratory reporting level (LRL) generally is equal to twice the yearly determined long-term method detection level (LT-MDL). The LRL controls false negative error. The probability of falsely reporting a nondetection for a sample that contained an analyte at a concentration equal to or greater than the LRL is predicted to be less than or equal to 1 percent. The value of the LRL will be reported with a “less than” (<) remark code for samples in which the analyte was not detected. The National Water Quality Laboratory (NWQL) collects quality-control data from selected analytical methods on a continuing basis to determine LT-MDLs and to establish LRLs. These values are reevaluated annually on the basis of the most current

quality-control data and, therefore, may change. The LRL replaces the term ‘non-detection value’ (NDV).

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

Latent heat flux (often used interchangeably with latent heat-flux density) is the amount of heat energy that converts water from liquid to vapor (evaporation) or from vapor to liquid (condensation) across a specified cross-sectional area per unit time. Usually expressed in watts per square meter.

Light-attenuation coefficient, also known as the extinction coefficient, is a measure of water clarity. Light is attenuated according to the Lambert-Beer equation:

$$I = I_o e^{-\lambda L},$$

where I_o is the source light intensity, I is the light intensity at length L (in meters) from the source, λ is the light-attenuation coefficient, and e is the base of the natural logarithm. The light-attenuation coefficient is defined as

$$\lambda = -\frac{1}{L} \log_e \frac{I}{I_o}.$$

Lipid is any one of a family of compounds that are insoluble in water and that make up one of the principal components of living cells. Lipids include fats, oils, waxes, and steroids. Many environmental contaminants such as organochlorine pesticides are lipophilic.

Long-term method detection level (LT-MDL) is a detection level derived by determining the standard deviation of a minimum of 24 method detection limit (MDL) spike-sample measurements over an extended period of time. LT-MDL data are collected on a continuous basis to assess year-to-year variations in the LT-MDL. The LT-MDL controls false positive error. The chance of falsely reporting a concentration at or greater than the LT-MDL for a sample that did not contain the analyte is predicted to be less than or equal to 1 percent.

Low tide is the minimum height reached by each falling tide. The high-low and low-low tides are the higher and lower of the two low tides, respectively, of each tidal day. See NOAA Website: <http://www.csc.noaa.gov/text/glossary.html> (see ‘‘Low water’’)

Macrophytes are the macroscopic plants in the aquatic environment. The most common macrophytes are the rooted vascular plants that usually are arranged in zones in aquatic ecosystems and restricted in the area by the extent of illumination through the water and sediment deposition along the shoreline.

Mean concentration of suspended sediment (Daily mean suspended-sediment concentration) is the time-weighted concentration of suspended sediment passing a stream cross section during a given time period. (See also ‘‘Daily mean suspended-sediment concentration’’ and ‘‘Suspended-sediment concentration’’)

Mean discharge (MEAN) is the arithmetic mean of individual daily mean discharges during a specific period. (See also ‘‘Discharge’’)

Mean high or low tide is the average of all high or low tides, respectively, over a specific period.

Mean sea level is a local tidal datum. It is the arithmetic mean of hourly heights observed over the National Tidal Datum Epoch. Shorter series are specified in the name; for example, monthly mean sea level and yearly mean sea level. In order that they may be recovered when needed, such datums are referenced to fixed points known as benchmarks. (See also ‘‘Datum’’)

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

Megahertz is a unit of frequency. One megahertz equals one million cycles per second.

Membrane filter is a thin microporous material of specific pore size used to filter bacteria, algae, and other very small particles from water.

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.

Method code is a one-character code that identifies the analytical or field method used to determine a value stored in the National Water Information System (NWIS).

Method detection limit (MDL) is the minimum concentration of a substance that can be measured and reported with 99-percent confidence that the analyte concentration is greater than zero. It is determined from the analysis of a sample in a given matrix containing the analyte. At the MDL concentration, the risk of a false positive is predicted to be less than or equal to 1 percent.

Method of Cubatures is a method of computing discharge in tidal estuaries based on the conservation of mass equation.

Methylene blue active substances (MBAS) indicate the presence of detergents (anionic surfactants). The determination depends on the formation of a blue color when methylene blue dye reacts with synthetic anionic detergent compounds.

Micrograms per gram (UG/G, $\mu\text{g/g}$) 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 kilogram (UG/KG, $\mu\text{g/kg}$) is a unit expressing the concentration of a chemical constituent as the mass (micrograms) of the constituent per unit mass (kilogram) of the material analyzed. One microgram per kilogram is equivalent to 1 part per billion.

Micrograms per liter (UG/L, $\mu\text{g/L}$) is a unit expressing the concentration of chemical constituents in water as mass (micrograms) of constituent per unit volume (liter) of water. One thousand micrograms per liter is equivalent to 1 milligram per liter. One microgram per liter is equivalent to 1 part per billion.

Microsiemens per centimeter (US/CM, $\mu\text{S/cm}$) is a unit expressing the amount of electrical conductivity of a solution as measured between opposite faces of a centimeter cube of solution at a specified temperature. Siemens is the International System of Units nomenclature. It is synonymous with mhos and is the reciprocal of resistance in ohms.

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

Minimum reporting level (MRL) is the smallest measured concentration of a constituent that may be reliably reported by using a given analytical method.

Miscellaneous site, miscellaneous station, or miscellaneous sampling site is a site where streamflow, sediment, and/or water-quality data or water-quality or sediment samples are collected once, or more often on a random or discontinuous basis to provide better areal coverage for defining hydrologic and water-quality conditions over a broad area in a river basin.

Most probable number (MPN) is an index of the number of coliform bacteria that, more probably than any other number, would give the results shown by the laboratory examination; it is not an actual enumeration. MPN is determined from the distribution of gas-positive cultures among multiple inoculated tubes.

Multiple-plate samplers are artificial substrates of known surface area used for obtaining benthic invertebrate samples. They consist of a series of spaced, hardboard plates on an eyebolt.

Nanograms per liter (NG/L, ng/L) is a unit expressing the concentration of chemical constituents in solution as mass (nanograms) of solute per unit volume (liter) of water. One million nanograms per liter is equivalent to 1 milligram per liter.

National Geodetic Vertical Datum of 1929 (NGVD 29) is a fixed reference adopted as a standard geodetic datum for elevations determined by leveling. It formerly was called "Sea Level Datum of 1929" or "mean sea level." Although the datum was derived from the mean sea level at 26 tide stations, it does not necessarily represent local mean sea level at any particular place. *See NOAA Web site: <http://www.ngs.noaa.gov/faq.shtml#WhatVD29VD88>* (See "North American Vertical Datum of 1988")

Natural substrate refers to any naturally occurring immersed or submersed solid surface, such as a rock or tree, upon which an organism lives. (See also "Substrate")

Nekton are the consumers in the aquatic environment and consist of large, free-swimming organisms that are capable of sustained, directed mobility.

Nonfilterable refers to the portion of the total residue retained by a filter.

North American Datum of 1927 (NAD 27) is the horizontal control datum for the United States that was defined by a location and azimuth on the Clarke spheroid of 1866.

North American Datum of 1983 (NAD 83) is the horizontal control datum for the United States, Canada, Mexico, and Central America that is based on the adjustment of 250,000 points including 600 satellite Doppler stations that constrain the system to a geocentric origin. NAD 83 has been officially adopted as the legal horizontal datum for the United States by the Federal government.

North American Vertical Datum of 1988 (NAVD 88) is a fixed reference adopted as the official civilian vertical datum for elevations determined by Federal surveying and mapping activities in the United States. This datum was established in 1991 by minimum-constraint adjustment of the Canadian, Mexican, and United States first-order terrestrial leveling networks.

Open or screened interval is the length of unscreened opening or of well screen through which water enters a well, in feet below land surface.

Organic carbon (OC) is a measure of organic matter present in aqueous solution, suspension, or bottom sediment. May be reported as dissolved organic carbon (DOC), particulate organic carbon (POC), or total organic carbon (TOC).

Organic mass or volatile mass of a living substance is the difference between the dry mass and ash mass and represents the actual mass of the living matter. Organic mass is expressed in the same units as for ash mass and dry mass. (See also “Ash mass,” “Biomass,” and “Dry mass”)

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 (m²), 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.

Organochlorine compounds are any chemicals that contain carbon and chlorine. Organochlorine compounds that are important in investigations of water, sediment, and biological quality include certain pesticides and industrial compounds.

Parameter code is a 5-digit number used in the USGS computerized data system, National Water Information System (NWIS), to uniquely identify a specific constituent or property.

Partial-record station is a site where discrete measurements of one or more hydrologic parameters are obtained over a period of time without continuous data being recorded or computed. A common example is a crest-stage gage partial-record station at which only peak stages and flows are recorded.

Particle size is the diameter, in millimeters (mm), of a particle determined by sieve or sedimentation methods. The sedimentation method uses the principle of Stokes Law to calculate sediment particle sizes. Sedimentation methods (pipet, bottom-withdrawal tube, visual-accumulation tube, sedimentograph) 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, as used in this report, agrees with the recommendation made by the American Geophys-

ical Union Subcommittee on Sediment Terminology. The classification is as follows:

Classification	Size (mm)	Method of analysis
Clay	>0.00024 - 0.004	Sedimentation
Silt	>0.004 - 0.062	Sedimentation
Sand	>0.062 - 2.0	Sedimentation/sieve
Gravel	>2.0 - 64.0	Sieve
Cobble	>64 - 256	Manual measurement
Boulder	>256	Manual measurement

The particle-size distributions given in this report are not necessarily representative of all particles in transport in the stream. For the sedimentation method, 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.

Peak flow (peak stage) is an instantaneous local maximum value in the continuous time series of streamflows or stages, preceded by a period of increasing values and followed by a period of decreasing values. Several peak values ordinarily occur in a year. The maximum peak value in a year is called the annual peak; peaks lower than the annual peak are called secondary peaks. Occasionally, the annual peak may not be the maximum value for the year; in such cases, the maximum value occurs at midnight at the beginning or end of the year, on the recession from or rise toward a higher peak in the adjoining year. If values are recorded at a discrete series of times, the peak recorded value may be taken as an approximation of the true peak, which may occur between the recording instants. If the values are recorded with finite precision, a sequence of equal recorded values may occur at the peak; in this case, the first value is taken as the peak.

Percent composition or percent of total 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, weight, mass, or volume.

Percent shading is a measure of the amount of sunlight potentially reaching the stream. A clinometer is used to measure left and right bank canopy angles. These values are added together, divided by 180, and multiplied by 100 to compute percentage of shade.

Periodic-record station is a site where stage, discharge, sediment, chemical, physical, or other hydrologic measurements are made one or more times during a year but at a frequency insufficient to develop a daily record.

Periphyton is the assemblage of microorganisms attached to and living upon submerged solid surfaces. Although primarily consisting of algae, they also include bacteria,

fungi, protozoa, rotifers, and other small organisms. Periphyton are useful indicators of water quality.

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

pH of water is the negative logarithm of the hydrogen-ion activity. Solutions with pH less than 7.0 standard units are termed “acidic,” and solutions with a pH greater than 7.0 are termed “basic.” Solutions with a pH of 7.0 are neutral. The presence and concentration of many dissolved chemical constituents found in water are affected, in part, by the hydrogen-ion activity of water. Biological processes including growth, distribution of organisms, and toxicity of the water to organisms also are affected, in part, by the hydrogen-ion activity of water.

Phytoplankton is the plant part of the plankton. They usually are 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 commonly are known as algae. (See also “Plankton”)

Picocurie (PC, pCi) is one-trillionth (1×10^{-12}) of the amount of radioactive nuclide represented by a curie (Ci). A curie is the quantity of radioactive nuclide that yields 3.7×10^{10} radioactive disintegrations per second (dps). A picocurie yields 0.037 dps, or 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. Concentrations are expressed as a number of cells per milliliter (cells/mL) of sample.

Polychlorinated biphenyls (PCBs) are industrial chemicals that are mixtures of chlorinated biphenyl compounds having various percentages of chlorine. They are similar in structure to organochlorine insecticides.

Polychlorinated naphthalenes (PCNs) are industrial chemicals that are mixtures of chlorinated naphthalene compounds. They have properties and applications similar to polychlorinated biphenyls (PCBs) and have been identified in commercial PCB preparations.

Pool, as used in this report, is a small part of a stream reach with little velocity, commonly with water deeper than surrounding areas.

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 (carbon method) by the plants.

Primary productivity (carbon method) is expressed as milligrams of carbon per area per unit time [$\text{mg C}/(\text{m}^2/\text{time})$] for periphyton and macrophytes or per volume [$\text{mg C}/(\text{m}^3/\text{time})$] for phytoplankton. The carbon method defines 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 with unenriched water samples. Unit time may be either the hour or day, depending on the incubation period. (See also “Primary productivity”)

Primary productivity (oxygen method) is expressed as milligrams of oxygen per area per unit time [$\text{mg O}/(\text{m}^2/\text{time})$] for periphyton and macrophytes or per volume [$\text{mg O}/(\text{m}^3/\text{time})$] for phytoplankton. The oxygen method defines 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. (See also “Primary productivity”)

Radioisotopes are isotopic forms of elements that exhibit radioactivity. Isotopes are varieties of a chemical element that differ in atomic weight but are very nearly alike in chemical properties. The difference arises because the atoms of the isotopic forms of an element differ in the number of neutrons in the nucleus; for example, ordinary chlorine is a mixture of isotopes having atomic weights of 35 and 37, and the natural mixture has an atomic weight of about 35.453. Many of the elements similarly exist as mixtures of isotopes, and a great many new isotopes have been produced in the operation of nuclear devices such as the cyclotron. There are 275 isotopes of the 81 stable elements, in addition to more than 800 radioactive isotopes.

Reach, as used in this report, is a length of stream that is chosen to represent a uniform set of physical, chemical, and biological conditions within a segment. It is the principal sampling unit for collecting physical, chemical, and biological data.

Recoverable is the amount of a given constituent that is in solution after a representative water sample has been extracted or digested. Complete recovery is not achieved by the extraction or digestion and thus the determination represents something less than 95 percent of the constituent present in the sample. To achieve comparability of ana-

lytical data, equivalent extraction or digestion procedures are required of all laboratories performing such analyses because different procedures are likely to produce different analytical results. (See also “Bed material”)

Recurrence interval, also referred to as return period, is the average time, usually expressed in years, between occurrences of hydrologic events of a specified type (such as exceedances of a specified high flow or nonexceedance of a specified low flow). The terms “return period” and “recurrence interval” do not imply regular cyclic occurrence. The actual times between occurrences vary randomly, with most of the times being less than the average and a few being substantially greater than the average. For example, the 100-year flood is the flow rate that is exceeded by the annual maximum peak flow at intervals whose average length is 100 years (that is, once in 100 years, on average); almost two-thirds of all exceedances of the 100-year flood occur less than 100 years after the previous exceedance, half occur less than 70 years after the previous exceedance, and about one-eighth occur more than 200 years after the previous exceedance. Similarly, the 7-day, 10-year low flow ($7Q_{10}$) is the flow rate below which the annual minimum 7-day-mean flow dips at intervals whose average length is 10 years (that is, once in 10 years, on average); almost two-thirds of the nonexceedances of the $7Q_{10}$ occur less than 10 years after the previous nonexceedance, half occur less than 7 years after, and about one-eighth occur more than 20 years after the previous nonexceedance. The recurrence interval for annual events is the reciprocal of the annual probability of occurrence. Thus, the 100-year flood has a 1-percent chance of being exceeded by the maximum peak flow in any year, and there is a 10-percent chance in any year that the annual minimum 7-day-mean flow will be less than the $7Q_{10}$.

Replicate samples are a group of samples collected in a manner such that the samples are thought to be essentially identical in composition.

Return period (See “Recurrence interval”)

Riffle, as used in this report, is a shallow part of the stream where water flows swiftly over completely or partially submerged obstructions to produce surface agitation.

River mileage is the curvilinear distance, in miles, measured upstream from the mouth along the meandering path of a stream channel in accordance with Bulletin No. 14 (October 1968) of the Water Resources Council and typically is used to denote location along a river.

Run, as used in this report, is a relatively shallow part of a stream with moderate velocity and little or no surface turbulence.

Runoff is the quantity of water that is discharged (“runs off”) from a drainage basin during a given time period. Runoff data may be presented as volumes in acre-feet, as mean discharges per unit of drainage area in cubic feet per second per square mile, or as depths of water on the drainage basin in inches. (See also “Annual runoff”)

Salinity is the total quantity of dissolved salts, measured by weight in parts per thousand. Values in this report are calculated from specific conductance and temperature. Seawater has an average salinity of about 35 parts per thousand (for additional information, refer to: Miller, R.L., Bradford, W.L., and Peters, N.E., 1988, Specific conductance: theoretical considerations and application to analytical quality control: U.S. Geological Survey Water-Supply Paper 2311, 16 p.)

Sea level, as used in this report, refers to one of the two commonly used national vertical datums (NGVD 1929 or NAVD 1988). See separate entries for definitions of these datums.

Sediment is solid material that originates mostly from disintegrated rocks; when transported by, suspended in, or deposited from water, it is referred to as “fluvial sediment.” Sediment 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 affected by environmental and land-use factors. Some major factors are topography, soil characteristics, land cover, and depth and intensity of precipitation.

Sensible heat flux (often used interchangeably with latent sensible heat-flux density) is the amount of heat energy that moves by turbulent transport through the air across a specified cross-sectional area per unit time and goes to heating (cooling) the air. Usually expressed in watts per square meter.

Seven-day, 10-year low flow ($7Q_{10}$) is the discharge below which the annual 7-day minimum flow falls in 1 year out of 10 on the long-term average. The recurrence interval of the $7Q_{10}$ is 10 years; the chance that the annual 7-day minimum flow will be less than the $7Q_{10}$ is 10 percent in any given year. (See also “Annual 7-day minimum” and “Recurrence interval”)

Shelves, as used in this report, are streambank features extending nearly horizontally from the flood plain to the lower limit of persistent woody vegetation.

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. Sodium hazard in water is an index that can be used to evaluate the suitability of water for irrigating crops.

Soil heat flux (often used interchangeably with soil heat-flux density) is the amount of heat energy that moves by conduction across a specified cross-sectional area of soil per unit time and goes to heating (or cooling) the soil. Usually expressed in watts per square meter.

Soil-water content is the water lost from the soil upon drying to constant mass at 105 °C; expressed either as mass of water per unit mass of dry soil or as the volume of water per unit bulk volume of soil.

Specific electrical conductance (conductivity) is a measure of the capacity of water (or other media) to conduct an electrical current. It is expressed in microsiemens per centimeter at 25 °C. Specific electrical conductance is a function of the types and quantity of dissolved substances in water and can be used for approximating the dissolved-solids content of the water. Commonly, the concentration of dissolved solids (in milligrams per liter) is from 55 to 75 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.

Stable isotope ratio (per MIL) is a unit expressing the ratio of the abundance of two radioactive isotopes. Isotope ratios are used in hydrologic studies to determine the age or source of specific water, to evaluate mixing of different water, as an aid in determining reaction rates, and other chemical or hydrologic processes.

Stage (See “Gage height”)

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

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.

Substrate embeddedness class is a visual estimate of riffle streambed substrate larger than gravel that is surrounded or covered by fine sediment (<2 mm, sand or finer). Below are the class categories expressed as the percentage covered by fine sediment:

0	no gravel or larger substrate	3	26-50 percent
1	> 75 percent	4	5-25 percent
2	51-75 percent	5	< 5 percent

Surface area of a lake is that area (acres) encompassed by the boundary of the lake as shown on USGS topographic maps, or other available maps or photographs. Because surface area changes with lake stage, surface areas listed in this report represent those determined for the stage at the time the maps or photographs were obtained.

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

Surrogate is an analyte that behaves similarly to a target analyte, but that is highly unlikely to occur in a sample. A surrogate is added to a sample in known amounts before extraction and is measured with the same laboratory procedures used to measure the target analyte. Its purpose is to monitor method performance for an individual sample.

Suspended is the amount (concentration) of undissolved material in a water-sediment mixture. Most commonly refers to that 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-micrometer filter has been extracted or digested. Complete recovery is not achieved by the extraction or digestion procedures and thus the determination represents less than 95 percent of the constituent present in the sample. To achieve comparability of analytical data, equivalent extraction or digestion procedures are required of all laboratories performing such analyses because different procedures are likely to produce different analytical results. (See also “Suspended”)

Suspended sediment is sediment carried in suspension by the turbulent components of the fluid or by the Brownian movement (a law of physics). (See also “Sediment”)

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 foot above the bed) expressed as milligrams of dry sediment per liter of water-sediment mixture (mg/L). The analytical technique uses the mass of all of the sediment and the net weight of the water-sediment mixture in a sample to compute the suspended-sediment concentration. (See also “Sediment” and “Suspended sediment”)

Suspended-sediment discharge (tons/d) is the rate of sediment transport, as measured by dry mass or volume, that

passes a cross section in a given time. It is calculated in units of tons per day as follows: concentration (mg/L) x discharge (ft³/s) x 0.0027. (See also “Sediment,” “Suspended sediment,” and “Suspended-sediment concentration”)

Suspended-sediment load is a general term that refers to a given characteristic of the material in suspension that passes a point during a specified period of time. The term needs to be qualified, such as “annual suspended-sediment load” or “sand-size suspended-sediment load,” and so on. It is not synonymous with either suspended-sediment discharge or concentration. (See also “Sediment”)

Suspended solids, total residue at 105 °C concentration is the concentration of inorganic and organic material retained on a filter, expressed as milligrams of dry material per liter of water (mg/L). An aliquot of the sample is used for this analysis.

Suspended, total is the total amount of a given constituent in the part of a water-sediment sample that is retained on a 0.45-micrometer membrane filter. This term is used only when the analytical procedure assures measurement of at least 95 percent of the constituent determined. 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 directly analyzing portions of the suspended material collected on the filter or, more commonly, by difference, on the basis of determinations of (1) dissolved and (2) total concentrations of the constituent. (See also “Suspended”)

Synoptic studies are short-term investigations of specific water-quality conditions during selected seasonal or hydrologic periods to provide improved spatial resolution for critical water-quality conditions. For the period and conditions sampled, they assess the spatial distribution of selected water-quality conditions in relation to causative factors, such as land use and contaminant sources.

Taxa (Species) richness is the number of species (taxa) present in a defined area or sampling unit.

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

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

Thalweg is the line formed by connecting points of minimum streambed elevation (deepest part of the channel).

Thermograph is an instrument that continuously records variations of temperature on a chart. The more general term “temperature recorder” is used in the table descriptions 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 resulting from the mixing of flow proportionally to the duration of the concentration.

Tons per acre-foot (T/acre-ft) is the dry mass (tons) of a constituent per unit volume (acre-foot) of water. It is computed by multiplying the concentration of the constituent, in milligrams per liter, by 0.00136.

Tons per day (T/DAY, tons/d) is a common chemical or sediment discharge unit. It is the quantity of a substance in solution, in suspension, or as bedload that passes a stream section during a 24-hour period. It is equivalent to 2,000 pounds per day, or 0.9072 metric ton per day.

Total is the amount of a given constituent in a representative whole-water (unfiltered) 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 at least 95 percent of the constituent in the sample.)

Total coliform bacteria are a particular group of bacteria that are used as indicators of possible sewage pollution. This group includes coliforms that inhabit the intestine of warmblooded animals and those that inhabit soils. They are characterized as aerobic or facultative anaerobic, gram-

negative, nonspore-forming, rod-shaped bacteria that 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 milliliters of sample. (See also “Bacteria”)

Total discharge is the quantity of a given constituent, measured as dry mass or volume, that passes a stream cross section per unit of time. When referring to constituents other than water, this term needs to be qualified, such as “total sediment discharge,” “total chloride discharge,” and so on.

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

Total length (fish) is the straight-line distance from the anterior point of a fish specimen’s snout, with the mouth closed, to the posterior end of the caudal (tail) fin, with the lobes of the caudal fin squeezed together.

Total load refers to all of a constituent in transport. When referring to sediment, it includes suspended load plus bed load.

Total organism count is the number of organisms collected and enumerated in any particular sample. (See also “Organism count/volume”)

Total recoverable is the amount of a given constituent in a whole-water sample after a 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 for whole-water samples, equivalent digestion procedures are required of all laboratories performing such analyses because different digestion procedures may produce different analytical results.

Total sediment discharge is the mass of suspended-sediment plus bed-load transport, measured as dry weight, that passes a cross section in a given time. It is a rate and is reported as tons per day. (See also “Bedload,” “Bedload

discharge,” “Sediment,” “Suspended sediment,” and “Suspended-sediment concentration”)

Total sediment load or total load is the sediment in transport as bedload and suspended-sediment load. The term may be qualified, such as “annual suspended-sediment load” or “sand-size suspended-sediment load,” and so on. It differs from total sediment discharge in that load refers to the material, whereas discharge refers to the quantity of material, expressed in units of mass per unit time. (See also “Sediment,” “Suspended-sediment load,” and “Total load”)

Transect, as used in this report, is a line across a stream perpendicular to the flow and along which measurements are taken, so that morphological and flow characteristics along the line are described from bank to bank. Unlike a cross section, no attempt is made to determine known elevation points along the line.

Turbidity is an expression of the optical properties of a liquid that causes light rays to be scattered and absorbed rather than transmitted in straight lines through water. Turbidity, which can make water appear cloudy or muddy, is caused by the presence of suspended and dissolved matter, such as clay, silt, finely divided organic matter, plankton and other microscopic organisms, organic acids, and dyes (ASTM International, 2003, D1889–00 Standard test method for turbidity of water, *in* ASTM International, Annual Book of ASTM Standards, Water and Environmental Technology, v. 11.01: West Conshohocken, Pennsylvania, 6 p.). The color of water, whether resulting from dissolved compounds or suspended particles, can affect a turbidity measurement. To ensure that USGS turbidity data can be understood and interpreted properly within the context of the instrument used and site conditions encountered, data from each instrument type are stored and reported in the National Water Information System (NWIS) using parameter codes and measurement reporting units that are specific to the instrument type, with specific instruments designated by the method code. The respective measurement units, many of which also are in use internationally, fall into two categories: (1) the designations NTU, NTRU, BU, AU, and NTMU signify the use of a broad spectrum incident light in the wavelength range of 400-680 nanometers (nm), but having different light detection configurations; (2) The designations FNU, FNRU, FBU, FAU, and FNMU generally signify an incident light in the range between 780-900 nm, also with varying light detection configurations. These reporting units are equivalent when measuring a calibration solution (for example, formazin or polymer beads), but their respective instruments may not produce equivalent results for environmental samples. Specific reporting units are as follows:

NTU (Nephelometric Turbidity Units): white or broad-band [400-680 nm] light source, 90 degree detection angle, one detector.

NTRU (Nephelometric Turbidity Ratio Units): white or broadband [400-680 nm] light source, 90 degree detection angle, multiple detectors with ratio compensation.

BU (Backscatter Units): white or broadband [400-680 nm] light source, 30 ± 15 degree detection angle (backscatter).

AU (Attenuation Units): white or broadband [400-680 nm] light source, 180 degree detection angle (attenuation).

NTMU (Nephelometric Turbidity Multibeam Units): white or broadband [400-680 nm] light source, multiple light sources, detectors at 90 degrees and possibly other angles to each beam.

FNU (Formazin Nephelometric Units): near infrared [780-900 nm] or monochrome light source, 90 degree detection angle, one detector.

FNRU (Formazin Nephelometric Ratio Units): near infrared [780-900 nm] or monochrome light source, 90 degree detection angle, multiple detectors, ratio compensation.

FBU (Formazin Backscatter Units): near infrared [780-900 nm] or monochrome light source, 30 ± 15 degree detection angle.

FAU (Formazin Attenuation Units): near infrared [780-900 nm] light source, 180 degree detection angle.

FNMU (Formazin Nephelometric Multibeam Units): near infrared [780-900 nm] or monochrome light source, multiple light sources, detectors at 90 degrees and possibly other angles to each beam.

For more information please see http://water.usgs.gov/owq/FieldManual/Chapter6/6.7_contents.html.

Ultraviolet (UV) absorbance (absorption) at 254 or 280 nanometers is a measure of the aggregate concentration of the mixture of UV absorbing organic materials dissolved in the analyzed water, such as lignin, tannin, humic substances, and various aromatic compounds. UV absorbance (absorption) at 254 or 280 nanometers is measured in UV absorption units per centimeter of path length of UV light through a sample.

Unconfined aquifer is an aquifer whose upper surface is a water table free to fluctuate under atmospheric pressure. (See “Water-table aquifer”)

Unfiltered pertains to the constituents in an unfiltered, representative water-suspended sediment sample.

Unfiltered, recoverable is the amount of a given constituent in a representative water-suspended sediment sample that has been extracted or digested. Complete recovery is not achieved by the extraction or digestion treatment and thus the determination represents less than 95 percent of the

constituent present in the sample. To achieve comparability of analytical data, equivalent extraction or digestion procedures are required of all laboratories performing such analyses because different procedures are likely to produce different analytical results.

Vertical datum (See “Datum”)

Volatile organic compounds (VOCs) are organic compounds that can be isolated from the water phase of a sample by purging the water sample with inert gas, such as helium, and, subsequently, analyzed by gas chromatography. Many VOCs are human-made chemicals that are used and produced in the manufacture of paints, adhesives, petroleum products, pharmaceuticals, and refrigerants. They often are components of fuels, solvents, hydraulic fluids, paint thinners, and dry-cleaning agents commonly used in urban settings. VOC contamination of drinking-water supplies is a human-health concern because many are toxic and are known or suspected human carcinogens.

Water table is that surface in a ground-water body at which the water pressure is equal to the atmospheric pressure.

Water-table aquifer is an unconfined aquifer within which the water table is found.

Water year in USGS 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, 2002, is called the “2002 water year.”

Watershed (See “Drainage basin”)

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.

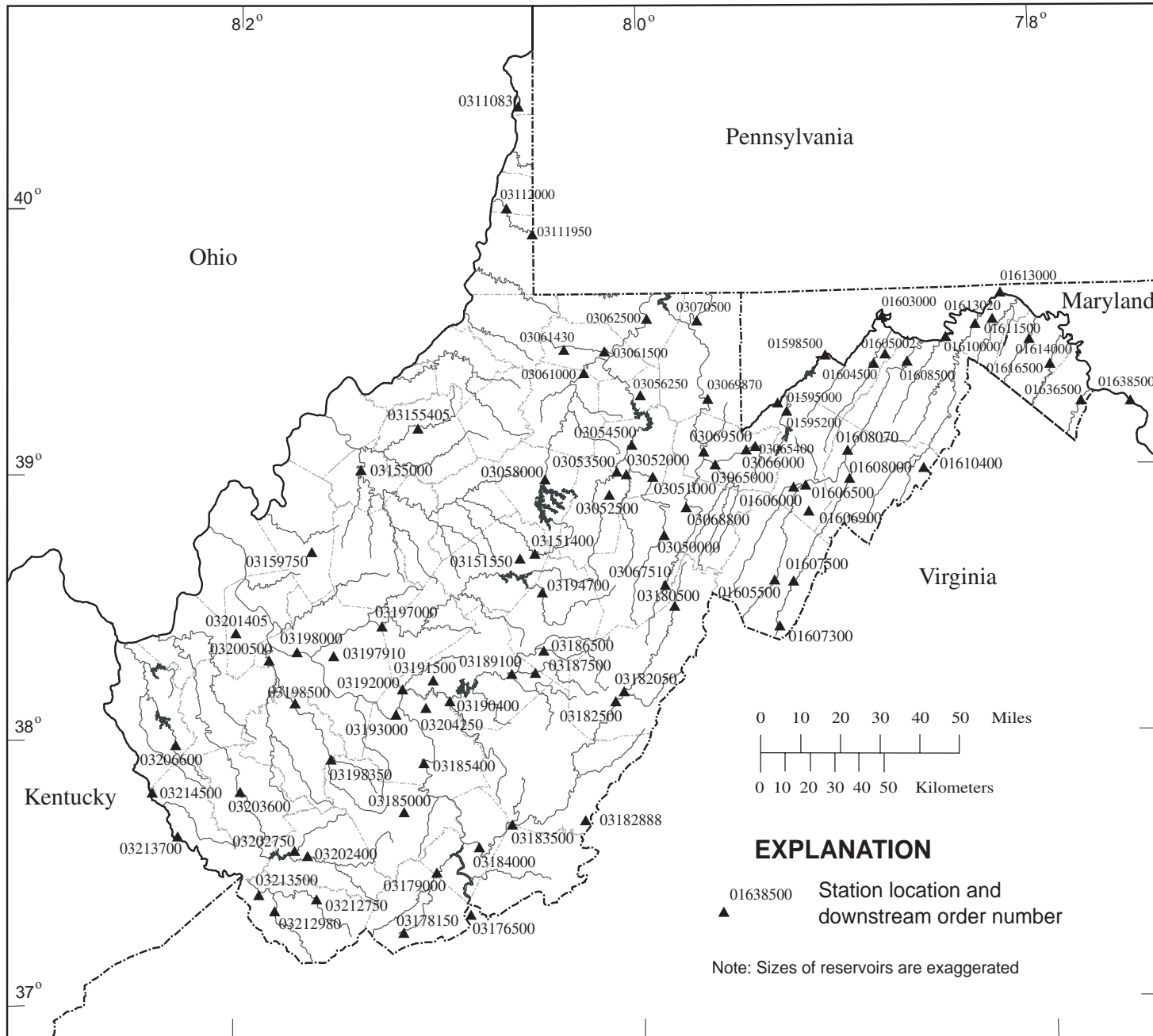
Wet mass is the mass of living matter plus contained water. (See also “Biomass” and “Dry mass”)

Wet weight refers to the weight of animal tissue or other substance including its contained water. (See also “Dry weight”)

WSP is used as an acronym for “Water-Supply Paper” in reference to previously published reports.

Zooplankton is the animal part of the plankton. Zooplankton are capable of extensive movements within the water column and often are 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. (See also “Plankton”)

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



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

Remark Codes

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

<u>PRINTED OUTPUT</u>	<u>REMARK</u>
E	Value is estimated.
>	Actual value is known to be greater than the value shown.
<	Actual value is known to be less than the value shown.
M	Presence of material verified, but not quantified.
N	Presumptive evidence of presence of material.
U	Material specifically analyzed for, but not detected.
A	Value is an average.
V	Analyte was detected in both the environmental sample and the associated blanks.
S	Most probable value.

Water-Quality Control Data

NOTE.--See information related to quality-control data beginning on page 24.

01595200 STONY RIVER NEAR MOUNT STORM, WV

LOCATION.--Lat 39°16'10", long 79°15'45", NAD 27, 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.--48.7 mi².

WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WDR WV-97-1: Drainage area.

GAGE.--Water-stage recorder with satellite telemeter. Datum of gage is 2,554.54 ft above NGVD 29.

REMARKS.--Water-discharge records good except those for periods of estimated daily discharges (ice effect, no gage-height record), which are poor. Flow regulated by Stony River Reservoir, 14.0 mi upstream from station until use of reservoir discontinued June 1987. Regulation since 1963 by Virginia Electric and Power Company dam (Mount Storm Lake), 4.0 mi upstream from station.

PEAK DISCHARGE FOR CURRENT YEAR.--Maximum discharge, 1,680 ft³/s, Mar. 29, gage height, 6.65 ft..

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	68	125	283	84	e20	e31	344	e250	21	11	9.8	14
2	57	93	274	88	e20	e30	426	e180	22	12	8.1	9.7
3	56	117	203	86	19	e34	425	138	24	11	8.3	7.5
4	42	254	157	123	19	e32	e400	101	20	25	7.8	5.6
5	22	335	100	240	19	e30	e280	80	19	63	6.6	4.7
6	21	234	39	322	20	69	222	71	20	25	5.4	5.1
7	20	156	53	252	29	e170	174	60	35	20	83	7.9
8	18	126	76	224	49	e250	153	57	34	347	77	8.1
9	17	75	98	190	161	e190	129	56	68	285	139	7.7
10	17	35	158	122	308	e160	128	54	61	160	88	7.1
11	19	33	188	112	232	122	126	64	58	90	30	3.9
12	20	68	181	215	147	111	126	77	37	56	22	3.0
13	17	76	161	188	117	101	85	77	21	22	18	6.4
14	17	96	138	234	186	93	e32	55	18	17	16	6.9
15	17	90	119	202	133	67	e29	53	20	16	13	5.9
16	18	76	101	170	149	31	e29	53	20	87	13	5.9
17	21	66	84	108	137	33	e45	39	23	64	12	3.3
18	15	81	76	61	135	36	44	25	20	50	12	2.7
19	23	86	72	52	111	64	23	28	20	82	11	2.5
20	41	89	52	e45	101	115	21	294	16	66	10	4.0
21	154	84	29	e38	116	123	25	323	14	53	39	6.7
22	92	82	34	e34	148	133	63	241	14	39	13	5.7
23	94	77	84	e26	147	375	115	158	13	33	11	5.5
24	110	88	77	e28	148	497	84	175	11	28	10	3.3
25	116	135	66	e31	124	417	69	221	9.7	27	9.5	2.5
26	100	138	69	e27	103	304	83	189	9.0	23	8.7	2.5
27	79	122	83	e25	66	244	69	137	8.1	15	12	6.2
28	72	146	77	e21	33	667	e130	113	50	15	33	6.6
29	115	147	67	e23	---	1,210	e240	95	95	13	13	7.0
30	264	135	71	e22	---	480	e370	56	23	12	10	5.6
31	189	---	78	e21	---	363	---	24	---	11	14	---
TOTAL	1,931	3,465	3,348	3,414	2,997	6,582	4,489	3,544	823.8	1,778	763.2	173.5
MEAN	62.3	116	108	110	107	212	150	114	27.5	57.4	24.6	5.78
MAX	264	335	283	322	308	1,210	426	323	95	347	139	14
MIN	15	33	29	21	19	30	21	24	8.1	11	5.4	2.5

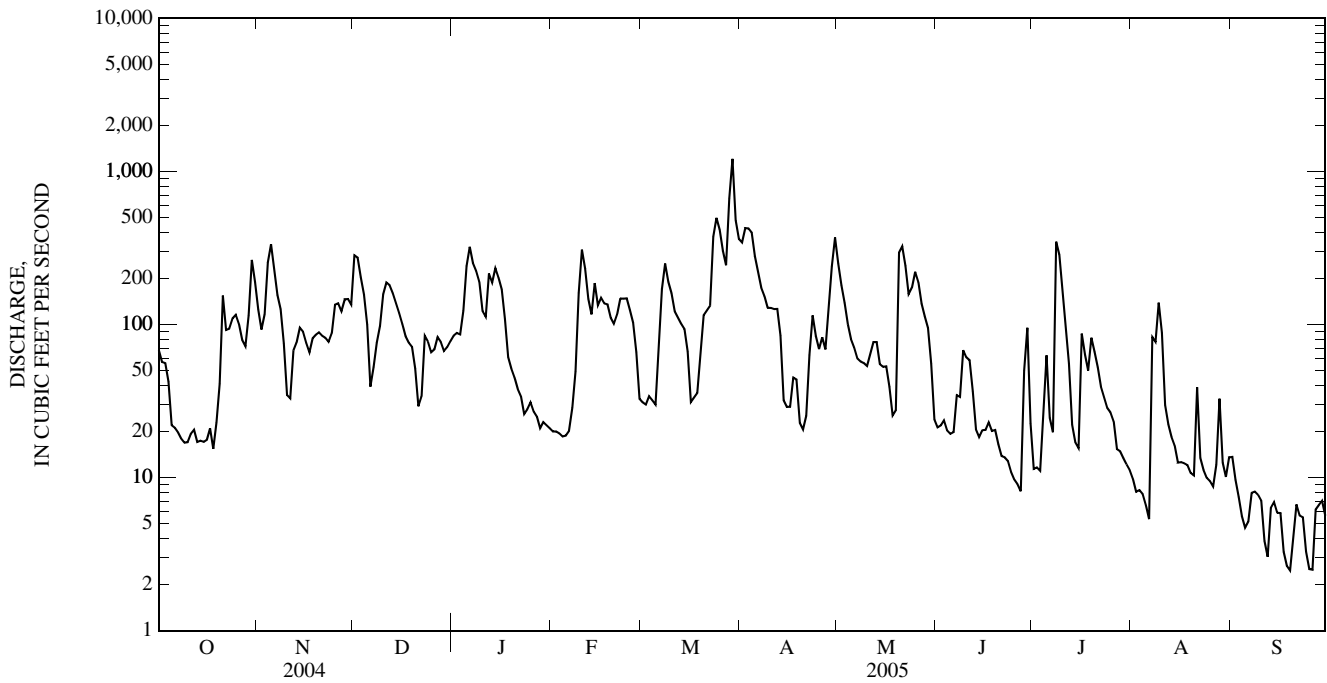
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1962 - 2005, BY WATER YEAR (WY)

MEAN	45.6	86.9	105	112	140	221	160	122	69.4	48.2	35.4	42.8
MAX	234	669	301	267	361	537	371	271	237	205	200	314
(WY)	(1977)	(1986)	(1973)	(1996)	(1994)	(1963)	(1987)	(1988)	(1981)	(1978)	(1996)	(1996)
MIN	3.36	5.53	8.36	20.9	21.3	46.9	51.8	28.3	9.91	4.36	3.28	3.89
(WY)	(1992)	(1999)	(1999)	(1981)	(1978)	(1990)	(1995)	(1964)	(1964)	(1968)	(1999)	(1985)

01595200 STONY RIVER NEAR MOUNT STORM, WV—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1962 - 2005	
ANNUAL TOTAL	43,486.7		33,308.5		98.8	
ANNUAL MEAN	119		91.3		166	
HIGHEST ANNUAL MEAN					42.0	1964
LOWEST ANNUAL MEAN					9,880	Nov 5, 1985
HIGHEST DAILY MEAN	950	Mar 4	1,210	Mar 29	1.3	Aug 28, 1988
LOWEST DAILY MEAN	6.7	Sep 5	2.5	(a)	1.7	Aug 28, 1988
ANNUAL SEVEN-DAY MINIMUM	8.4	Sep 1	4.3	Sep 19	(b)14,000	Nov 5, 1985
MAXIMUM PEAK FLOW			1,680	Mar 29	(c)16.41	Nov 5, 1985
MAXIMUM PEAK STAGE			6.65	Mar 29	1.3	(f)
INSTANTANEOUS LOW FLOW			2.4	(d)		
10 PERCENT EXCEEDS	275		223		232	
50 PERCENT EXCEEDS	80		61		49	
90 PERCENT EXCEEDS	16		9.3		8.4	

- a Sept. 19, 25, 26.
- b From rating curve extended above 7,500 ft³/s on basis of slope-area measurement of peak flow.
- c From floodmarks.
- d Sept. 19, 20, 25, 26.
- e Estimated.
- f Aug. 22, 23, 28, 29, 1988.



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 September 1995, October 1996 to current year.

INSTRUMENTATION.--Temperature recorder (continuous ethyl alcohol-actuated thermograph) December 1961 to October 2001. Satellite telemetry installed Oct. 22, 2001.

REMARKS.--Upstream reservoir regulation defined on the discharge manuscript. No temperature record Mar. 7-10, Apr. 4, 5, 14-17, and Apr. 28 to May 2, due to equipment malfunction.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 31.3°C, Aug. 3, 2002, Aug. 14, 2003; minimum, -0.5°C, Jan. 16-20, 1999.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 27.6°C, July 9; minimum, -0.1°C, Dec. 20, 21.

TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19.9	16.0	11.4	10.1	3.0	2.8	13.9	---	18.2	25.2	24.2	21.0
2	19.6	17.4	12.7	10.6	1.9	1.2	11.8	---	15.3	25.2	25.1	21.7
3	18.9	16.4	11.5	11.7	2.9	1.7	9.5	13.4	14.5	23.0	25.8	20.8
4	18.1	13.9	10.3	12.4	4.2	3.3	---	14.8	18.6	24.4	26.1	19.8
5	15.8	14.6	10.3	12.5	3.4	5.5	---	15.5	22.0	22.6	24.0	19.1
6	13.4	15.1	7.2	13.5	3.8	7.0	14.8	14.9	22.8	23.7	23.3	19.7
7	13.9	15.0	8.7	11.7	4.9	---	13.6	13.7	22.4	21.0	23.7	19.3
8	14.5	13.9	8.3	11.2	3.8	---	13.1	16.8	21.4	25.7	19.2	19.3
9	15.0	10.4	8.9	11.3	7.5	---	14.7	18.3	20.4	27.6	20.7	20.1
10	15.3	7.6	11.1	10.1	8.8	---	16.4	19.6	21.4	27.2	24.0	20.4
11	13.4	9.0	11.0	10.1	8.0	6.1	16.4	20.2	20.5	26.2	23.3	20.1
12	12.6	8.4	9.8	12.3	7.9	5.9	13.1	17.8	23.0	25.9	24.4	20.3
13	11.9	7.1	9.4	13.9	8.3	6.9	14.1	19.3	23.1	24.4	25.4	20.4
14	12.8	9.1	6.9	13.1	7.5	7.1	---	20.3	24.7	22.7	24.1	18.5
15	12.5	10.2	5.9	10.0	7.3	6.8	---	19.4	21.7	23.3	23.8	20.7
16	10.5	9.8	6.7	9.5	9.3	5.4	---	16.4	19.6	21.6	22.3	21.4
17	9.1	10.9	6.3	7.1	6.5	6.6	---	18.2	18.9	21.2	23.9	22.1
18	9.3	12.9	6.7	1.3	5.7	7.2	15.5	18.9	18.9	22.4	22.0	19.8
19	10.8	13.8	6.1	1.1	5.8	6.8	16.7	17.2	18.0	21.4	22.0	20.2
20	10.6	14.1	2.2	2.0	6.5	6.3	18.3	16.4	18.4	24.0	24.5	18.7
21	13.1	13.6	1.8	2.6	7.8	7.9	14.8	21.0	20.7	23.9	22.5	20.2
22	13.5	13.6	3.8	2.9	10.2	10.4	14.2	20.5	20.4	22.8	21.5	19.9
23	14.0	13.2	5.7	1.7	8.5	8.3	14.0	19.4	22.8	23.7	20.2	20.0
24	15.0	12.9	2.8	2.1	7.1	9.6	10.8	16.4	23.2	21.9	21.0	18.9
25	16.8	12.5	2.4	3.4	7.7	10.6	9.4	16.9	24.4	23.8	20.6	20.9
26	16.6	10.9	3.5	4.6	6.3	10.1	12.8	20.8	25.2	25.1	18.2	19.4
27	15.6	11.2	2.9	2.6	6.0	10.2	12.0	20.4	25.2	25.4	17.6	19.2
28	14.7	10.2	4.6	2.0	3.8	9.0	---	18.1	21.9	22.0	21.0	18.0
29	15.9	11.8	5.5	4.3	---	11.5	---	19.0	26.7	22.3	19.3	16.9
30	18.7	12.4	7.4	5.7	---	13.5	---	16.7	27.0	24.0	19.8	14.7
31	18.1	---	9.0	5.3	---	14.1	---	18.4	---	24.3	20.5	---
MEAN	14.5	12.3	7.1	7.5	6.2	---	---	---	21.4	23.8	22.4	19.7
MAX	19.9	17.4	12.7	13.9	10.2	---	---	---	27.0	27.6	26.1	22.1
MIN	9.1	7.1	1.8	1.1	1.9	---	---	---	14.5	21.0	17.6	14.7

01595200 STONY RIVER NEAR MOUNT STORM, WV—Continued

 TEMPERATURE, WATER, DEGREES CELSIUS
 WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
 DAILY MINIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16.6	15.1	9.1	8.9	0.5	0.7	10.6	---	12.3	20.4	18.5	17.3
2	18.3	14.1	10.2	8.8	0.4	0.6	9.2	---	13.6	19.8	18.8	16.9
3	17.2	13.8	9.4	10.5	1.5	0.6	7.8	10.3	13.2	18.6	19.1	15.7
4	15.6	12.2	9.0	11.4	1.3	0.6	---	10.0	13.5	18.6	19.2	14.4
5	11.7	13.0	6.9	10.8	0.4	3.3	---	9.2	15.1	18.6	19.6	14.1
6	9.3	13.7	6.0	10.9	0.4	3.6	10.9	11.0	16.7	19.9	20.2	13.7
7	9.3	13.4	7.0	10.5	1.4	---	11.8	10.1	17.1	18.3	18.2	13.3
8	10.0	10.3	6.7	9.9	3.0	---	10.7	10.1	17.6	16.7	18.0	13.1
9	11.2	6.4	6.2	9.9	3.3	---	8.7	11.0	17.3	25.0	17.7	14.2
10	12.2	4.8	8.9	7.7	6.5	---	9.9	12.7	17.1	23.9	20.3	14.9
11	10.0	6.5	9.0	7.7	6.7	4.4	10.9	14.3	17.2	22.3	19.7	14.6
12	8.5	6.8	8.8	8.6	6.4	3.9	10.0	15.8	18.7	22.3	19.5	13.9
13	9.3	5.7	6.7	11.8	6.2	4.4	10.4	14.2	19.1	20.8	20.2	14.3
14	11.1	5.5	5.4	9.0	6.6	4.0	---	15.4	19.7	20.8	20.4	14.7
15	10.5	7.4	4.6	8.8	4.7	3.4	---	15.9	19.2	19.8	20.4	15.3
16	7.6	8.4	4.4	7.1	5.1	2.1	---	13.7	16.4	19.0	20.4	16.7
17	6.4	8.9	4.8	0.8	4.8	2.8	---	12.7	14.9	18.5	18.6	17.8
18	5.7	10.5	4.1	0.2	4.0	2.3	10.1	11.5	13.8	19.6	17.5	16.5
19	9.0	12.9	2.2	0.2	3.7	2.5	10.4	13.8	15.2	20.0	19.0	14.5
20	9.9	13.2	-0.1	0.9	4.5	5.1	10.9	12.8	15.2	19.6	19.0	17.1
21	9.9	13.1	-0.1	0.9	6.1	6.0	12.4	16.4	14.5	19.9	19.6	15.8
22	12.7	12.8	1.8	0.6	7.4	4.9	11.6	17.7	16.5	20.6	17.9	14.6
23	13.2	12.3	1.9	0.3	7.1	5.7	10.8	16.4	15.1	19.9	15.9	16.3
24	12.8	12.5	0.5	0.3	5.7	7.8	5.3	15.6	16.4	18.3	16.1	17.2
25	14.2	8.7	0.2	1.2	5.6	9.5	4.6	15.7	17.2	20.2	15.2	16.4
26	13.8	8.6	1.2	2.6	5.1	9.4	7.6	16.3	17.6	19.3	16.3	17.9
27	14.5	10.2	2.0	0.3	3.8	8.7	9.6	16.8	17.9	21.2	16.6	15.8
28	13.9	9.4	1.8	0.3	0.8	6.5	---	15.8	18.0	19.4	16.9	12.7
29	13.3	9.5	4.2	1.9	---	7.7	---	14.7	20.4	17.7	17.3	13.0
30	13.8	11.2	5.2	4.3	---	10.5	---	14.6	21.3	19.1	17.8	10.0
31	16.0	---	6.7	2.2	---	11.4	---	12.3	---	18.8	18.7	---
MEAN	11.9	10.4	5.0	5.5	4.0	---	---	---	16.6	19.9	18.5	15.1
MAX	18.3	15.1	10.2	11.8	7.4	---	---	---	21.3	25.0	20.4	17.9
MIN	5.7	4.8	-0.1	0.2	0.4	---	---	---	12.3	16.7	15.2	10.0

POTOMAC RIVER BASIN

01604500 PATTERSON CREEK NEAR HEADSVILLE, WV

LOCATION.--Lat 39°26'35", long 78°49'20", NAD 27, 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 13.0.

DRAINAGE AREA.--211 mi².

WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WSP 951: 1939-40. WDR WV-97-1: Drainage area.

GAGE.--Water-stage recorder with satellite telemeter. Datum of gage is 624.90 ft above NGVD 29 (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.--No estimated daily discharges. Water-discharge records 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.--Maximum discharge, 4,150 ft³/s, Mar. 29, gage height, 9.83 ft.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	295	196	458	75	95	165	735	137	107	17	21	21
2	228	169	501	72	84	160	1,050	130	92	16	19	19
3	174	144	417	68	77	150	1,070	119	87	15	18	16
4	128	164	347	64	78	148	745	107	82	15	16	13
5	94	299	300	143	78	175	627	98	75	15	15	12
6	73	266	267	476	77	248	591	90	68	18	14	11
7	59	227	261	416	76	543	578	86	66	18	14	10
8	51	193	277	416	83	648	566	83	62	115	40	9.2
9	45	159	281	405	100	591	471	78	89	98	50	8.7
10	42	131	561	346	125	501	395	75	103	68	68	8.4
11	38	108	607	312	120	415	340	89	83	48	60	7.9
12	36	139	541	463	110	363	295	101	68	37	45	7.2
13	35	236	430	456	103	314	263	91	62	61	34	7.0
14	34	233	349	971	132	277	229	80	57	118	29	6.8
15	34	205	294	690	205	240	198	76	48	182	25	6.9
16	36	179	254	601	219	211	167	70	43	227	21	7.0
17	34	158	222	504	212	189	143	65	38	321	20	7.5
18	31	158	196	361	194	170	126	58	34	293	18	7.2
19	33	162	175	305	170	154	115	55	32	209	18	7.0
20	37	189	146	278	156	143	106	182	29	158	18	7.5
21	72	192	153	243	157	133	100	318	27	111	17	7.5
22	131	181	117	205	153	124	105	272	29	83	15	7.3
23	116	167	124	189	138	343	169	245	31	65	14	6.8
24	108	216	138	192	130	670	180	430	27	51	14	7.5
25	127	488	113	166	132	596	161	480	24	43	13	7.5
26	126	390	105	148	133	544	144	352	22	36	13	7.2
27	111	313	92	146	136	462	128	273	20	31	16	7.0
28	97	331	88	130	151	1,400	114	224	19	28	19	6.5
29	90	318	84	116	---	3,410	103	187	18	26	18	6.4
30	179	294	75	102	---	1,580	111	156	17	24	19	6.5
31	222	---	75	108	---	975	---	131	---	22	20	---
TOTAL	2,916	6,605	8,048	9,167	3,624	16,042	10,125	4,938	1,559	2,569	741	270.5
MEAN	94.1	220	260	296	129	517	338	159	52.0	82.9	23.9	9.02
MAX	295	488	607	971	219	3,410	1,070	480	107	321	68	21
MIN	31	108	75	64	76	124	100	55	17	15	13	6.4
CFSM	0.45	1.04	1.23	1.40	0.61	2.45	1.60	0.75	0.25	0.39	0.11	0.04
IN.	0.51	1.16	1.42	1.62	0.64	2.83	1.79	0.87	0.27	0.45	0.13	0.05

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1938 - 2005, BY WATER YEAR (WY)

MEAN	72.2	90.3	165	207	303	431	319	223	109	60.2	57.3	55.7
MAX	745	901	825	908	893	1,346	1,085	763	459	415	586	767
(WY)	(1943)	(1986)	(1973)	(1996)	(1994)	(1963)	(1993)	(1988)	(2003)	(1989)	(1996)	(1996)
MIN	2.24	4.39	9.70	18.1	22.2	58.3	54.1	21.2	8.38	3.14	5.20	2.80
(WY)	(1992)	(1992)	(1944)	(2002)	(2002)	(1990)	(1969)	(1969)	(1999)	(1999)	(1966)	(1991)

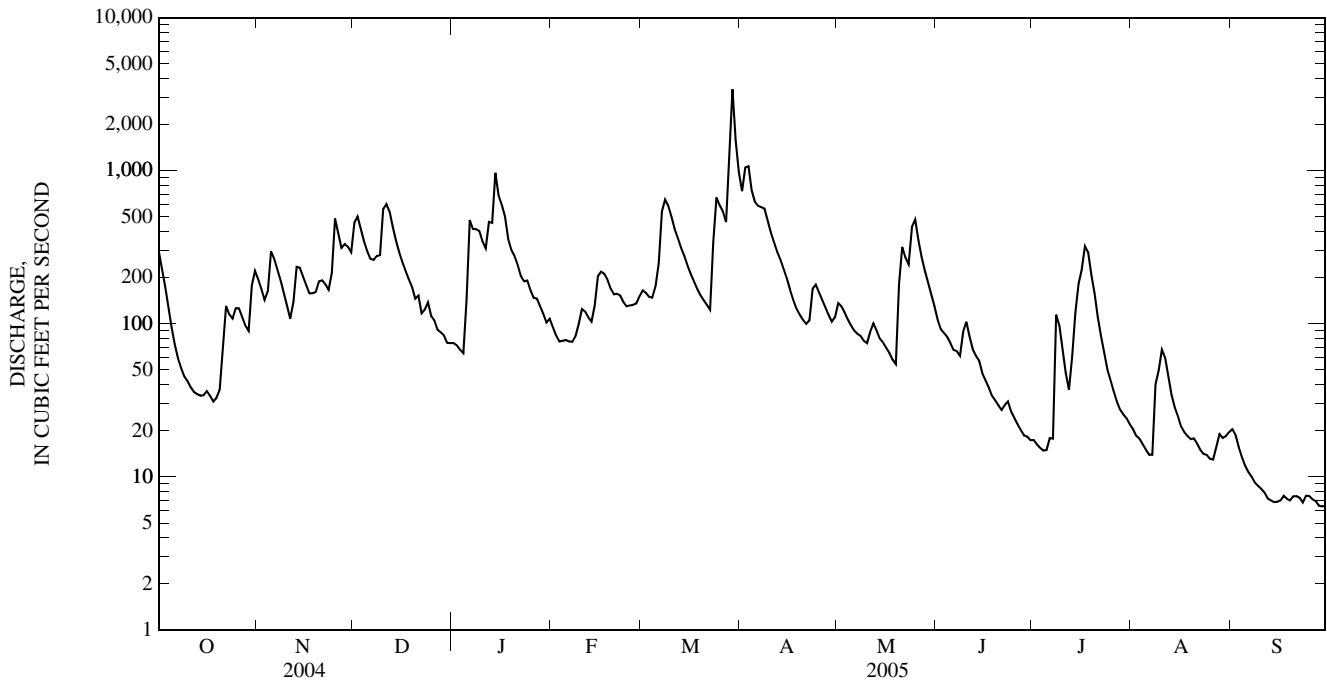
01604500 PATTERSON CREEK NEAR HEADSVILLE, WV—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1938 - 2005	
ANNUAL TOTAL	78,485		66,604.5		174	
ANNUAL MEAN	214		182		387	
HIGHEST ANNUAL MEAN					35.1	
LOWEST ANNUAL MEAN					1969	
HIGHEST DAILY MEAN	1,680	Apr 14	3,410	Mar 29	11,100	Oct 15, 1942
LOWEST DAILY MEAN	12	(a)	6.4	Sep 29	0.48	Aug 23, 1999
ANNUAL SEVEN-DAY MINIMUM	13	Sep 1	6.9	Sep 24	0.87	Aug 17, 1999
MAXIMUM PEAK FLOW			4,150	Mar 29	(b)16,000	Aug 19, 1955
MAXIMUM PEAK STAGE			9.83	Mar 29	12.20	Aug 19, 1955
INSTANTANEOUS LOW FLOW			6.2	Sep 28	0.45	(c)
ANNUAL RUNOFF (CFSM)	1.02		0.865		0.824	
ANNUAL RUNOFF (INCHES)	13.84		11.74		11.19	
10 PERCENT EXCEEDS	553		430		450	
50 PERCENT EXCEEDS	128		115		61	
90 PERCENT EXCEEDS	25		15		10	

a Sept. 5, 6.

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

c Aug. 23, 24, 1999.



01604500 PATTERSON CREEK NEAR HEADSVILLE, WV—Continued

LOCATION.--Lat 39°26'35", long 78°49'20", NAD 27, 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 13.0.

DRAINAGE AREA.--211 mi².

PERIOD OF RECORD.--Periodic laboratory analyses, June 2005 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	Gage height, feet (00065)	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specific conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Alkalinity, wat fltr inc tit field, mg/L as CaCO ₃ (39086)	Bicarbonate, wat fltr incrm. titr., mg/L (00453)	Carbonate, wat fltr incrm. titr., mg/L (00452)
JUN 07...	1400	3.08	65	747	7.7	95	7.8	245	31.0	25.1	84	--	--
JUL 11...	1455	2.96	41	751	9.0	110	8.2	276	33.0	24.7	95	--	--
AUG 09...	1355	2.99	51	751	8.1	98	7.8	281	30.0	23.9	92	--	--
SEP 12...	1510	2.44	7.0	752	8.2	96	7.9	298	--	22.4	95	116	<1

Date	Residue total at 105 deg. C, suspended, mg/L (00530)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water, fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Total nitrogen, wat unfltrd by analysis, mg/L (62855)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)	Suspended sediment concentration mg/L (80154)	Suspended sediment discharge, tons/d (80155)
JUN 07...	<10	E.02	.46	E.005	.70	E.003	.015	3	.53
JUL 11...	<10	<.04	.07	<.008	.30	E.003	.020	5	.55
AUG 09...	<10	<.04	.27	E.005	.52	<.006	.017	8	1.1
SEP 12...	<10	<.04	E.04	<.008	.22	<.006	.015	4	.08

Remark codes used in this table:

< -- Less than.
E -- Estimated.

01604500 PATTERSON CREEK NEAR HEADSVILLE, WV—Continued

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POTOMAC RIVER BASIN

01605002 PAINTER RUN NEAR FORT ASHBY, WV
(Detention Reservoir)

LOCATION.--Lat 39°29'08", long 78°45'37", NAD 27, Mineral County, Hydrologic Unit 02070002.

DAM NAME.--Patterson Creek No. 46, (corrected).

SURFACE AREA.--14 acres (corrected).

DRAINAGE AREA.-- 1.76 mi² (corrected).

PERIOD OF RECORD.--June 2002 to current year.

GAGE.--Water-stage recorder with satellite telemeter. Datum of gage is 700.0 ft above NGVD 29.

REMARKS.-- Normal Pool = 20.6 ft (Normal Storage = 215 acre-ft, corrected)

Top of Riser = 31.1 ft

Emergency Spillway = 38.7 ft

Top of Dam = 47.6 ft

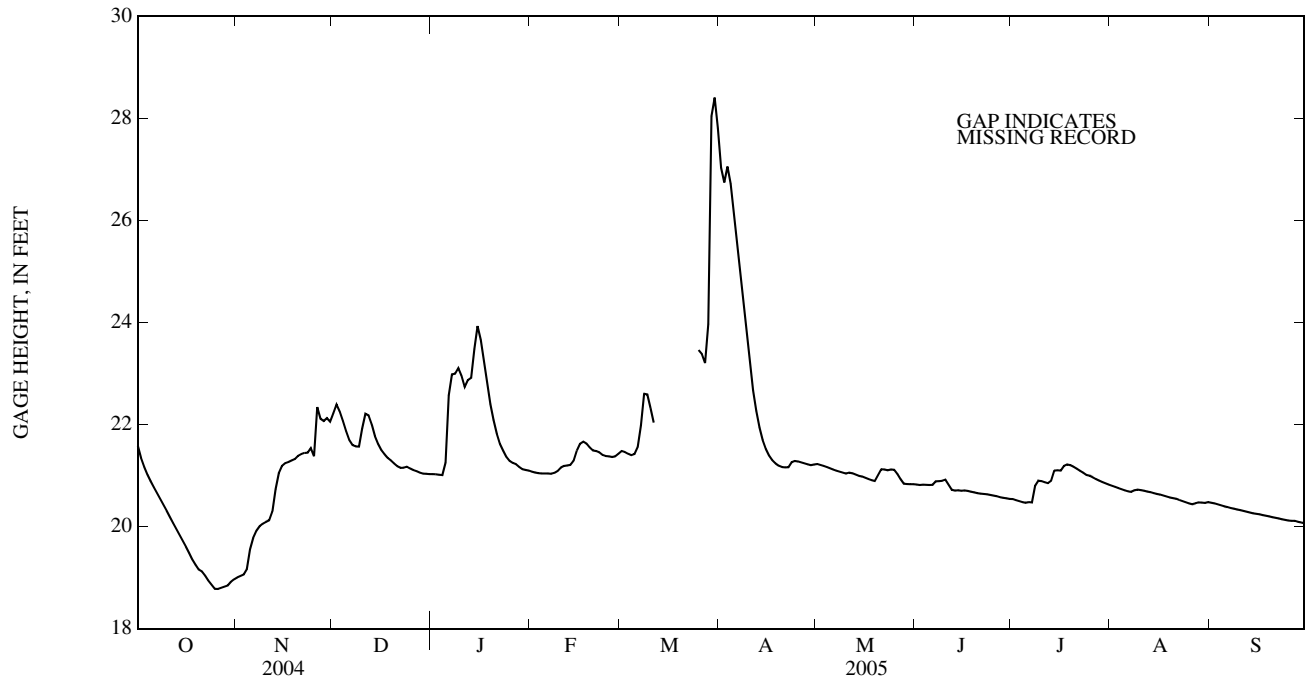
EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 28.54 ft, Mar. 29, 2005; minimum gage height, 18.75 ft, Oct. 25, 2004.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 28.54 ft, Mar. 29; minimum gage height, 18.75 ft, Oct. 25.

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21.58	19.00	22.22	21.03	21.08	21.48	27.03	21.23	20.82	20.54	20.80	20.47
2	21.34	19.03	22.39	21.03	21.06	21.46	26.75	21.21	20.81	20.52	20.78	20.45
3	21.17	19.06	22.26	21.02	21.05	21.43	27.06	21.19	20.82	20.50	20.75	20.43
4	21.02	19.17	22.07	21.01	21.04	21.40	26.72	21.17	20.82	20.48	20.73	20.42
5	20.89	19.55	21.87	21.25	21.04	21.42	26.12	21.14	20.82	20.47	20.71	20.40
6	20.77	19.78	21.70	22.57	21.04	21.56	25.46	21.12	20.82	20.48	20.69	20.38
7	20.65	19.92	21.60	22.98	21.04	21.98	24.82	21.09	20.89	20.47	20.68	20.37
8	20.54	20.01	21.57	23.00	21.05	22.60	24.24	21.08	20.89	20.80	20.71	20.35
9	20.42	20.06	21.57	23.11	21.09	22.59	23.67	21.06	20.90	20.90	20.72	20.33
10	20.31	20.09	21.93	22.96	21.16	22.32	23.14	21.04	20.92	20.89	20.72	20.32
11	20.19	20.12	22.21	22.74	21.19	22.04	22.67	21.06	20.82	20.87	20.70	20.31
12	20.07	20.30	22.18	22.87	21.20	---	22.27	21.05	20.72	20.85	20.69	20.29
13	19.95	20.74	22.00	22.92	21.21	---	21.94	21.02	20.71	20.90	20.67	20.28
14	19.84	21.05	21.77	23.48	21.29	---	21.70	21.00	20.71	21.10	20.66	20.26
15	19.72	21.19	21.62	23.93	21.49	---	21.52	20.98	20.70	21.10	20.64	20.25
16	19.61	21.24	21.50	23.66	21.62	---	21.39	20.96	20.71	21.10	20.63	20.24
17	19.48	21.26	21.42	23.22	21.67	---	21.30	20.93	20.70	21.19	20.61	20.23
18	19.36	21.30	21.35	22.79	21.63	---	21.24	20.91	20.68	21.22	20.59	20.21
19	19.25	21.32	21.29	22.40	21.55	---	21.19	20.89	20.67	21.20	20.57	20.20
20	19.16	21.39	21.24	22.09	21.49	---	21.17	21.01	20.66	21.17	20.56	20.18
21	19.12	21.42	21.18	21.83	21.48	---	21.16	21.12	20.65	21.14	20.55	20.17
22	19.04	21.44	21.15	21.62	21.45	---	21.16	21.12	20.64	21.10	20.52	20.16
23	18.94	21.45	21.15	21.49	21.41	---	21.26	21.10	20.63	21.06	20.50	20.14
24	18.86	21.54	21.17	21.37	21.38	---	21.29	21.12	20.62	21.01	20.48	20.13
25	18.78	21.38	21.14	21.29	21.38	23.46	21.28	21.11	20.61	21.00	20.46	20.12
26	18.78	22.34	21.11	21.25	21.36	23.38	21.26	21.03	20.60	20.97	20.44	20.11
27	18.80	22.12	21.08	21.22	21.38	23.21	21.24	20.93	20.58	20.93	20.46	20.11
28	18.82	22.07	21.06	21.17	21.43	23.97	21.22	20.84	20.56	20.90	20.48	20.09
29	18.84	22.13	21.04	21.13	---	28.04	21.20	20.83	20.56	20.87	20.47	20.08
30	18.92	22.06	21.04	21.11	---	28.41	21.22	20.83	20.54	20.85	20.46	20.07
31	18.96	---	21.03	21.10	---	27.81	---	20.83	---	20.82	20.48	---
MEAN	19.78	20.78	21.55	22.09	21.30	---	22.79	21.03	20.72	20.88	20.61	20.25
MAX	21.58	22.34	22.39	23.93	21.67	---	27.06	21.23	20.92	21.22	20.80	20.47
MIN	18.78	19.00	21.03	21.01	21.04	---	21.16	20.83	20.54	20.47	20.44	20.07

01605002 PAINTER RUN NEAR FORT ASHBY, WV—Continued



01605500 SOUTH BRANCH POTOMAC RIVER AT FRANKLIN, WV

LOCATION.--Lat 38°38'08", long 79°20'17", NAD 27, 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 112.5.

DRAINAGE AREA.--179 mi².

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

REVISED RECORDS.--WDR WV-97-1: Drainage area.

GAGE.--Water-stage recorder with satellite telemeter. Datum of gage is 1,692.5 ft above NGVD 29 (U.S. Army Corps of Engineers bench mark).

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

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 28	1400	*3,720	*5.77	No other peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	454	80	675	160	100	161	526	386	117	74	107	76
2	341	78	620	149	96	147	999	339	111	62	92	65
3	267	77	490	141	97	138	950	305	120	57	83	59
4	220	185	391	138	98	134	693	264	114	54	75	56
5	186	302	320	139	97	152	543	232	105	54	70	52
6	161	225	282	136	95	146	447	214	106	54	67	50
7	141	192	278	133	97	269	393	201	294	54	72	48
8	125	169	302	139	104	733	421	187	151	302	68	47
9	114	143	362	143	116	553	366	168	133	137	125	45
10	109	125	681	139	137	421	325	157	126	92	145	44
11	101	115	621	135	123	357	289	147	103	78	119	44
12	97	166	500	133	117	314	263	141	93	71	95	43
13	103	202	418	129	114	274	246	134	89	136	103	42
14	107	176	341	345	119	266	221	129	84	267	84	41
15	99	164	280	345	139	241	201	127	80	203	75	41
16	97	156	244	296	136	226	181	116	76	168	97	40
17	92	148	226	260	133	216	168	108	73	161	111	40
18	85	140	208	215	122	203	162	103	70	149	92	40
19	84	137	198	199	112	198	157	100	70	126	87	39
20	101	155	170	198	111	204	149	356	68	133	79	38
21	107	134	161	184	115	206	141	365	66	106	72	38
22	96	124	160	169	172	198	199	293	65	96	66	38
23	90	120	268	152	150	275	376	254	62	87	62	38
24	91	176	325	e130	151	650	337	262	59	77	60	38
25	93	434	257	148	148	522	305	239	57	73	56	38
26	88	347	227	138	150	427	264	214	56	70	54	39
27	85	288	206	139	145	372	237	190	54	66	66	40
28	87	372	181	111	159	1,700	215	170	56	71	84	38
29	87	321	178	106	---	1,580	200	157	79	181	68	37
30	85	286	171	110	---	907	355	143	68	189	61	36
31	83	---	166	104	---	659	---	134	---	131	89	---
TOTAL	4,076	5,737	9,907	5,163	3,453	12,849	10,329	6,335	2,805	3,579	2,584	1,330
MEAN	131	191	320	167	123	414	344	204	93.5	115	83.4	44.3
MAX	454	434	681	345	172	1,700	999	386	294	302	145	76
MIN	83	77	160	104	95	134	141	100	54	54	54	36
CFSM	0.73	1.07	1.79	0.93	0.69	2.32	1.92	1.14	0.52	0.64	0.47	0.25
IN.	0.85	1.19	2.06	1.07	0.72	2.67	2.15	1.32	0.58	0.74	0.54	0.28

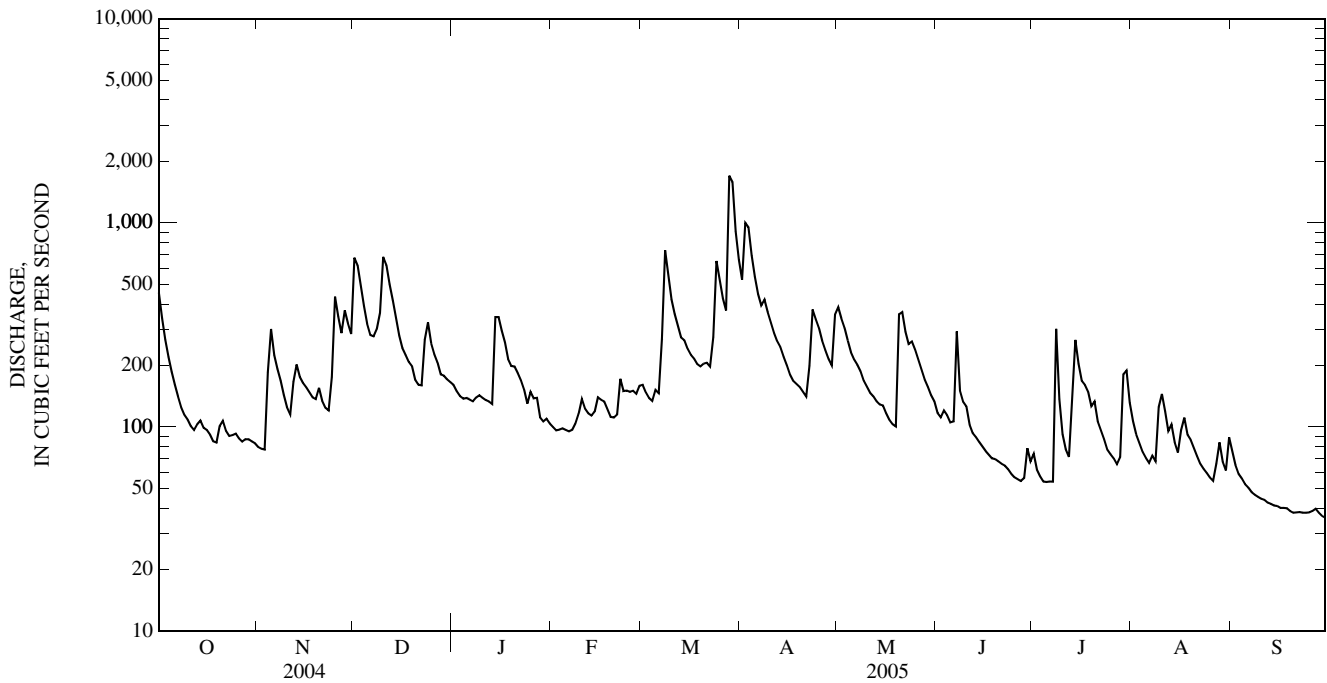
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 2005, BY WATER YEAR (WY)

MEAN	79.9	141	164	206	254	396	292	235	138	72.5	78.7	86.9
MAX	546	2,219	496	815	668	832	797	665	664	381	351	750
(WY)	(1977)	(1986)	(1997)	(1996)	(1998)	(1963)	(1987)	(1996)	(1940)	(1949)	(1984)	(1996)
MIN	20.0	25.5	23.5	32.5	45.6	80.8	90.2	59.3	33.7	27.8	23.3	21.4
(WY)	(1964)	(1966)	(1966)	(1981)	(2002)	(1981)	(1988)	(1941)	(1964)	(1964)	(1966)	(1963)

01605500 SOUTH BRANCH POTOMAC RIVER AT FRANKLIN, WV—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1940 - 2005	
ANNUAL TOTAL	84,332		68,147		177	
ANNUAL MEAN	230		187		85.2	
HIGHEST ANNUAL MEAN					344	2003
LOWEST ANNUAL MEAN					85.2	1999
HIGHEST DAILY MEAN	2,360	Sep 28	1,700	Mar 28	25,000	Nov 4, 1985
LOWEST DAILY MEAN	41	(a)	36	Sep 30	14	(b)
ANNUAL SEVEN-DAY MINIMUM	43	Sep 1	38	Sep 24	14	Sep 6, 1966
MAXIMUM PEAK FLOW			3,720	Mar 28	(c)44,000	Nov 4, 1985
MAXIMUM PEAK STAGE			5.77	Mar 28	(d)22.58	Nov 4, 1985
INSTANTANEOUS LOW FLOW			36	(f)	13	Jan 17, 1966
ANNUAL RUNOFF (CFSM)	1.29		1.04		0.991	
ANNUAL RUNOFF (INCHES)	17.53		14.16		13.46	
10 PERCENT EXCEEDS	435		356		376	
50 PERCENT EXCEEDS	176		137		90	
90 PERCENT EXCEEDS	64		57		32	

- a Sept. 5, 6.
- b Sept. 7-12, 1966.
- c From rating curve extended above 15,000 ft³/s on basis of slope-area measurement of peak flow.
- d From floodmarks.
- e Estimated.
- f Sept. 29, 30.



01606000 NORTH FORK SOUTH BRANCH POTOMAC RIVER AT CABINS, WV

LOCATION.--Lat 38°59'04", long 79°14'02", NAD 27, Grant County, Hydrologic Unit 02070001, on right bank 10 ft upstream from bridge on County Route 28/11, 2 mi downstream from Jordan Run, 6 mi west of Petersburg, at Cabins, and at mile 2.9.

DRAINAGE AREA.--335 mi².

PERIOD OF RECORD.--February 1940 to September 1961, October 1961 to September 1978 (occasional discharge measurements and annual maximums only), October 1978 to September 1980, April 1998 to current year.

REVISED RECORDS.--WSP 1272: 1945.

GAGE.--Water-stage recorder with satellite telemeter. Datum of gage is 1,045.848 ft above NGVD 29.

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

EXTREMES OUTSIDE PERIOD OF RECORD.--Discharge, 90,000 ft³/s, Nov. 5, 1985, from slope-area measurement. Estimated discharge, 80,000 ft³/s, Sept. 6, 1996, from modification of Nov. 5, 1985, slope-area measurement.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,300 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar 24	0700	3,840	7.52	Mar 28	1800	*5,840	*8.51

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	867	373	1,170	259	171	388	1,200	1,260	271	46	187	94
2	610	322	1,530	241	162	346	1,810	1,050	242	41	150	87
3	465	294	1,140	226	165	309	2,200	815	244	41	116	65
4	362	536	807	244	168	283	1,660	617	233	39	90	51
5	285	1,360	604	375	163	329	1,310	488	201	166	77	43
6	233	1,000	493	477	162	316	1,030	410	177	157	78	39
7	204	739	480	506	182	689	832	360	189	88	406	36
8	179	565	556	555	242	2,310	941	324	169	1,690	245	33
9	161	441	589	594	388	1,620	931	277	156	669	395	31
10	151	368	1,240	565	610	1,040	807	255	210	329	484	29
11	140	320	1,250	502	558	787	684	321	180	219	320	27
12	129	368	1,020	470	497	649	590	261	150	180	241	26
13	125	574	820	435	437	533	513	230	127	228	198	24
14	153	530	653	872	431	479	425	209	124	291	175	22
15	146	491	524	1,150	564	443	353	238	104	277	143	20
16	135	452	434	973	603	427	296	227	90	387	126	20
17	145	407	403	786	638	402	262	200	87	806	168	19
18	133	379	357	597	553	379	238	187	79	587	152	19
19	125	314	334	555	450	408	223	176	72	462	130	18
20	139	310	275	487	417	528	207	1,140	65	454	124	18
21	198	289	246	404	392	581	192	1,760	60	350	106	18
22	199	269	270	352	537	564	210	1,130	56	305	97	17
23	187	258	381	e310	520	1,100	399	793	52	256	77	16
24	217	276	903	e250	517	3,370	501	1,040	47	204	64	17
25	296	509	716	287	485	2,130	489	1,090	42	167	57	17
26	257	622	575	271	434	1,410	488	893	38	144	52	17
27	239	582	465	248	392	1,150	487	691	35	121	80	17
28	245	741	358	e210	393	3,290	446	539	33	107	150	17
29	307	766	357	e190	---	4,530	395	433	77	167	123	17
30	557	684	309	203	---	2,490	751	365	60	253	85	17
31	448	---	279	187	---	1,650	---	317	---	235	81	---
TOTAL	8,037	15,139	19,538	13,781	11,231	34,930	20,870	18,096	3,670	9,466	4,977	891
MEAN	259	505	630	445	401	1,127	696	584	122	305	161	29.7
MAX	867	1,360	1,530	1,150	638	4,530	2,200	1,760	271	1,690	484	94
MIN	125	258	246	187	162	283	192	176	33	39	52	16
CFSM	0.77	1.51	1.88	1.33	1.20	3.36	2.08	1.74	0.37	0.91	0.48	0.09
IN.	0.89	1.68	2.17	1.53	1.25	3.88	2.32	2.01	0.41	1.05	0.55	0.10

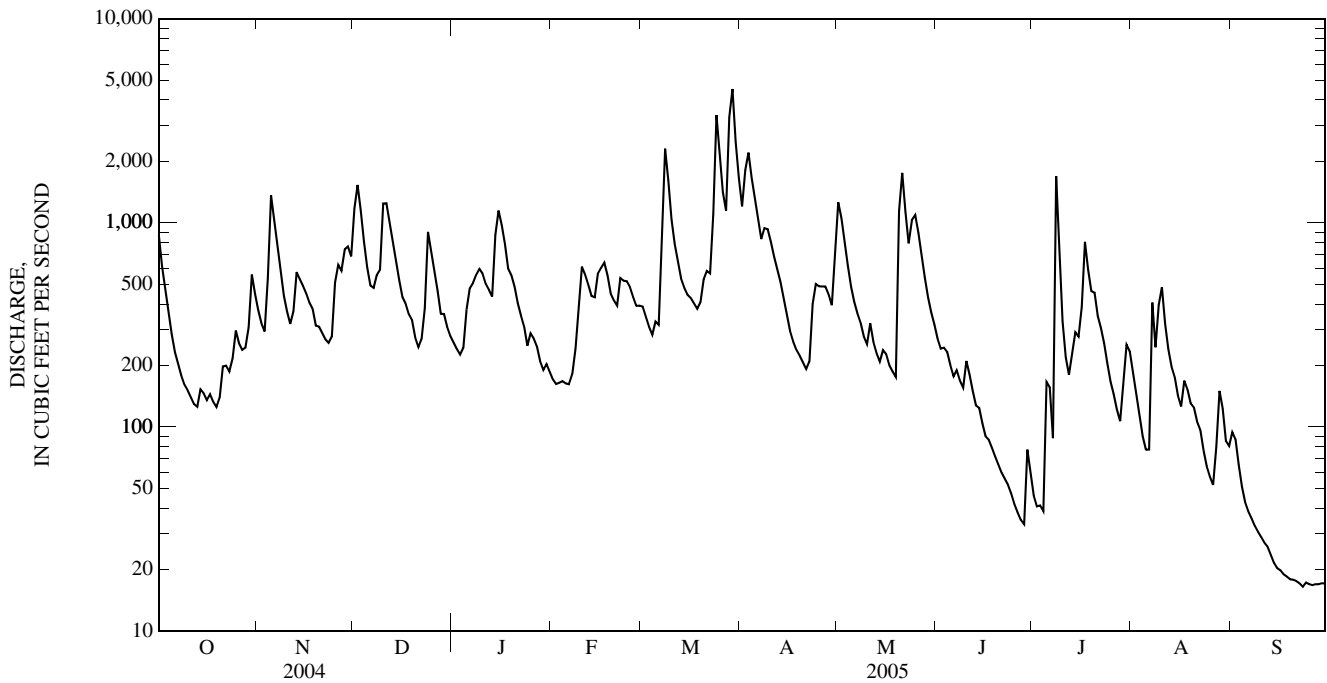
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 2005, BY WATER YEAR (WY)

MEAN	151	224	403	482	672	884	797	590	317	136	144	145
MAX	913	994	1,114	1,053	1,473	1,716	1,703	1,404	1,133	655	767	678
(WY)	(1980)	(2004)	(1949)	(1952)	(1961)	(2003)	(1958)	(2003)	(2003)	(1949)	(1955)	(1950)
MIN	7.08	16.2	30.2	116	142	418	229	134	55.6	16.9	12.0	6.83
(WY)	(1954)	(1954)	(1999)	(1956)	(1941)	(1959)	(1955)	(1941)	(1999)	(1999)	(1999)	(1953)

01606000 NORTH FORK SOUTH BRANCH POTOMAC RIVER AT CABINS, WV—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1940 - 2005	
ANNUAL TOTAL	204,636		160,626			
ANNUAL MEAN	559		440		409	
HIGHEST ANNUAL MEAN					814	2003
LOWEST ANNUAL MEAN					213	1959
HIGHEST DAILY MEAN	4,470	Apr 14	4,530	Mar 29	10,600	Aug 18, 1955
LOWEST DAILY MEAN	14	(a)	16	Sep 23	5.0	(b)
ANNUAL SEVEN-DAY MINIMUM	18	Aug 25	17	Sep 22	5.1	Sep 30, 1953
MAXIMUM PEAK FLOW			5,840	Mar 28	(c)90,000	Nov 5, 1985
MAXIMUM PEAK STAGE			8.51	Mar 28	(d)	Nov 5, 1985
INSTANTANEOUS LOW FLOW			16	(f)	5.0	(b)
ANNUAL RUNOFF (CFSM)	1.67		1.31		1.22	
ANNUAL RUNOFF (INCHES)	22.72		17.84		16.58	
10 PERCENT EXCEEDS	1,220		954		1,000	
50 PERCENT EXCEEDS	410		309		193	
90 PERCENT EXCEEDS	51		52		26	

- a Aug. 30, Sept. 5, 6.
- b Oct. 1-5, 9-11, 1953.
- c From slope-area measurement.
- d Not determined.
- e Estimated.
- f Sept. 22, 23, 25, 26, 27, 28, 29.



01606500 SOUTH BRANCH POTOMAC RIVER NEAR PETERSBURG, WV

LOCATION.--Lat 38°59'28", long 79°10'34", NAD 27, 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 74.7.

DRAINAGE AREA.--676 mi².

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

REVISED RECORDS.--WSP 951: 1939-41. WSP 1141: 1932, 1933(M), 1936-38. WDR WV-97-1: Drainage area.

GAGE.--Water-stage recorder with satellite telemeter. Datum of gage is 968.34 ft above NGVD 29. Prior to Dec. 4, 1928, nonrecording gage and June 1928 to Nov. 5, 1985, water-stage recorder at site 1,125 ft downstream at datum 6.34 ft lower. Nov. 5, 1985, to June 22, 1994, and October 23, 1996 to current year, water-stage recorder at present site and datum. June 22, 1994, to October 23, 1996, water-stage recorder at site 325 ft downstream at datum 2.34 ft lower.

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

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in 1877 reached a stage of 21.2 ft, from floodmarks at previous site and datum; discharge about 59,000 ft³/s.

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 28	2000	*12,700	*11.17	No other peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,770	543	1,980	604	385	711	2,630	2,170	572	203	387	224
2	1,250	482	2,830	570	365	655	3,610	1,810	511	190	322	206
3	984	447	2,210	533	361	596	4,450	1,500	514	171	276	176
4	795	612	1,650	540	368	562	3,410	1,220	507	168	239	157
5	659	1,830	1,300	695	364	624	2,740	1,030	454	267	212	146
6	560	1,430	1,090	835	355	627	2,200	902	411	272	206	136
7	492	1,120	1,040	869	369	1,100	1,790	819	568	208	521	129
8	437	910	1,150	916	434	3,580	1,910	753	506	2,150	386	123
9	392	748	1,160	980	601	3,030	1,830	673	422	1,180	534	117
10	361	638	2,410	944	853	2,110	1,570	614	486	600	825	114
11	332	567	2,570	872	837	1,630	1,350	681	447	411	570	111
12	311	616	2,120	816	743	1,380	1,180	599	386	333	431	108
13	300	959	1,720	756	678	1,180	1,070	549	338	390	350	105
14	337	894	1,410	1,230	673	1,060	951	509	330	582	329	102
15	339	820	1,160	1,890	836	979	835	537	296	645	272	99
16	312	763	992	1,580	894	926	740	523	269	713	243	98
17	309	704	917	1,340	932	880	674	467	257	1,110	305	96
18	290	668	834	1,060	838	827	634	436	243	1,000	304	94
19	272	626	774	909	716	828	603	412	230	794	264	93
20	290	649	683	916	673	943	571	1,560	221	755	251	91
21	372	629	593	802	640	1,010	536	2,870	212	621	226	91
22	380	584	636	716	809	995	563	1,930	206	538	209	90
23	347	562	699	640	837	1,520	966	1,440	200	469	187	89
24	374	583	1,580	543	819	4,840	1,180	1,690	190	387	174	89
25	473	1,060	1,290	588	792	3,560	1,110	1,790	178	326	164	89
26	442	1,310	1,070	573	731	2,580	1,060	1,510	169	292	157	89
27	409	1,180	932	538	687	2,110	1,020	1,230	160	261	188	89
28	417	1,380	760	460	692	5,900	947	1,020	155	239	254	89
29	460	1,470	745	404	---	8,960	855	867	195	352	251	89
30	754	1,310	682	430	---	4,870	1,240	745	214	525	201	87
31	638	---	637	411	---	3,380	---	652	---	490	194	---
TOTAL	15,858	26,094	39,624	24,960	18,282	63,953	44,225	33,508	9,847	16,642	9,432	3,416
MEAN	512	870	1,278	805	653	2,063	1,474	1,081	328	537	304	114
MAX	1,770	1,830	2,830	1,890	932	8,960	4,450	2,870	572	2,150	825	224
MIN	272	447	593	404	355	562	536	412	155	168	157	87
CFSM	0.76	1.29	1.89	1.19	0.97	3.05	2.18	1.60	0.49	0.79	0.45	0.17
IN.	0.87	1.44	2.18	1.37	1.01	3.52	2.43	1.84	0.54	0.92	0.52	0.19

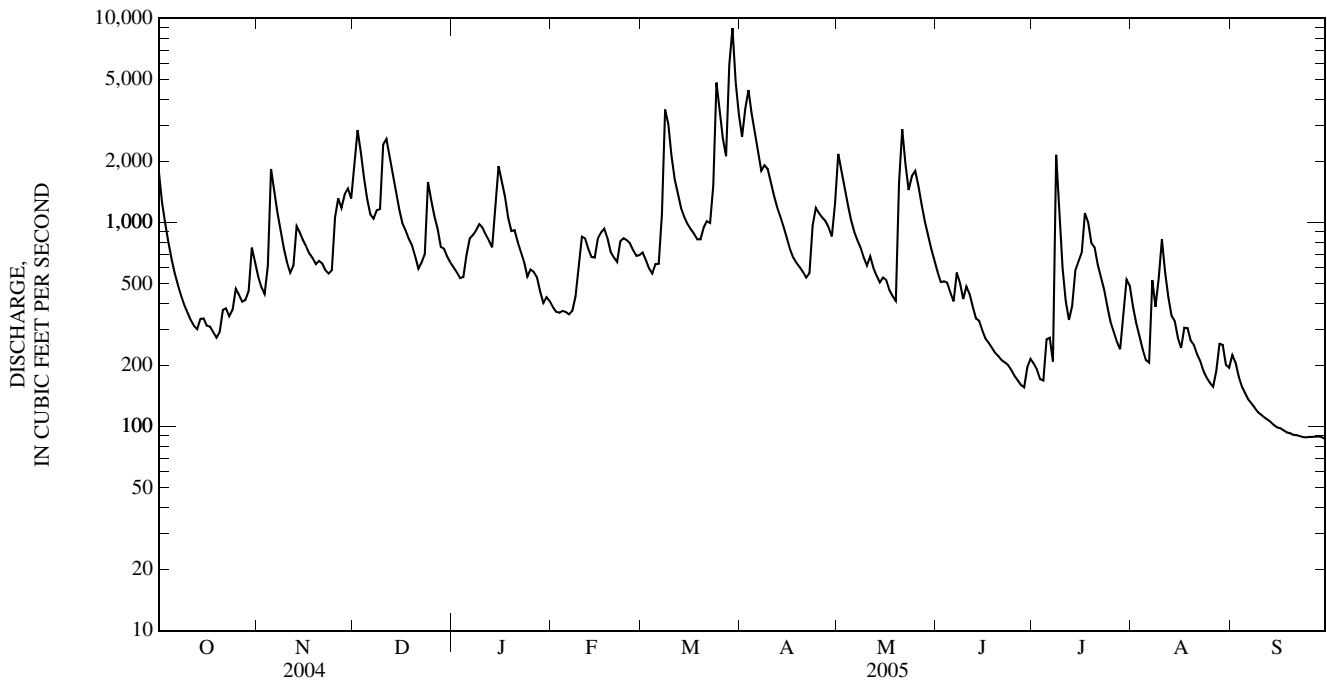
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1928 - 2005, BY WATER YEAR (WY)

MEAN	325	509	722	920	1,157	1,657	1,296	1,036	550	296	287	282
MAX	1,863	5,569	2,511	3,386	3,519	4,090	2,888	3,546	2,196	1,479	1,601	2,968
(WY)	(1977)	(1986)	(1973)	(1996)	(1994)	(1936)	(1993)	(1996)	(2003)	(1949)	(1996)	(1996)
MIN	49.3	62.7	95.1	143	212	543	398	233	125	63.9	54.1	52.3
(WY)	(1931)	(1931)	(1966)	(1981)	(1934)	(1990)	(1986)	(1930)	(1999)	(1999)	(1930)	(1930)

01606500 SOUTH BRANCH POTOMAC RIVER NEAR PETERSBURG, WV—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1928 - 2005	
ANNUAL TOTAL	365,208		305,841		751	
ANNUAL MEAN	998		838		1,619	
HIGHEST ANNUAL MEAN					1996	
LOWEST ANNUAL MEAN					365	
HIGHEST DAILY MEAN	8,650	Apr 14	8,960	Mar 29	77,000	Nov 5, 1985
LOWEST DAILY MEAN	97	Sep 5	87	Sep 30	43	(a)
ANNUAL SEVEN-DAY MINIMUM	106	Aug 31	89	Sep 24	44	Sep 6, 1966
MAXIMUM PEAK FLOW			12,700	Mar 28	(b)130,000	Nov 5, 1985
MAXIMUM PEAK STAGE			11.17	Mar 28	(c)25.40	Nov 5, 1985
INSTANTANEOUS LOW FLOW			87	(d)	42	(f)
ANNUAL RUNOFF (CFSM)	1.48		1.24		1.11	
ANNUAL RUNOFF (INCHES)	20.10		16.83		15.09	
10 PERCENT EXCEEDS	2,190		1,700		1,690	
50 PERCENT EXCEEDS	751		621		383	
90 PERCENT EXCEEDS	170		177		96	

- a Sept. 27-29, 1959, Sept. 11, 12, 1966.
- b From rating curve extended above 16,700 ft³/s on basis of slope-area measurement of peak flow.
- c From floodmarks at former site at gage datum 962.00 ft.
- d Sept. 23, 24, 29, 30.
- f Sept. 28, 29, 1959, Sept. 11, 12, 1966.



POTOMAC RIVER BASIN

01606900 SOUTH MILL CREEK NEAR MOZER, WV
(Detention Reservoir)

LOCATION.--Lat 38°51'17", long 79°09'48", NAD 27, Grant County, Hydrologic Unit 02070001.

DAM NAME.--North and South Mill Creek No. 7.

SURFACE AREA.--48 acres.

DRAINAGE AREA.--10.0 mi².

PERIOD OF RECORD.--October 2003 to current year.

GAGE.--Water-stage recorder with satellite telemeter. Datum of gage is 1,279.97 ft above NGVD 29, (corrected).

REMARKS.-- Normal Pool = 8.85 ft (Normal Storage = 840 acre-ft)

Top of Riser = 11.0 ft

Emergency Spillway = 31.8 ft

Top of Dam = 45.2 ft

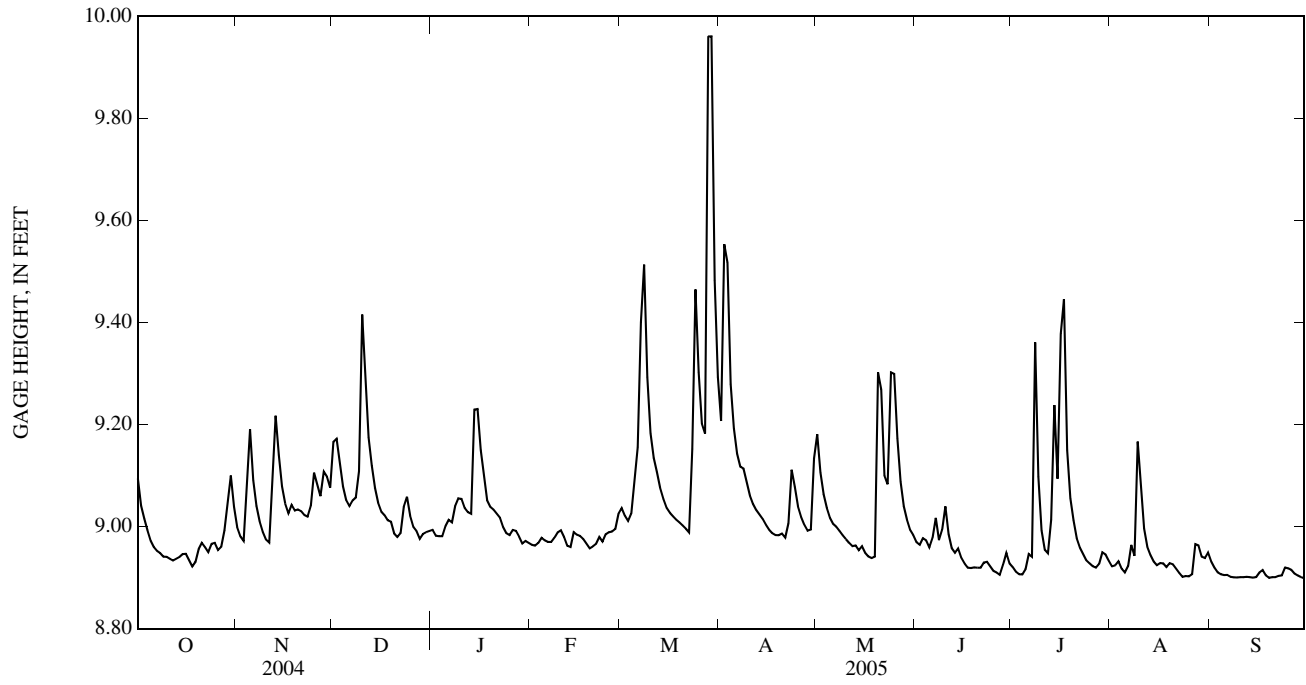
EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 12.98 ft, Sept 28, 2004; minimum gage height, 8.89 ft, Aug. 27, 29, Sept. 4, 5, 2004, Sept. 19, 29, 30, 2005.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 10.71 ft, Mar. 28; minimum gage height, 8.89 ft, Sept. 19, 29, 30.

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.09	9.00	9.17	8.99	8.96	9.04	9.21	9.18	8.97	8.92	8.92	8.93
2	9.04	8.98	9.17	8.98	8.96	9.02	9.55	9.11	8.96	8.91	8.92	8.92
3	9.02	8.97	9.12	8.98	8.97	9.01	9.52	9.06	8.98	8.91	8.93	8.91
4	8.99	9.10	9.08	8.98	8.98	9.03	9.28	9.04	8.97	8.91	8.92	8.91
5	8.97	9.19	9.05	9.00	8.97	9.09	9.19	9.02	8.96	8.92	8.91	8.90
6	8.96	9.09	9.04	9.01	8.97	9.16	9.14	9.01	8.98	8.95	8.92	8.91
7	8.95	9.04	9.05	9.01	8.97	9.40	9.12	9.00	9.02	8.94	8.96	8.90
8	8.95	9.01	9.06	9.04	8.98	9.51	9.11	8.99	8.97	9.36	8.94	8.90
9	8.94	8.99	9.11	9.06	8.99	9.29	9.09	8.98	8.99	9.10	9.17	8.90
10	8.94	8.97	9.42	9.05	8.99	9.18	9.06	8.98	9.04	8.99	9.08	8.90
11	8.94	8.97	9.28	9.04	8.98	9.13	9.04	8.97	8.99	8.95	9.00	8.90
12	8.93	9.08	9.17	9.03	8.96	9.11	9.03	8.96	8.96	8.95	8.96	8.90
13	8.94	9.22	9.12	9.03	8.96	9.08	9.02	8.96	8.95	9.01	8.94	8.90
14	8.94	9.14	9.08	9.23	8.99	9.05	9.02	8.95	8.96	9.24	8.93	8.90
15	8.95	9.08	9.05	9.23	8.98	9.04	9.00	8.96	8.94	9.09	8.92	8.90
16	8.95	9.04	9.03	9.15	8.98	9.03	8.99	8.95	8.93	9.38	8.93	8.91
17	8.93	9.03	9.02	9.10	8.98	9.02	8.99	8.94	8.92	9.45	8.93	8.91
18	8.92	9.04	9.01	9.05	8.97	9.01	8.98	8.94	8.92	9.15	8.92	8.90
19	8.93	9.03	9.01	9.04	8.96	9.01	8.98	8.94	8.92	9.06	8.93	8.90
20	8.96	9.03	8.99	9.03	8.96	9.00	8.99	9.30	8.92	9.01	8.93	8.90
21	8.97	9.03	8.98	9.03	8.97	9.00	8.98	9.27	8.92	8.98	8.92	8.90
22	8.96	9.02	8.99	9.02	8.98	8.99	9.01	9.10	8.93	8.96	8.91	8.90
23	8.95	9.02	9.04	9.00	8.97	9.15	9.11	9.08	8.93	8.95	8.90	8.90
24	8.97	9.04	9.06	8.99	8.98	9.46	9.08	9.30	8.92	8.93	8.90	8.92
25	8.97	9.11	9.02	8.98	8.99	9.30	9.04	9.30	8.91	8.93	8.90	8.92
26	8.95	9.08	9.00	8.99	8.99	9.20	9.02	9.17	8.91	8.92	8.91	8.91
27	8.96	9.06	8.99	8.99	9.00	9.18	9.00	9.09	8.91	8.92	8.97	8.91
28	8.99	9.11	8.98	8.98	9.03	9.96	8.99	9.04	8.93	8.93	8.96	8.90
29	9.04	9.10	8.99	8.97	---	9.96	8.99	9.01	8.95	8.95	8.94	8.90
30	9.10	9.08	8.99	8.97	---	9.48	9.13	8.99	8.93	8.95	8.94	8.90
31	9.04	---	8.99	8.97	---	9.29	---	8.98	---	8.93	8.95	---
MEAN	8.97	9.05	9.07	9.03	8.98	9.20	9.09	9.05	8.95	9.02	8.94	8.91
MAX	9.10	9.22	9.42	9.23	9.03	9.96	9.55	9.30	9.04	9.45	9.17	8.93
MIN	8.92	8.97	8.98	8.97	8.96	8.99	8.98	8.94	8.91	8.91	8.90	8.90

01606900 SOUTH MILL CREEK NEAR MOZER, WV—Continued



POTOMAC RIVER BASIN

01607300 BRUSHY FORK NEAR SUGAR GROVE, WV
(Detention Reservoir)

LOCATION.--Lat 38°27'59", long 79°19'08", NAD 83, Pendleton County, Hydrologic Unit 02070001.

DAM NAME.--South Fork No. 19.

SURFACE AREA.--26 acres.

DRAINAGE AREA.--15.2 mi².

PERIOD OF RECORD.--June 2004 to current year.

GAGE.--Water-stage recorder with satellite telemeter. Datum of gage is 1952 ft above NGVD 29, (corrected).

REMARKS.-- Normal Pool = 46.50 ft (Normal Storage = 271 acre-ft)

Top of Riser = 50.00 ft

Emergency Spillway = 83.1 ft

Top of Dam = 101.00 ft

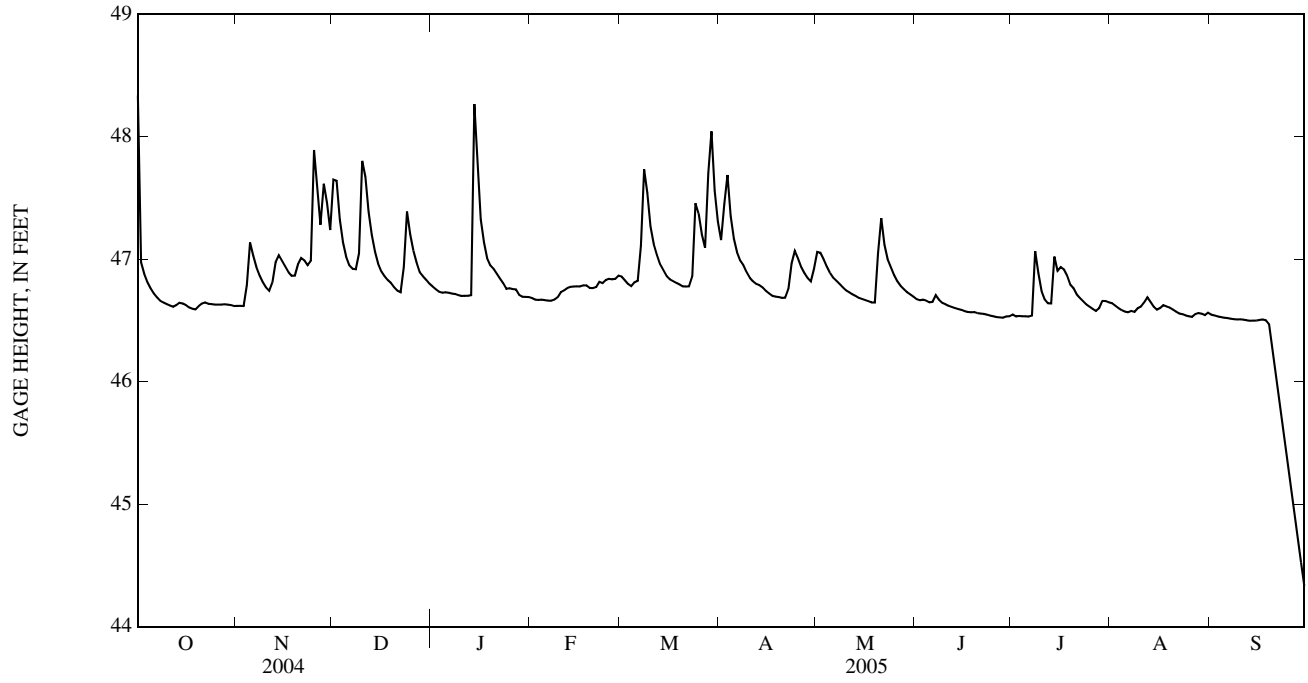
EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 64.33 ft, Sept. 29, 2004; minimum gage height, 44.30 ft, Sept. 30, 2005.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 52.28 ft, Oct. 1; minimum gage height, 44.30 ft, Sept. 30.

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	48.34	46.62	47.65	46.78	46.68	46.86	47.16	47.06	46.67	46.55	46.64	46.55
2	46.97	46.62	47.64	46.76	46.67	46.83	47.45	47.05	46.67	46.53	46.62	46.54
3	46.88	46.62	47.33	46.73	46.67	46.80	47.69	47.00	46.67	46.54	46.60	46.53
4	46.81	46.79	47.14	46.73	46.67	46.78	47.35	46.94	46.66	46.53	46.58	46.53
5	46.76	47.14	47.02	46.73	46.67	46.81	47.17	46.89	46.65	46.53	46.57	46.52
6	46.72	47.03	46.95	46.73	46.66	46.82	47.06	46.85	46.65	46.53	46.57	46.52
7	46.69	46.94	46.92	46.72	46.66	47.11	46.99	46.82	46.71	46.54	46.58	46.52
8	46.66	46.87	46.92	46.72	46.67	47.73	46.95	46.80	46.67	47.07	46.57	46.51
9	46.65	46.81	47.05	46.71	46.69	47.54	46.89	46.77	46.64	46.89	46.60	46.51
10	46.63	46.77	47.80	46.70	46.73	47.27	46.85	46.75	46.63	46.74	46.61	46.51
11	46.62	46.74	47.67	46.70	46.75	47.12	46.82	46.73	46.62	46.67	46.65	46.51
12	46.61	46.81	47.39	46.70	46.76	47.04	46.80	46.71	46.61	46.64	46.69	46.50
13	46.62	46.98	47.20	46.71	46.78	46.96	46.79	46.70	46.60	46.64	46.65	46.50
14	46.65	47.03	47.06	48.27	46.78	46.91	46.77	46.69	46.59	47.02	46.61	46.50
15	46.64	46.99	46.96	47.75	46.78	46.86	46.74	46.68	46.59	46.91	46.59	46.50
16	46.63	46.94	46.90	47.33	46.78	46.84	46.72	46.67	46.58	46.94	46.60	46.51
17	46.61	46.90	46.86	47.14	46.79	46.82	46.70	46.66	46.57	46.92	46.62	46.51
18	46.60	46.86	46.83	47.01	46.79	46.81	46.69	46.65	46.57	46.87	46.61	46.50
19	46.59	46.87	46.81	46.95	46.77	46.79	46.69	46.65	46.57	46.79	46.60	46.47
20	46.62	46.96	46.77	46.92	46.76	46.78	46.69	47.05	46.56	46.76	46.59	46.30
21	46.64	47.01	46.74	46.88	46.77	46.78	46.69	47.34	46.56	46.71	46.57	46.10
22	46.65	46.99	46.73	46.84	46.82	46.78	46.76	47.12	46.55	46.68	46.56	45.91
23	46.64	46.95	46.94	46.80	46.80	46.86	46.97	47.00	46.55	46.66	46.55	45.72
24	46.63	46.99	47.39	46.76	46.83	47.46	47.07	46.94	46.54	46.63	46.54	45.53
25	46.63	47.89	47.20	46.76	46.84	47.37	47.01	46.87	46.53	46.61	46.54	45.33
26	46.63	47.62	47.07	46.76	46.84	47.20	46.94	46.82	46.53	46.59	46.53	45.13
27	46.63	47.28	46.97	46.75	46.84	47.09	46.89	46.78	46.53	46.58	46.55	44.93
28	46.63	47.62	46.89	46.71	46.87	47.70	46.85	46.76	46.52	46.60	46.56	44.73
29	46.63	47.46	46.86	46.69	---	48.04	46.82	46.73	46.53	46.66	46.56	44.52
30	46.63	47.24	46.83	46.69	---	47.56	46.92	46.71	46.54	46.66	46.54	44.33
31	46.62	---	46.80	46.69	---	47.31	---	46.70	---	46.65	46.56	---
MEAN	46.72	47.01	47.07	46.87	46.75	47.08	46.93	46.84	46.60	46.70	46.59	46.08
MAX	48.34	47.89	47.80	48.27	46.87	48.04	47.69	47.34	46.71	47.07	46.69	46.55
MIN	46.59	46.62	46.73	46.69	46.66	46.78	46.69	46.65	46.52	46.53	46.53	44.33

01607300 BRUSHY FORK NEAR SUGAR GROVE, WV—Continued



01607500 SOUTH FORK SOUTH BRANCH POTOMAC RIVER AT BRANDYWINE, WV

LOCATION.--Lat 38°37'53", long 79°14'38", NAD 27, 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 44.9.

DRAINAGE AREA.--103 mi².

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

REVISED RECORDS.--WSP 1141: 1945(M), 1947(M). WDR WV-84-1: 1983. WDR WV-88-1: 1987. WDR WV-97-1: Drainage area, 1967(M), 1971-75(M), 1977-78(M).

GAGE.--Water-stage recorder with satellite telemeter. Datum of gage is 1,558.35 ft above NGVD 29. Prior to Sept. 24, 1956, nonrecording gage at highway bridge 50 ft downstream at same datum.

REMARKS.--No estimated daily discharges. 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.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharges for the November 1877 and 1896 peaks were about 40,000 ft³/s and 45,000 ft³/s, respectively; based on notes from local residents comparing these peaks to the 1949 peak.

PEAK DISCHARGE FOR CURRENT YEAR.--Maximum discharge, 1,500 ft³/s, Mar. 28, gage height, 4.56 ft.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	740	28	455	64	40	81	292	168	36	20	24	20
2	244	27	498	59	38	73	444	153	36	18	23	17
3	131	26	340	57	38	64	617	126	37	16	21	15
4	102	66	238	57	37	62	415	111	35	15	19	14
5	68	195	177	54	37	80	293	96	33	17	18	13
6	60	153	138	54	35	97	217	83	33	16	37	12
7	50	112	127	51	34	256	175	76	140	15	39	12
8	42	87	136	50	35	658	156	73	77	265	26	11
9	40	67	185	49	36	551	127	60	56	107	31	11
10	32	55	671	47	41	347	106	55	47	52	32	11
11	29	48	627	45	41	247	90	53	40	38	27	9.5
12	28	68	429	45	42	192	78	50	35	31	27	9.1
13	27	114	306	44	42	153	73	43	33	30	27	8.5
14	30	122	215	589	43	129	67	41	30	174	24	8.4
15	28	114	157	616	45	108	59	40	28	145	21	8.3
16	27	97	125	369	44	95	53	40	26	153	25	7.7
17	26	83	110	254	44	87	49	34	24	148	28	7.7
18	24	74	96	170	43	80	47	34	23	299	24	7.4
19	23	69	86	134	40	73	45	31	22	134	22	7.1
20	26	100	67	123	41	68	44	145	21	106	20	7.1
21	33	112	62	107	42	65	41	220	20	68	18	9.4
22	30	109	59	91	58	62	52	142	19	52	16	10
23	28	96	78	80	58	79	118	111	19	48	15	10
24	29	103	204	74	59	336	138	100	17	34	14	10
25	30	484	199	70	63	360	118	85	16	29	13	11
26	28	485	153	62	67	271	98	73	16	27	13	12
27	27	329	124	58	70	207	87	56	14	24	15	10
28	27	424	94	53	76	743	75	51	16	23	19	10
29	28	409	87	52	---	1,080	66	42	16	33	17	9.4
30	28	288	79	46	---	603	108	40	17	30	15	8.4
31	28	---	70	44	---	404	---	40	---	26	18	---
TOTAL	2,093	4,544	6,392	3,668	1,289	7,711	4,348	2,472	982	2,193	688	317.0
MEAN	67.5	151	206	118	46.0	249	145	79.7	32.7	70.7	22.2	10.6
MAX	740	485	671	616	76	1,080	617	220	140	299	39	20
MIN	23	26	59	44	34	62	41	31	14	15	13	7.1
CFSM	0.66	1.47	2.00	1.15	0.45	2.41	1.41	0.77	0.32	0.69	0.22	0.10
IN.	0.76	1.64	2.31	1.32	0.47	2.78	1.57	0.89	0.35	0.79	0.25	0.11

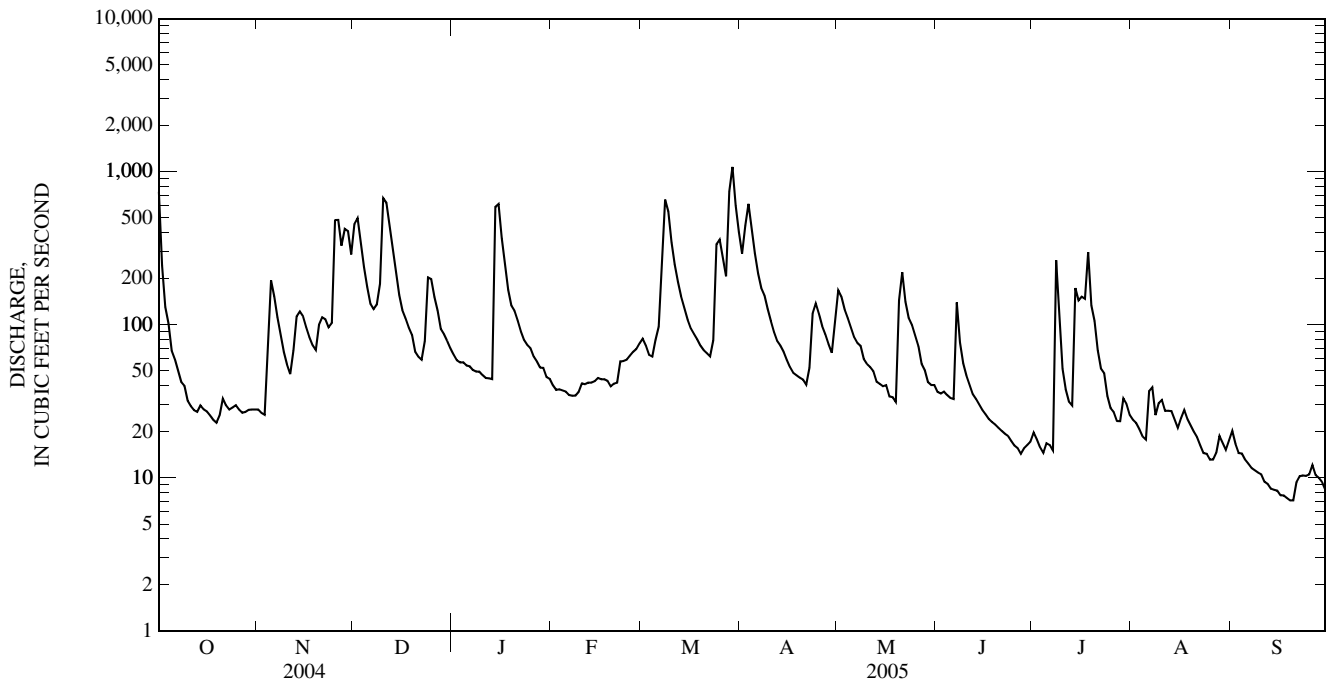
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1943 - 2005, BY WATER YEAR (WY)

	57.0	88.9	110	127	152	232	167	130	74.5	32.5	38.3	56.0
MEAN	57.0	88.9	110	127	152	232	167	130	74.5	32.5	38.3	56.0
MAX	340	965	473	519	681	588	583	324	570	220	301	568
(WY)	(1973)	(1986)	(1974)	(1996)	(1998)	(1994)	(1987)	(1960)	(1949)	(1949)	(1984)	(1996)
MIN	4.57	5.09	6.45	7.70	11.0	30.4	34.0	18.3	7.68	3.90	3.39	2.88
(WY)	(1964)	(1999)	(1956)	(1981)	(2002)	(1988)	(1981)	(1977)	(1977)	(1999)	(1957)	(1968)

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

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1943 - 2005	
ANNUAL TOTAL	51,882.0		36,697.0		105	
ANNUAL MEAN	142		101		215	
HIGHEST ANNUAL MEAN					38.6	
LOWEST ANNUAL MEAN					1981	
HIGHEST DAILY MEAN	1,680	Sep 29	1,080	Mar 29	7,500	Nov 4, 1985
LOWEST DAILY MEAN	6.8	(a)	7.1	(b)	0.20	Aug 13, 1999
ANNUAL SEVEN-DAY MINIMUM	7.0	Aug 31	7.7	Sep 14	0.42	Aug 4, 1999
MAXIMUM PEAK FLOW			1,500	Mar 28	(c)41,200	Jun 17, 1949
MAXIMUM PEAK STAGE			4.56	Mar 28	(d)18.42	Nov 4, 1985
INSTANTANEOUS LOW FLOW			6.9	(b)	0.17	Aug 13, 1999
ANNUAL RUNOFF (CFSM)	1.38		0.976		1.02	
ANNUAL RUNOFF (INCHES)	18.74		13.25		13.88	
10 PERCENT EXCEEDS	328		250		226	
50 PERCENT EXCEEDS	72		51		40	
90 PERCENT EXCEEDS	14		15		7.4	

- a Sept. 2, 4-6.
- b Sept. 19, 20.
- c From rating curve extended above 5,300 ft³/s on basis of slope-area measurement of peak flow.
- d From floodmarks.



01608000 SOUTH FORK SOUTH BRANCH POTOMAC RIVER NEAR MOOREFIELD, WV

LOCATION.--Lat 39°00'44", long 78°57'23", NAD 27, Hardy County, Hydrologic Unit 02070001, on right bank 0.2 mi downstream from Stony Creek, 3.5 mi south of Moorefield, and at mile 5.3.

DRAINAGE AREA.--277 mi².

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). WDR WV-97-1: Drainage area.

GAGE.--Water-stage recorder with satellite telemeter. 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.--Records good except those for period of estimated discharge (no gage-height record), which is poor. 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. Water-quality data furnished by Maryland USGS.

PEAK DISCHARGE FOR CURRENT YEAR.--Maximum discharge, 3,530 ft³/s, Mar. 29, gage height, 6.29 ft.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,140	99	551	156	132	167	756	279	127	41	53	35
2	695	93	799	145	124	172	862	305	113	42	48	33
3	375	87	675	133	115	168	1,330	294	109	39	46	32
4	272	101	532	127	110	167	1,000	269	107	36	41	29
5	222	245	421	130	106	175	736	241	99	33	37	26
6	183	341	340	128	102	207	576	217	89	34	40	25
7	154	304	297	128	96	364	472	200	89	37	164	24
8	133	259	277	134	91	e1,500	442	187	169	237	114	22
9	114	227	277	137	87	e1,100	403	170	130	386	181	21
10	102	197	753	139	91	e730	329	153	111	205	221	21
11	93	172	1,160	139	94	e560	287	140	151	135	128	20
12	85	169	948	136	95	462	261	134	134	104	92	20
13	80	256	709	134	95	372	237	122	106	93	77	19
14	79	312	546	374	100	305	219	112	94	94	70	18
15	77	310	421	1,170	103	264	200	109	83	219	61	18
16	77	290	334	800	105	235	177	102	75	248	54	20
17	73	264	285	618	106	216	158	93	66	331	53	20
18	68	245	255	527	106	202	148	87	57	367	54	19
19	66	224	229	441	106	189	137	82	53	323	53	17
20	64	215	209	396	106	175	134	219	51	229	48	17
21	70	234	180	356	110	166	128	514	48	179	43	17
22	70	245	165	313	115	156	129	395	47	138	38	17
23	71	241	162	292	130	190	196	314	45	112	35	16
24	71	234	196	276	127	464	280	440	42	89	32	18
25	73	337	275	259	127	715	287	466	39	76	30	20
26	74	656	273	234	127	616	262	365	36	66	29	18
27	72	587	249	215	136	506	236	279	34	59	37	19
28	72	531	225	191	147	1,160	216	232	33	53	38	18
29	75	693	193	171	---	3,020	197	200	38	56	33	18
30	119	590	182	156	---	1,670	206	172	46	66	34	18
31	110	---	169	151	---	1,040	---	146	---	62	35	---
TOTAL	5,029	8,758	12,287	8,706	3,089	17,433	11,001	7,038	2,421	4,189	2,019	635
MEAN	162	292	396	281	110	562	367	227	80.7	135	65.1	21.2
MAX	1,140	693	1,160	1,170	147	3,020	1,330	514	169	386	221	35
MIN	64	87	162	127	87	156	128	82	33	33	29	16
CFSM	0.59	1.05	1.43	1.01	0.40	2.03	1.32	0.82	0.29	0.49	0.24	0.08
IN.	0.68	1.18	1.65	1.17	0.41	2.34	1.48	0.95	0.33	0.56	0.27	0.09

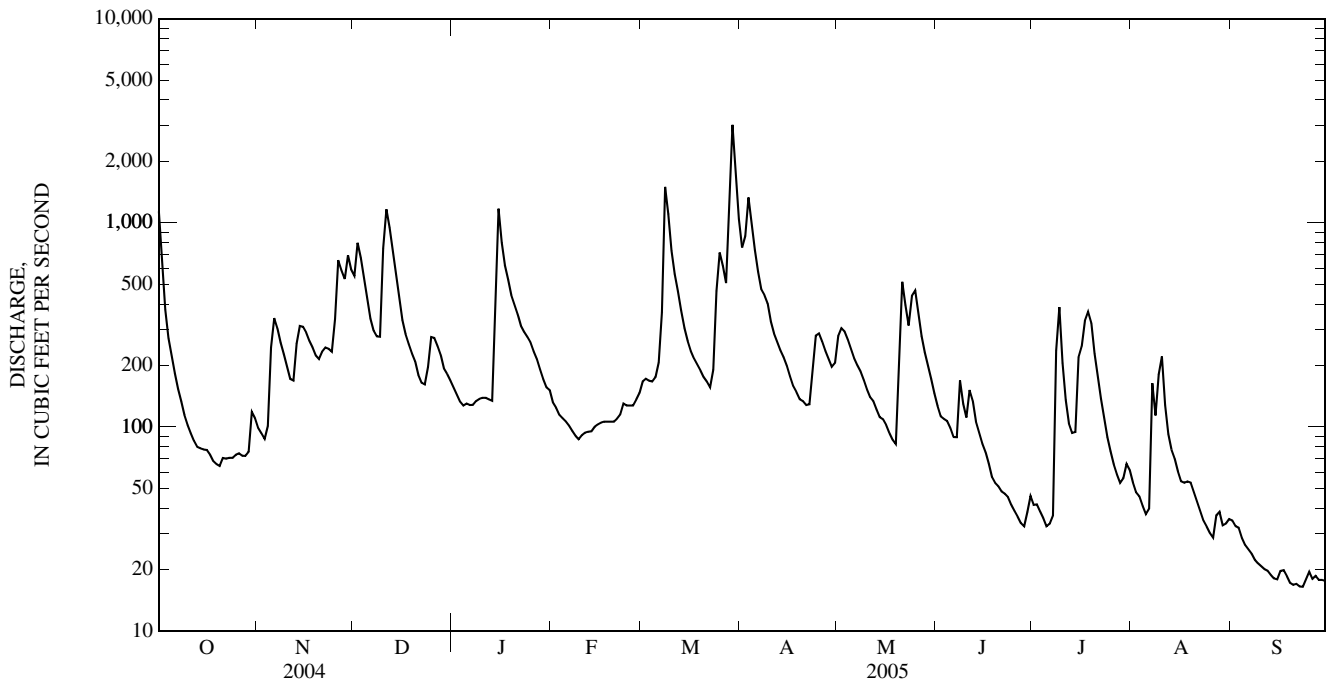
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1928 - 2005, BY WATER YEAR (WY)

	126	183	214	263	334	496	415	330	172	84.7	105	109
MEAN	126	183	214	263	334	496	415	330	172	84.7	105	109
MAX	776	2,951	879	1,267	1,591	1,327	1,787	946	1,071	510	801	1,340
(WY)	(1977)	(1986)	(1974)	(1996)	(1998)	(1993)	(1987)	(1988)	(1949)	(1949)	(1955)	(1996)
MIN	12.8	14.0	17.4	21.3	25.2	72.2	91.7	51.2	28.1	9.48	10.4	10.2
(WY)	(1992)	(1999)	(1966)	(1981)	(1934)	(1981)	(1981)	(1930)	(1977)	(1999)	(1965)	(1968)

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

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1928 - 2005	
ANNUAL TOTAL	107,280		82,605			
ANNUAL MEAN	293		226		235	
HIGHEST ANNUAL MEAN					526	2003
LOWEST ANNUAL MEAN					85.9	1934
HIGHEST DAILY MEAN	4,610	Sep 29	3,020	Mar 29	28,000	Nov 5, 1985
LOWEST DAILY MEAN	20	(a)	16	Sep 23	4.4	Sep 10, 1966
ANNUAL SEVEN-DAY MINIMUM	21	Sep 1	17	Sep 18	5.3	Sep 5, 1966
MAXIMUM PEAK FLOW			3,530	Mar 29	(b)110,000	Nov 5, 1985
MAXIMUM PEAK STAGE			6.29	Mar 29	(c)19.99	Nov 5, 1985
INSTANTANEOUS LOW FLOW			16	(d)	3.1	Aug 13, 1999
ANNUAL RUNOFF (CFSM)	1.06		0.817		0.849	
ANNUAL RUNOFF (INCHES)	14.41		11.09		11.54	
10 PERCENT EXCEEDS	588		519		522	
50 PERCENT EXCEEDS	202		138		98	
90 PERCENT EXCEEDS	44		34		21	

- a Sept. 4-6.
- b From rating curve extended above 39,000 ft³/s on basis of slope-area measurement of peak flow.
- c From floodmarks.
- d Sept. 22, 23, 24.
- e Estimated



01608070 SOUTH BRANCH POTOMAC RIVER NEAR MOOREFIELD, WV—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS—CONTINUED
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DAY	JUNE			JULY			AUGUST			SEPTEMBER		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	---	---	---	---	---	---	224	213	219	263	258	260
2	---	---	---	---	---	---	226	218	223	261	254	257
3	215	210	211	---	---	---	230	221	226	258	243	254
4	218	214	216	---	---	---	233	224	229	247	241	244
5	221	215	217	---	---	---	239	227	234	258	242	252
6	225	219	221	---	---	---	239	220	233	263	254	259
7	234	224	230	---	---	---	225	196	210	272	263	269
8	232	227	229	---	---	---	222	201	209	274	268	271
9	230	222	225	201	188	195	214	199	210	278	272	275
10	237	225	228	209	201	205	217	199	209	277	260	272
11	239	217	226	220	209	213	219	216	217	264	251	260
12	222	217	220	224	217	221	220	214	217	269	251	263
13	231	220	225	225	220	223	222	211	217	283	268	277
14	233	225	229	227	216	222	219	210	215	285	277	281
15	235	230	233	224	215	219	222	216	219	290	283	286
16	239	234	236	222	213	218	232	222	227	290	282	286
17	242	231	238	215	186	204	240	230	235	289	271	282
18	242	231	237	192	184	188	239	225	232	274	267	271
19	236	225	231	200	192	197	238	231	234	276	266	271
20	238	227	235	201	195	198	238	225	233	294	276	287
21	242	234	238	198	195	196	235	223	229	302	292	296
22	244	235	240	201	197	199	242	226	237	303	293	298
23	242	225	237	203	197	200	250	238	244	302	293	299
24	234	214	226	206	198	202	251	243	247	302	281	296
25	---	---	---	217	206	210	253	247	250	283	271	277
26	---	---	---	223	217	219	256	249	254	290	272	281
27	---	---	---	228	220	224	257	241	251	301	288	293
28	---	---	---	239	225	230	244	237	241	300	290	297
29	---	---	---	242	231	236	252	240	247	303	298	300
30	---	---	---	238	225	232	255	247	253	306	298	303
31	---	---	---	234	216	224	258	253	256	---	---	---
MONTH	---	---	---	---	---	---	258	196	231	306	241	277

01608070 SOUTH BRANCH POTOMAC RIVER NEAR MOOREFIELD, WV—Continued

PH, WATER, UNFILTERED, FIELD, STANDARD UNITS—CONTINUED
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DAY	JUNE			JULY			AUGUST			SEPTEMBER		
	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN
1	---	---	---	---	---	---	8.5	7.8	8.1	8.4	7.6	8.0
2	---	---	---	---	---	---	8.6	7.8	8.1	8.4	7.7	8.0
3	8.4	8.1	8.2	---	---	---	8.5	7.7	8.1	8.4	7.7	8.1
4	8.5	7.9	8.2	---	---	---	8.6	7.7	8.1	8.5	7.7	8.1
5	8.5	8.0	8.2	---	---	---	8.6	7.6	8.1	8.5	7.7	8.1
6	8.4	7.9	8.1	---	---	---	8.6	7.6	8.0	8.4	7.7	8.1
7	8.5	7.9	8.1	---	---	---	7.9	7.6	7.7	8.5	7.6	8.1
8	8.5	8.0	8.1	7.9	7.6	7.7	8.0	7.7	7.8	8.5	7.6	8.1
9	8.2	7.8	8.0	8.1	7.8	7.9	8.1	7.7	7.8	8.5	7.6	8.1
10	8.4	7.8	8.0	8.4	7.8	8.0	8.2	7.8	8.0	8.5	7.6	8.2
11	8.2	7.7	8.0	8.5	7.9	8.1	8.3	7.9	8.1	8.5	7.6	8.2
12	8.5	7.8	8.1	8.6	7.8	8.2	8.4	7.8	8.0	8.4	7.7	8.2
13	8.4	7.8	8.0	8.5	7.8	8.2	8.5	7.8	8.1	8.5	7.6	8.1
14	8.6	7.7	8.1	8.2	7.9	8.1	8.5	7.8	8.1	8.5	7.6	8.1
15	8.5	7.8	8.1	8.3	7.8	8.0	8.5	7.8	8.1	8.5	7.6	8.2
16	8.4	7.7	8.1	8.4	7.8	8.2	8.3	7.8	---	8.5	7.5	8.2
17	8.4	7.8	8.0	8.3	7.8	8.0	8.5	7.7	8.0	8.6	7.5	8.2
18	8.5	7.7	8.0	8.6	7.8	8.0	8.5	7.8	8.1	8.5	7.6	8.1
19	8.5	7.7	8.0	8.5	7.8	8.2	8.3	7.7	8.0	8.5	7.5	8.1
20	8.5	7.7	8.1	8.6	7.8	8.3	8.4	7.6	8.0	8.2	7.5	7.8
21	8.5	7.8	8.2	8.6	7.9	8.3	8.4	7.7	8.0	8.4	7.5	7.9
22	8.5	7.6	8.0	8.5	7.9	8.3	8.5	7.7	8.1	8.6	7.5	8.1
23	8.6	7.6	8.1	8.5	7.9	8.3	8.5	7.7	8.1	8.5	7.5	8.2
24	8.6	7.7	8.1	8.6	7.9	8.2	8.6	7.6	8.1	8.2	7.5	7.7
25	---	---	---	8.7	7.8	8.1	8.5	7.8	8.2	8.5	7.4	8.2
26	---	---	---	8.7	7.9	8.2	8.3	7.6	8.0	8.2	7.3	7.7
27	---	---	---	8.6	7.8	8.2	8.2	7.6	7.9	8.4	7.4	7.8
28	---	---	---	8.4	7.8	8.0	8.4	7.7	8.0	8.4	7.5	8.0
29	---	---	---	8.4	7.8	---	8.4	7.7	8.0	8.3	7.5	8.0
30	---	---	---	8.4	7.7	8.0	8.3	7.6	7.9	8.6	7.6	8.1
31	---	---	---	8.4	7.8	8.0	8.3	7.7	7.9	---	---	---
MAX	---	---	---	---	---	---	8.6	7.9	---	8.6	7.7	8.2
MIN	---	---	---	---	---	---	7.9	7.6	---	8.2	7.3	7.7

01608070 SOUTH BRANCH POTOMAC RIVER NEAR MOOREFIELD, WV—Continued

TEMPERATURE, WATER, DEGREES CELSIUS—CONTINUED
WATER YEAR 2004 TO SEPTEMBER 2005

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	---	---	---	---	---	---	28.1	24.5	26.2	26.0	22.8	24.4
2	---	---	---	---	---	---	28.9	24.7	26.8	26.5	22.4	24.4
3	17.2	16.6	16.9	---	---	---	29.5	25.2	27.4	25.3	22.0	23.9
4	20.8	16.4	18.4	---	---	---	29.8	25.6	27.7	25.4	21.4	23.5
5	24.4	20.0	22.0	---	---	---	29.1	26.0	27.7	24.1	20.8	22.7
6	25.7	22.3	24.0	---	---	---	28.8	26.2	27.5	24.7	20.4	22.6
7	26.4	22.7	24.5	---	---	---	26.3	23.9	25.2	25.0	20.4	22.7
8	26.4	23.3	24.9	24.1	20.0	21.7	25.5	24.2	24.8	24.9	20.3	22.7
9	25.4	23.8	24.7	22.9	19.6	21.2	24.5	23.1	23.8	24.8	20.8	22.9
10	26.3	22.8	24.5	24.7	21.5	23.1	25.4	23.0	24.1	25.5	21.8	23.7
11	26.4	23.9	25.2	26.7	23.1	24.7	26.2	24.3	25.3	25.3	21.5	23.5
12	26.8	24.0	25.5	28.2	24.5	26.2	28.2	25.1	26.6	25.4	21.0	23.3
13	27.3	24.4	25.9	26.8	24.7	25.7	29.4	26.1	27.8	25.6	21.3	23.6
14	28.7	24.7	26.6	25.6	24.4	24.9	29.7	26.8	28.2	25.6	21.7	23.7
15	27.2	25.1	26.2	25.7	23.5	24.6	28.7	26.5	27.7	26.5	22.7	24.9
16	25.8	23.7	24.6	26.6	24.4	25.3	27.7	26.2	26.9	25.9	23.6	25.0
17	24.3	21.7	23.1	25.5	24.3	24.9	28.3	24.5	26.4	25.7	23.4	24.6
18	24.6	20.5	22.6	25.2	23.0	24.1	27.1	24.5	26.0	24.6	22.3	23.5
19	23.2	20.7	22.1	25.4	24.0	24.8	26.1	24.3	25.2	24.7	21.2	23.0
20	22.3	20.1	21.2	26.4	24.0	25.2	29.1	24.6	26.6	24.2	22.3	22.9
21	24.0	19.7	22.0	26.3	24.5	25.4	29.4	26.4	27.9	24.1	20.8	22.6
22	23.7	20.7	22.2	27.0	24.8	25.9	28.4	25.4	26.9	24.0	20.6	22.5
23	25.5	20.8	23.2	27.7	24.9	26.2	27.1	23.6	25.6	24.6	21.7	23.2
24	27.6	22.1	24.9	26.9	24.2	25.6	27.0	23.3	25.2	23.8	21.9	22.5
25	28.2	23.6	26.1	29.0	24.6	26.5	26.3	22.9	24.8	24.1	21.3	22.8
26	28.2	22.4	25.7	29.5	25.4	27.4	25.3	22.6	23.5	23.8	22.2	22.7
27	27.9	18.6	23.7	29.1	26.4	27.8	23.5	22.2	22.6	23.2	21.2	22.3
28	28.6	21.0	24.4	27.8	25.0	26.0	25.4	21.6	23.3	22.1	19.0	20.9
29	29.3	20.6	25.8	26.9	23.7	25.4	25.7	23.4	24.5	21.5	19.3	20.3
30	---	---	---	27.6	24.3	25.8	25.3	24.1	24.8	19.3	16.3	18.1
31	---	---	---	27.3	24.6	25.9	26.2	24.2	25.1	---	---	---
MONTH	---	---	---	---	---	---	29.8	21.6	25.9	26.5	16.3	23.0

01608500 SOUTH BRANCH POTOMAC RIVER NEAR SPRINGFIELD, WV

LOCATION.--Lat 39°26'49", long 78°39'16", NAD 27, Hampshire County, Hydrologic Unit 02070001, on left bank at highway bridge, 2.0 mi east of Springfield, and at mile 13.5.

DRAINAGE AREA.--1,486 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). WDR WV-97-1: Drainage area.

GAGE.--Water-stage recorder with satellite telemeter. Datum of gage is 562.02 ft above NGVD 29. June 1894 to February 1896, 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.--Water-discharge records good except those for periods of estimated daily discharges (sluggish intakes), which are poor.

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 29	1130	*21,400	*14.99	No other peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4,140	1,080	2,500	1,030	701	1,120	4,740	1,990	1,080	e330	632	320
2	2,750	913	3,850	970	642	1,140	4,700	e2,900	964	e310	522	303
3	1,920	802	3,620	904	645	1,080	8,640	e2,400	861	e290	452	318
4	1,490	769	2,830	859	624	1,020	6,250	e2,000	838	e270	402	299
5	1,240	1,510	2,250	922	630	1,030	4,580	e1,700	833	e260	361	270
6	1,070	2,290	1,850	1,410	635	1,210	3,580	1,410	763	e380	328	246
7	932	1,860	1,670	1,500	619	1,760	2,930	1,300	688	e390	371	225
8	814	1,540	1,680	1,480	617	3,740	2,590	1,220	764	e310	797	213
9	723	1,310	1,720	1,600	681	5,610	2,680	1,160	855	2,760	652	204
10	652	1,140	3,060	1,560	895	3,900	2,340	1,080	714	1,450	1,070	194
11	597	1,020	4,660	1,470	1,120	2,890	2,060	996	779	943	1,160	183
12	553	999	3,980	1,450	1,090	2,380	1,890	1,020	770	671	841	179
13	519	1,340	3,110	1,420	1,030	2,000	1,780	937	683	562	649	173
14	499	1,630	2,540	2,210	991	1,710	e1,600	862	590	587	538	165
15	510	1,480	2,060	3,860	1,060	1,540	e1,400	817	543	958	483	160
16	542	1,370	1,730	3,390	1,200	1,420	e1,200	813	495	1,280	428	156
17	509	1,260	1,530	2,670	1,230	1,370	e1,100	796	454	1,350	390	154
18	482	1,200	1,420	2,100	1,260	1,280	e1,000	721	422	1,590	381	150
19	473	1,170	1,310	1,660	1,170	1,210	e920	675	e390	1,510	426	150
20	462	1,130	1,210	1,590	1,070	1,210	e870	743	e370	1,230	411	147
21	507	1,140	1,080	1,480	1,020	1,280	e830	3,730	e350	1,110	379	142
22	638	1,130	1,020	1,330	985	1,320	e800	3,150	e340	951	351	138
23	613	1,080	1,070	1,210	1,090	1,600	e870	2,300	e320	782	318	136
24	574	1,090	1,290	1,030	1,120	4,840	e1,200	2,530	e310	684	301	135
25	624	1,490	1,800	956	1,130	6,070	e1,700	3,140	e300	582	277	133
26	727	2,140	1,600	1,080	1,110	4,290	e1,600	2,680	e280	494	266	137
27	690	2,180	1,440	1,020	1,070	3,290	e1,500	2,150	e260	438	263	142
28	638	2,130	1,310	900	1,070	4,900	1,400	1,760	e250	399	275	135
29	651	2,520	1,150	745	---	19,000	1,330	1,490	e240	377	340	135
30	958	2,390	1,120	724	---	11,600	1,270	1,320	e290	379	372	137
31	1,340	---	1,080	728	---	6,760	---	1,190	---	601	357	---
TOTAL	28,837	43,103	62,540	45,258	26,505	103,570	69,350	50,980	16,796	24,228	14,793	5,579
MEAN	930	1,437	2,017	1,460	947	3,341	2,312	1,645	560	782	477	186
MAX	4,140	2,520	4,660	3,860	1,260	19,000	8,640	3,730	1,080	2,760	1,160	320
MIN	462	769	1,020	724	617	1,020	800	675	240	260	263	133
CFSM	0.63	0.97	1.36	0.98	0.64	2.25	1.56	1.11	0.38	0.53	0.32	0.13
IN.	0.72	1.08	1.57	1.13	0.66	2.59	1.74	1.28	0.42	0.61	0.37	0.14

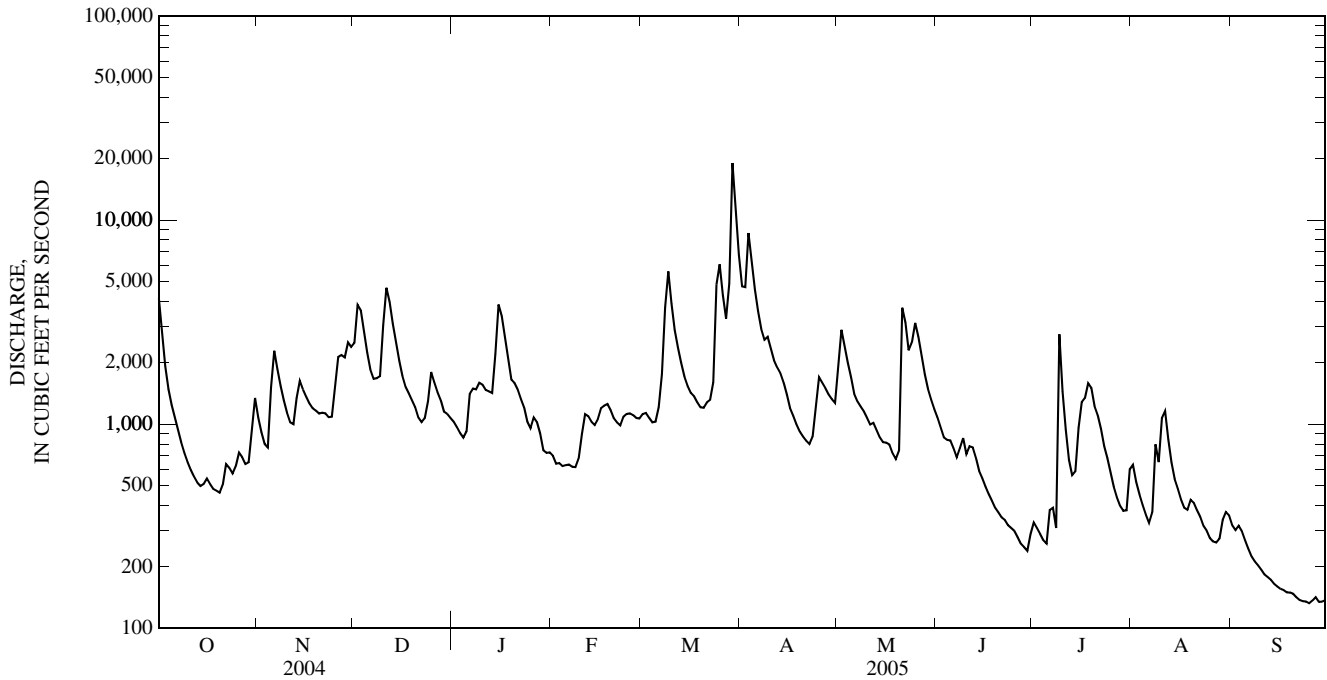
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1899 - 2005, BY WATER YEAR (WY)

MEAN	620	891	1,260	1,618	2,040	3,025	2,404	1,843	1,042	531	542	517
MAX	4,629	12,850	5,000	6,928	6,474	10,490	6,421	5,785	5,231	2,638	3,923	6,538
(WY)	(1977)	(1986)	(1973)	(1996)	(1998)	(1936)	(1987)	(1996)	(1949)	(1949)	(1955)	(1996)
MIN	79.4	82.2	147	271	330	791	829	366	217	86.7	73.5	76.6
(WY)	(1931)	(1905)	(1966)	(1981)	(2002)	(1981)	(1976)	(1977)	(1999)	(1999)	(1930)	(1930)

01608500 SOUTH BRANCH POTOMAC RIVER NEAR SPRINGFIELD, WV—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1899 - 2005	
ANNUAL TOTAL	638,694		491,539			
ANNUAL MEAN	1,745		1,347		1,358	
HIGHEST ANNUAL MEAN					2,975	1996
LOWEST ANNUAL MEAN					566	1969
HIGHEST DAILY MEAN	17,900	Apr 14	19,000	Mar 29	145,000	Nov 5, 1985
LOWEST DAILY MEAN	145	Sep 7	133	Sep 25	52	(a)
ANNUAL SEVEN-DAY MINIMUM	155	Sep 1	136	Sep 23	54	Sep 7, 1966
MAXIMUM PEAK FLOW			21,400	Mar 29	(b)240,000	Nov 5, 1985
MAXIMUM PEAK STAGE			14.99	Mar 29	(c)44.22	Nov 5, 1985
INSTANTANEOUS LOW FLOW			133	(d)	29	(f)
ANNUAL RUNOFF (CFSM)	1.17		0.906		0.914	
ANNUAL RUNOFF (INCHES)	15.99		12.31		12.41	
10 PERCENT EXCEEDS	3,460		2,680		3,060	
50 PERCENT EXCEEDS	1,340		1,030		665	
90 PERCENT EXCEEDS	316		286		153	

- 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 Sept. 24, 25, 26, 28, 29.
- e Estimated
- f Jan. 28, 1956 (result of freeze-up), July 30, 1966 (result of temporary dam).



01608500 SOUTH BRANCH POTOMAC RIVER NEAR SPRINGFIELD, WV—Continued

LOCATION.--Lat 39°26'49", long 78°39'16", NAD 27, Hampshire County, Hydrologic Unit 02070001, on left bank at highway bridge, 2.0 mi east of Springfield, and at mile 13.5.

DRAINAGE AREA.--1,486 mi².

PERIOD OF RECORD.--Periodic laboratory analyses, June 2005 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	Gage height, feet (00065)	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specific conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Alkalinity, wat fltr inc tit field, mg/L as CaCO ₃ (39086)	Bicarbonate, wat fltr incrm. titr., field, mg/L (00453)	Carbonate, wat fltr incrm. titr., field, mg/L (00452)
JUN 08...	1100	2.27	680	750	7.6	95	8.1	223	E29.0	25.8	92	--	--
JUL 12...	1015	2.27	680	753	7.5	93	7.9	210	33.0	25.8	80	--	--
AUG 10...	1000	2.77	1,160	752	7.2	88	7.8	223	30.0	25.0	86	--	--
SEP 13...	1030	1.43	176	751	8.2	96	8.4	266	--	22.5	113	138	<1

Date	Residue total at 105 deg. C, suspended, mg/L (00530)	Ammonia water, fltrd, mg/L as N (00608)	Nitrate water, fltrd, mg/L as N (00618)	Nitrite + nitrate water, fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Total nitrogen, wat unfltrd by analysis, mg/L (62855)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)	E coli, NA-MUG MF, water, col/100 mL (50278)	Fecal coliform, M-FC 0.7u MF col/100 mL (31625)	Total coliform, M-Endo, col/100 mL (31501)	Suspended sediment concentration mg/L (80154)	Suspended sediment discharge, tons/d (80155)
JUN 08...	<10	E.03	.38	.39	.008	.66	.031	.053	14	8	E8,200	3	5.5
JUL 12...	<10	<.04	--	.43	E.004	.72	.019	.058	10	20	230	8	15
AUG 10...	18	<.04	--	.36	E.005	.65	.043	.086	E18	E520	E1,120	17	53
SEP 13...	<10	<.04	--	<.06	<.008	.17	.082	.120	50	35	175	2	.95

Remark codes used in this table:

< -- Less than.
E -- Estimated.

01608500 SOUTH BRANCH POTOMAC RIVER NEAR SPRINGFIELD, WV—Continued

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01610400 WAITES RUN NEAR WARDENSVILLE, WV

LOCATION.--Lat 39°02'33.8", long 78°35'54.0", Hardy County, Hydrologic Unit 02070003, on left bank at downstream side of bridge on Waites Run Road, 2.6 mi south of Wardensville, 4.3 mi upstream from mouth, and 8.2 mi east of Baker.

DRAINAGE AREA.--12.6 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--January 2002 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1240.00 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Water-discharge records good except those for estimated daily discharges (ice affect and EDL malfunction), which are poor. U.S. Geological Survey gage-height telemeter at station. Water-quality records are published by the Maryland Water Science Center.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 140 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan 25	0745	*144	*4.38	No other peak greater than base discharge.			

Minimum discharge, 1.1 ft³/s, Sept. 28.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	43	8.9	32	14	e9.0	9.9	41	17	14	2.8	3.7	2.4
2	34	8.6	27	13	e9.0	8.9	65	16	13	2.7	3.5	2.1
3	28	8.4	26	12	e9.0	e8.8	68	16	14	2.6	3.2	2.0
4	23	15	23	12	e9.0	e8.6	52	15	12	2.5	3.0	1.9
5	19	15	21	15	9.6	9.0	44	14	11	2.5	2.8	1.8
6	17	13	20	14	9.4	10	38	14	9.9	2.5	2.7	1.8
7	15	12	19	13	9.8	19	34	14	9.4	2.7	2.9	1.8
8	13	12	18	13	11	35	32	13	8.1	32	2.9	1.7
9	12	11	24	13	11	28	28	12	7.8	6.8	7.2	1.6
10	12	10	62	13	12	24	25	12	9.4	4.2	3.7	1.7
11	11	10	57	12	9.9	22	22	11	9.7	3.6	3.0	1.6
12	9.9	19	43	12	9.9	21	20	11	7.3	3.4	2.8	1.6
13	9.5	22	37	12	9.5	18	19	10	11	5.3	2.6	1.5
14	11	18	31	86	12	16	17	11	10	6.1	2.4	1.5
15	11	17	26	48	13	15	16	12	6.9	5.4	2.3	1.5
16	9.5	16	24	37	12	14	15	10	6.2	19	2.4	1.6
17	8.4	15	22	30	12	14	14	9.2	5.8	32	2.5	1.9
18	7.5	15	20	e24	11	13	14	8.6	5.4	18	2.2	1.6
19	7.7	15	19	e22	e11	13	13	8.3	5.3	17	2.5	1.5
20	8.9	15	e16	e19	10	13	13	46	5.0	14	2.4	1.5
21	13	14	e14	e18	11	12	13	30	4.5	14	2.1	1.5
22	9.4	13	15	e16	11	12	17	24	4.7	12	1.9	1.4
23	8.5	12	26	e15	9.9	23	26	32	4.3	9.2	1.9	1.4
24	9.7	14	23	e14	10	24	19	45	3.8	7.5	1.9	1.6
25	9.3	16	19	e13	9.9	e23	18	44	3.5	6.5	1.8	1.6
26	8.6	15	18	e12	9.4	e23	16	37	3.3	5.7	1.8	1.6
27	8.4	14	e16	e12	8.9	e28	16	30	3.1	5.0	3.7	1.5
28	8.4	35	e16	e11	9.6	e40	15	26	3.1	4.9	3.5	1.3
29	8.8	27	16	e10	---	77	14	22	3.2	5.0	2.5	1.5
30	11	25	15	e10	---	60	20	19	2.9	4.6	2.4	1.4
31	9.5	---	14	e9.5	---	48	---	17	---	4.1	3.2	---
TOTAL	415.0	460.9	759	574.5	288.8	690.2	764	606.1	217.6	263.6	87.4	49.4
MEAN	13.4	15.4	24.5	18.5	10.3	22.3	25.5	19.6	7.25	8.50	2.82	1.65
MAX	43	35	62	86	13	77	68	46	14	32	7.2	2.4
MIN	7.5	8.4	14	9.5	8.9	8.6	13	8.3	2.9	2.5	1.8	1.3
CFSM	1.06	1.22	1.94	1.47	0.82	1.77	2.02	1.55	0.58	0.67	0.22	0.13
IN.	1.23	1.36	2.24	1.70	0.85	2.04	2.26	1.79	0.64	0.78	0.26	0.15

e Estimated

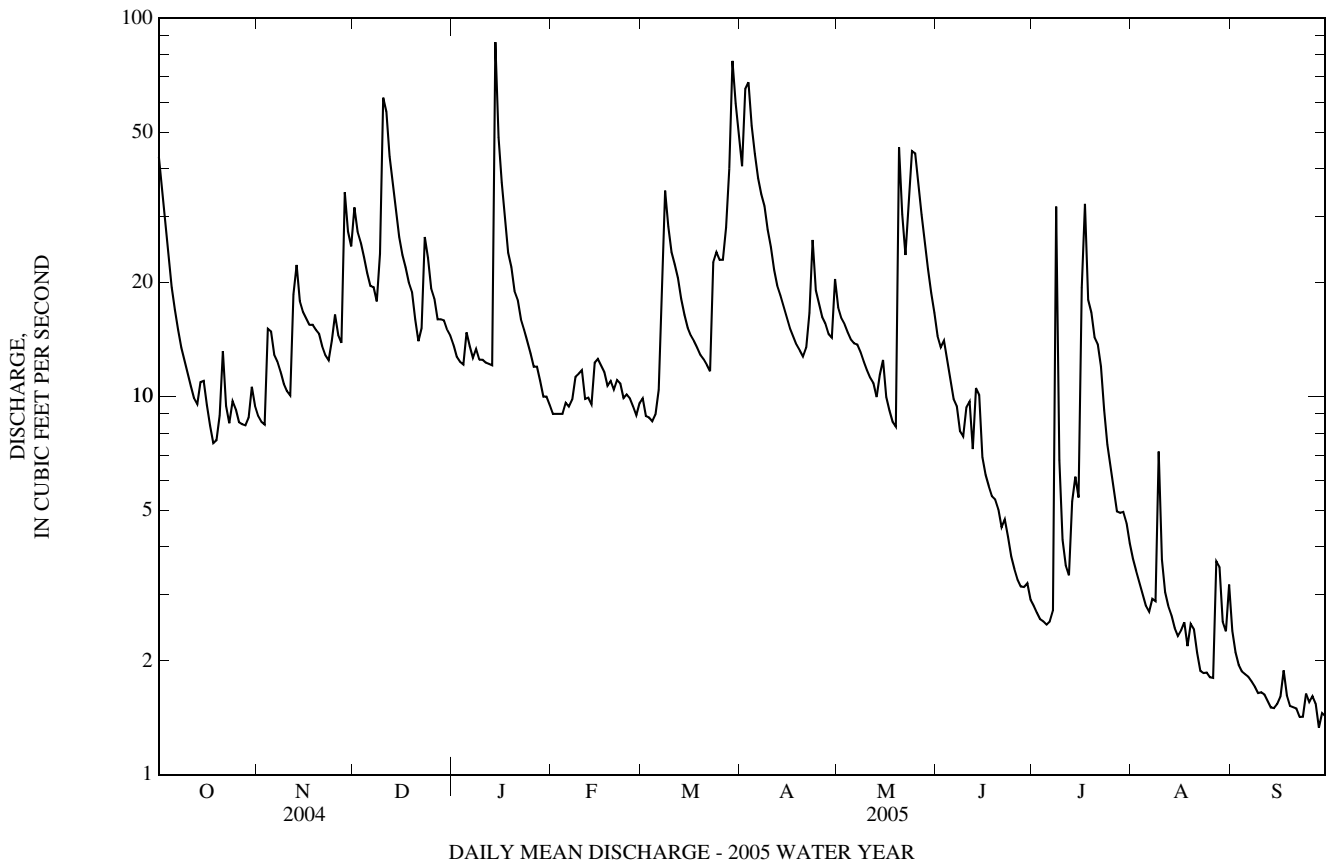
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2002 - 2005, BY WATER YEAR (WY)

MEAN	11.9	25.4	28.5	18.9	14.7	28.7	36.5	28.0	17.8	6.51	4.39	23.7
MAX	13.9	31.0	36.5	26.7	22.6	55.8	45.6	33.9	44.1	8.50	9.21	48.3
(WY)	(2004)	(2004)	(2004)	(2003)	(2003)	(2003)	(2004)	(2003)	(2003)	(2005)	(2003)	(2003)
MIN	8.43	15.4	24.4	11.3	3.79	13.0	25.5	19.6	7.25	3.43	2.27	1.65
(WY)	(2003)	(2005)	(2003)	(2004)	(2002)	(2002)	(2005)	(2005)	(2005)	(2004)	(2004)	(2005)

01610400 WAITES RUN NEAR WARDENSVILLE, WV—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 2002 - 2005	
ANNUAL TOTAL	7,424.1		5,176.5			
ANNUAL MEAN	20.3		14.2		22.1	
HIGHEST ANNUAL MEAN					29.5 2003	
LOWEST ANNUAL MEAN					14.2 2005	
HIGHEST DAILY MEAN	249	Sep 8	86	Jan 14	679	Sep 19, 2003
LOWEST DAILY MEAN	1.2	(a)	1.3	Sep 28	(e)0.78	Sep 14, 2002
ANNUAL SEVEN-DAY MINIMUM	1.3	Aug 30	1.5	Sep 22	1.0	Sep 12, 2002
MAXIMUM PEAK FLOW			144	Jan 25	1,380	Sep 19, 2003
MAXIMUM PEAK STAGE			4.38	Jan 25	6.09	Sep 19, 2003
INSTANTANEOUS LOW FLOW			1.1	Sep 28		UNKNOWN
ANNUAL RUNOFF (CFSM)	1.61		1.13		1.75	
ANNUAL RUNOFF (INCHES)	21.92		15.28		23.84	
10 PERCENT EXCEEDS	38		28		46	
50 PERCENT EXCEEDS	15		12		14	
90 PERCENT EXCEEDS	2.3		2.3		2.8	

a Sept. 2, 4, 5
 e Estimated
 b From rating curve extended above 420 ft³/s.



01611500 CACAPON RIVER NEAR GREAT CACAPON, WV

LOCATION.--Lat 39°34'56", long 78°18'36", NAD 27, Morgan County, Hydrologic Unit 02070003, on left bank at Rock Ford, 3.0 mi southwest of Great Cacapon, and at mile 6.1.

DRAINAGE AREA.--675 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--December 1922 to September 1995, October 1996 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. WDR WV-97-1: Drainage area.

GAGE.--Water-stage recorder with satellite telemeter. Datum of gage is 456.78 ft above NGVD 29 (U.S. Army Corps of Engineers bench mark). Prior to Nov. 10, 1933, nonrecording gage at same site and datum.

REMARKS.--No estimated daily discharges. Water-discharge records fair. High end of rating not confirmed above 3,000 ft³/s since cableway removed in July 1992.

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)
Jan 15	0330	4,300	7.13	Mar 29	1330	*9,090	*10.21

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,740	323	1,300	411	393	415	2,000	608	443	129	103	98
2	1,220	335	1,480	403	367	431	1,830	750	388	165	102	92
3	902	296	1,300	383	358	417	2,810	663	352	153	106	86
4	715	284	1,110	362	346	380	2,470	630	334	136	102	83
5	587	373	931	378	356	381	1,900	579	330	127	95	81
6	492	743	797	506	363	451	1,590	525	319	130	91	78
7	425	640	714	636	354	600	1,350	486	325	171	99	75
8	377	533	715	638	355	1,160	1,290	463	300	243	125	72
9	338	454	708	671	383	1,840	1,250	442	264	1,040	123	71
10	307	388	1,250	677	449	1,550	1,030	414	246	627	110	71
11	278	347	3,130	654	478	1,230	894	381	224	360	212	71
12	256	363	2,230	640	430	1,030	799	355	284	239	270	68
13	241	631	1,730	617	386	884	726	336	282	184	192	67
14	232	969	1,380	1,530	389	754	670	318	289	164	148	67
15	232	796	1,090	3,430	430	647	617	310	244	225	142	67
16	242	674	881	2,130	528	572	561	300	204	317	120	71
17	239	596	756	1,670	522	525	511	299	181	365	106	73
18	221	538	694	1,270	503	497	476	274	165	568	97	73
19	207	505	634	896	465	471	456	252	154	374	96	75
20	201	503	565	937	413	445	442	262	148	268	92	69
21	223	503	462	873	419	422	430	1,250	144	233	92	70
22	279	464	485	715	431	400	445	1,540	144	213	91	73
23	284	431	500	593	426	499	531	1,040	157	176	86	70
24	265	425	577	516	410	1,730	813	1,260	144	175	83	68
25	254	533	676	541	399	1,880	748	1,890	138	163	78	67
26	255	752	526	641	391	1,550	657	1,610	133	146	75	67
27	261	810	429	605	384	1,300	604	1,240	129	133	76	67
28	251	947	403	507	387	1,730	552	926	124	121	81	67
29	234	1,610	443	447	---	8,280	512	731	123	113	88	70
30	227	1,380	446	423	---	5,240	496	609	121	109	91	71
31	252	---	425	403	---	2,750	---	514	---	105	97	---
TOTAL	12,237	18,146	28,767	25,103	11,515	40,461	29,460	21,257	6,833	7,672	3,469	2,198
MEAN	395	605	928	810	411	1,305	982	686	228	247	112	73.3
MAX	1,740	1,610	3,130	3,430	528	8,280	2,810	1,890	443	1,040	270	98
MIN	201	284	403	362	346	380	430	252	121	105	75	67
CFSM	0.58	0.90	1.37	1.20	0.61	1.93	1.45	1.02	0.34	0.37	0.17	0.11
IN.	0.67	1.00	1.59	1.38	0.63	2.23	1.62	1.17	0.38	0.42	0.19	0.12

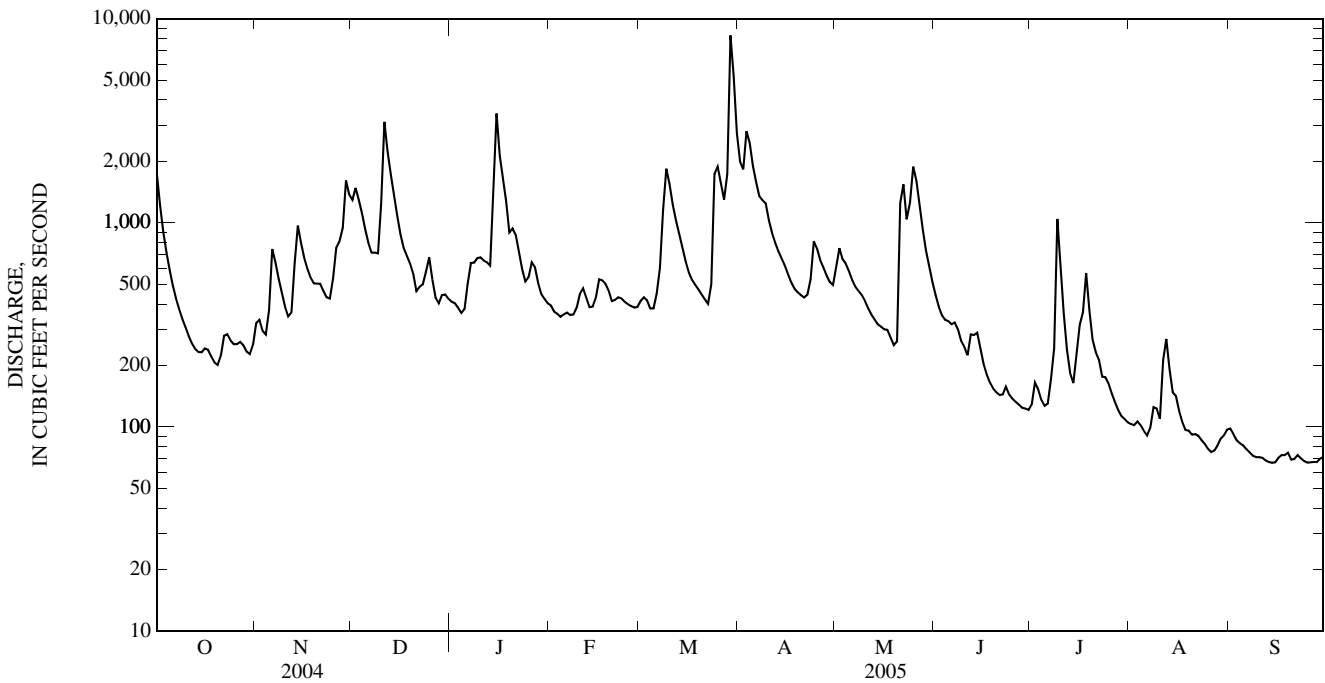
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1923 - 2005, BY WATER YEAR (WY)

MEAN	326	381	534	638	885	1,286	1,130	864	439	195	232	203
MAX	2,976	2,577	2,121	1,751	3,234	5,708	2,976	3,565	3,525	936	2,791	1,698
(WY)	(1943)	(1986)	(1973)	(1998)	(1998)	(1936)	(1987)	(1924)	(1972)	(1972)	(1955)	(2003)
MIN	44.8	51.1	56.5	69.6	89.1	247	242	157	72.5	53.8	39.8	39.4
(WY)	(1931)	(1966)	(1966)	(1956)	(1934)	(1990)	(1947)	(1969)	(1999)	(1999)	(1966)	(1932)

01611500 CACAPON RIVER NEAR GREAT CACAPON, WV—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1923 - 2005	
ANNUAL TOTAL	320,830		207,118			
ANNUAL MEAN	877		567		594	
HIGHEST ANNUAL MEAN					1,192	2003
LOWEST ANNUAL MEAN					180	1969
HIGHEST DAILY MEAN	8,050	Apr 27	8,280	Mar 29	67,900	Mar 18, 1936
LOWEST DAILY MEAN	82	(a)	67	(b)	26	Sep 12, 1966
ANNUAL SEVEN-DAY MINIMUM	84	Sep 1	68	Sep 23	28	Sep 7, 1966
MAXIMUM PEAK FLOW			9,090	Mar 29	(c)87,600	Mar 18, 1936
MAXIMUM PEAK STAGE			10.21	Mar 29	30.10	Mar 18, 1936
INSTANTANEOUS LOW FLOW			66	(d)	26	(f)
ANNUAL RUNOFF (CFSM)	1.30		0.841		0.880	
ANNUAL RUNOFF (INCHES)	17.68		11.41		11.96	
10 PERCENT EXCEEDS	1,750		1,260		1,360	
50 PERCENT EXCEEDS	586		403		250	
90 PERCENT EXCEEDS	167		91		68	

- a Sept. 5-7.
- b Sept. 13-15, 25-28.
- c From rating curve extended above 52,000 ft³/s.
- d Sept. 14, 15, 16, 25, 26.
- f Sept. 11-13, 1966.



01611500 CACAPON RIVER NEAR GREAT CACAPON, WV—Continued

LOCATION.--Lat 39°34'56", long 78°18'36", NAD 27, Morgan County, Hydrologic Unit 02070003, on left bank at Rock Ford, 3.0 mi southwest of Great Cacapon, and at mile 6.1.

DRAINAGE AREA.--675 mi².

PERIOD OF RECORD.--Periodic laboratory analyses, June 2005 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	Gage height, feet (00065)	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specific conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Alkalinity, wat fltr inc tit field, mg/L as CaCO ₃ (39086)	Bicarbonate, wat fltr incrm. titr., mg/L (00453)	Carbonate, wat fltr incrm. titr., mg/L (00452)
JUN 08...	1615	1.95	292	751	8.6	110	8.5	136	35.0	27.0	50	--	--
JUL 12...	1535	1.79	226	753	8.4	108	8.0	134	E35.0	27.4	50	--	--
AUG 10...	1420	1.42	130	754	8.3	106	8.1	168	31.0	27.4	72	--	--
SEP 13...	1505	1.22	67	751	9.0	110	8.2	178	--	24.9	82	100	<1

Date	Residue total at 105 deg. C, suspended, mg/L (00530)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water, fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Total nitrogen, wat unfltrd by analysis, mg/L (62855)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)	Suspended sediment concentration mg/L (80154)	Suspended sediment discharge, tons/d (80155)
JUN 08...	<10	<.04	.12	<.008	.33	E.003	.016	3	2.4
JUL 12...	<10	<.04	.25	<.008	.60	E.003	.021	3	1.8
AUG 10...	<10	<.04	<.06	<.008	.22	<.006	.016	2	.70
SEP 13...	10	<.04	<.06	<.008	.18	<.006	.013	1	.18

Remark codes used in this table:

< -- Less than.
E -- Estimated.

01611500 CACAPON RIVER NEAR GREAT CACAPON, WV—Continued

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01613020 UNNAMED TRIBUTARY TO WARM SPRINGS RUN NEAR BERKELEY SPRINGS, WV
(Detention Reservoir)

LOCATION.--Lat 39°36'21", long 78°13'45", NAD 83, Morgan County, Hydrologic Unit 02070004.

DAM NAME.--Warm Springs No. 3.

SURFACE AREA.--1 acre.

DRAINAGE AREA.--0.45 mi², (corrected).

PERIOD OF RECORD.--September 2004 to current year.

GAGE.--Water-stage recorder with satellite telemeter. Datum of gage is 689.05 ft above NGVD 29.

REMARKS.-- Normal Pool = 43.45 ft (Normal Storage = 6 acre-ft)

Top of Riser = 61.50 ft

Emergency Spillway = 63.55 ft

Top of Dam = 70.45 ft

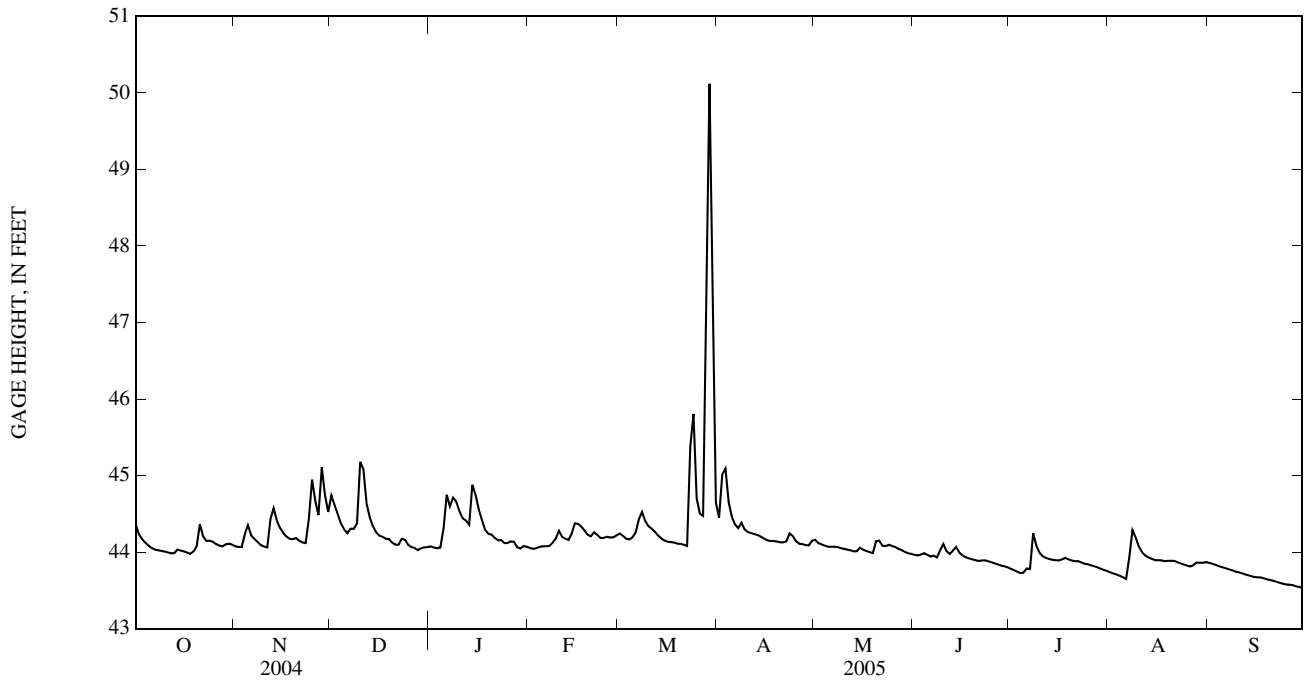
EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 51.94 ft, Sept. 18, 2004; minimum gage height, 43.52 ft, Sept. 30, 2005.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 50.81 ft, Mar. 29; minimum gage height, 43.52 ft, Sept. 30.

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	44.36	44.08	44.74	44.07	44.05	44.24	44.45	44.16	43.96	43.78	43.74	43.86
2	44.23	44.07	44.62	44.06	44.04	44.21	45.02	44.12	43.96	43.76	43.72	43.85
3	44.17	44.07	44.50	44.05	44.05	44.17	45.09	44.10	43.97	43.74	43.71	43.83
4	44.12	44.23	44.37	44.06	44.07	44.17	44.65	44.08	43.99	43.73	43.69	43.82
5	44.08	44.35	44.30	44.31	44.08	44.19	44.46	44.07	43.96	43.73	43.67	43.80
6	44.05	44.22	44.25	44.75	44.08	44.26	44.36	44.07	43.94	43.79	43.65	43.79
7	44.03	44.17	44.31	44.59	44.08	44.43	44.32	44.07	43.95	43.78	43.93	43.78
8	44.02	44.13	44.30	44.71	44.12	44.52	44.38	44.07	43.93	44.25	44.29	43.76
9	44.02	44.09	44.37	44.66	44.17	44.40	44.30	44.05	44.02	44.09	44.19	43.75
10	44.01	44.07	45.18	44.53	44.28	44.34	44.26	44.04	44.11	43.99	44.07	43.74
11	43.99	44.06	45.09	44.44	44.20	44.31	44.25	44.03	44.01	43.95	44.00	43.73
12	43.98	44.43	44.63	44.41	44.18	44.27	44.23	44.02	43.98	43.92	43.95	43.71
13	43.99	44.57	44.46	44.36	44.16	44.22	44.22	44.01	44.02	43.91	43.93	43.70
14	44.03	44.41	44.34	44.88	44.24	44.18	44.20	44.01	44.07	43.90	43.91	43.68
15	44.02	44.32	44.26	44.75	44.38	44.15	44.18	44.06	43.99	43.89	43.90	43.68
16	44.01	44.25	44.22	44.56	44.37	44.13	44.16	44.03	43.96	43.89	43.90	43.67
17	43.99	44.20	44.20	44.42	44.33	44.13	44.15	44.01	43.93	43.90	43.89	43.67
18	43.98	44.18	44.18	44.29	44.28	44.12	44.15	44.00	43.92	43.92	43.88	43.66
19	44.01	44.17	44.17	44.24	44.23	44.11	44.14	43.99	43.90	43.91	43.89	43.64
20	44.08	44.18	44.12	44.23	44.21	44.11	44.13	44.14	43.89	43.89	43.89	43.64
21	44.37	44.15	44.10	44.18	44.26	44.09	44.13	44.15	43.88	43.88	43.89	43.62
22	44.21	44.13	44.10	44.15	44.23	44.08	44.14	44.08	43.89	43.88	43.87	43.61
23	44.15	44.12	44.17	44.16	44.19	45.38	44.24	44.08	43.89	43.87	43.85	43.60
24	44.15	44.43	44.16	44.12	44.19	45.81	44.21	44.10	43.88	43.85	43.84	43.59
25	44.14	44.95	44.10	44.12	44.20	44.70	44.14	44.08	43.87	43.84	43.82	43.58
26	44.11	44.67	44.07	44.14	44.19	44.50	44.11	44.07	43.85	43.83	43.81	43.57
27	44.09	44.48	44.05	44.14	44.19	44.47	44.10	44.04	43.84	43.81	43.83	43.57
28	44.08	45.11	44.03	44.06	44.22	46.30	44.09	44.03	43.82	43.80	43.86	43.55
29	44.10	44.74	44.05	44.04	---	50.12	44.09	44.00	43.82	43.78	43.86	43.55
30	44.11	44.52	44.06	44.08	---	46.50	44.15	43.98	43.80	43.77	43.86	43.53
31	44.10	---	44.07	44.07	---	44.65	---	43.98	---	43.75	43.87	---
MEAN	44.09	44.32	44.31	44.31	44.19	44.69	44.28	44.06	43.93	43.86	43.88	43.68
MAX	44.37	45.11	45.18	44.88	44.38	50.12	45.09	44.16	44.11	44.25	44.29	43.86
MIN	43.98	44.06	44.03	44.04	44.04	44.08	44.09	43.98	43.80	43.73	43.65	43.53

01613020 UNNAMED TRIBUTARY TO WARM SPRINGS RUN NEAR BERKELEY SPRINGS, WV—Continued



01614000 BACK CREEK NEAR JONES SPRINGS, WV

LOCATION.--Lat 39°30'43", long 78°02'15", NAD 27, Berkeley County, Hydrologic Unit 02070004, on left bank at downstream side of highway bridge, 1.3 mi southeast of Tomahawk, 3.5 mi northeast of village of Jones Springs, 9.0 mi upstream from Tilhance Creek, and at mile 11.6.

DRAINAGE AREA.--235 mi².

PERIOD OF RECORD.--July 1928 to September 1931 (published as near Hedgesville, measurements, daily mean discharges, and annual maximums), August 1938 to September 1975 (measurements, daily mean discharges, and annual maximums), October 1992 to September 1998 (occasional measurements and annual maximums), June 2004 to current year (measurements, daily mean discharges, annual maximums, and gage heights and discharges at one hour or less intervals).

REVISED RECORDS.--WSP 851: 1930 (M).

GAGE.--Water-stage recorder with satellite telemeter. Datum of gage is 416.42 ft above mean sea level (from Corps of Engineers Bench Mark).

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

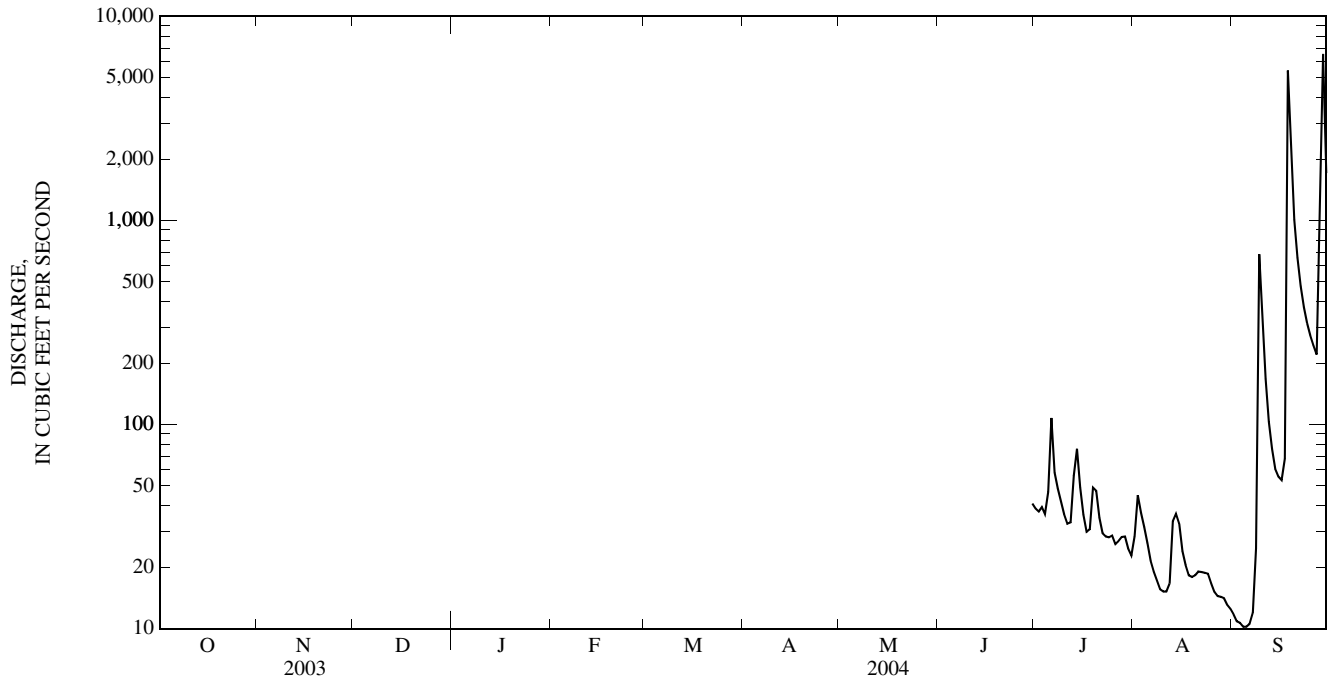
EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of March 17 or 18, 1936, reached a stage of 25 ft, present datum, from floodmarks; discharge, 22,000 ft³/s.

EXTREMES FOR JUNE 30 TO SEPTEMBER 30, 2004, AND FOR 2004 WATER YEAR.--Maximum discharge, 9,460 ft³/s, Sept. 29, gage height, 15.77 ft; minimum, 10 ft³/s, Sept. 3, 4, 5, 6, gage height, 1.62 ft.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	39	28	12
2	---	---	---	---	---	---	---	---	---	37	45	11
3	---	---	---	---	---	---	---	---	---	39	37	11
4	---	---	---	---	---	---	---	---	---	37	31	10
5	---	---	---	---	---	---	---	---	---	47	26	10
6	---	---	---	---	---	---	---	---	---	108	22	11
7	---	---	---	---	---	---	---	---	---	58	19	12
8	---	---	---	---	---	---	---	---	---	49	17	25
9	---	---	---	---	---	---	---	---	---	42	16	683
10	---	---	---	---	---	---	---	---	---	36	15	327
11	---	---	---	---	---	---	---	---	---	33	15	167
12	---	---	---	---	---	---	---	---	---	33	17	103
13	---	---	---	---	---	---	---	---	---	56	34	76
14	---	---	---	---	---	---	---	---	---	76	37	61
15	---	---	---	---	---	---	---	---	---	49	33	56
16	---	---	---	---	---	---	---	---	---	36	24	53
17	---	---	---	---	---	---	---	---	---	30	20	68
18	---	---	---	---	---	---	---	---	---	31	18	5,420
19	---	---	---	---	---	---	---	---	---	49	18	2,650
20	---	---	---	---	---	---	---	---	---	47	18	1,010
21	---	---	---	---	---	---	---	---	---	35	19	656
22	---	---	---	---	---	---	---	---	---	29	19	477
23	---	---	---	---	---	---	---	---	---	28	19	376
24	---	---	---	---	---	---	---	---	---	28	19	314
25	---	---	---	---	---	---	---	---	---	29	17	274
26	---	---	---	---	---	---	---	---	---	26	15	244
27	---	---	---	---	---	---	---	---	---	27	14	220
28	---	---	---	---	---	---	---	---	---	28	14	1,030
29	---	---	---	---	---	---	---	---	---	28	14	6,520
30	---	---	---	---	---	---	---	---	41	25	13	1,710
31	---	---	---	---	---	---	---	---	---	23	13	---
TOTAL	---	---	---	---	---	---	---	---	---	1,238	666	22,597
MEAN	---	---	---	---	---	---	---	---	---	39.9	21.5	753
MAX	---	---	---	---	---	---	---	---	---	108	45	6,520
MIN	---	---	---	---	---	---	---	---	---	23	13	10
CFSM	---	---	---	---	---	---	---	---	---	0.17	0.09	3.21
IN.	---	---	---	---	---	---	---	---	---	0.20	0.11	3.58

01614000 BACK CREEK NEAR JONES SPRINGS, WV—Continued



POTOMAC RIVER BASIN

01614000 BACK CREEK NEAR JONES SPRINGS, WV

LOCATION.--Lat 39°30'43", long 78°02'15", NAD 27, Berkeley County, Hydrologic Unit 02070004, on left bank at downstream side of highway bridge, 1.3 mi southeast of Tomahawk, 3.5 mi northeast of village of Jones Springs, 9.0 mi upstream from Tilhance Creek, and at mile 11.6.

DRAINAGE AREA.--235 mi².

PERIOD OF RECORD.--July 1928 to September 1931 (published as near Hedgesville, measurements, daily mean discharges, and annual maximums), August 1938 to September 1975 (measurements, daily mean discharges, and annual maximums), October 1992 to September 1998 (occasional measurements and annual maximums), June 2004 to current year (measurements, daily mean discharges, annual maximums, and gage heights and discharges at one hour or less intervals).

REVISED RECORDS.--WSP 851: 1930 (M).

GAGE.--Water-stage recorder with satellite telemeter. Datum of gage is 416.42 ft above mean sea level (from Corps of Engineers Bench Mark).

REMARKS.--No estimated daily discharges. Records fair except those for period January through April (sluggish or plugged intakes), which are poor.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of March 17 or 18, 1936, reached a stage of 25 ft, present datum, from floodmarks; discharge, 22,000 ft³/s.

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 29	1300	*6,560	*12.76	No other peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	926	95	643	152	196	152	1,100	168	67	19	16	13
2	613	86	670	142	183	153	1,190	158	60	17	16	12
3	443	78	544	131	186	140	1,730	146	58	16	15	11
4	333	77	445	123	172	136	1,260	137	63	15	14	9.7
5	251	195	371	124	168	149	981	127	64	16	13	9.0
6	194	195	322	180	162	181	835	115	58	20	13	8.4
7	167	159	306	207	154	263	742	111	58	31	13	7.8
8	148	131	338	224	152	364	685	109	68	102	28	7.5
9	132	107	318	264	166	381	597	101	55	192	30	7.5
10	122	89	1,230	251	186	330	504	93	52	103	37	7.7
11	109	80	1,950	239	181	297	439	86	47	64	28	7.5
12	99	98	1,070	227	158	267	386	81	46	47	23	7.1
13	89	376	735	210	146	228	335	74	45	45	20	6.6
14	89	353	532	1,010	144	193	292	71	59	45	17	6.6
15	102	270	408	1,510	197	163	243	71	63	75	14	6.6
16	100	219	341	961	222	143	200	70	47	54	13	6.6
17	89	187	310	741	225	130	170	66	38	54	13	7.2
18	75	166	286	549	210	121	141	60	33	60	12	7.0
19	67	151	265	495	184	109	126	55	31	56	13	19
20	65	148	230	432	170	96	119	75	29	42	14	15
21	124	136	213	381	170	88	113	303	29	34	14	12
22	164	122	189	350	166	79	113	187	29	30	14	10
23	158	110	192	351	147	227	173	139	28	33	13	9.4
24	154	123	300	315	131	1,070	204	150	29	28	12	9.1
25	157	275	262	321	132	901	172	183	28	25	10	9.5
26	152	314	219	290	131	709	152	160	25	24	9.5	9.8
27	138	287	212	280	128	594	140	134	23	22	10	9.3
28	126	633	187	257	135	1,340	131	106	21	19	13	8.4
29	114	806	182	225	---	5,330	123	94	20	17	15	10
30	108	590	164	228	---	2,450	130	84	21	16	17	11
31	104	---	155	202	---	1,480	---	74	---	16	16	---
TOTAL	5,712	6,656	13,589	11,372	4,702	18,264	13,526	3,588	1,294	1,337	505.5	281.3
MEAN	184	222	438	367	168	589	451	116	43.1	43.1	16.3	9.38
MAX	926	806	1,950	1,510	225	5,330	1,730	303	68	192	37	19
MIN	65	77	155	123	128	79	113	55	20	15	9.5	6.6
CFSM	0.78	0.94	1.87	1.56	0.71	2.51	1.92	0.49	0.18	0.18	0.07	0.04
IN.	0.90	1.05	2.15	1.80	0.74	2.89	2.14	0.57	0.20	0.21	0.08	0.04

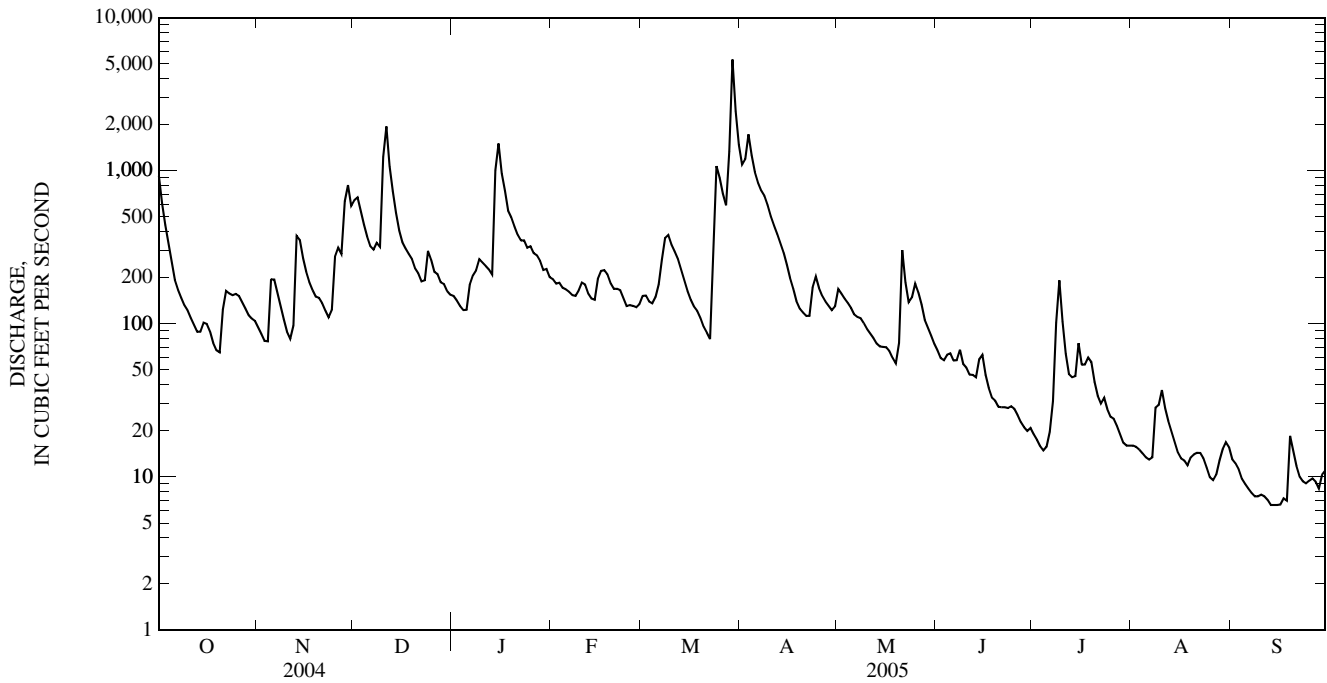
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1929 - 2005, BY WATER YEAR (WY)

MEAN	98.0	125	214	235	343	448	350	231	154	62.5	61.0	80.3
MAX	1,218	588	817	793	849	1,003	835	580	1,100	371	657	753
(WY)	(1943)	(1971)	(1973)	(1968)	(1961)	(1963)	(1952)	(1972)	(1972)	(1949)	(1955)	(2004)
MIN	5.20	10.6	10.0	21.3	33.9	112	68.8	38.8	13.0	6.27	3.22	5.25
(WY)	(1964)	(1931)	(1966)	(1966)	(1931)	(1969)	(1947)	(1930)	(1969)	(1930)	(1930)	(1930)

01614000 BACK CREEK NEAR JONES SPRINGS, WV—Continued

SUMMARY STATISTICS	FOR 2005 WATER YEAR		WATER YEARS 1929 - 2005	
ANNUAL TOTAL	80,826.8			
ANNUAL MEAN	221		198	
HIGHEST ANNUAL MEAN			382	1972
LOWEST ANNUAL MEAN			55.7	1969
HIGHEST DAILY MEAN	5,330	Mar 29	14,800	Oct 15, 1942
LOWEST DAILY MEAN	6.6	(a)	(b)1.1	
ANNUAL SEVEN-DAY MINIMUM	6.8	Sep 12	1.6	Aug 5, 1930
MAXIMUM PEAK FLOW	6,560	Mar 29	(c)22,400	Oct 15, 1942
MAXIMUM PEAK STAGE	12.76	Mar 29	(d)25.17	Oct 15, 1942
INSTANTANEOUS LOW FLOW	(f)6.4	Sep 14	0.90	(g)
ANNUAL RUNOFF (CFSM)	0.942		0.843	
ANNUAL RUNOFF (INCHES)	12.79		11.45	
10 PERCENT EXCEEDS	499		459	
50 PERCENT EXCEEDS	130		69	
90 PERCENT EXCEEDS	13		11	

- a Sept. 13-16.
- b Aug. 6, 7, 1930.
- c From rating curve extended above 6,200 ft³/s on basis of current-meter measurement of 14,500 ft³/s made at Hedgesville.
- d From floodmarks.
- f Measured discharge 6.4 ft³/s, Sept. 14.
- g Minimum observed Aug. 6, 1930.



POTOMAC RIVER BASIN

01616500 OPEQUON CREEK NEAR MARTINSBURG, WV

LOCATION.--Lat 39°25'25", long 77°56'20", NAD 27, 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 11.6.

DRAINAGE AREA.--273 mi².

WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WSP 1702: 1959. WDR WV-97-1: Drainage area, 1936(M), 1967(M), 1968(P), 1969(M).

GAGE.--Water-stage recorder with satellite telemeter. Datum of gage is 354.89 ft above NGVD 29. 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.

REMARKS.--No estimated daily discharges. Water-discharge records fair. Some diurnal fluctuation at low flow caused by upstream mills in Virginia and since July 18, 1988, by wastewater treatment plant, 1,000 ft upstream from Opequon Creek near Berryville, Va (01615000); drainage area 57.4 mi².

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in March 1936 reached a stage of about 17.5 ft, from information by local residents, estimated discharge, 19,100 ft³/s.

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	0030	2,170	9.25	Mar 29	1130	*5,030	*12.02
Mar 24	0400	2,120	9.15				

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	572	184	516	233	205	251	646	270	155	119	94	108
2	455	177	527	222	199	261	902	233	148	109	93	86
3	388	173	403	216	199	247	1,540	222	151	104	92	81
4	345	195	339	213	203	235	895	214	156	103	90	78
5	312	344	302	227	216	249	652	204	149	104	88	76
6	285	259	277	286	221	298	553	199	142	121	86	75
7	267	221	290	274	219	357	492	195	150	122	86	75
8	250	201	341	270	226	374	500	192	144	431	88	73
9	239	185	357	280	242	366	448	185	136	387	119	72
10	238	177	1,670	262	271	315	402	180	137	198	149	71
11	229	171	1,520	250	261	286	375	177	134	150	108	70
12	223	260	761	239	229	266	353	175	129	132	99	69
13	215	579	569	230	218	243	337	168	127	127	93	68
14	226	420	462	742	220	227	321	165	136	163	90	68
15	240	319	397	819	268	215	304	192	128	133	87	68
16	238	280	357	494	264	206	288	180	122	124	85	69
17	217	253	341	400	249	201	278	166	120	124	88	84
18	200	238	321	323	230	198	270	161	118	119	86	88
19	196	226	305	292	212	193	261	156	116	132	88	73
20	221	232	281	287	203	189	255	250	114	131	96	70
21	380	226	259	271	211	184	249	474	114	122	88	69
22	323	213	259	251	213	179	254	246	116	166	83	67
23	279	205	280	239	201	684	312	205	141	130	79	67
24	255	213	437	248	198	1,450	287	262	124	113	78	66
25	252	291	334	229	208	633	255	287	117	109	77	66
26	233	324	286	223	211	474	244	255	113	112	77	66
27	221	272	265	229	219	418	236	210	110	103	79	68
28	208	633	243	216	229	1,350	226	183	109	100	98	65
29	199	607	240	203	---	4,120	218	174	112	100	99	64
30	196	401	237	212	---	1,230	245	162	112	99	86	63
31	191	---	234	207	---	800	---	166	---	96	110	---
TOTAL	8,293	8,479	13,410	9,087	6,245	16,699	12,598	6,508	3,880	4,383	2,859	2,183
MEAN	268	283	433	293	223	539	420	210	129	141	92.2	72.8
MAX	572	633	1,670	819	271	4,120	1,540	474	156	431	149	108
MIN	191	171	234	203	198	179	218	156	109	96	77	63
CFSM	0.98	1.04	1.58	1.07	0.82	1.97	1.54	0.77	0.47	0.52	0.34	0.27
IN.	1.13	1.16	1.83	1.24	0.85	2.28	1.72	0.89	0.53	0.60	0.39	0.30

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1947 - 2005, BY WATER YEAR (WY)

MEAN	152	179	251	284	346	455	381	280	221	143	137	141
MAX	788	609	821	1,337	1,269	1,461	1,199	1,091	1,190	456	772	970
(WY)	(1977)	(1997)	(1973)	(1996)	(1998)	(1993)	(1984)	(1988)	(1972)	(1972)	(1996)	(1996)
MIN	30.5	35.1	33.7	39.6	49.9	97.2	97.8	86.0	62.3	49.4	36.6	35.2
(WY)	(1948)	(1966)	(1966)	(1966)	(2002)	(2002)	(1954)	(1969)	(1999)	(1966)	(1966)	(1947)

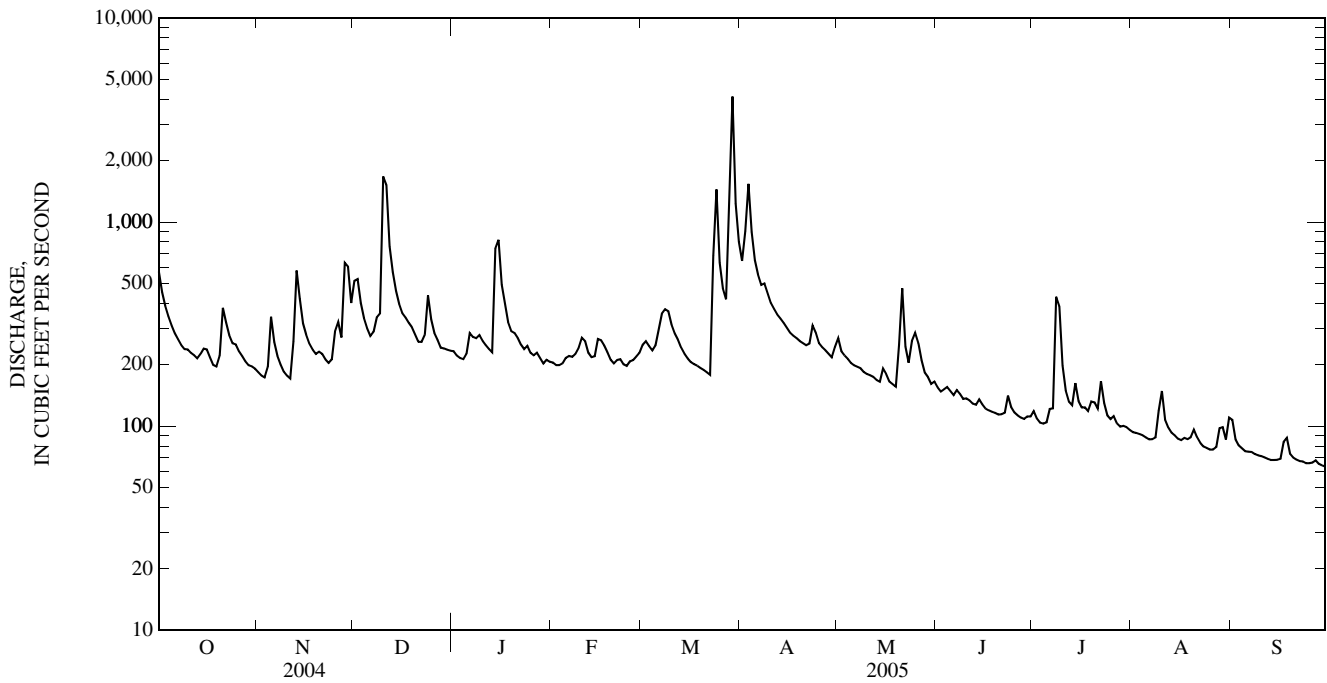
01616500 OPEQUON CREEK NEAR MARTINSBURG, WV—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1947 - 2005	
ANNUAL TOTAL	134,860		94,624			
ANNUAL MEAN	368		259		247	
HIGHEST ANNUAL MEAN					581	1996
LOWEST ANNUAL MEAN					85.7	1954
HIGHEST DAILY MEAN	5,690	Sep 29	4,120	Mar 29	(e)15,000	Jan 20, 1996
LOWEST DAILY MEAN	97	Sep 6	63	Sep 30	26	Oct 25, 1947
ANNUAL SEVEN-DAY MINIMUM	100	Sep 1	65	Sep 24	27	Sep 7, 1966
MAXIMUM PEAK FLOW			5,030	Mar 29	(a)23,400	Jan 20, 1996
MAXIMUM PEAK STAGE			12.02	Mar 29	18.76	Jan 20, 1996
INSTANTANEOUS LOW FLOW			62	(b)	25	Oct 25, 1947
ANNUAL RUNOFF (CFSM)	1.35		0.950		0.905	
ANNUAL RUNOFF (INCHES)	18.38		12.89		12.30	
10 PERCENT EXCEEDS	644		419		487	
50 PERCENT EXCEEDS	280		215		143	
90 PERCENT EXCEEDS	144		86		58	

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

b Sept. 29, 30.

e Estimated.



01616500 OPEQUON CREEK NEAR MARTINSBURG, WV—Continued

LOCATION.--Lat 39°25'25", long 77°56'20", NAD 27, 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 11.6.

DRAINAGE AREA.--273 mi².

PERIOD OF RECORD.--Periodic laboratory analyses, June 2005 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	Sample type	Gage height, feet (00065)	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specific conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Alkalinity, wat flt inc tit field, mg/L as CaCO3 (39086)		
Date		Bicarbonate, wat flt incrm. titr., field, mg/L (00453)	Carbonate, wat flt incrm. titr., field, mg/L (00452)	Residue total at 105 deg. C, suspended, mg/L (00530)	Ammonia water, fltrd, mg/L as N (00608)	Nitrate water, fltrd, mg/L as N (00618)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Total nitrogen, wat unfltrd by analysis, mg/L (62855)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)	Suspended sediment concentration mg/L (80154)	Suspended sediment discharge, tons/d (80155)	Data base number
JUN 09...	0915	Environmental	2.31	132	757	6.9	80	8.0	667	30.0	22.0	243		
JUL 13...	0920	Environmental	2.24	123	756	6.8	81	8.0	664	30.0	23.3	213		
AUG 11...	0949	Blank	--	--	--	--	--	--	--	--	--	--		
11...	0950	Environmental	2.13	109	757	6.9	81	8.1	598	31.0	22.8	202		
11...	0951	Replicate	--	--	--	--	--	--	--	--	--	--		
SEP 14...	0900	Environmental	1.78	67	755	7.9	86	8.0	772	--	18.8	312		
JUN 09...	--	--	26	.04	1.93	1.96	.037	2.33	.128	.186	29	10	01	
JUL 13...	--	--	28	.05	1.80	1.83	.022	2.22	.121	.183	19	6.3	01	
AUG 11...	--	--	--	<.04	--	<.06	<.008	<.06	<.006	<.004	--	--	98	
11...	--	--	23	.06	1.52	1.53	.011	2.04	.399	.49	23	6.8	01	
11...	--	--	--	.05	1.54	1.55	.011	1.96	.385	.46	--	--	98	
SEP 14...	380	<1	19	E.03	--	1.78	E.006	2.23	.295	.36	16	2.9	01	

Remark codes used in this table:

< -- Less than.
E -- Estimated.

01616500 OPEQUON CREEK NEAR MARTINSBURG, WV—Continued

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01636500 SHENANDOAH RIVER AT MILLVILLE, WV

LOCATION.--Lat 39°16'55", long 77°47'22", NAD 27, 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 4.7.

DRAINAGE AREA.--3,022 mi².

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). WDR WV-97-1: Drainage area.

GAGE.--Water-stage recorder with satellite telemeter. Datum of gage is 293.00 ft above NGVD 29. Apr. 15, 1895, to Mar. 31, 1909, nonrecording gage at site 0.8 mi downstream at datum 0.32 ft higher.

REMARKS.--No estimated daily discharges. Records good. Some regulation by upstream hydroelectric plants, including that of Potomac Light and Power Company, 0.5 mi upstream from 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)
Mar 30	0700	*16,300	*8.57	Apr 3	1230	15,500	8.35

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14,900	1,660	6,040	2,930	2,290	2,240	8,760	2,810	2,030	1,140	1,130	1,160
2	9,570	1,640	5,680	2,790	2,170	2,320	8,020	2,880	1,930	990	1,200	833
3	7,030	1,590	5,960	2,690	2,120	2,410	13,600	3,080	1,870	973	1,090	819
4	5,560	1,660	5,540	2,490	2,060	2,360	13,600	3,010	1,880	1,000	1,140	850
5	4,680	1,800	4,920	2,540	2,070	2,330	10,100	2,860	1,870	1,210	1,130	871
6	3,950	2,210	4,420	2,470	2,080	2,340	7,950	2,740	1,850	1,200	998	763
7	3,410	2,670	4,000	2,500	2,070	2,530	6,640	2,590	1,900	1,080	1,060	750
8	3,020	2,660	3,730	2,450	2,060	3,070	5,980	2,470	1,670	2,570	884	734
9	2,770	2,550	3,650	2,400	1,990	4,330	5,450	2,390	1,670	4,070	1,080	577
10	2,530	2,290	5,000	2,310	2,080	6,240	5,020	2,280	1,840	4,350	1,220	531
11	2,380	2,140	10,500	2,290	2,150	5,650	4,580	2,150	1,750	3,210	1,160	629
12	2,250	2,120	11,900	2,210	2,050	4,900	4,170	2,080	1,990	2,340	1,060	649
13	2,110	2,570	9,120	2,140	2,010	4,370	3,890	2,010	1,900	1,920	1,070	640
14	2,070	3,020	7,170	3,580	1,980	3,910	3,700	1,930	1,720	1,660	1,180	623
15	2,060	3,730	5,930	5,420	1,990	3,550	3,500	2,420	1,700	1,530	1,140	618
16	2,130	3,340	5,050	8,280	2,050	3,340	3,330	2,450	1,500	1,640	1,020	631
17	2,080	3,020	4,480	7,060	2,020	3,110	3,100	2,100	1,360	2,650	1,010	643
18	1,980	2,820	4,090	5,750	2,000	2,890	2,940	2,000	1,270	2,690	1,040	662
19	1,860	2,660	3,780	4,840	1,940	2,760	2,790	1,870	1,240	2,510	1,250	617
20	1,730	2,610	3,550	4,310	1,890	2,660	2,720	1,860	1,200	2,960	1,150	651
21	1,870	2,570	3,290	3,920	1,880	2,560	2,660	4,000	1,160	2,910	1,030	642
22	1,810	2,710	3,070	3,680	1,870	2,390	2,620	3,700	1,160	2,520	975	626
23	1,690	2,630	3,010	3,420	1,900	2,620	2,730	3,760	1,180	2,140	881	603
24	1,730	2,550	3,370	3,040	2,030	3,850	2,950	3,980	1,150	1,850	852	598
25	1,750	2,550	3,750	2,920	2,170	4,180	3,270	4,190	1,120	1,600	809	617
26	1,620	2,720	4,560	3,220	2,110	4,260	3,500	3,800	1,110	1,390	635	609
27	1,820	4,020	4,060	3,120	2,110	4,170	3,330	3,430	1,020	1,290	741	594
28	1,600	4,900	3,710	2,790	2,140	4,700	3,060	2,970	990	1,250	818	590
29	1,630	6,090	3,460	2,660	---	9,050	2,850	2,660	960	1,140	803	581
30	1,630	6,890	3,220	2,550	---	15,300	2,790	2,400	1,180	1,100	1,030	577
31	1,680	---	3,060	2,470	---	11,700	---	2,210	---	1,090	975	---
TOTAL	96,900	86,390	153,070	105,240	57,280	132,090	149,600	85,080	45,170	59,973	31,561	20,288
MEAN	3,126	2,880	4,938	3,395	2,046	4,261	4,987	2,745	1,506	1,935	1,018	676
MAX	14,900	6,890	11,900	8,280	2,290	15,300	13,600	4,190	2,030	4,350	1,250	1,160
MIN	1,600	1,590	3,010	2,140	1,870	2,240	2,620	1,860	960	973	635	531
CFSM	1.03	0.95	1.63	1.12	0.68	1.41	1.65	0.91	0.50	0.64	0.34	0.22
IN.	1.19	1.06	1.88	1.30	0.71	1.63	1.84	1.05	0.56	0.74	0.39	0.25

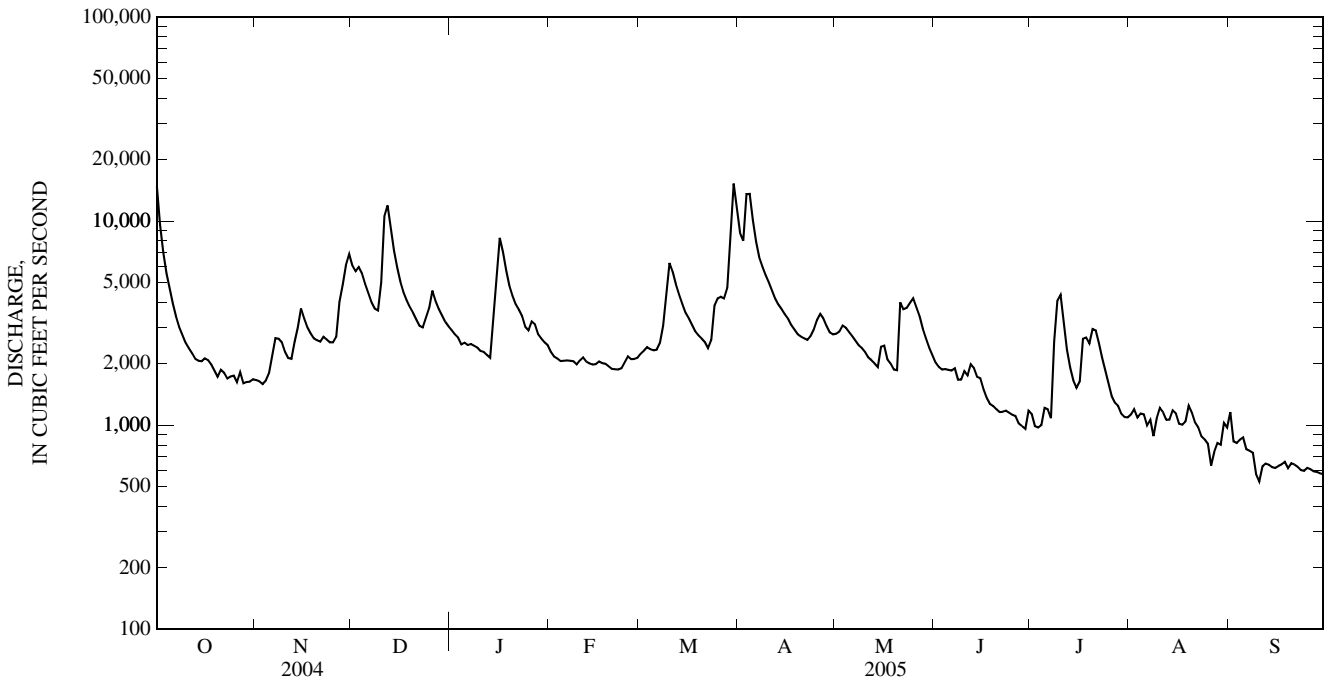
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1895 - 2005, BY WATER YEAR (WY)

MEAN	1,947	1,907	2,554	3,214	3,896	5,031	4,405	3,352	2,434	1,459	1,609	1,584
MAX (WY)	(1943)	(1986)	(1973)	(1996)	(1998)	(1936)	(1901)	(1901)	(1972)	(1972)	(1955)	(1996)
MIN (WY)	343 (1931)	388 (1932)	410 (1966)	475 (2002)	471 (2002)	929 (1931)	992 (1981)	1,001 (1969)	643 (1999)	402 (1966)	388 (1930)	411 (1963)

01636500 SHENANDOAH RIVER AT MILLVILLE, WV—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1895 - 2005	
ANNUAL TOTAL	1,288,185		1,022,642			
ANNUAL MEAN	3,520		2,802		2,776	
HIGHEST ANNUAL MEAN					5,618	1996
LOWEST ANNUAL MEAN					927	2002
HIGHEST DAILY MEAN	36,400	Sep 30	15,300	Mar 30	192,000	Oct 16, 1942
LOWEST DAILY MEAN	640	Sep 7	531	Sep 10	194	Jul 24, 1930
ANNUAL SEVEN-DAY MINIMUM	700	Sep 1	595	Sep 24	240	Sep 7, 1966
MAXIMUM PEAK FLOW			16,300	Mar 30	230,000	Oct 16, 1942
MAXIMUM PEAK STAGE			8.57	Mar 30	(a)32.40	Oct 16, 1942
INSTANTANEOUS LOW FLOW			312	Aug 23	59	Oct 4, 1930
ANNUAL RUNOFF (CFSM)	1.16		0.927		0.919	
ANNUAL RUNOFF (INCHES)	15.86		12.59		12.48	
10 PERCENT EXCEEDS	5,980		4,950		5,630	
50 PERCENT EXCEEDS	2,840		2,310		1,630	
90 PERCENT EXCEEDS	1,070		883		610	

a From floodmarks.



03050000 TYGART VALLEY RIVER NEAR DAILEY, WV

LOCATION.--Lat 38°48'33", long 79°52'55", NAD 27, 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 98.4.

DRAINAGE AREA.--185 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). WDR WV-97-1: Drainage area, 1976(M).

GAGE.--Water-stage recorder with satellite telemeter. Datum of gage is 1,940.09 ft above NGVD 12. 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 period of estimated daily discharges (ice effect), which are poor.

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 24	1100	*5,860	*10.79	No other peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	240	155	1,450	168	158	338	575	2,500	130	20	61	53
2	167	133	1,540	162	180	300	767	1,290	109	37	68	53
3	135	142	819	157	201	260	1,230	752	104	32	54	39
4	100	630	501	344	205	232	1,140	476	103	23	38	30
5	79	1,560	354	960	185	291	1,010	344	88	17	30	25
6	65	744	285	964	182	312	736	276	75	16	24	19
7	55	435	343	1,040	241	570	525	239	64	17	198	16
8	48	296	611	979	432	2,060	1,270	214	58	874	95	14
9	42	216	632	1,020	768	1,440	1,060	180	60	338	125	12
10	37	170	1,170	718	1,230	820	669	156	66	142	302	10
11	33	143	1,240	490	895	586	461	170	71	83	157	9.4
12	31	205	1,220	405	594	485	352	176	56	60	92	8.3
13	29	443	884	348	455	403	292	145	45	83	63	7.3
14	30	372	619	1,170	505	359	242	128	39	137	48	7.1
15	34	296	468	1,210	891	388	199	270	35	136	38	6.2
16	46	241	381	744	810	414	165	284	32	184	36	5.4
17	78	195	352	503	764	373	143	222	31	354	90	5.3
18	74	193	302	341	565	352	131	183	28	337	62	4.9
19	61	216	279	317	406	446	121	155	25	366	53	4.5
20	327	347	234	282	343	663	112	1,730	23	526	82	4.4
21	487	370	244	234	373	699	104	1,840	20	268	85	4.2
22	236	324	225	e190	1,430	568	110	786	18	212	53	4.2
23	168	280	536	e150	999	1,010	222	567	17	144	39	4.1
24	206	264	1,200	e175	669	4,390	296	941	15	99	31	4.0
25	317	770	715	e185	492	1,530	389	886	14	74	26	3.6
26	241	842	468	e190	386	926	899	636	12	64	22	3.5
27	179	553	341	e135	324	770	866	430	11	59	24	3.8
28	156	589	249	e130	316	1,450	569	315	11	68	101	3.6
29	146	625	238	e160	---	2,680	398	252	22	71	83	3.5
30	196	477	199	e170	---	1,470	1,320	196	25	66	56	5.4
31	184	---	178	183	---	876	---	159	---	49	45	---
TOTAL	4,227	12,226	18,277	14,224	14,999	27,461	16,373	16,898	1,407	4,956	2,281	373.7
MEAN	136	408	590	459	536	886	546	545	46.9	160	73.6	12.5
MAX	487	1,560	1,540	1,210	1,430	4,390	1,320	2,500	130	874	302	53
MIN	29	133	178	130	158	232	104	128	11	16	22	3.5
CFSM	0.74	2.20	3.19	2.48	2.90	4.79	2.95	2.95	0.25	0.86	0.40	0.07
IN.	0.85	2.46	3.68	2.86	3.02	5.52	3.29	3.40	0.28	1.00	0.46	0.08

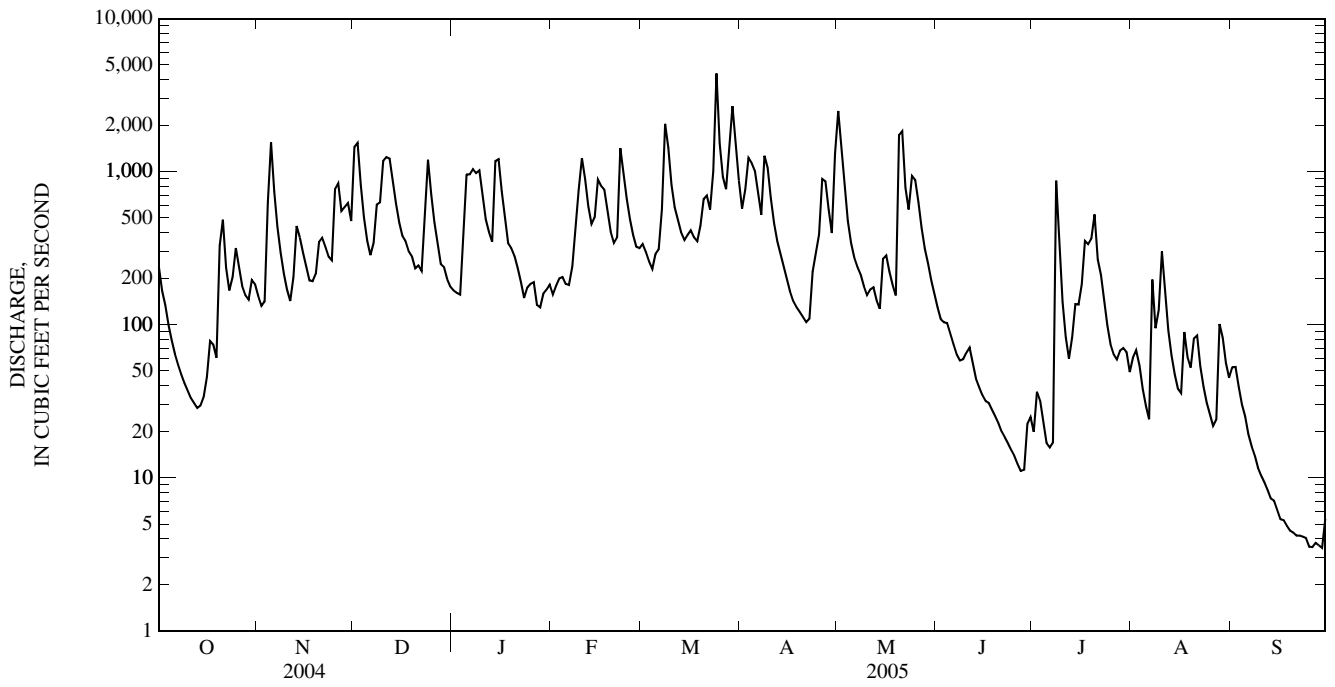
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1915 - 2005, BY WATER YEAR (WY)

MEAN	123	247	446	548	596	720	523	455	237	162	156	90.9
MAX	664	904	1,269	1,092	1,270	1,780	1,145	1,576	1,066	764	962	653
(WY)	(1938)	(2004)	(1973)	(1996)	(1994)	(1963)	(2002)	(1996)	(1928)	(1996)	(1942)	(2003)
MIN	0.00	0.00	60.2	73.3	139	304	155	65.7	13.2	6.72	0.50	0.19
(WY)	(1931)	(1931)	(1966)	(1940)	(1941)	(1957)	(1921)	(1930)	(1991)	(1930)	(1930)	(1930)

03050000 TYGART VALLEY RIVER NEAR DAILEY, WV—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1915 - 2005	
ANNUAL TOTAL	155,569.3		133,702.7		358	
ANNUAL MEAN	425		366		611	
HIGHEST ANNUAL MEAN					182	
LOWEST ANNUAL MEAN					1941	
HIGHEST DAILY MEAN	6,040	Feb 7	4,390	Mar 24	11,700	May 17, 1996
LOWEST DAILY MEAN	5.0	Sep 7	3.5	(a)	0.00	(b)
ANNUAL SEVEN-DAY MINIMUM	7.6	Sep 1	3.7	Sep 23	0.00	Sep 12, 1930
MAXIMUM PEAK FLOW			5,860	Mar 24	19,900	May 17, 1996
MAXIMUM PEAK STAGE			10.79	Mar 24	(c)17.20	Feb 4, 1932
INSTANTANEOUS LOW FLOW			3.4	(d)	0.00	(b)
ANNUAL RUNOFF (CFSM)	2.30		1.98		1.94	
ANNUAL RUNOFF (INCHES)	31.28		26.89		26.31	
10 PERCENT EXCEEDS	888		932		854	
50 PERCENT EXCEEDS	237		205		167	
90 PERCENT EXCEEDS	32		20		18	

- a Sept. 26, 29.
- b Sept. 12 to Nov. 30, 1930, Sept. 29 to Nov. 5, 1953.
- c From floodmarks.
- d Sept. 25, 26, 29.
- e Estimated.



03051000 TYGART VALLEY RIVER AT BELINGTON, WV

LOCATION.--Lat 39°01'45", long 79°56'10", NAD 27, Barbour County, Hydrologic Unit 05020001, on left bank opposite mouth of Mill Creek, 0.2 mi downstream from highway bridge at Belington, and at mile 62.4.

DRAINAGE AREA.--406 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. WDR WV-97-1: Drainage area.

GAGE.--Water-stage recorder with satellite telemeter. Datum of gage is 1,679.49 ft above NGVD 12. Prior to Apr. 25, 1939, nonrecording gage at site 0.2 mi upstream at same datum.

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

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)
Mar 25	0100	*7,130	*11.61	May 20	2400	6,340	10.96
Mar 29	1400	6,790	11.33				

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	497	477	2,370	414	462	931	1,400	5,300	316	22	109	105
2	336	387	3,750	389	485	852	1,730	3,270	263	23	94	131
3	269	452	1,940	376	553	727	2,900	1,780	244	33	104	95
4	237	1,310	1,220	588	585	628	2,570	1,150	230	61	91	86
5	196	3,770	873	2,520	561	690	2,130	808	195	82	82	63
6	166	2,000	712	2,890	537	729	1,660	625	179	68	71	45
7	115	1,160	758	2,300	607	1,360	1,230	523	169	68	57	31
8	108	787	1,120	2,060	904	4,790	3,010	468	150	984	145	30
9	104	565	1,320	2,150	1,560	4,200	2,790	403	153	1,110	144	28
10	97	454	2,160	1,640	3,070	2,040	1,640	336	269	393	194	25
11	86	389	2,570	1,160	2,470	1,450	1,140	356	236	209	298	23
12	77	498	2,460	938	1,520	1,240	853	550	250	146	169	19
13	75	1,200	1,970	848	1,170	1,020	686	451	188	126	126	15
14	89	1,070	1,500	1,830	1,390	851	561	361	147	277	95	13
15	78	799	1,170	2,850	2,180	838	481	496	125	279	78	9.2
16	122	627	942	1,720	1,770	903	403	663	112	301	75	6.6
17	213	521	850	1,210	1,620	879	326	515	107	388	65	5.4
18	226	507	755	833	1,300	832	316	413	98	727	58	4.7
19	186	653	707	642	980	982	297	348	71	1,340	87	4.5
20	486	1,250	609	673	815	1,370	275	2,360	48	1,510	96	4.5
21	1,660	1,250	535	567	869	1,570	254	4,960	55	742	100	8.4
22	754	1,030	647	489	1,770	1,260	261	1,980	59	465	123	8.1
23	474	822	954	e390	2,010	1,510	396	1,230	57	347	91	5.1
24	553	731	2,090	e450	1,380	5,760	599	2,570	55	245	65	4.5
25	917	1,450	1,620	e470	1,110	4,840	830	2,260	49	187	49	3.7
26	659	2,200	1,100	e490	873	2,070	1,710	1,630	42	166	36	3.4
27	470	1,470	822	e380	756	1,480	1,740	1,090	35	143	51	3.2
28	388	1,110	597	e380	788	2,140	1,290	770	31	141	119	2.7
29	422	1,150	562	e450	---	6,090	944	620	28	231	187	3.6
30	1,040	969	495	498	---	4,000	2,090	472	24	173	146	3.1
31	665	---	448	476	---	2,110	---	384	---	128	112	---
TOTAL	11,765	31,058	39,626	33,071	34,095	60,142	36,512	39,142	3,985	11,115	3,317	789.7
MEAN	380	1,035	1,278	1,067	1,218	1,940	1,217	1,263	133	359	107	26.3
MAX	1,660	3,770	3,750	2,890	3,070	6,090	3,010	5,300	316	1,510	298	131
MIN	75	387	448	376	462	628	254	336	24	22	36	2.7
CFSM	0.93	2.55	3.15	2.63	3.00	4.78	3.00	3.11	0.33	0.88	0.26	0.06
IN.	1.08	2.85	3.63	3.03	3.12	5.51	3.35	3.59	0.37	1.02	0.30	0.07

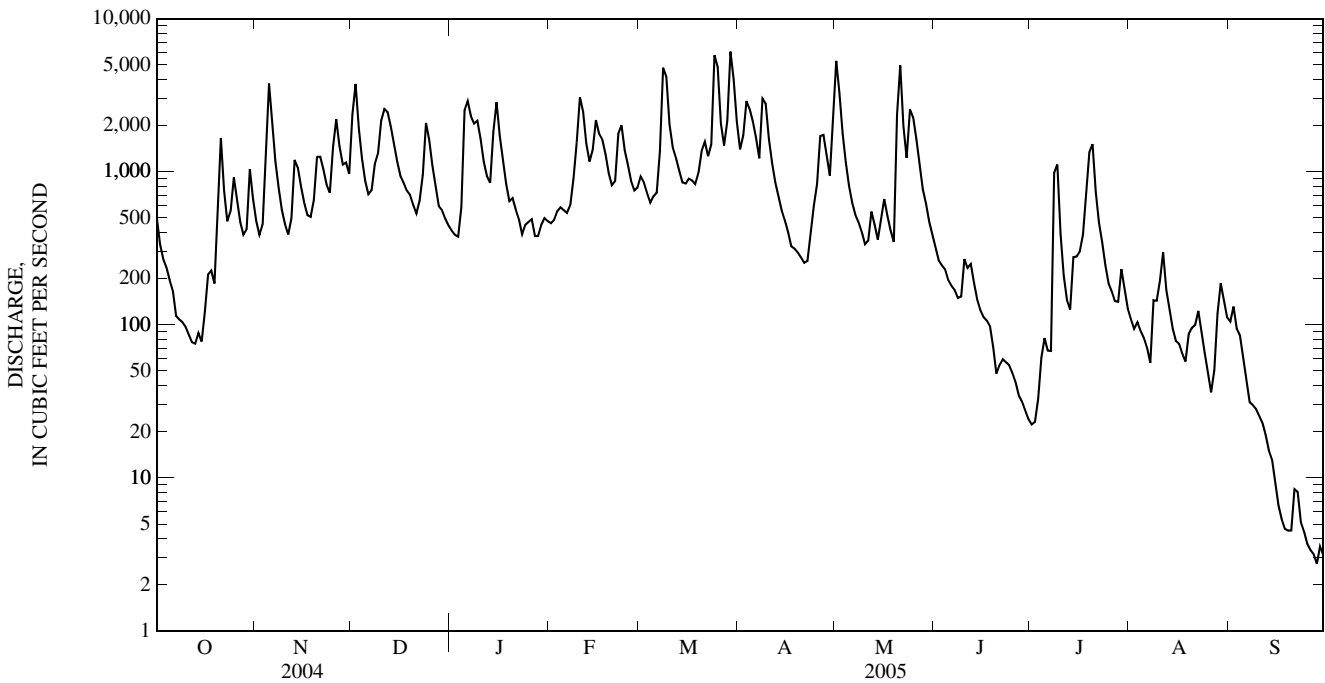
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1907 - 2005, BY WATER YEAR (WY)

	326	639	1,015	1,266	1,366	1,565	1,200	1,021	558	422	344	220
MEAN	326	639	1,015	1,266	1,366	1,565	1,200	1,021	558	422	344	220
MAX	1,765	3,431	2,837	2,731	2,905	3,765	2,387	3,847	2,449	1,997	1,981	1,202
(WY)	(1912)	(1986)	(1973)	(1911)	(1994)	(1963)	(2002)	(1996)	(1910)	(1912)	(1942)	(1971)
MIN	1.26	5.74	84.2	245	255	437	383	203	51.5	18.5	2.50	0.65
(WY)	(1931)	(1954)	(1909)	(1977)	(1978)	(1910)	(1921)	(1991)	(1965)	(1999)	(1930)	(1930)

03051000 TYGART VALLEY RIVER AT BELINGTON, WV—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1907 - 2005	
ANNUAL TOTAL	365,413		304,617.7		825	
ANNUAL MEAN	998		835		1,375	
HIGHEST ANNUAL MEAN					506	
LOWEST ANNUAL MEAN					1996	
HIGHEST DAILY MEAN	13,900	Feb 7	6,090	Mar 29	27,400	Nov 5, 1985
LOWEST DAILY MEAN	29	Sep 7	2.7	Sep 28	0.10	(a)
ANNUAL SEVEN-DAY MINIMUM	48	Sep 1	3.5	Sep 24	0.17	Sep 13, 1930
MAXIMUM PEAK FLOW			7,130	Mar 25	(b)29,500	Nov 5, 1985
MAXIMUM PEAK STAGE			11.61	Mar 25	(c)23.65	Nov 5, 1985
INSTANTANEOUS LOW FLOW			1.7	(d)	0.10	(a)
ANNUAL RUNOFF (CFSM)	2.46		2.06		2.03	
ANNUAL RUNOFF (INCHES)	33.48		27.91		27.60	
10 PERCENT EXCEEDS	2,200		2,080		2,000	
50 PERCENT EXCEEDS	588		498		407	
90 PERCENT EXCEEDS	103		49		46	

- a Sept. 13-16, 1930.
- b From rating curve extended above 18,700 ft³/s.
- c From floodmarks.
- d Sept. 28, 29.
- e Estimated.



03052000 MIDDLE FORK RIVER AT AUDRA, WV

LOCATION.--Lat 39°02'22", long 80°04'06", NAD 27, Barbour County, Hydrologic Unit 05020001, on right bank at Audra, 600 ft upstream from highway bridge, and at mile 2.9.

DRAINAGE AREA.--148 mi².

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

REVISED RECORDS.--WDR WV-97-1: Drainage area, 1944(P), 1945(M), 1947(M), 1948(P), 1949-50(M), 1955-56(M), 1957(P), 1963(P), 1964(M), 1972(P), 1986(M), 1992(M), 1994(P).

GAGE.--Water-stage recorder with satellite telemeter. Elevation of gage is approximately 1,670 ft above NGVD 29, from topographic map.

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

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Nov. 5, 1985, reached a stage of 15.8 ft, from floodmarks; discharge, about 17,100 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)
Mar 8	1300	*3,520	*7.52	Mar 24	0700	3,500	7.50

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	195	271	1,000	211	246	491	635	1,900	169	6.4	64	44
2	155	243	1,170	201	250	472	767	1,200	136	5.7	51	68
3	151	363	792	189	269	411	982	792	120	6.5	40	40
4	132	946	580	339	297	337	1,020	561	131	9.5	33	30
5	104	1,500	458	1,050	292	388	909	425	103	5.9	28	24
6	84	901	380	1,100	290	343	715	345	81	5.5	24	19
7	73	630	396	1,010	320	512	560	291	67	12	20	16
8	65	475	477	911	419	2,380	1,320	253	56	292	18	14
9	56	363	484	886	574	1,530	1,080	207	53	193	16	12
10	51	291	694	696	1,290	872	745	178	54	83	17	10
11	47	248	883	548	1,000	668	553	177	51	48	27	8.5
12	45	313	897	464	723	553	432	238	65	35	24	6.8
13	46	615	767	412	573	460	353	210	49	28	18	5.9
14	169	533	643	829	625	388	282	181	39	72	15	4.9
15	167	450	538	926	816	354	226	289	39	100	12	4.3
16	150	380	462	700	731	362	187	285	35	279	12	3.7
17	297	318	422	560	760	351	160	240	31	197	13	3.4
18	249	317	373	407	619	369	145	206	30	305	11	2.5
19	207	364	347	331	488	460	132	176	27	777	13	2.3
20	522	521	275	369	437	654	119	732	23	636	17	2.3
21	972	610	277	300	461	708	108	1,240	20	330	24	2.1
22	585	562	318	262	740	606	116	709	18	350	32	1.9
23	426	483	462	247	687	723	257	526	17	250	28	1.8
24	457	426	744	200	586	2,630	324	1,240	16	159	20	1.8
25	550	633	618	254	510	1,400	405	996	14	108	15	1.8
26	450	808	500	248	419	866	887	746	12	96	12	1.8
27	367	665	412	238	360	653	900	554	10	77	14	1.9
28	311	572	297	169	386	921	708	414	8.6	115	19	1.9
29	290	496	322	235	---	2,190	546	353	7.9	182	57	2.1
30	342	433	261	254	---	1,560	1,020	265	7.1	122	41	2.4
31	309	---	231	253	---	895	---	213	---	86	39	---
TOTAL	8,024	15,730	16,480	14,799	15,168	25,507	16,593	16,142	1,489.6	4,971.5	774	341.1
MEAN	259	524	532	477	542	823	553	521	49.7	160	25.0	11.4
MAX	972	1,500	1,170	1,100	1,290	2,630	1,320	1,900	169	777	64	68
MIN	45	243	231	169	246	337	108	176	7.1	5.5	11	1.8
CFSM	1.75	3.54	3.59	3.23	3.66	5.56	3.74	3.52	0.34	1.08	0.17	0.08
IN.	2.02	3.95	4.14	3.72	3.81	6.41	4.17	4.06	0.37	1.25	0.19	0.09

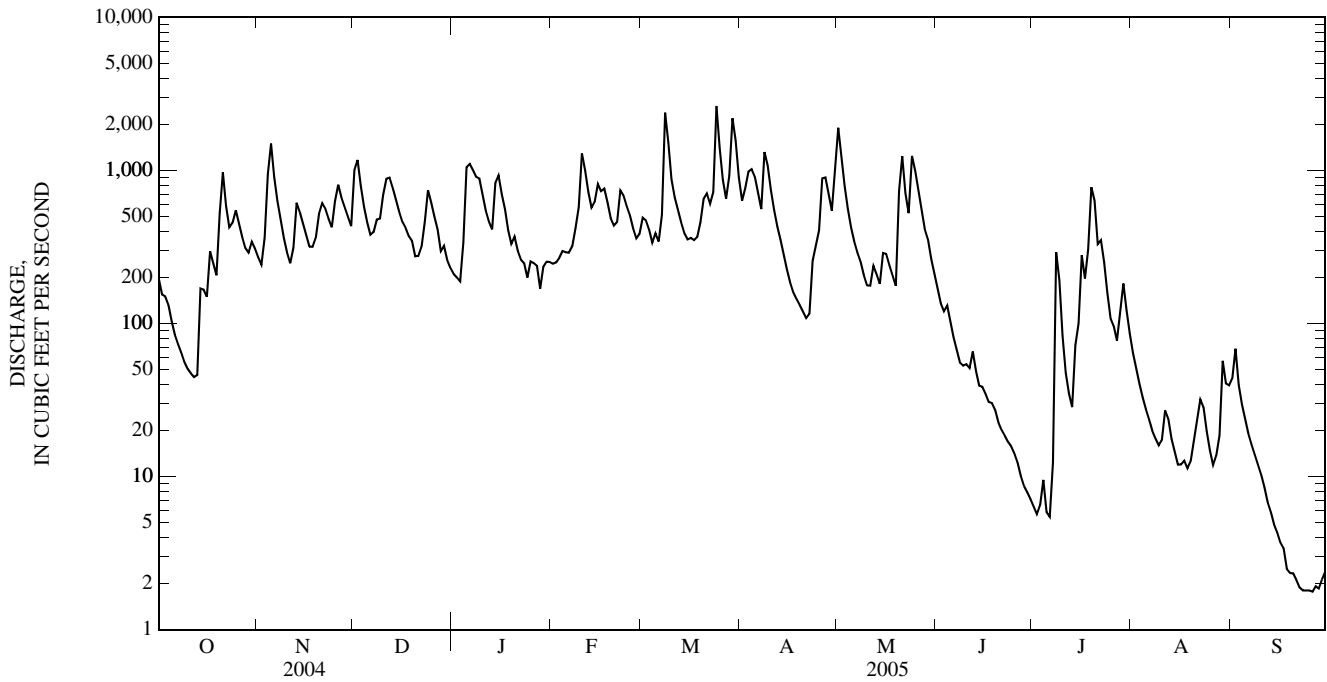
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1942 - 2005, BY WATER YEAR (WY)

MEAN	125	278	476	551	584	672	523	437	225	159	141	103
MAX	548	841	1,124	986	1,080	1,443	1,012	1,634	760	720	690	642
(WY)	(1955)	(2004)	(1973)	(1994)	(1994)	(1963)	(1973)	(1996)	(1972)	(1996)	(1942)	(1971)
MIN	0.39	2.40	47.5	96.3	134	372	222	90.3	15.4	5.39	2.60	1.40
(WY)	(1954)	(1954)	(1966)	(1977)	(1978)	(1966)	(1971)	(1991)	(1965)	(1966)	(1993)	(1946)

03052000 MIDDLE FORK RIVER AT AUDRA, WV—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1942 - 2005	
ANNUAL TOTAL	166,421		136,019.2		356	
ANNUAL MEAN	455		373		203	
HIGHEST ANNUAL MEAN					554	1996
LOWEST ANNUAL MEAN					203	1966
HIGHEST DAILY MEAN	4,180	Feb 6	2,630	Mar 24	9,320	May 17, 1996
LOWEST DAILY MEAN	20	Sep 7	1.8	(a)	0.20	(b)
ANNUAL SEVEN-DAY MINIMUM	32	Sep 1	1.8	Sep 22	0.20	Oct 11, 1953
MAXIMUM PEAK FLOW			3,520	Mar 8	16,700	May 17, 1996
MAXIMUM PEAK STAGE			7.52	Mar 8	15.60	May 17, 1996
INSTANTANEOUS LOW FLOW			1.7	Sep 26	0.20	(b)
ANNUAL RUNOFF (CFSM)	3.07		2.52		2.40	
ANNUAL RUNOFF (INCHES)	41.83		34.19		32.64	
10 PERCENT EXCEEDS	910		884		837	
50 PERCENT EXCEEDS	329		290		192	
90 PERCENT EXCEEDS	61		12		15	

a Sept. 23-26.
 b Oct. 11-27, 1953.



03052500 SAND RUN NEAR BUCKHANNON, WV

LOCATION.--Lat 38°57'50", long 80°09'10", NAD 27, Upshur County, Hydrologic Unit 05020001, on right bank 300 ft downstream from Left Fork, 4.5 mi southeast of Buckhannon, and at mile 6.4.

DRAINAGE AREA.--14.3 mi².

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

REVISED RECORDS.--WSP 1725: 1955(M). WDR WV-97-1: Drainage area.

GAGE.--Water-stage recorder with satellite telemeter and crest-stage gage. Elevation of gage is approximately 1,530 ft above NGVD 29, 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 (no gage-height record, ice effect), 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)
Mar 8	0800	*421	*4.54	No other peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.9	14	106	14	e25	80	38	114	11	0.72	1.7	2.4
2	3.3	14	79	13	27	61	92	63	9.5	0.60	1.2	1.3
3	4.6	32	50	13	28	e44	98	40	8.9	0.51	0.99	0.87
4	3.4	132	35	35	30	e39	83	29	8.2	0.49	e84	0.64
5	2.5	113	27	136	29	35	55	22	7.1	0.45	0.71	0.51
6	2.1	57	24	108	27	45	38	19	5.6	2.0	0.75	0.42
7	1.8	39	31	81	26	77	33	17	4.5	1.5	0.66	0.37
8	1.6	26	30	95	26	247	94	16	3.6	15	0.62	0.31
9	4.0	19	43	85	38	104	63	13	7.5	3.4	0.70	0.28
10	2.5	16	77	54	121	63	42	12	12	1.6	0.75	0.25
11	1.4	15	85	38	74	51	31	14	8.4	1.1	0.59	0.22
12	1.3	49	73	31	53	46	25	23	7.2	0.86	0.45	0.18
13	62	71	63	26	42	40	21	15	4.7	0.87	0.38	0.16
14	112	47	51	115	49	36	17	14	4.0	1.2	0.32	0.13
15	47	33	42	79	51	36	14	18	3.8	8.8	0.29	0.13
16	41	26	35	51	47	37	12	14	2.9	5.7	0.34	0.15
17	46	21	31	37	39	34	11	12	3.0	2.5	0.38	0.21
18	27	24	31	32	33	34	10	11	2.1	30	0.30	0.22
19	22	34	25	34	31	36	9.9	9.7	1.7	77	0.59	0.19
20	e68	e50	23	23	25	40	9.5	66	1.5	45	0.81	0.17
21	e48	e54	22	20	32	34	9.1	56	1.4	15	0.61	0.16
22	e37	e47	22	e17	31	27	15	31	1.2	9.6	0.39	0.14
23	25	e36	32	e15	30	45	20	44	1.2	6.4	0.29	0.10
24	49	e30	38	e19	30	118	25	111	0.99	4.1	0.23	0.05
25	45	e36	33	e19	28	74	43	84	0.82	5.3	0.17	0.04
26	31	e54	28	e18	25	49	57	52	0.74	8.4	0.15	0.07
27	23	43	22	e15	26	37	41	32	0.69	4.3	1.8	0.14
28	19	34	21	e19	44	98	30	27	0.67	4.3	5.7	0.15
29	18	26	18	e25	---	170	24	27	0.75	3.0	2.0	0.25
30	18	24	16	e26	---	92	106	17	0.76	2.4	3.7	0.28
31	16	---	15	e26	---	54	---	14	---	1.7	1.9	---
TOTAL	786.4	1,216	1,228	1,319	1,067	1,983	1,166.5	1,036.7	126.42	263.80	30.31	10.49
MEAN	25.4	40.5	39.6	42.5	38.1	64.0	38.9	33.4	4.21	8.51	0.98	0.35
MAX	112	132	106	136	121	247	106	114	12	77	5.7	2.4
MIN	1.3	14	15	13	25	27	9.1	9.7	0.67	0.45	0.15	0.04
CFSM	1.77	2.83	2.77	2.98	2.66	4.47	2.72	2.34	0.29	0.60	0.07	0.02
IN.	2.05	3.16	3.19	3.43	2.78	5.16	3.03	2.70	0.33	0.69	0.08	0.03

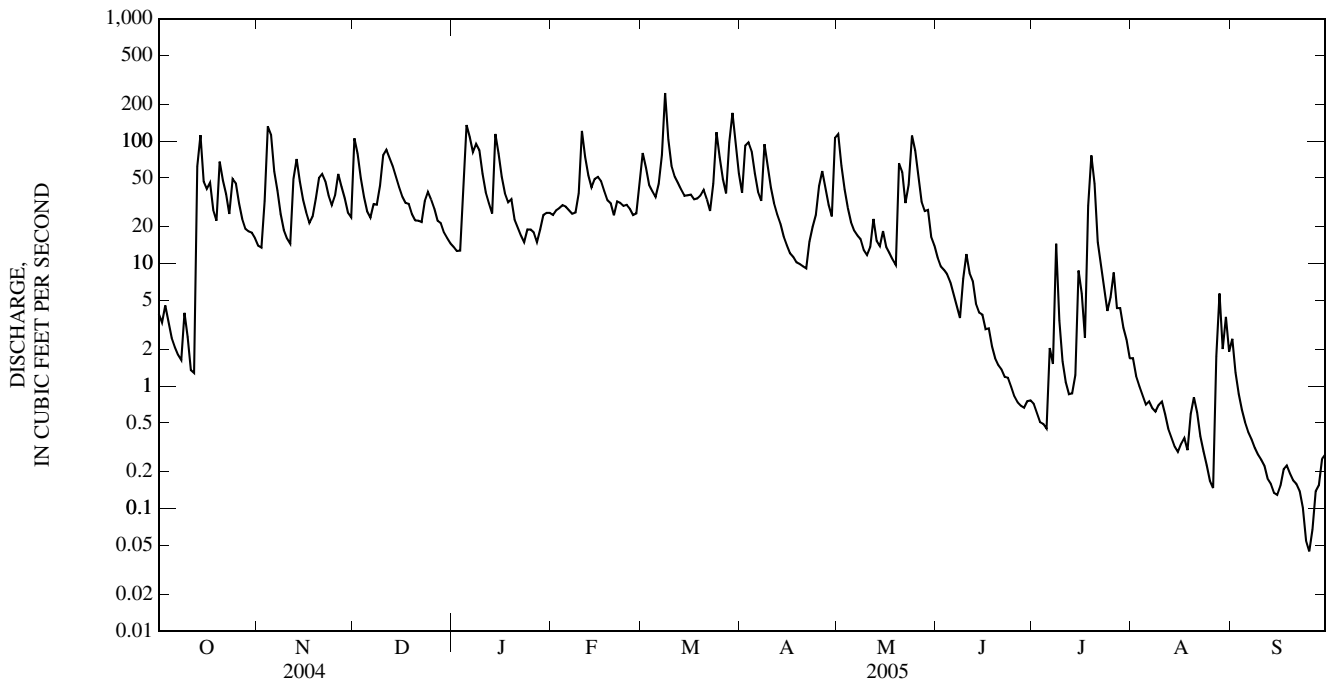
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1947 - 2005, BY WATER YEAR (WY)

MEAN	10.5	24.5	38.3	42.4	48.1	51.8	40.7	30.8	17.7	13.4	10.3	7.21
MAX	60.3	145	87.3	91.1	116	119	83.9	154	75.1	59.4	48.5	30.2
(WY)	(1977)	(1986)	(1973)	(1994)	(1994)	(1993)	(1973)	(1996)	(1989)	(1958)	(1977)	(1979)
MIN	0.01	0.06	3.52	9.44	11.1	12.3	10.2	4.91	0.44	0.37	0.15	0.07
(WY)	(1954)	(1954)	(1966)	(1977)	(1978)	(1987)	(1971)	(1982)	(1965)	(1966)	(1993)	(1953)

03052500 SAND RUN NEAR BUCKHANNON, WV—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1947 - 2005	
ANNUAL TOTAL	13,861.12		10,233.62		27.9	
ANNUAL MEAN	37.9		28.0		45.3	
HIGHEST ANNUAL MEAN					1994	
LOWEST ANNUAL MEAN					14.8	
HIGHEST DAILY MEAN	537	Feb 6	247	Mar 8	1,320	Feb 9, 1994
LOWEST DAILY MEAN	0.62	Sep 6	0.04	Sep 25	0.00	(a)
ANNUAL SEVEN-DAY MINIMUM	0.97	Sep 1	0.10	Sep 22	0.00	Sep 22, 1953
MAXIMUM PEAK FLOW			421	Mar 8	(b)3,200	Nov 4, 1985
MAXIMUM PEAK STAGE			4.54	Mar 8	8.34	Nov 4, 1985
INSTANTANEOUS LOW FLOW			0.04	(c)	0.00	(d)
ANNUAL RUNOFF (CFSM)	2.65		1.96		1.95	
ANNUAL RUNOFF (INCHES)	36.06		26.62		26.50	
10 PERCENT EXCEEDS	77		69		63	
50 PERCENT EXCEEDS	24		22		13	
90 PERCENT EXCEEDS	3.1		0.44		1.0	

- a Several days in 1951-56, 1964-66, July 19, 1986, and Sept. 11, 12, 1995.
- b From rating curve extended above 1,560 ft³/s.
- c Sept. 24, 25, 26.
- d Several days in 1951-56, 1964-66, parts of July 19, 20, 1986, and Sept. 11, 12, 1995.
- e Estimated.



MONONGAHELA RIVER BASIN
03053500 BUCKHANNON RIVER AT HALL, WV

LOCATION.--Lat 39°03'04", long 80°06'53", NAD 27, 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 7.9.

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 with satellite telemeter. Datum of gage is 1,369.15 ft above NGVD 29 (from Baltimore & Ohio RR reference mark). 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 period of estimated daily discharges (ice effect), which is 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)
Mar 8	2130	*3,920	*8.87	No peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	254	388	1,520	329	e460	1,540	1,090	2,990	274	34	115	98
2	204	347	2,250	309	e470	1,370	1,380	2,220	232	38	169	137
3	177	422	1,530	299	511	981	2,050	1,390	205	27	126	106
4	169	1,370	1,040	493	548	772	1,830	900	191	26	98	74
5	143	2,870	772	1,920	542	726	1,560	646	171	23	77	54
6	119	1,790	624	2,320	508	770	1,220	510	147	22	64	41
7	102	1,130	643	2,000	494	1,150	900	427	127	38	51	32
8	90	787	781	1,850	534	2,920	1,450	377	99	191	44	26
9	82	580	793	1,940	714	3,080	1,770	324	101	440	40	21
10	75	454	1,400	1,440	1,970	1,810	1,220	281	130	195	34	18
11	67	381	1,840	1,030	1,990	1,310	852	254	162	116	31	16
12	60	534	1,930	813	1,400	1,130	644	389	123	79	34	14
13	112	1,200	1,610	699	1,050	1,010	529	314	110	67	30	13
14	802	994	1,310	1,640	958	858	437	259	92	91	24	11
15	608	758	1,020	2,240	1,340	744	360	315	94	155	20	10
16	490	619	831	1,500	1,260	682	307	372	81	196	18	9.2
17	680	514	722	1,070	1,220	628	272	301	71	190	19	8.0
18	619	486	638	761	1,000	591	246	263	62	174	18	8.2
19	551	646	580	637	796	602	229	235	56	809	17	8.0
20	960	1,220	521	605	676	716	213	502	49	893	26	7.5
21	1,560	1,310	450	545	678	879	196	1,720	43	430	57	6.8
22	979	1,140	466	507	1,060	791	202	1,060	37	304	61	6.2
23	675	897	519	e460	1,180	827	502	719	34	286	44	5.3
24	707	741	1,120	e370	977	3,020	712	1,700	29	212	32	4.4
25	997	841	1,040	e480	893	2,350	943	1,830	26	158	24	4.1
26	786	1,340	827	e460	730	1,480	1,420	1,510	23	171	20	4.3
27	613	1,140	668	e440	658	1,060	1,600	954	20	145	22	4.6
28	507	946	514	e370	760	1,600	1,300	656	18	144	74	4.5
29	453	818	471	e440	---	3,380	886	562	16	167	88	5.8
30	456	684	416	e470	---	2,700	1,260	419	17	142	139	6.0
31	448	---	366	e470	---	1,660	---	330	---	112	115	---
TOTAL	14,545	27,347	29,212	28,907	25,377	43,137	27,580	24,729	2,840	6,075	1,731	763.9
MEAN	469	912	942	932	906	1,392	919	798	94.7	196	55.8	25.5
MAX	1,560	2,870	2,250	2,320	1,990	3,380	2,050	2,990	274	893	169	137
MIN	60	347	366	299	460	591	196	235	16	22	17	4.1
CFSM	1.69	3.29	3.40	3.37	3.27	5.02	3.32	2.88	0.34	0.71	0.20	0.09
IN.	1.95	3.67	3.92	3.88	3.41	5.79	3.70	3.32	0.38	0.82	0.23	0.10

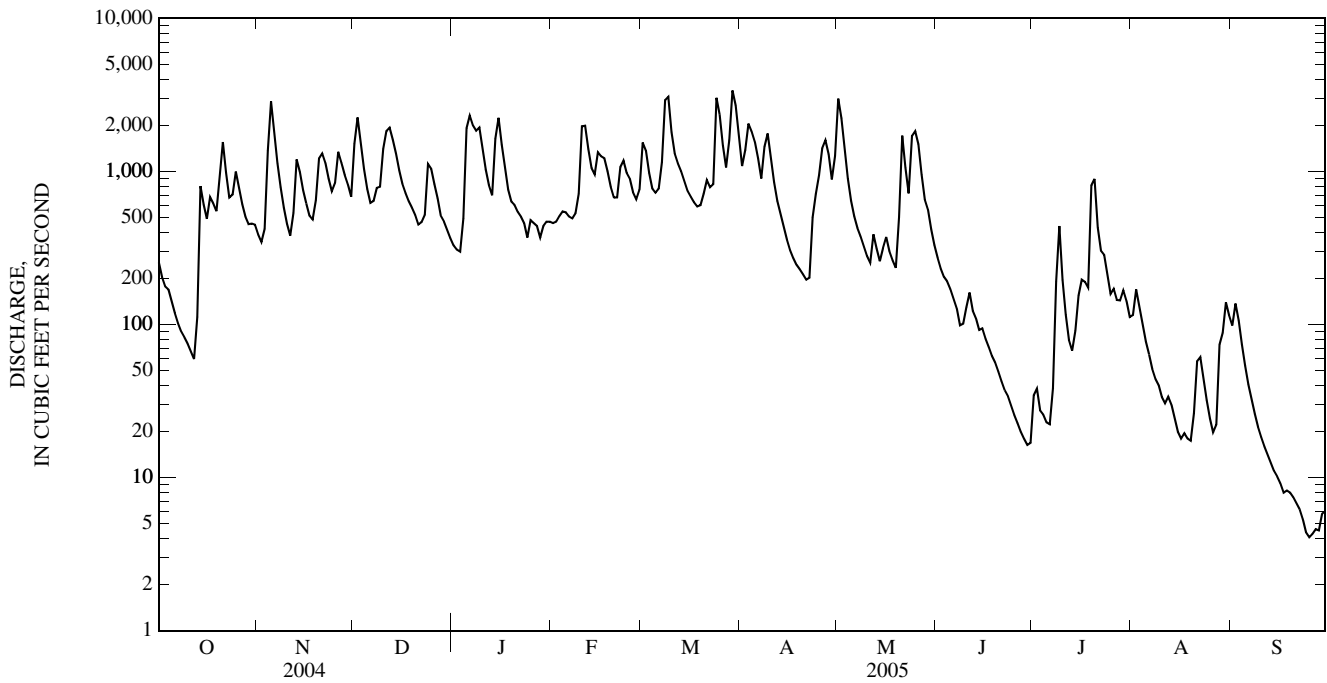
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1915 - 2005, BY WATER YEAR (WY)

MEAN	258	511	814	921	1,011	1,118	831	672	393	291	260	176
MAX	1,272	2,399	1,942	1,862	1,993	2,474	1,736	2,357	1,435	1,302	976	914
(WY)	(1938)	(1986)	(1973)	(1937)	(1994)	(1917)	(1973)	(1996)	(1950)	(1958)	(1956)	(2003)
MIN	0.29	1.03	67.1	169	217	474	299	117	30.6	15.9	3.56	0.55
(WY)	(1931)	(1931)	(1931)	(1977)	(1978)	(1987)	(1971)	(1964)	(1965)	(1966)	(1930)	(1930)

03053500 BUCKHANNON RIVER AT HALL, WV—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1915 - 2005	
ANNUAL TOTAL	296,411		232,243.9			
ANNUAL MEAN	810		636		604	
HIGHEST ANNUAL MEAN					915 1927	
LOWEST ANNUAL MEAN					354 1966	
HIGHEST DAILY MEAN	8,070	Feb 7	3,380	Mar 29	14,500	Nov 5, 1985
LOWEST DAILY MEAN	37	Sep 7	4.1	Sep 25	0.20	(a)
ANNUAL SEVEN-DAY MINIMUM	65	Sep 2	4.7	Sep 23	0.21	Oct 21, 1930
MAXIMUM PEAK FLOW			3,920	Mar 8	(b)15,000	Nov 5, 1985
MAXIMUM PEAK STAGE			8.87	Mar 8	(c)16.88	Nov 5, 1985
INSTANTANEOUS LOW FLOW			3.8	Sep 26	0.20	(a)
ANNUAL RUNOFF (CFSM)	2.92		2.30		2.18	
ANNUAL RUNOFF (INCHES)	39.81		31.19		29.61	
10 PERCENT EXCEEDS	1,650		1,530		1,410	
50 PERCENT EXCEEDS	555		471		319	
90 PERCENT EXCEEDS	114		24		36	

- a Oct. 21-23, 25-27, 29, 1930.
- b From rating curve extended above 13,000 ft³/s on basis of slope-area measurement.
- c From floodmarks.
- e Estimated



03054500 TYGART VALLEY RIVER AT PHILIPPI, WV

LOCATION.--Lat 39°09'01", long 80°02'20", NAD 27, 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 45.5.

DRAINAGE AREA.--914 mi².

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

REVISED RECORDS.--WDR WV-97-1: Drainage area, 1942(M), 1943-45(P), 1947(P), 1948(M), 1955(M), 1956(P), 1957(M), 1964-65(P), 1969(M), 1986(P), 1989(M), 1990(P), 1992(P), 1993(M), 1994(P).

GAGE.--Water-stage recorder with satellite telemeter. Datum of gage is 1,280.55 ft above NGVD 29. Prior to May 23, 1940, nonrecording gage at same site and datum.

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

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)
Mar 8	2000	*15,200	*12.91	Mar 29	1600	15,100	12.83
Mar 24	1700	14,700	12.59				

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,010	1,200	4,480	933	1,240	3,070	3,880	11,400	742	59	239	221
2	711	1,000	8,640	865	1,230	2,950	4,210	8,310	595	67	243	259
3	585	1,150	4,900	826	1,320	2,290	6,730	4,770	517	67	227	243
4	521	3,270	3,200	1,180	1,430	1,830	6,180	3,230	484	97	195	173
5	432	9,880	2,360	5,610	1,420	1,800	5,250	2,360	422	107	165	137
6	362	5,720	1,830	7,690	1,350	1,850	4,210	1,810	373	110	144	105
7	300	3,260	1,840	6,060	1,380	2,880	3,220	1,500	320	96	125	84
8	248	2,260	2,470	5,350	1,740	10,900	5,490	1,310	274	748	112	68
9	236	1,610	2,730	5,600	2,730	11,400	6,600	1,110	269	2,070	188	61
10	221	1,260	4,260	4,180	6,580	5,510	4,250	917	352	786	156	57
11	205	1,040	5,710	3,040	6,510	3,750	3,070	819	471	389	296	51
12	189	1,220	5,820	2,420	4,020	3,230	2,340	1,260	391	272	222	47
13	219	2,970	4,780	2,060	3,040	2,810	1,850	1,200	351	200	166	44
14	1,030	2,860	3,770	4,060	2,970	2,390	1,510	936	257	260	121	40
15	938	2,180	3,010	7,070	4,510	2,160	1,240	1,110	245	431	95	39
16	785	1,720	2,460	4,370	4,010	2,140	1,000	1,520	213	638	84	38
17	1,120	1,420	2,160	3,110	3,770	2,080	813	1,270	191	720	79	36
18	1,180	1,330	1,880	2,210	3,180	1,940	737	1,010	170	828	71	32
19	1,010	1,670	1,710	1,750	2,450	2,130	668	832	153	2,520	73	29
20	1,480	3,070	1,490	1,650	2,020	2,770	610	2,670	123	3,160	99	27
21	4,490	3,400	1,290	1,480	1,970	3,350	554	9,500	104	1,660	120	26
22	2,570	2,960	1,430	1,310	3,230	2,920	633	4,360	106	1,050	161	25
23	1,660	2,400	1,740	1,330	4,110	3,020	1,450	2,550	102	853	159	21
24	1,560	1,980	3,810	1,020	3,140	11,800	2,000	5,300	95	583	117	15
25	2,450	2,610	3,540	1,190	2,670	10,900	2,680	5,390	89	411	87	13
26	1,980	4,530	2,650	1,250	2,130	5,270	4,270	4,010	82	362	72	14
27	1,490	3,500	2,030	1,280	1,800	3,780	4,840	2,710	74	336	70	14
28	1,220	2,810	1,530	999	1,930	4,910	3,900	1,910	67	336	102	12
29	1,170	2,570	1,360	992	---	13,600	2,900	1,570	64	442	239	14
30	1,770	2,200	1,210	1,210	---	10,500	3,970	1,210	60	392	305	14
31	1,510	---	1,050	1,270	---	5,630	---	929	---	291	262	---
TOTAL	34,652	79,050	91,140	83,365	77,880	145,560	91,055	88,783	7,756	20,341	4,794	1,959
MEAN	1,118	2,635	2,940	2,689	2,781	4,695	3,035	2,864	259	656	155	65.3
MAX	4,490	9,880	8,640	7,690	6,580	13,600	6,730	11,400	742	3,160	305	259
MIN	189	1,000	1,050	826	1,230	1,800	554	819	60	59	70	12
CFSM	1.22	2.88	3.22	2.94	3.04	5.14	3.32	3.13	0.28	0.72	0.17	0.07
IN.	1.41	3.22	3.71	3.39	3.17	5.92	3.71	3.61	0.32	0.83	0.20	0.08

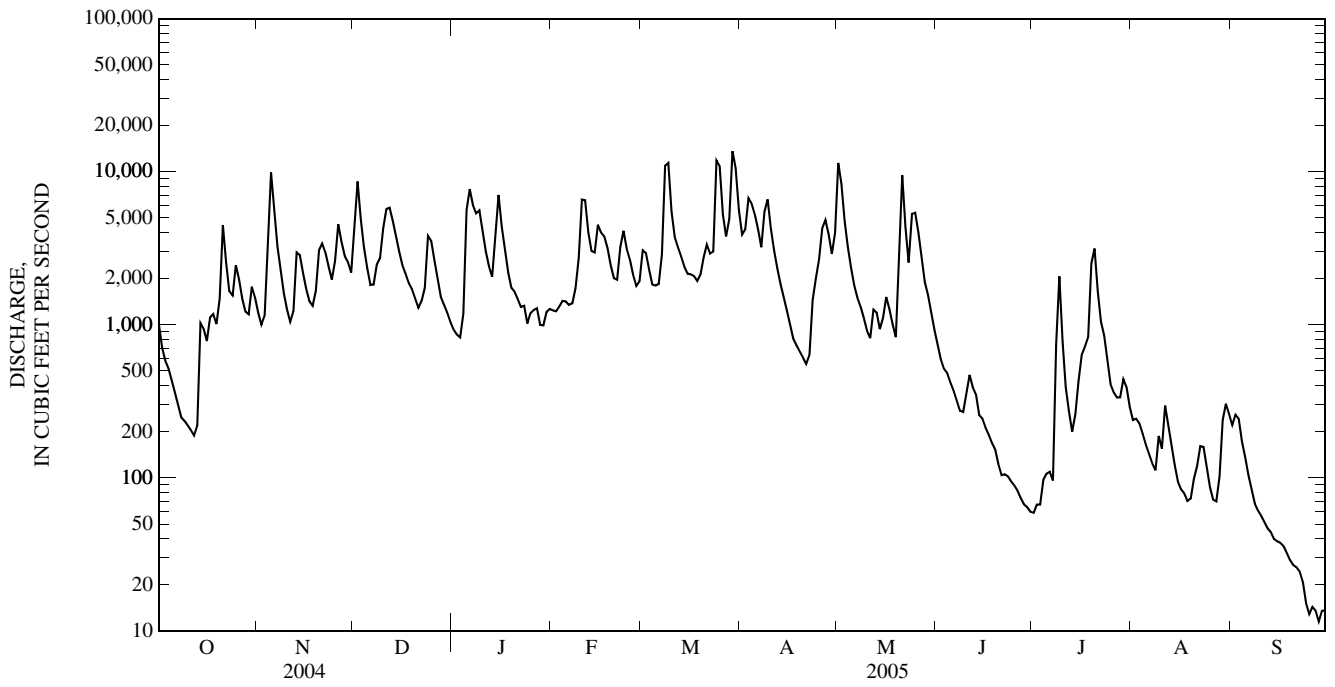
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 2005, BY WATER YEAR (WY)

MEAN	714	1,631	2,551	2,829	3,199	3,605	2,830	2,258	1,272	923	809	556
MAX	3,391	7,341	6,172	5,864	6,460	8,024	5,378	8,818	4,224	3,753	3,779	3,197
(WY)	(1980)	(1986)	(1973)	(1994)	(1994)	(1963)	(2002)	(1996)	(1981)	(1958)	(1942)	(2003)
MIN	5.88	11.4	273	563	587	1,531	1,090	483	114	60.3	30.9	16.4
(WY)	(1954)	(1954)	(1966)	(1977)	(1978)	(1987)	(1971)	(1991)	(1965)	(1999)	(1993)	(1946)

03054500 TYGART VALLEY RIVER AT PHILIPPI, WV—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1940 - 2005	
ANNUAL TOTAL	897,694		726,335		1,922	
ANNUAL MEAN	2,453		1,990		3,136	
HIGHEST ANNUAL MEAN					1,105	1996
LOWEST ANNUAL MEAN					50,900	1966
HIGHEST DAILY MEAN	30,100	Feb 7	13,600	Mar 29	1,105	Nov 5, 1985
LOWEST DAILY MEAN	108	Sep 7	12	Sep 28	4.9	(a)
ANNUAL SEVEN-DAY MINIMUM	155	Sep 2	14	Sep 24	5.2	Oct 9, 1953
MAXIMUM PEAK FLOW			15,200	Mar 8	(b)61,000	Nov 5, 1985
MAXIMUM PEAK STAGE			12.91	Mar 8	(c)31.83	Nov 5, 1985
INSTANTANEOUS LOW FLOW			11	(d)	4.9	(f)
ANNUAL RUNOFF (CFSM)	2.68		2.18		2.10	
ANNUAL RUNOFF (INCHES)	36.54		29.56		28.57	
10 PERCENT EXCEEDS	5,130		4,770		4,530	
50 PERCENT EXCEEDS	1,540		1,310		1,050	
90 PERCENT EXCEEDS	271		83		114	

- a Oct. 10, 11, 1953.
- b From rating curve extended above 41,000 ft³/s on basis of slope-area measurement of peak flow.
- c From floodmarks.
- d Sept. 25, 28, 29.
- f Oct. 10-12, 21, 1953.



03056250 THREE FORK CREEK NEAR GRAFTON, WV

LOCATION.--Lat 39°20'11", long 79°59'37", NAD 27, 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.--96.8 mi².

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

REVISED RECORDS.--WDR WV-97-1: Drainage area.

GAGE.--Water-stage recorder with satellite telemeter. Elevation of gage is approximately 1,000 ft above NGVD 29, from topographic map.

REMARKS.--Records good except those for periods of estimated daily discharges (no gage-height record), which are poor.

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan 5	1800	3,130	10.41	Mar 8	0730	3,090	10.35
Jan 12	0115	*4,070	(a)*11.70	Mar 29	0330	2,800	9.93

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	35	142	e700	73	112	192	278	146	90	15	6.3	52
2	31	117	e510	65	116	169	458	125	71	12	5.5	26
3	34	184	e320	70	125	149	541	114	65	10	5.2	15
4	29	346	226	601	137	134	467	100	59	8.6	4.6	10
5	25	519	172	1,800	155	149	382	86	51	8.5	4.2	7.2
6	22	317	142	1,440	165	172	295	79	46	14	4.0	5.2
7	21	215	172	675	192	353	235	74	93	17	3.8	3.8
8	19	153	215	795	270	1,890	200	72	60	50	6.1	3.1
9	18	115	199	643	357	705	156	64	133	36	23	2.9
10	18	94	e400	401	1,000	411	130	59	69	21	16	2.4
11	17	81	e600	431	577	314	114	54	79	15	10	2.2
12	17	141	e420	2,080	376	263	103	70	95	12	7.5	1.9
13	19	196	e340	670	292	221	94	59	58	11	8.0	1.9
14	59	162	e270	1,140	494	195	83	53	47	14	6.7	1.8
15	58	136	e230	649	753	176	73	156	42	12	5.4	1.7
16	66	118	e190	406	504	163	64	127	37	16	15	1.7
17	120	104	168	291	400	150	59	94	37	21	11	1.6
18	82	127	142	193	306	139	57	74	32	28	9.0	1.6
19	292	407	133	163	228	136	54	64	27	21	7.8	1.5
20	227	731	97	170	181	140	52	739	24	20	7.2	1.2
21	183	518	100	131	220	130	50	520	21	17	32	1.2
22	131	339	108	127	227	116	58	269	22	13	26	1.1
23	100	253	116	141	203	252	235	189	24	11	14	1.1
24	125	209	167	100	184	426	247	432	20	11	9.0	1.1
25	142	297	144	139	169	321	411	376	17	8.8	6.9	1.2
26	114	310	130	125	149	263	520	278	15	8.9	5.7	1.2
27	94	251	111	109	135	216	322	188	13	9.0	7.6	1.2
28	82	261	83	79	167	767	216	154	12	10	25	1.4
29	135	236	103	114	---	1,910	165	199	11	9.9	24	1.9
30	262	203	87	121	---	688	156	143	13	8.2	34	2.0
31	201	---	78	113	---	401	---	116	---	7.2	25	---
TOTAL	2,778	7,282	6,873	14,055	8,194	11,711	6,275	5,273	1,383	476.1	375.5	158.1
MEAN	89.6	243	222	453	293	378	209	170	46.1	15.4	12.1	5.27
MAX	292	731	700	2,080	1,000	1,910	541	739	133	50	34	52
MIN	17	81	78	65	112	116	50	53	11	7.2	3.8	1.1
CFSM	0.93	2.51	2.29	4.68	3.02	3.90	2.16	1.76	0.48	0.16	0.13	0.05
IN.	1.07	2.80	2.64	5.40	3.15	4.50	2.41	2.03	0.53	0.18	0.14	0.06

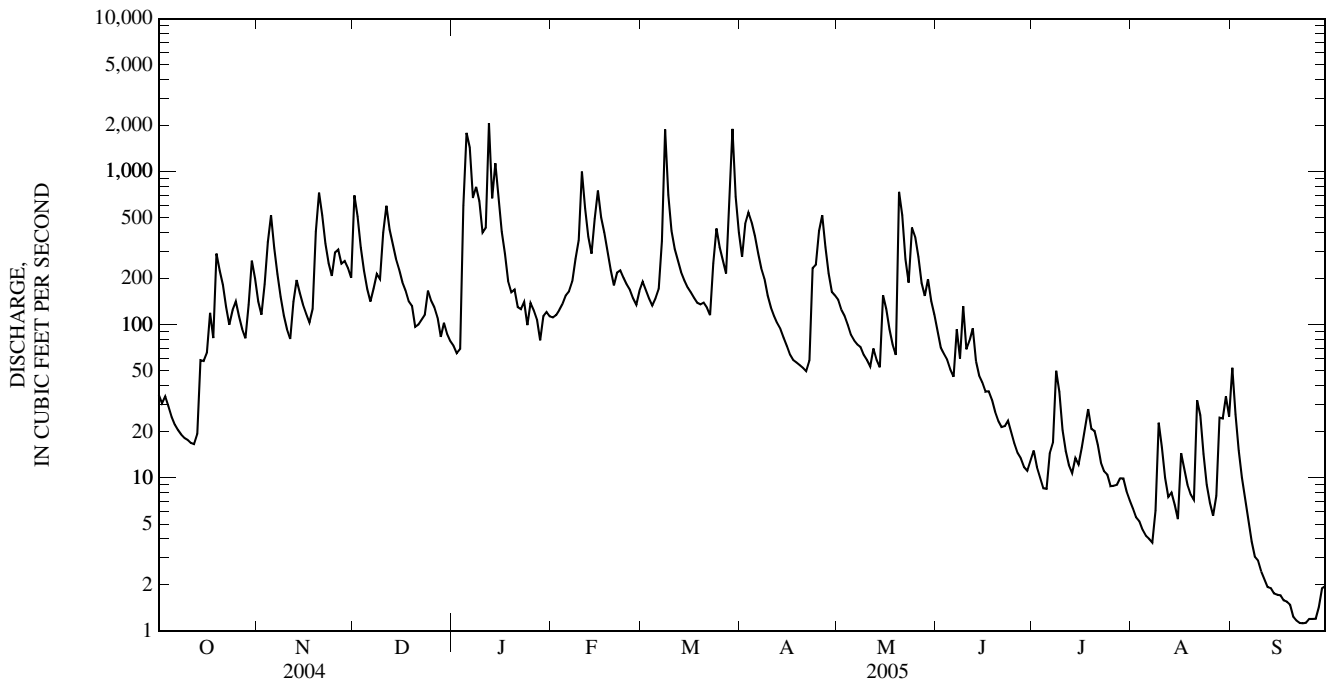
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1985 - 2005, BY WATER YEAR (WY)

MEAN	56.5	195	233	281	326	337	251	201	125	88.1	45.7	47.1
MAX	237	654	578	549	643	598	410	598	500	235	171	217
(WY)	(1997)	(1986)	(1991)	(1996)	(1986)	(1994)	(2004)	(1996)	(1998)	(2000)	(1994)	(2003)
MIN	4.49	12.4	31.7	63.3	121	80.2	84.5	44.0	7.07	3.85	1.56	0.90
(WY)	(1992)	(1999)	(1999)	(2000)	(2002)	(1987)	(1995)	(1999)	(1991)	(1991)	(1999)	(1999)

03056250 THREE FORK CREEK NEAR GRAFTON, WV—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1985 - 2005	
ANNUAL TOTAL	79,128		64,833.7		181	
ANNUAL MEAN	216		178		272	
HIGHEST ANNUAL MEAN					112	
LOWEST ANNUAL MEAN					1988	
HIGHEST DAILY MEAN	3,080	Feb 6	2,080	Jan 12	5,200	Nov 5, 1985
LOWEST DAILY MEAN	14	(b)	1.1	(c)	0.49	(d)
ANNUAL SEVEN-DAY MINIMUM	18	Jul 6	1.2	Sep 20	0.55	Aug 13, 1988
MAXIMUM PEAK FLOW			4,070	Jan 12	(f)12,000	Nov 5, 1985
MAXIMUM PEAK STAGE			(a)11.70	Jan 12	(g)20.13	Nov 5, 1985
INSTANTANEOUS LOW FLOW			1.1	(h)	0.44	Aug 18, 1988
ANNUAL RUNOFF (CFSM)	2.23		1.83		1.87	
ANNUAL RUNOFF (INCHES)	30.41		24.92		25.46	
10 PERCENT EXCEEDS	478		415		423	
50 PERCENT EXCEEDS	127		111		90	
90 PERCENT EXCEEDS	22		6.8		8.0	

- a From float-tape indicator.
- b July 17, 18, Sept. 6.
- c Sept. 22-24.
- d Aug. 16, 18, 1988.
- e Estimated.
- f From rating curve extended above 10,000 ft³/s on basis of slope-area measurement of peak flow.
- g From floodmarks.
- h Sept. 21, 22, 23, 24.



03058000 WEST FORK RIVER BELOW STONEWALL JACKSON DAM NEAR WESTON, WV

WATER-QUALITY RECORDS

LOCATION.--Lat 39°00'12", long 80°28'27", Lewis County, Hydrologic Unit 05020002, on left bank, 500 ft downstream from Stonewall Jackson Dam, 3.0 mi south of Weston, and at mile 74.2.

PERIOD OF RECORD.--Water years 1990 to November 1999, July to September 2005.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: May to November 1999, July to September 2005.

pH: May to November 1999, July to September 2005.

WATER TEMPERATURES: May to November 1999, July to September 2005.

DISSOLVED OXYGEN: May to November 1999, July to September 2005.

INSTRUMENTATION.--Water-quality monitor May to November 1999, July to September 2005.

DRAINAGE AREA.--101 mi².

REMARKS.--Discontinued streamflow gaging station. See page xi for former station names. Additional data are collected at this site by the U.S. Army Corps of Engineers, Pittsburgh District.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum recorded, 128 microsiemens, Sept. 19, 2005; minimum recorded, 95 microsiemens, June 14, 1999, Aug. 31, 2005.

pH: Maximum recorded, 7.7 units, Aug. 13, 15, 1999, Aug. 16, 17, Sept. 7, 8, 9, 2005; minimum recorded, 6.8 units, several days in 1999.

WATER TEMPERATURES: Maximum recorded, 25.8°C, Aug. 13, 1999; minimum recorded, 11.0°C, Nov. 8, 9, 1999.

DISSOLVED OXYGEN: Maximum recorded, 10.6 mg/L, May 28, 1999; minimum recorded, 5.7 mg/L, Oct. 15, 1999.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum recorded, 120 microsiemens, Sept. 29; minimum recorded, 95 microsiemens, Aug. 31.

pH: Maximum recorded, 7.7 units, Aug. 16, 17, Sept. 7, 8, 9; minimum recorded, 7.1 units, Aug. 21, 22.

WATER TEMPERATURES: Maximum recorded, 24.9°C, Aug. 7, 12, 20; minimum recorded, 20.6°C, Sept. 30.

DISSOLVED OXYGEN: Maximum recorded, 10.1 mg/L, Aug. 30; minimum recorded, 7.8 mg/L, Aug. 25.

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DAY	JUNE			JULY			AUGUST			SEPTEMBER		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	---	---	---	---	---	---	105	103	104	100	97	98
2	---	---	---	---	---	---	105	102	104	102	98	99
3	---	---	---	---	---	---	105	103	104	102	98	100
4	---	---	---	---	---	---	106	103	104	104	100	101
5	---	---	---	---	---	---	105	102	103	106	101	103
6	---	---	---	---	---	---	107	103	104	107	103	104
7	---	---	---	---	---	---	106	104	105	108	102	105
8	---	---	---	---	---	---	107	104	106	108	102	105
9	---	---	---	---	---	---	107	105	106	108	104	106
10	---	---	---	---	---	---	106	104	105	110	104	107
11	---	---	---	---	---	---	106	103	105	111	106	108
12	---	---	---	---	---	---	104	102	103	114	107	109
13	---	---	---	---	---	---	104	102	103	---	---	---
14	---	---	---	108	104	106	106	103	104	---	---	---
15	---	---	---	105	103	104	107	103	105	---	---	---
16	---	---	---	105	103	104	109	105	107	---	---	---
17	---	---	---	106	103	104	108	106	107	---	---	---
18	---	---	---	107	103	105	107	104	106	---	---	---
19	---	---	---	108	103	104	107	104	105	---	---	---
20	---	---	---	109	104	106	106	102	104	---	---	---
21	---	---	---	109	106	107	107	103	104	---	---	---
22	---	---	---	108	105	106	107	103	105	---	---	---
23	---	---	---	108	104	106	106	104	105	---	---	---
24	---	---	---	107	104	105	107	104	106	---	---	---
25	---	---	---	106	104	105	108	105	107	---	---	---
26	---	---	---	106	103	104	108	106	106	---	---	---
27	---	---	---	105	101	103	108	102	106	119	115	116
28	---	---	---	106	102	104	108	104	106	118	115	116
29	---	---	---	106	103	105	119	98	104	120	114	116
30	---	---	---	107	104	105	99	96	98	118	115	116
31	---	---	---	105	103	105	99	95	97	---	---	---
MONTH	---	---	---	---	---	---	119	95	104	---	---	---

03058000 WEST FORK RIVER BELOW STONEWALL JACKSON DAM NEAR WESTON, WV—Continued

PH, WATER, UNFILTERED, FIELD, STANDARD UNITS
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DAY	MAX	MIN	MEDIAN	JUNE			JULY			AUGUST			SEPTEMBER		
				MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN
1	---	---	---	---	---	---	---	---	---	7.5	7.4	7.4	7.5	7.4	7.4
2	---	---	---	---	---	---	---	---	---	7.6	7.4	7.4	7.5	7.4	7.4
3	---	---	---	---	---	---	---	---	---	7.6	7.5	7.5	7.5	7.4	7.4
4	---	---	---	---	---	---	---	---	---	7.5	7.4	7.5	7.5	7.4	7.4
5	---	---	---	---	---	---	---	---	---	7.5	7.4	7.4	7.6	7.4	7.5
6	---	---	---	---	---	---	---	---	---	7.5	7.3	7.4	7.6	7.5	7.5
7	---	---	---	---	---	---	---	---	---	7.6	7.4	7.5	7.7	7.5	7.6
8	---	---	---	---	---	---	---	---	---	7.5	7.4	7.5	7.7	7.6	7.6
9	---	---	---	---	---	---	---	---	---	7.4	7.4	7.4	7.7	7.6	7.6
10	---	---	---	---	---	---	---	---	---	7.4	7.4	7.4	7.6	7.5	7.6
11	---	---	---	---	---	---	---	---	---	---	---	---	7.5	7.5	7.5
12	---	---	---	---	---	---	---	---	---	---	---	---	7.5	7.4	7.5
13	---	---	---	---	---	---	---	---	---	---	---	---	7.6	7.3	7.5
14	---	---	---	---	---	---	---	---	---	---	---	---	7.4	7.3	7.3
15	---	---	---	---	---	---	---	---	---	---	---	---	7.4	7.3	7.3
16	---	---	---	---	---	---	---	---	---	7.7	7.5	7.6	7.5	7.3	7.4
17	---	---	---	---	---	---	---	---	---	7.7	7.5	7.6	7.5	7.4	7.4
18	---	---	---	---	---	---	---	---	---	7.6	7.5	7.5	7.5	7.4	7.5
19	---	---	---	---	---	---	---	---	---	7.5	7.3	7.4	7.5	7.4	7.5
20	---	---	---	---	---	---	---	---	---	7.4	7.2	7.3	7.6	7.5	7.5
21	---	---	---	---	---	---	---	---	---	7.3	7.1	7.2	7.5	7.5	7.5
22	---	---	---	---	---	---	---	---	---	7.3	7.1	7.2	7.6	7.4	7.5
23	---	---	---	---	---	---	---	---	---	7.3	7.2	7.3	7.5	7.3	7.4
24	---	---	---	---	---	---	---	---	---	7.4	7.2	7.3	7.4	7.3	7.4
25	---	---	---	---	---	---	---	---	---	7.4	7.2	7.3	7.4	7.3	7.4
26	---	---	---	---	---	---	---	---	---	7.5	7.3	7.4	7.5	7.3	7.4
27	---	---	---	---	---	---	---	---	---	7.5	7.4	7.4	7.5	7.3	7.4
28	---	---	---	---	---	---	---	---	---	7.4	7.3	7.4	7.5	7.4	7.4
29	---	---	---	---	---	---	---	---	---	7.4	7.3	7.3	7.5	7.4	7.5
30	---	---	---	---	---	---	---	---	---	7.3	7.2	7.3	7.4	7.4	7.4
31	---	---	---	---	---	---	---	---	---	7.4	7.3	7.4	---	---	---
MAX	---	---	---	---	---	---	---	---	---	---	---	---	7.7	7.6	7.6
MIN	---	---	---	---	---	---	---	---	---	---	---	---	7.4	7.3	7.3

03058000 WEST FORK RIVER BELOW STONEWALL JACKSON DAM NEAR WESTON, WV—Continued

TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DAY	MAX	MIN	MEAN	JUNE			JULY			AUGUST			SEPTEMBER		
				MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	---	---	---	---	---	---	24.3	23.5	23.9	23.0	22.2	22.5			
2	---	---	---	---	---	---	24.3	23.6	23.9	23.0	22.3	22.6			
3	---	---	---	---	---	---	24.2	23.6	23.9	22.8	22.0	22.3			
4	---	---	---	---	---	---	24.5	23.6	24.0	22.4	21.8	22.0			
5	---	---	---	---	---	---	24.5	23.9	24.1	22.6	21.7	22.1			
6	---	---	---	---	---	---	24.1	23.4	23.8	22.5	21.8	22.1			
7	---	---	---	---	---	---	24.9	23.4	24.3	22.4	21.8	22.0			
8	---	---	---	---	---	---	24.7	23.8	24.2	22.5	21.7	22.0			
9	---	---	---	---	---	---	24.1	23.8	23.9	22.4	21.8	22.1			
10	---	---	---	---	---	---	24.4	23.6	24.0	22.4	21.8	22.0			
11	---	---	---	---	---	---	24.7	23.7	24.2	22.4	21.7	22.0			
12	---	---	---	---	---	---	24.9	23.9	24.3	22.5	21.8	22.1			
13	---	---	---	---	---	---	24.8	23.9	24.3	22.8	21.9	22.2			
14	---	---	---	23.0	22.3	22.5	24.5	23.7	24.1	22.7	22.1	22.4			
15	---	---	---	23.2	22.2	22.6	24.2	23.5	23.8	22.8	22.2	22.5			
16	---	---	---	23.1	22.4	22.7	24.3	23.5	23.9	23.4	22.2	22.8			
17	---	---	---	23.7	22.6	23.1	23.7	23.3	23.5	23.2	22.5	22.9			
18	---	---	---	23.5	22.9	23.2	24.4	23.4	23.9	23.0	22.4	22.7			
19	---	---	---	23.3	22.9	23.1	24.7	23.9	24.3	23.0	22.3	22.6			
20	---	---	---	23.2	21.6	22.5	24.9	24.0	24.4	22.9	22.4	22.7			
21	---	---	---	22.6	21.6	21.9	24.5	23.5	24.1	22.7	22.2	22.4			
22	---	---	---	22.5	21.5	21.9	24.3	23.3	23.9	23.1	22.0	22.5			
23	---	---	---	22.9	21.4	22.2	23.6	22.7	23.2	23.0	22.4	22.6			
24	---	---	---	23.6	22.3	23.1	23.3	22.6	22.9	22.7	22.2	22.5			
25	---	---	---	24.1	22.8	23.4	23.6	22.8	23.2	23.3	22.4	22.8			
26	---	---	---	24.2	22.6	23.5	23.7	23.3	23.5	23.1	22.6	22.9			
27	---	---	---	24.3	23.5	23.8	23.7	23.2	23.4	22.6	21.9	22.2			
28	---	---	---	23.6	22.4	22.9	23.4	22.5	22.9	22.8	21.6	22.1			
29	---	---	---	23.0	22.5	22.6	23.0	22.5	22.6	22.3	21.1	21.9			
30	---	---	---	23.0	22.4	22.7	22.7	22.3	22.5	21.5	20.6	21.0			
31	---	---	---	24.0	22.4	23.2	23.0	22.4	22.8	---	---	---			
MONTH	---	---	---				24.9	22.3	23.7	23.4	20.6	22.3			

03061000 WEST FORK RIVER AT ENTERPRISE, WV

LOCATION.--Lat 39°25'20", long 80°16'34", NAD 27, 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.

WATER-DISCHARGE RECORDS

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). WDR WV-97-1: 1888(M).

GAGE.--Water-stage recorder with satellite telemeter. Datum of gage is 869.45 ft above NGVD 12. June 1907 to Sept. 30, 1918, nonrecording gage at site 150 ft upstream at same datum.

REMARKS.--No estimated daily discharges. Water-discharge records fair. Flow partially regulated since 1973 by Stonecoal Reservoir. Flow regulated since January 1990 by Stonewall Jackson Lake.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in 1888 reached a stage of about 33 ft; estimated discharge, 48,000 ft³/s, present site and datum.

PEAK DISCHARGE FOR CURRENT YEAR.--Maximum discharge, 12,500 ft³/s, Jan. 5, gage height, 14.03 ft.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	365	704	2,520	645	1,170	3,940	1,990	1,520	699	328	150	677
2	324	609	3,280	602	1,100	3,320	2,190	1,550	431	287	141	463
3	325	791	2,110	608	1,050	2,130	3,950	1,440	371	210	146	285
4	325	1,880	1,640	2,580	1,190	1,650	3,700	1,260	328	197	131	201
5	298	5,530	1,350	7,470	1,220	1,560	2,830	1,010	291	202	125	160
6	272	2,510	1,140	8,290	1,120	1,890	2,280	782	270	336	162	128
7	266	1,690	1,130	4,020	1,030	2,420	1,960	685	301	276	136	108
8	260	1,280	1,430	4,330	1,050	7,590	1,710	603	275	241	130	93
9	245	993	1,220	4,560	1,160	6,050	1,390	528	234	248	146	83
10	241	799	2,180	2,940	2,590	3,080	1,230	460	257	237	148	76
11	243	689	3,900	2,610	3,200	2,440	1,120	417	244	186	139	70
12	249	939	3,020	5,390	2,160	2,380	1,000	495	213	158	129	65
13	247	2,190	2,510	3,040	1,730	2,250	833	553	198	190	121	63
14	371	1,480	2,100	4,320	1,910	2,120	706	451	186	205	111	59
15	562	1,050	1,750	4,300	3,380	1,920	627	981	186	206	105	55
16	579	885	1,460	2,560	2,550	1,630	574	1,450	185	202	99	54
17	651	793	1,250	2,080	2,110	1,320	533	796	200	307	92	54
18	682	754	1,080	1,730	1,730	1,090	513	566	194	429	88	55
19	2,900	1,130	959	1,500	1,380	1,010	502	470	173	351	94	54
20	1,960	4,250	871	1,400	1,130	928	487	2,640	167	974	103	58
21	2,050	2,930	740	1,100	1,120	842	442	3,750	169	628	274	59
22	1,180	2,010	742	1,010	1,180	729	436	1,710	166	288	314	57
23	829	1,620	1,140	1,570	1,030	1,030	821	1,160	164	216	191	54
24	908	1,410	2,260	1,340	939	2,340	1,420	1,380	155	170	123	60
25	1,210	1,620	1,430	1,240	986	1,960	1,730	1,750	151	158	87	61
26	933	1,940	1,070	1,200	959	1,500	2,390	1,440	148	935	81	60
27	770	1,510	904	1,360	944	1,250	1,850	1,240	141	621	112	66
28	673	1,650	743	1,280	1,350	2,320	1,430	1,090	137	558	253	73
29	757	1,690	729	1,170	---	6,050	1,190	1,110	206	516	437	72
30	1,130	1,420	703	1,210	---	4,410	1,160	1,000	263	278	1,930	76
31	865	---	674	1,280	---	2,670	---	882	---	196	1,560	---
TOTAL	22,670	48,746	48,035	78,735	42,468	75,819	42,994	35,169	7,103	10,334	7,858	3,499
MEAN	731	1,625	1,550	2,540	1,517	2,446	1,433	1,134	237	333	253	117
MAX	2,900	5,530	3,900	8,290	3,380	7,590	3,950	3,750	699	974	1,930	677
MIN	241	609	674	602	939	729	436	417	137	158	81	54

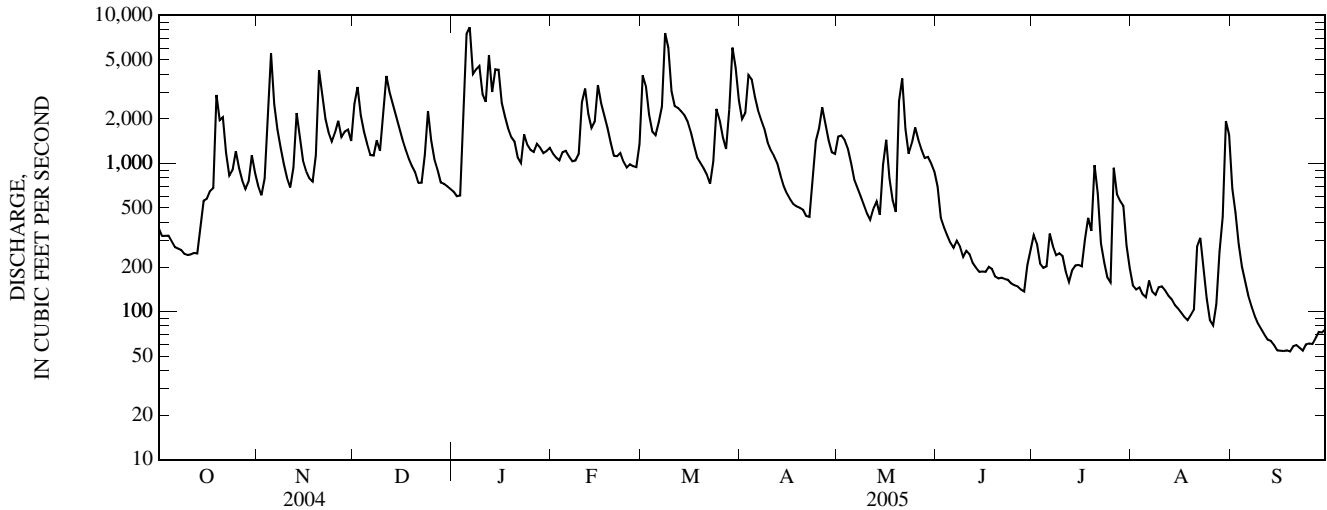
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1973 - 2005, BY WATER YEAR (WY)

MEAN	478	1,072	1,530	1,786	2,078	2,195	1,596	1,415	925	531	469	388
MAX	1,762	5,040	4,494	4,085	4,455	4,453	3,181	4,999	3,796	1,499	1,773	1,313
(WY)	(1977)	(1986)	(1979)	(1994)	(1994)	(1994)	(1973)	(1996)	(1981)	(1996)	(1980)	(2004)
MIN	63.9	157	209	273	480	497	488	250	170	75.5	69.5	77.0
(WY)	(1989)	(1999)	(1999)	(2000)	(1978)	(1987)	(1995)	(1982)	(1977)	(1988)	(1988)	(1983)

03061000 WEST FORK RIVER AT ENTERPRISE, WV—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1973 - 2005	
ANNUAL TOTAL	587,574		423,430		1,201	
ANNUAL MEAN	1,605		1,160		1,859	
HIGHEST ANNUAL MEAN					583	2004
LOWEST ANNUAL MEAN					1988	
HIGHEST DAILY MEAN	16,500	Feb 7	8,290	Jan 6	37,900	Nov 5, 1985
LOWEST DAILY MEAN	127	Sep 7	54	(a)	14	Oct 18, 1988
ANNUAL SEVEN-DAY MINIMUM	170	Sep 1	56	Sep 14	20	Oct 12, 1988
MAXIMUM PEAK FLOW			12,500	Jan 5	(b)41,100	Nov 5, 1985
MAXIMUM PEAK STAGE			14.03	Jan 5	30.37	Nov 5, 1985
INSTANTANEOUS LOW FLOW			52	(c)	12	Oct 18, 1988
10 PERCENT EXCEEDS	3,240		2,550		2,770	
50 PERCENT EXCEEDS	985		871		597	
90 PERCENT EXCEEDS	246		124		138	

a Sept. 16, 17, 19, 23.
 b From rating curve extended above 36,400 ft³/s.
 c Sept. 17, 19.



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	1,453	2,071	2,177	2,279	1,637	1,130	670	443	465	385
MAX	2,356	2,612	3,594	6,011	4,202	5,727	3,795	3,417	2,293	2,648	2,142	2,973
(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	1,136	
HIGHEST ANNUAL MEAN	1,879	1945
LOWEST ANNUAL MEAN	548	1954
HIGHEST DAILY MEAN	33,300	Mar 7, 1967
LOWEST DAILY MEAN	4.0	Jul 26, 1934
ANNUAL SEVEN-DAY MINIMUM	6.4	Oct 16, 1939
INSTANTANEOUS PEAK FLOW	(*)36,500	Mar 7, 1967
INSTANTANEOUS PEAK STAGE	28.05	Mar 7, 1967
INSTANTANEOUS LOW FLOW	3.4	Jul 27, 1934
10 PERCENT EXCEEDS	2,800	
50 PERCENT EXCEEDS	440	
90 PERCENT EXCEEDS	55	

* From rating curve extended above 21,000 ft³/s on basis of slope-area measurement at gage height 27.84 ft.

MONONGAHELA RIVER BASIN

03061430 WHETSTONE RUN NEAR MANNINGTON, WV
(Detention Reservoir)

LOCATION.--Lat 39°31'03", long 80°22'17", NAD 27, Marion County, Hydrologic Unit 05020003.

DAM NAME.--Upper Buffalo Creek No. 37-A.

SURFACE AREA.--8 acres.

DRAINAGE AREA.--1.98 mi², (corrected).

PERIOD OF RECORD.--October 2003 to current year.

GAGE.--Water-stage recorder with satellite telemeter. Datum of gage is 1004.00 ft above NGVD 29.

REMARKS.-- Normal Pool = 12.60 ft (Normal Storage = 76 acre-ft)

Top of Riser = 26.00 ft

Emergency Spillway = 32.50 ft

Top of Dam = 48.90 ft

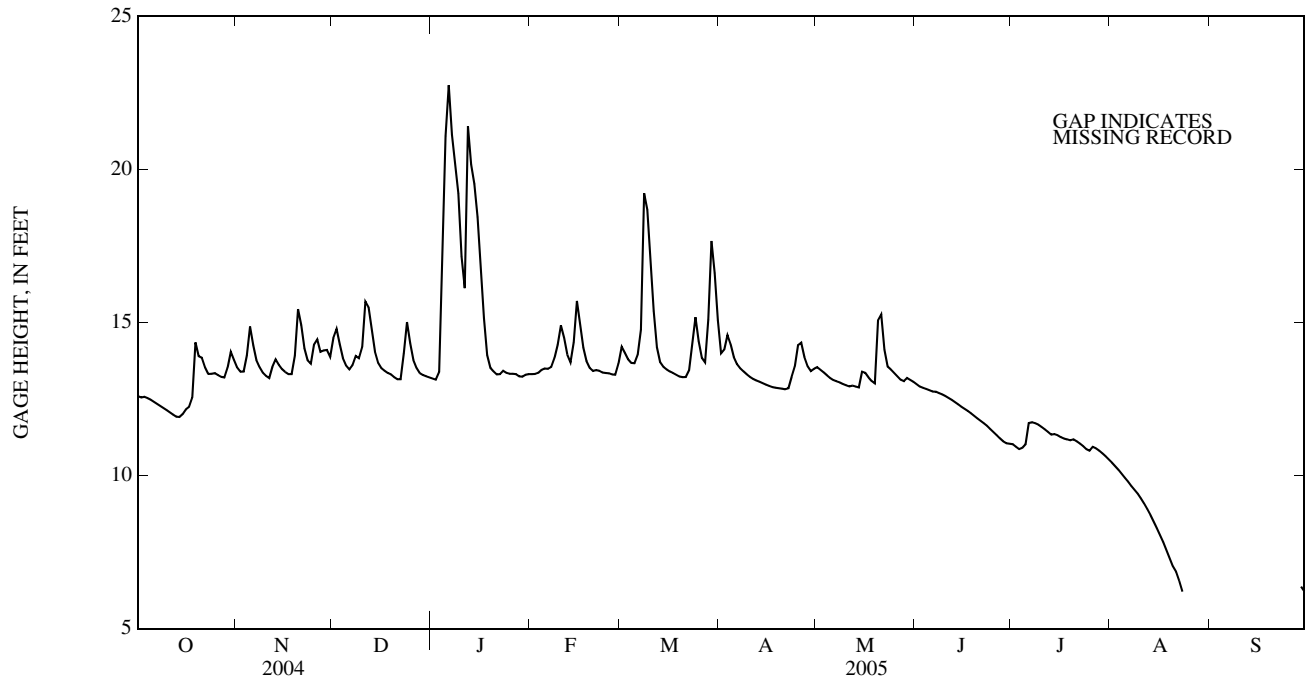
EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 23.84 ft, Nov. 19, 2003; minimum gage height, less than 5.91 ft, Aug. 24 to Sept. 28, 2005 (water level less than minimum recorded).

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 23.73 ft, Jan. 5; minimum gage height, less than 5.91 ft, Aug. 24 to Sept. 28 (water level less than minimum recorded).

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12.59	13.53	14.50	13.17	13.32	14.21	13.99	13.54	12.98	11.03	10.42	---
2	12.55	13.39	14.79	13.13	13.32	14.01	14.11	13.46	12.91	10.94	10.31	---
3	12.57	13.40	14.29	13.38	13.36	13.80	14.59	13.37	12.87	10.87	10.19	---
4	12.53	13.92	13.83	16.57	13.45	13.68	14.28	13.28	12.83	10.90	10.06	---
5	12.48	14.87	13.59	21.09	13.50	13.67	13.87	13.19	12.79	11.02	9.93	---
6	12.41	14.26	13.46	22.75	13.49	13.95	13.64	13.12	12.75	11.72	9.80	---
7	12.34	13.77	13.61	21.13	13.55	14.76	13.50	13.08	12.74	11.74	9.66	---
8	12.27	13.54	13.91	20.17	13.84	19.22	13.41	13.04	12.69	11.71	9.54	---
9	12.20	13.36	13.83	19.21	14.28	18.68	13.31	12.99	12.65	11.66	9.41	---
10	12.14	13.26	14.19	17.16	14.91	16.93	13.23	12.95	12.60	11.59	9.26	---
11	12.06	13.19	15.68	16.12	14.50	15.37	13.16	12.91	12.54	11.51	9.09	---
12	11.99	13.56	15.49	21.41	13.95	14.19	13.10	12.94	12.47	11.43	8.91	---
13	11.92	13.80	14.73	20.15	13.70	13.71	13.06	12.91	12.40	11.34	8.71	---
14	11.91	13.62	14.05	19.53	14.35	13.55	13.02	12.88	12.33	11.36	8.50	---
15	12.01	13.48	13.68	18.44	15.70	13.46	12.97	13.39	12.25	11.32	8.28	---
16	12.16	13.38	13.51	16.70	14.96	13.40	12.93	13.35	12.18	11.26	8.06	---
17	12.24	13.31	13.43	15.14	14.18	13.35	12.89	13.21	12.11	11.21	7.83	---
18	12.55	13.32	13.35	13.93	13.74	13.29	12.87	13.09	12.03	11.18	7.57	---
19	14.35	13.91	13.31	13.52	13.52	13.24	12.86	13.01	11.95	11.15	7.31	---
20	13.90	15.44	13.21	13.40	13.42	13.21	12.84	15.07	11.87	11.18	7.04	---
21	13.85	14.92	13.15	13.31	13.45	13.22	12.82	15.26	11.79	11.12	6.86	---
22	13.53	14.15	13.15	13.31	13.42	13.44	12.85	14.11	11.71	11.05	6.56	---
23	13.32	13.77	13.99	13.42	13.37	14.31	13.22	13.56	11.62	10.96	6.21	---
24	13.32	13.66	15.01	13.36	13.35	15.17	13.57	13.46	11.52	10.86	---	---
25	13.35	14.28	14.33	13.33	13.34	14.39	14.25	13.35	11.42	10.81	---	---
26	13.28	14.45	13.77	13.33	13.31	13.84	14.34	13.24	11.32	10.94	---	---
27	13.23	14.04	13.51	13.31	13.29	13.69	13.87	13.13	11.22	10.89	---	---
28	13.20	14.09	13.35	13.24	13.66	15.09	13.57	13.08	11.12	10.82	---	---
29	13.53	14.10	13.28	13.23	---	17.66	13.41	13.19	11.06	10.73	---	6.38
30	14.04	13.88	13.24	13.29	---	16.62	13.49	13.12	11.04	10.63	---	6.22
31	13.78	---	13.21	13.31	---	15.07	---	13.06	---	10.53	---	---
MEAN	12.83	13.86	13.88	15.89	13.79	14.59	13.43	13.33	12.13	11.14	---	---
MAX	14.35	15.44	15.68	22.75	15.70	19.22	14.59	15.26	12.98	11.74	---	---
MIN	11.91	13.19	13.15	13.13	13.29	13.21	12.82	12.88	11.04	10.53	---	---

03061430 WHETSTONE RUN NEAR MANNINGTON, WV—Continued



03061500 BUFFALO CREEK AT BARRACKVILLE, WV

LOCATION.--Lat 39°30'20", long 80°10'05", NAD 27, Marion County, Hydrologic Unit 05020003, on right downstream concrete and steel beam retaining wall 50 ft above highway bridge at Barrackville, 300 ft upstream from Finchs Run, and at mile 4.4.

DRAINAGE AREA.--116 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. WDR WV-97-1: Drainage area. WDR WV-04-1: 2001(M), 2002(M), 2003(M).

GAGE.--Water-stage recorder with satellite telemeter. Datum of gage is 882.42 ft above NGVD 29. Prior to Oct. 1, 2000, water-stage recorder at site 0.2 mi upstream at same datum. Prior to Dec. 6, 1940, nonrecording gage 0.2 mi upstream. Prior to June 4, 1943, at datum 1.98 ft higher. Datums published in error, Oct. 1985 to Sept. 1990.

REMARKS.--No estimated daily discharges. Records good. Flow from 5.20 mi² is partially controlled, but not diverted, by three floodwater-detention reservoirs. Some additional regulation at low flow from mine pumpage above station.

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

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan 5	1700	*6,980	*12.26	Jan 12	0400	6,840	12.16

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	27	134	607	86	113	413	271	184	59	59	8.2	13
2	26	102	540	78	114	320	486	153	48	34	7.8	11
3	30	110	332	94	129	255	624	125	46	19	6.8	10
4	26	255	234	1,410	152	220	447	101	46	20	6.3	7.9
5	24	602	176	4,140	159	216	318	83	42	20	6.0	6.2
6	22	297	145	1,660	155	331	242	74	39	44	6.0	5.6
7	21	195	173	803	163	719	194	71	46	24	6.4	5.3
8	21	140	261	1,070	238	2,210	167	66	37	18	7.3	5.1
9	20	99	221	728	400	707	136	57	31	18	8.8	4.9
10	20	78	377	439	693	432	114	51	30	15	8.8	4.6
11	19	70	824	1,040	417	331	99	48	27	14	7.6	4.2
12	19	165	509	3,430	294	286	88	55	23	13	7.1	5.0
13	21	257	360	763	231	248	80	52	22	12	8.4	5.5
14	27	175	263	1,090	538	210	73	44	21	21	9.8	5.4
15	29	135	200	647	888	183	65	164	22	28	8.7	5.0
16	50	112	162	417	473	164	59	128	21	19	7.2	5.3
17	40	97	147	307	336	144	54	81	22	15	7.9	8.1
18	55	102	126	223	248	127	52	63	21	14	10	8.9
19	368	300	115	200	185	113	50	53	19	16	9.0	7.5
20	186	705	97	173	162	106	48	393	18	28	7.4	6.6
21	157	412	110	143	173	96	46	304	17	28	8.2	6.1
22	103	275	85	149	163	86	49	169	17	19	7.5	5.9
23	74	223	403	173	142	326	115	123	17	16	7.3	7.2
24	71	196	617	162	135	535	143	160	15	13	6.5	8.0
25	72	347	316	147	133	325	327	160	14	14	6.2	9.6
26	62	347	213	136	118	256	343	121	13	23	6.6	9.4
27	56	258	164	126	111	220	226	91	11	18	11	9.3
28	54	302	124	114	205	915	161	79	9.0	15	11	11
29	221	312	121	113	---	1,460	131	111	9.5	12	9.6	14
30	386	243	108	115	---	597	150	85	26	9.7	9.3	13
31	212	---	97	116	---	375	---	71	---	8.5	13	---
TOTAL	2,519	7,045	8,227	20,292	7,268	12,926	5,358	3,520	788.5	627.2	251.7	228.6
MEAN	81.3	235	265	655	260	417	179	114	26.3	20.2	8.12	7.62
MAX	386	705	824	4,140	888	2,210	624	393	59	59	13	14
MIN	19	70	85	78	111	86	46	44	9.0	8.5	6.0	4.2
CFSM	0.70	2.02	2.29	5.64	2.24	3.59	1.54	0.98	0.23	0.17	0.07	0.07
IN.	0.81	2.26	2.64	6.51	2.33	4.15	1.72	1.13	0.25	0.20	0.08	0.07

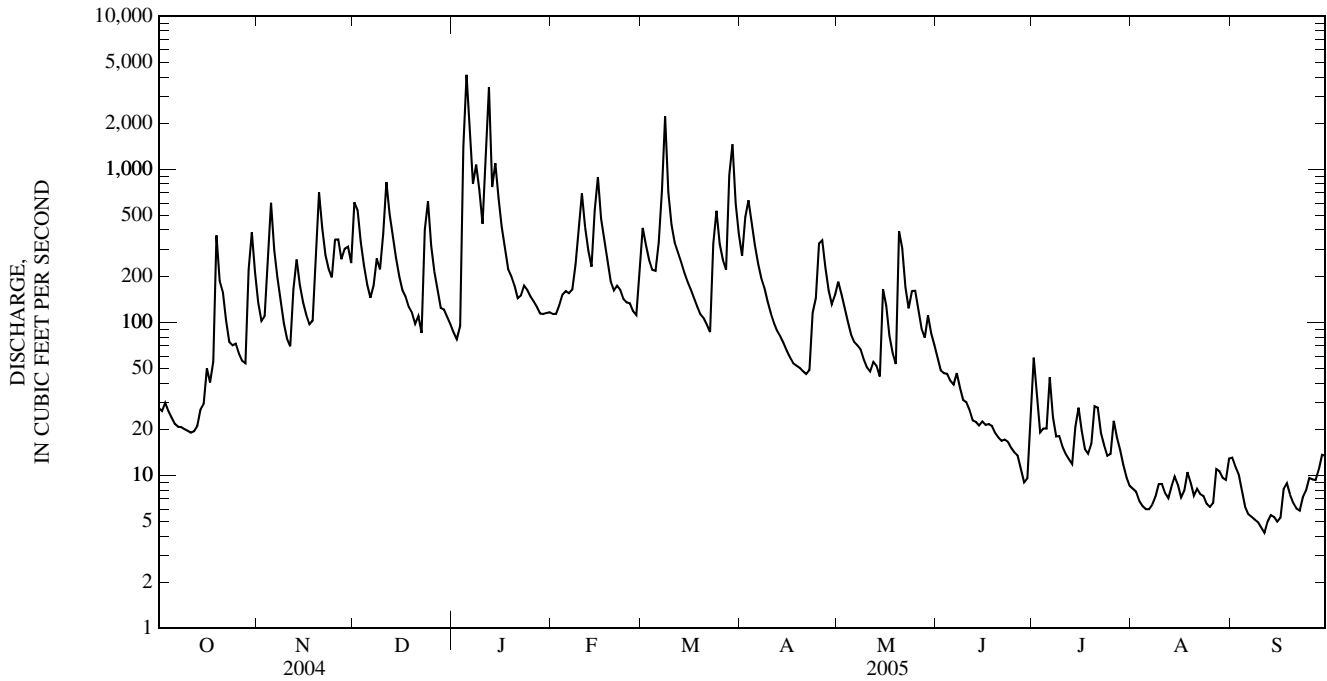
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1907 - 2005, BY WATER YEAR (WY)

	MEAN	MAX	MIN	(WY)	(WY)	(WY)	(WY)	(WY)	(WY)	(WY)	(WY)	(WY)
MEAN	46.8	113	214	283	303	356	251	197	111	65.7	56.5	47.6
MAX	262	530	696	944	690	795	658	543	476	381	357	285
(WY)	(1990)	(1986)	(1991)	(1937)	(1994)	(1963)	(1948)	(1968)	(1981)	(1978)	(1980)	(1990)
MIN	0.00	0.00	9.53	25.2	32.8	71.9	53.3	17.8	6.69	2.44	2.24	0.01
(WY)	(1909)	(1909)	(1999)	(1967)	(1934)	(1969)	(1971)	(1934)	(1936)	(1966)	(1938)	(1908)

03061500 BUFFALO CREEK AT BARRACKVILLE, WV—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1907 - 2005	
ANNUAL TOTAL	80,336		69,051.0		169	
ANNUAL MEAN	219		189		280	
HIGHEST ANNUAL MEAN					80.3	
LOWEST ANNUAL MEAN					1994	
HIGHEST DAILY MEAN	3,530	Feb 6	4,140	Jan 5	5,710	Apr 12, 1948
LOWEST DAILY MEAN	13	Aug 18	4.2	Sep 11	0.00	(a)
ANNUAL SEVEN-DAY MINIMUM	18	Sep 1	4.9	Sep 7	0.00	Sep 4, 1908
MAXIMUM PEAK FLOW			6,980	Jan 5	10,400	Feb 19, 2000
MAXIMUM PEAK STAGE			12.26	Jan 5	(b)16.76	Feb 19, 2000
INSTANTANEOUS LOW FLOW			4.1	Sep 11	0.00	(c)
ANNUAL RUNOFF (CFSM)	1.89		1.63		1.46	
ANNUAL RUNOFF (INCHES)	25.76		22.14		19.82	
10 PERCENT EXCEEDS	462		415		402	
50 PERCENT EXCEEDS	108		97		60	
90 PERCENT EXCEEDS	23		8.1		5.5	

a Aug. 13-17, Sept. 4-28, Sept. 30 to Dec. 6, 1908.
 b From floodmarks.
 c Greater part of period August to December 1908.



03062500 DECKERS CREEK AT MORGANTOWN, WV

LOCATION.--Lat 39°37'45", long 79°57'10", NAD 27, Monongalia County, Hydrologic Unit 05020003, on left bank at Kingwood Street, in Morgantown, 0.6 mi upstream from mouth.

DRAINAGE AREA.--63.2 mi².

PERIOD OF RECORD.--April 1914 to September 1915 (gage heights only), February 1946 to September 1969, October 2002 to September 2003.

GAGE.--Water-stage recorder with satellite telemeter. Datum of gage is 820 ft above NGVD 29, from topographic map. Prior to Dec. 4, 1914, nonrecording gage on bridge 0.5 mile upstream at different datum. Dec. 4, 1914, to Sept. 30, 1915, nonrecording gage on bridge 0.9 mile upstream at different datum. Feb. 8 to May 7, 1946, nonrecording gage, and May 8, 1946, to June 19, 1956, water-stage recorder at site 150 ft downstream at present datum.

REMARKS.--No estimated daily discharges. Records good except those prior to May 18 (lagging intake), which are fair.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Aug. 18, 1980, reached a stage of 12.36 ft, from floodmarks; discharge 7,550 ft³/s.

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan 6	2400	*723	*3.03	No peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	37	105	179	66	62	126	426	67	69	9.6	6.0	20
2	32	95	214	60	57	124	352	65	58	7.5	6.4	16
3	28	92	218	57	55	119	336	63	54	6.4	7.0	10
4	24	102	197	89	56	113	320	59	47	6.3	4.3	7.3
5	21	137	169	328	58	108	292	56	40	30	3.9	5.5
6	19	154	144	685	60	105	262	51	46	27	4.3	4.4
7	17	154	128	692	64	107	229	47	44	13	3.4	3.5
8	15	141	130	594	71	269	200	42	34	23	4.3	3.0
9	14	118	126	533	93	393	173	38	52	30	7.3	2.6
10	13	99	136	428	189	400	147	36	39	17	6.4	2.3
11	12	84	206	349	266	345	123	34	30	12	5.3	2.3
12	12	83	249	565	279	297	103	36	28	9.4	11	2.4
13	11	97	255	606	272	253	86	38	24	7.2	5.8	2.4
14	15	101	236	585	261	215	71	40	23	25	5.0	2.3
15	19	99	200	562	293	186	60	51	31	20	10	2.4
16	23	95	170	450	314	164	50	64	28	25	12	2.4
17	29	88	147	348	322	145	43	70	31	17	11	2.6
18	35	85	128	269	306	129	37	70	23	15	7.9	3.1
19	80	96	113	213	273	120	33	62	18	28	5.8	2.8
20	104	147	99	179	239	112	30	216	15	47	13	3.2
21	103	177	87	153	213	107	27	227	13	25	25	2.8
22	88	184	81	131	196	100	26	160	13	17	17	2.4
23	71	183	82	122	181	109	30	139	13	13	9.7	3.9
24	61	173	98	118	165	148	35	166	11	11	6.7	2.5
25	58	169	104	125	152	169	42	177	9.9	9.6	5.4	2.1
26	53	170	104	119	141	176	53	152	9.0	9.4	4.3	3.1
27	48	166	103	104	131	179	61	121	7.9	17	4.1	3.8
28	45	165	94	85	124	208	66	121	7.2	15	9.7	2.8
29	46	169	85	76	---	462	66	137	8.1	11	11	6.7
30	87	166	78	71	---	556	66	104	26	8.4	11	4.2
31	104	---	72	67	---	529	---	85	---	6.9	13	---
TOTAL	1,324	3,894	4,432	8,829	4,893	6,573	3,845	2,794	852.1	518.7	257.0	134.8
MEAN	42.7	130	143	285	175	212	128	90.1	28.4	16.7	8.29	4.49
MAX	104	184	255	692	322	556	426	227	69	47	25	20
MIN	11	83	72	57	55	100	26	34	7.2	6.3	3.4	2.1
CFSM	0.68	2.05	2.26	4.51	2.77	3.35	2.03	1.43	0.45	0.26	0.13	0.07
IN.	0.78	2.29	2.61	5.20	2.88	3.87	2.26	1.64	0.50	0.31	0.15	0.08

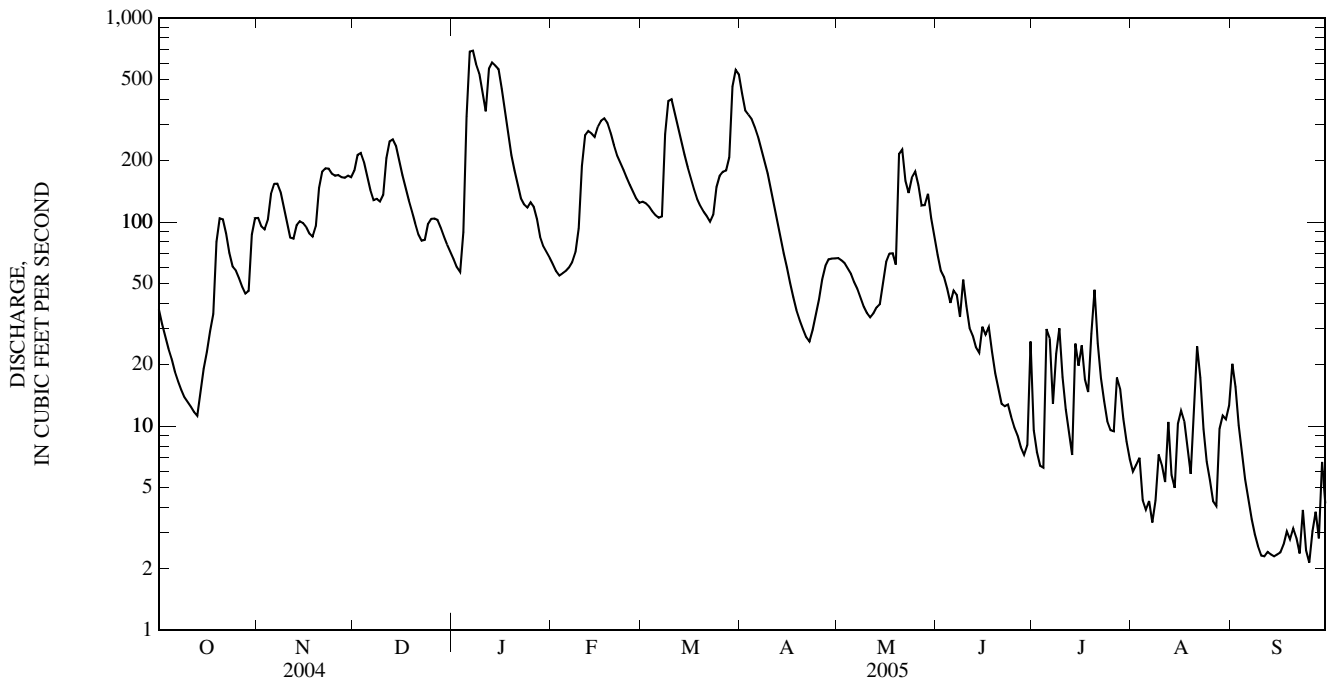
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1946 - 2005, BY WATER YEAR (WY)

MEAN	23.9	64.7	134	174	177	215	153	120	72.2	45.2	45.4	27.7
MAX	155	279	282	337	337	474	353	279	254	201	309	294
(WY)	(1955)	(2004)	(1957)	(1952)	(1956)	(1963)	(1948)	(1968)	(2003)	(2003)	(1956)	(2003)
MIN	1.27	1.85	11.2	32.4	53.5	56.8	52.3	23.6	9.23	2.89	2.42	1.97
(WY)	(1954)	(1954)	(1954)	(1967)	(1954)	(1969)	(1963)	(1962)	(1959)	(1966)	(1953)	(1953)

03062500 DECKERS CREEK AT MORGANTOWN, WV—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1946 - 2005	
ANNUAL TOTAL	46,995.6		38,346.6		105	
ANNUAL MEAN	128		105		193	
HIGHEST ANNUAL MEAN					54.8	
LOWEST ANNUAL MEAN					1966	
HIGHEST DAILY MEAN	1,000	Feb 6	692	Jan 7	2,740	Aug 6, 1956
LOWEST DAILY MEAN	5.9	Jul 18	2.1	Sep 25	0.30	Sep 3, 1966
ANNUAL SEVEN-DAY MINIMUM	8.8	Jul 13	2.4	Sep 10	0.60	Sep 6, 1964
MAXIMUM PEAK FLOW			723	Jan 6	7,550	Aug 18, 1980
MAXIMUM PEAK STAGE			3.03	Jan 6	(a)12.36	Aug 18, 1980
INSTANTANEOUS LOW FLOW			2.1	(b)	(c)	(c)
ANNUAL RUNOFF (CFSM)	2.03		1.66		1.66	
ANNUAL RUNOFF (INCHES)	27.66		22.57		22.51	
10 PERCENT EXCEEDS	268		261		253	
50 PERCENT EXCEEDS	94		65		51	
90 PERCENT EXCEEDS	12		5.8		4.8	

a From floodmarks.
 b Sept. 25, 26.
 c Unknown.



MONONGAHELA RIVER BASIN
03065000 DRY FORK AT HENDRICKS, WV

LOCATION.--Lat 39°04'20", long 79°37'23", NAD 27, Tucker County, Hydrologic Unit 05020004, on right bank at Hendricks, 0.4 mi upstream from confluence with Blackwater River.

DRAINAGE AREA.--349 mi².

PERIOD OF RECORD.--October 1940 to September 1993, October 1993 to September 1995 (gage heights only), October 1995 to current year.

REVISED RECORDS.--WDR WV-97-1: Drainage area.

GAGE.--Water-stage recorder with satellite telemeter. Datum of gage is 1,698.76 ft above NGVD 12. Prior to Dec. 21, 1941, nonrecording gage at same site and datum.

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

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)
Mar 24	0630	8,150	6.45	Mar 29	0500	*9,400	*6.87

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	718	718	2,500	547	e260	562	1,640	3,240	373	44	153	316
2	529	587	2,270	529	238	466	2,180	2,090	313	40	140	208
3	449	729	1,550	524	240	429	2,310	1,440	300	49	116	139
4	360	1,500	1,110	1,290	239	477	1,790	1,040	299	111	96	103
5	289	2,740	856	2,460	244	435	1,920	799	254	123	81	82
6	244	1,740	743	2,330	278	408	1,610	656	215	93	80	69
7	213	1,200	923	1,930	300	629	1,250	564	202	62	619	59
8	189	888	1,140	1,790	544	3,270	1,700	502	182	1,620	331	52
9	169	680	1,050	1,720	1,360	2,050	1,420	419	173	857	423	46
10	157	551	1,770	1,350	2,890	1,350	1,130	367	231	374	874	41
11	146	471	1,750	1,050	1,730	1,040	906	1,040	247	215	485	38
12	135	590	1,540	1,020	1,220	859	736	770	229	155	317	35
13	126	896	1,280	975	935	716	631	607	175	225	231	32
14	151	690	1,040	2,260	1,140	605	530	500	153	233	180	30
15	173	604	857	2,030	1,890	542	447	640	134	220	145	28
16	197	545	790	1,450	1,730	532	380	615	117	377	146	27
17	320	489	719	1,100	1,600	496	334	525	130	1,110	193	26
18	262	525	613	880	1,180	493	307	441	120	829	146	25
19	228	602	605	789	893	635	284	375	97	826	121	24
20	375	808	506	725	761	999	262	2,520	85	1,060	146	24
21	693	838	536	595	1,010	1,040	244	2,870	76	606	133	23
22	511	745	588	e500	1,630	975	257	1,610	77	531	159	22
23	411	667	1,610	e400	1,370	2,530	537	1,170	79	516	111	22
24	579	659	2,270	e340	1,120	6,400	568	2,190	71	404	84	22
25	820	1,370	1,470	e360	921	3,030	549	2,080	58	298	70	21
26	618	1,330	1,060	e390	739	1,970	885	1,520	50	270	61	23
27	524	1,090	830	e350	619	1,820	1,250	1,090	43	216	134	35
28	541	1,250	753	285	595	4,510	1,030	829	38	240	458	40
29	948	1,180	626	e280	---	7,290	826	701	39	284	277	39
30	1,390	992	532	e300	---	3,400	2,040	546	44	225	167	53
31	951	---	482	e280	---	2,200	---	453	---	183	133	---
TOTAL	13,416	27,674	34,369	30,829	27,676	52,158	29,953	34,209	4,604	12,396	6,810	1,704
MEAN	433	922	1,109	994	988	1,683	998	1,104	153	400	220	56.8
MAX	1,390	2,740	2,500	2,460	2,890	7,290	2,310	3,240	373	1,620	874	316
MIN	126	471	482	280	238	408	244	367	38	40	61	21
CFSM	1.24	2.64	3.18	2.85	2.83	4.82	2.86	3.16	0.44	1.15	0.63	0.16
IN.	1.43	2.95	3.66	3.29	2.95	5.56	3.19	3.65	0.49	1.32	0.73	0.18

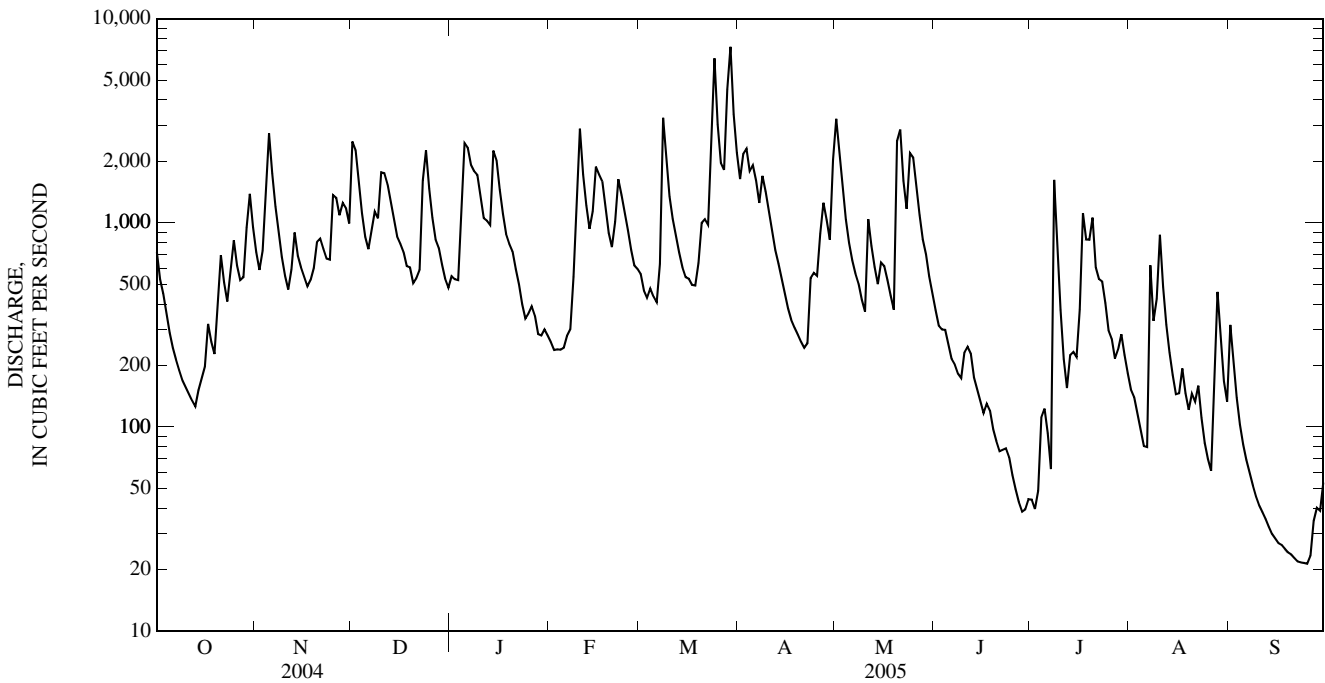
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 2005, BY WATER YEAR (WY)

MEAN	365	683	949	1,026	1,199	1,558	1,215	933	543	388	335	274
MAX	1,704	4,165	2,224	2,545	2,688	3,736	2,914	3,543	1,737	1,796	1,266	1,316
(WY)	(1977)	(1986)	(1973)	(1996)	(1956)	(1963)	(1958)	(1996)	(1974)	(1996)	(1956)	(1996)
MIN	13.8	35.0	242	174	227	588	373	236	67.3	32.1	23.7	11.6
(WY)	(1954)	(1954)	(2002)	(1977)	(1978)	(1990)	(1946)	(1970)	(1991)	(1993)	(1957)	(1946)

03065000 DRY FORK AT HENDRICKS, WV—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1941 - 2005	
ANNUAL TOTAL	361,727		275,798			
ANNUAL MEAN	988		756		786	
HIGHEST ANNUAL MEAN					1,435	1996
LOWEST ANNUAL MEAN					510	1959
HIGHEST DAILY MEAN	7,180	Feb 6	7,290	Mar 29	34,000	Nov 5, 1985
LOWEST DAILY MEAN	47	Sep 7	21	Sep 25	2.4	(a)
ANNUAL SEVEN-DAY MINIMUM	69	Aug 24	22	Sep 20	3.5	Aug 28, 1993
MAXIMUM PEAK FLOW			9,400	Mar 29	(b)100,000	Nov 5, 1985
MAXIMUM PEAK STAGE			6.87	Mar 29	(c)20.74	Nov 5, 1985
INSTANTANEOUS LOW FLOW			21	(d)	2.2	Sep 1, 1993
ANNUAL RUNOFF (CFSM)	2.83		2.17		2.25	
ANNUAL RUNOFF (INCHES)	38.56		29.40		30.62	
10 PERCENT EXCEEDS	2,240		1,740		1,830	
50 PERCENT EXCEEDS	667		531		432	
90 PERCENT EXCEEDS	152		70		65	

- 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.
- d Sept. 23, 24, 25.
- e Estimated



03065400 BLACKWATER RIVER NEAR DAVIS, WV

LOCATION.--Lat 39°08'24", long 79°25'12", NAD 27, 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.--54.7 mi².

PERIOD OF RECORD.--November 1991 to September 1998, October 2002 to current year.

REVISED RECORDS.--WDR WV-97-1: Drainage area. WDR WV-04-1: 1993(M), 1994(P), 1995(M).

GAGE.--Water-stage recorder with satellite telemeter. Elevation of gage is approximately 3,130 ft above NGVD 29, from topographic map.

REMARKS.--Records good except those above 500 ft³/s, which are fair, and those for periods of estimated daily discharges (ice effect, no gage-height record), 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)
Mar 29	1730	*1,270	*5.72	No other peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	109	149	315	121	e43	93	265	359	65	9.5	15	36
2	88	119	367	113	e42	e72	293	258	55	8.8	13	38
3	87	150	262	116	e42	e64	367	188	58	8.0	11	23
4	78	235	210	266	e41	e74	300	144	53	7.8	9.5	16
5	69	385	184	420	e39	e68	317	112	44	12	8.4	12
6	61	309	167	518	e42	e64	239	92	39	18	10	10
7	50	228	193	429	e85	e90	194	81	35	13	63	8.5
8	45	189	237	335	161	e430	268	73	31	183	46	7.4
9	40	155	210	285	342	e260	212	62	30	133	53	7.1
10	38	134	268	210	461	e190	153	55	58	55	67	6.8
11	34	117	273	172	e315	143	125	57	94	32	35	6.5
12	31	142	247	241	203	126	106	81	41	44	24	6.3
13	29	193	215	215	147	115	96	61	30	111	18	6.0
14	33	151	193	340	215	101	85	48	27	65	15	5.7
15	38	119	176	300	370	92	70	67	28	41	12	5.5
16	51	101	202	201	273	85	61	56	26	95	12	5.5
17	103	88	194	e150	239	79	54	46	31	131	14	5.5
18	92	97	159	e110	166	87	49	41	25	68	e12	5.4
19	88	110	139	e105	e140	127	46	38	22	53	e12	5.0
20	97	137	e100	e95	170	193	44	277	20	53	12	5.0
21	163	145	e80	e83	218	167	41	374	18	36	19	5.0
22	145	124	133	e68	263	156	48	201	20	33	16	4.9
23	105	105	313	e54	175	385	130	135	23	32	12	5.0
24	107	104	351	e58	137	763	114	277	18	26	10	5.0
25	150	209	206	e64	126	610	121	308	14	23	8.6	5.0
26	122	229	176	e55	111	342	199	210	12	26	7.4	5.5
27	97	193	e155	e49	98	276	196	147	9.7	22	9.0	6.9
28	105	193	e140	e44	97	464	169	117	9.3	21	71	5.9
29	124	198	e125	e47	---	1,110	127	116	11	26	63	6.2
30	232	168	115	e45	---	890	233	88	10	22	31	6.7
31	201	---	109	e44	---	401	---	79	---	17	25	---
TOTAL	2,812	4,976	6,214	5,353	4,761	8,117	4,722	4,248	957.0	1,425.1	733.9	277.3
MEAN	90.7	166	200	173	170	262	157	137	31.9	46.0	23.7	9.24
MAX	232	385	367	518	461	1,110	367	374	94	183	71	38
MIN	29	88	80	44	39	64	41	38	9.3	7.8	7.4	4.9
CFSM	1.66	3.03	3.66	3.16	3.11	4.79	2.88	2.51	0.58	0.84	0.43	0.17
IN.	1.91	3.38	4.23	3.64	3.24	5.52	3.21	2.89	0.65	0.97	0.50	0.19

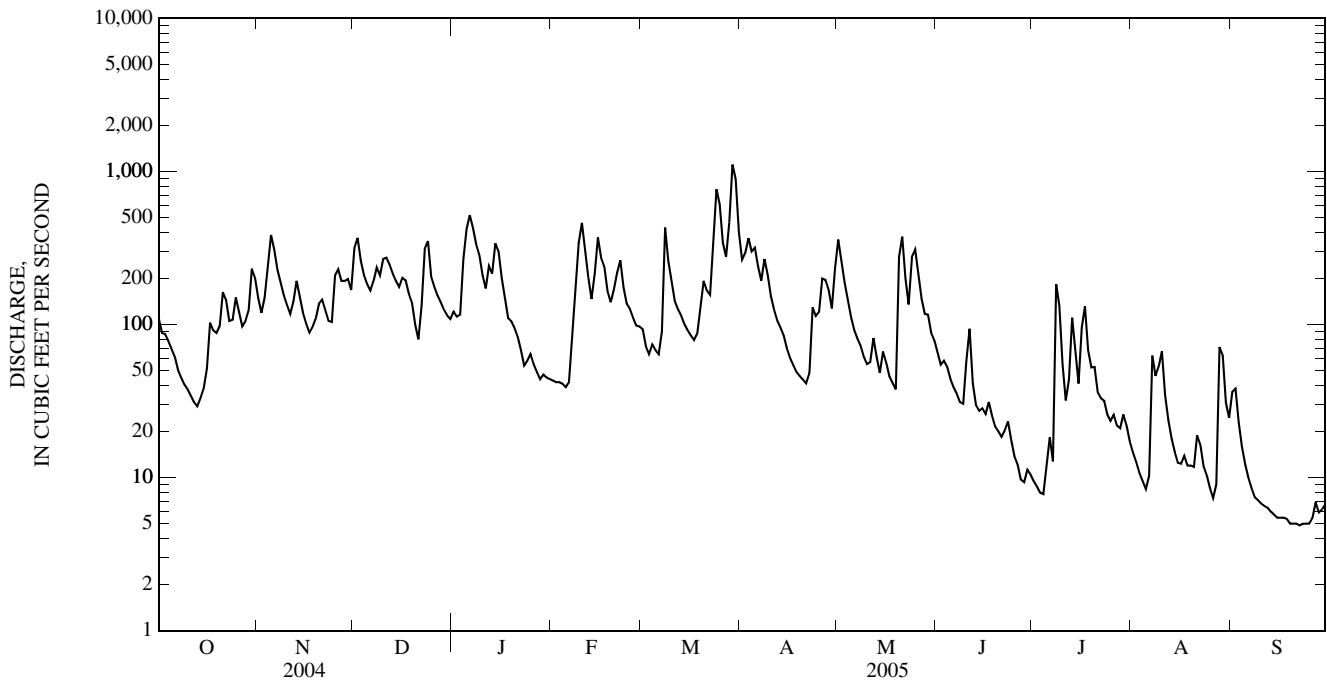
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1992 - 2005, BY WATER YEAR (WY)

MEAN	58.5	144	180	200	245	325	189	183	91.8	92.2	77.5	77.6
MAX	108	234	244	378	486	461	350	406	226	236	211	284
(WY)	(1997)	(2004)	(1997)	(1996)	(1994)	(2003)	(1993)	(1996)	(2003)	(2001)	(1996)	(2003)
MIN	9.93	30.8	123	110	69.5	146	88.5	65.5	29.1	9.48	7.10	9.24
(WY)	(1995)	(1992)	(1995)	(2003)	(1993)	(1995)	(1995)	(1993)	(1994)	(1993)	(1993)	(2005)

03065400 BLACKWATER RIVER NEAR DAVIS, WV—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1992 - 2005	
ANNUAL TOTAL	62,669.3		44,596.3		158	
ANNUAL MEAN	171		122		101	
HIGHEST ANNUAL MEAN					220	1996
LOWEST ANNUAL MEAN					101	1995
HIGHEST DAILY MEAN	1,350	Feb 7	1,110	Mar 29	(e)3,800	Feb 9, 1994
LOWEST DAILY MEAN	8.7	Sep 6	4.9	Sep 22	4.0	Aug 30, 1993
ANNUAL SEVEN-DAY MINIMUM	10	Sep 1	5.0	Sep 19	4.9	Aug 28, 1993
MAXIMUM PEAK FLOW			1,270	Mar 29	4,050	Feb 9, 1994
MAXIMUM PEAK STAGE			5.72	Mar 29	(a)10.51	Jan 19, 1996
INSTANTANEOUS LOW FLOW			4.6	(b)	4.0	(c)
ANNUAL RUNOFF (CFSM)	3.13		2.23		2.89	
ANNUAL RUNOFF (INCHES)	42.62		30.33		39.27	
10 PERCENT EXCEEDS	352		274		374	
50 PERCENT EXCEEDS	119		88		96	
90 PERCENT EXCEEDS	30		10		14	

a From floodmarks.
 b Sept. 22, 23.
 c July 25, 26, Aug. 29-31, 1993.
 e Estimated



MONONGAHELA RIVER BASIN
03066000 BLACKWATER RIVER AT DAVIS, WV

LOCATION.--Lat 39°07'37", long 79°28'07", NAD 27, Tucker County, Hydrologic Unit 05020004, on right bank 0.4 mi southwest of Davis, 0.5 mi downstream from Beaver Creek, and at mile 11.1.

DRAINAGE AREA.--85.9 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). WDR WV-97-1: Drainage area.

GAGE.--Water-stage recorder with satellite telemeter. Datum of gage is 3,058.87 ft above mean 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.

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 29	1400	*2,140	*7.59	No other peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	147	164	697	190	e66	136	389	538	106	20	27	69
2	118	142	569	175	e65	108	484	358	93	17	24	58
3	117	232	343	189	e64	e100	560	271	98	15	21	37
4	100	428	249	472	e61	e110	452	212	90	16	18	26
5	83	704	211	738	e59	e105	497	171	77	225	16	20
6	73	439	206	800	e64	e98	354	146	66	64	18	16
7	65	275	301	618	e120	196	294	131	59	39	75	14
8	59	212	361	514	310	666	470	119	52	500	81	13
9	54	173	282	420	616	421	330	104	58	264	99	12
10	52	151	460	308	802	280	238	97	170	119	116	11
11	49	137	426	255	436	215	197	146	219	64	56	10
12	45	217	341	423	295	190	170	212	96	84	38	9.6
13	45	259	272	345	225	173	151	133	61	279	29	9.1
14	52	173	232	578	400	149	133	101	53	122	23	8.8
15	59	137	207	444	625	137	118	132	53	81	20	8.6
16	90	124	191	299	433	129	104	109	49	160	19	8.9
17	160	116	187	232	376	121	94	90	60	268	21	8.9
18	107	149	175	e170	253	138	87	79	48	145	18	8.4
19	117	171	145	e160	231	205	83	73	40	142	19	8.0
20	147	212	138	e150	213	308	79	599	37	149	20	7.8
21	263	193	e100	e130	371	253	75	579	33	84	72	7.6
22	183	156	166	e110	397	235	90	295	37	72	45	7.4
23	129	136	552	e82	264	698	211	216	44	69	25	7.1
24	176	161	542	e86	211	1,160	181	446	32	52	18	7.0
25	209	363	291	e98	192	819	193	468	26	47	15	7.3
26	147	295	217	e85	169	513	332	311	22	53	14	8.5
27	125	214	176	e76	152	429	324	219	19	44	20	11
28	145	284	e170	e68	150	867	247	181	18	42	135	11
29	191	271	e165	e72	---	1,970	192	179	25	45	98	11
30	382	209	155	e70	---	1,200	357	142	25	39	51	13
31	237	---	168	e67	---	585	---	126	---	33	44	---
TOTAL	3,926	6,897	8,695	8,424	7,620	12,714	7,486	6,983	1,866	3,353	1,295	455.0
MEAN	127	230	280	272	272	410	250	225	62.2	108	41.8	15.2
MAX	382	704	697	800	802	1,970	560	599	219	500	135	69
MIN	45	116	100	67	59	98	75	73	18	15	14	7.0
CFSM	1.47	2.68	3.27	3.16	3.17	4.77	2.90	2.62	0.72	1.26	0.49	0.18
IN.	1.70	2.99	3.77	3.65	3.30	5.51	3.24	3.02	0.81	1.45	0.56	0.20

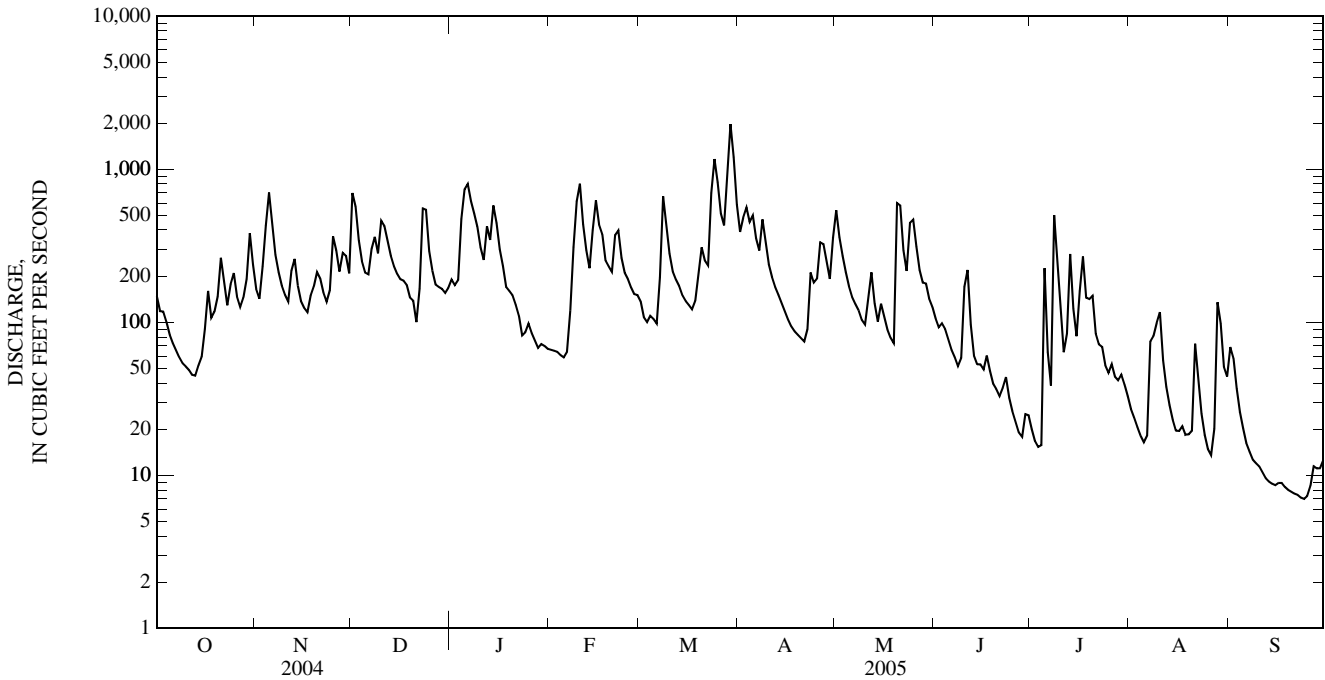
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1921 - 2005, BY WATER YEAR (WY)

MEAN	107	172	244	270	321	393	298	224	143	107	101	78.2
MAX	510	990	615	634	773	1,125	766	640	507	408	478	503
(WY)	(1977)	(1986)	(1973)	(1952)	(1994)	(1963)	(1958)	(1996)	(1981)	(1996)	(1956)	(2003)
MIN	4.31	6.73	45.7	44.5	52.4	127	74.7	47.4	23.2	14.2	7.19	5.23
(WY)	(1954)	(1931)	(1999)	(1977)	(1978)	(1990)	(1946)	(1930)	(1999)	(1930)	(1930)	(1930)

03066000 BLACKWATER RIVER AT DAVIS, WV—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1921 - 2005	
ANNUAL TOTAL	94,926		69,714.0		204	
ANNUAL MEAN	259		191		362	
HIGHEST ANNUAL MEAN					125	1996
LOWEST ANNUAL MEAN					9,470	1959
HIGHEST DAILY MEAN	2,020	Feb 7	1,970	Mar 29	2.4	Nov 5, 1985
LOWEST DAILY MEAN	15	Sep 6	7.0	Sep 24	1.6	Sep 11, 1959
ANNUAL SEVEN-DAY MINIMUM	17	Sep 1	7.5	Sep 19	2.4	Oct 1, 1953
MAXIMUM PEAK FLOW			2,140	Mar 29	(a)12,500	Nov 5, 1985
MAXIMUM PEAK STAGE			7.59	Mar 29	(b)17.67	Nov 5, 1985
INSTANTANEOUS LOW FLOW			6.8	(c)	(d)1.5	(f)
ANNUAL RUNOFF (CFSM)	3.02		2.22		2.38	
ANNUAL RUNOFF (INCHES)	41.11		30.19		32.29	
10 PERCENT EXCEEDS	556		441		480	
50 PERCENT EXCEEDS	167		137		113	
90 PERCENT EXCEEDS	45		19		19	

- a From rating curve extended above 7,000 ft³/s.
- b From floodmarks.
- c Sept. 23, 24.
- d Caused by filling small water-supply pool about 1.0 mi upstream.
- e Estimated.
- f Sept. 11, 12, 1959.



03067510 SHAVERS FORK NEAR CHEAT BRIDGE, WV

LOCATION.--Lat 38°37'01", long 79°52'12", NAD 27, Randolph County, Hydrologic Unit 05020004, on left downstream wingwall, on US Route 250 at Cheat Bridge, 1.8 mi downstream from Fish Hatchery Run, and at mile 65.5.

DRAINAGE AREA.--60.2 mi².

PERIOD OF RECORD.--October 2001 to current year.

GAGE.--Water-stage recorder with satellite telemeter. Datum of gage is 3,536.56 ft above NGVD 29.

REMARKS.--Records good except those for periods of estimated daily discharges (no gage-height record, ice effect), which are poor.

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 1	1100	1,520	8.85	Apr 8	0400	1,820	9.36
Mar 23	2400	2,580	10.42	May 20	1400	1,630	9.05
Mar 28	1300	*5,360	*13.38	Jul 8	0500	2,030	9.67
Apr 2	1200	2,450	10.25				

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	199	94	849	140	e45	100	523	641	75	85	34	55
2	158	82	395	139	e44	e84	1,270	331	70	30	77	37
3	134	110	254	152	e43	e66	600	235	118	19	33	27
4	110	548	195	430	e40	e77	379	183	105	15	23	21
5	93	435	165	466	e37	e79	377	150	78	13	18	18
6	79	235	176	371	e45	e74	363	130	64	12	18	17
7	70	177	272	329	e56	112	307	117	56	22	26	15
8	62	144	284	342	e95	e400	928	108	49	869	20	13
9	57	118	287	277	e180	e260	370	92	47	163	112	12
10	53	103	421	211	500	e170	258	85	44	79	e130	11
11	48	98	386	177	457	e140	206	94	38	50	e50	11
12	43	189	277	159	241	e120	175	89	32	37	e29	9.8
13	45	183	216	144	203	e105	152	74	30	52	23	9.0
14	82	130	e160	725	237	e97	132	75	28	81	20	8.6
15	80	112	e140	305	342	e92	132	222	25	67	17	8.5
16	122	102	e125	207	335	e87	115	130	24	204	53	8.4
17	132	94	e120	167	286	e82	100	98	24	338	56	8.6
18	91	117	e105	e120	e210	e85	88	82	22	209	31	9.0
19	85	163	e86	e110	e160	e100	80	74	21	242	67	7.8
20	165	225	e74	e105	e150	e130	73	813	19	198	53	7.4
21	158	174	e130	e92	e280	e120	68	425	18	116	33	7.2
22	115	145	e700	e76	623	e110	109	223	17	95	24	7.1
23	95	126	e680	e62	281	643	196	184	16	73	19	7.0
24	158	208	e320	e56	208	1,190	154	282	14	55	17	7.3
25	165	414	e230	e63	167	381	139	248	13	47	16	7.2
26	118	231	e170	e66	134	337	188	186	12	45	15	7.9
27	105	180	e140	e54	123	506	325	147	11	42	95	21
28	118	586	e130	e47	116	2,440	211	126	13	52	141	14
29	121	305	e125	e50	---	1,710	161	114	41	78	60	12
30	139	222	e120	e47	---	689	793	98	31	44	39	18
31	111	---	e130	e46	---	615	---	86	---	41	37	---
TOTAL	3,311	6,050	7,862	5,735	5,638	11,201	8,972	5,942	1,155	3,473	1,386	422.8
MEAN	107	202	254	185	201	361	299	192	38.5	112	44.7	14.1
MAX	199	586	849	725	623	2,440	1,270	813	118	869	141	55
MIN	43	82	74	46	37	66	68	74	11	12	15	7.0
CFSM	1.77	3.35	4.21	3.07	3.34	6.00	4.97	3.18	0.64	1.86	0.74	0.23
IN.	2.05	3.74	4.86	3.54	3.48	6.92	5.54	3.67	0.71	2.15	0.86	0.26

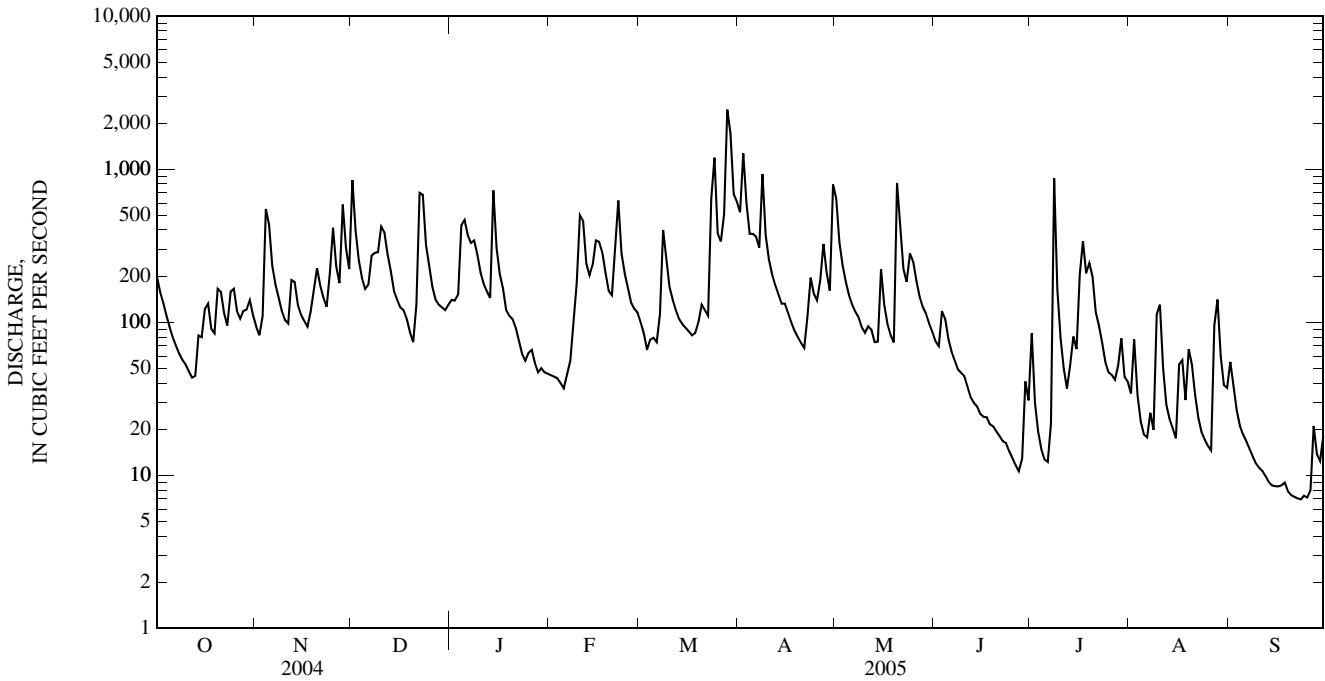
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2002 - 2005, BY WATER YEAR (WY)

MEAN	117	211	173	180	189	397	347	262	135	118	50.3	168
MAX	218	365	254	222	285	523	386	305	321	213	73.6	299
(WY)	(2003)	(2004)	(2005)	(2004)	(2003)	(2003)	(2004)	(2003)	(2003)	(2002)	(2003)	(2004)
MIN	12.4	13.9	66.8	138	105	272	299	192	38.5	46.0	37.6	14.1
(WY)	(2002)	(2002)	(2002)	(2002)	(2002)	(2002)	(2005)	(2005)	(2005)	(2004)	(2002)	(2005)

03067510 SHAVERS FORK NEAR CHEAT BRIDGE, WV—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 2002 - 2005	
ANNUAL TOTAL	77,351		61,147.8		195	
ANNUAL MEAN	211		168		139	
HIGHEST ANNUAL MEAN					253	2003
LOWEST ANNUAL MEAN					139	2002
HIGHEST DAILY MEAN	2,280	Apr 13	2,440	Mar 28	3,040	Nov 19, 2003
LOWEST DAILY MEAN	12	(a)	7.0	Sep 23	4.2	Sep 13, 2002
ANNUAL SEVEN-DAY MINIMUM	14	Sep 1	7.3	Sep 19	5.3	Sep 9, 2002
MAXIMUM PEAK FLOW			5,360	Mar 28	7,600	Nov 19, 2003
MAXIMUM PEAK STAGE			13.38	Mar 28	15.57	Nov 19, 2003
INSTANTANEOUS LOW FLOW			6.5	Sep 23	4.1	(b)
ANNUAL RUNOFF (CFSM)	3.51		2.78		3.25	
ANNUAL RUNOFF (INCHES)	47.80		37.79		44.11	
10 PERCENT EXCEEDS	425		373		421	
50 PERCENT EXCEEDS	125		105		114	
90 PERCENT EXCEEDS	34		17		20	

a Sept. 4, 5.
 b Sept. 13, 14, 2002.
 e Estimated



03068800 SHAVERS FORK BELOW BOWDEN, WV

LOCATION.--Lat 38°54'47", long 79°46'14", NAD 27, Randolph County, Hydrologic Unit 05020004, on upstream side of right pier, on County Route 33/8 bridge, 3.0 mi west of Bowden, and at mile 26.4.

DRAINAGE AREA.--151 mi².

PERIOD OF RECORD.--August 1973 to September 1981, October 1997 to current year. Once daily wire-weight gage readings at same site November 1971 to August 1973 are contained in files of Bowden National Fish Hatchery.

GAGE.--Water-stage recorder with satellite telemeter. Elevation of gage is approximately 2,120 ft above NGVD 29, from topographic map.

REMARKS.--Records good except those for periods of estimated daily discharges (ice effect, doubtful or no gage-height record), which are poor.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,600 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec 23	2000	5,090	8.46	Apr 2	1800	3,780	7.89
Mar 24	0400	6,910	9.10	May 20	1900	4,070	8.03
Mar 28	1800	*13,400	*10.74				

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	476	278	1,500	295	e120	283	1,160	2,130	219	66	111	126
2	365	244	1,200	324	117	219	1,900	1,090	190	101	95	122
3	320	330	739	306	116	184	1,590	737	194	81	115	92
4	259	854	556	685	110	213	964	545	254	51	82	71
5	214	1,440	439	1,250	98	219	968	423	197	45	62	59
6	181	769	386	956	111	204	859	350	171	42	52	50
7	157	549	473	887	141	290	725	301	153	46	162	44
8	140	423	636	858	221	1,140	1,530	267	129	1,690	105	39
9	125	339	526	826	456	734	970	233	120	617	187	35
10	114	281	908	621	1,160	486	667	232	139	273	462	32
11	105	246	949	502	691	403	517	509	174	174	224	29
12	96	316	835	453	467	327	421	409	145	130	139	27
13	90	535	644	406	370	285	360	327	108	114	103	24
14	93	374	529	1,440	501	269	304	276	98	165	80	22
15	131	303	420	1,020	833	254	263	523	85	178	68	20
16	159	267	348	655	844	239	242	488	78	283	63	19
17	235	242	328	507	891	223	212	344	82	574	98	18
18	200	267	296	341	584	222	189	282	72	666	109	18
19	159	390	284	e300	420	264	170	245	64	813	90	17
20	266	570	208	e290	363	358	155	1,930	62	843	142	16
21	480	540	169	e250	459	347	144	1,590	55	455	168	16
22	315	437	286	e210	1,430	313	159	782	53	385	112	14
23	251	370	1,610	e170	834	989	341	623	49	312	76	14
24	338	349	1,590	e150	623	4,080	389	1,080	44	233	60	15
25	507	912	725	e160	493	1,360	349	1,000	39	184	51	14
26	352	761	504	e180	390	915	456	705	35	168	45	15
27	287	539	403	e150	326	1,060	749	529	32	141	66	e22
28	269	887	309	e120	316	5,430	637	426	29	181	279	e18
29	340	804	303	e130	---	5,210	479	366	53	184	201	e25
30	440	571	286	e140	---	1,920	1,450	298	93	165	123	e37
31	343	---	269	e130	---	1,330	---	254	---	130	103	---
TOTAL	7,807	15,187	18,658	14,712	13,485	29,770	19,319	19,294	3,216	9,490	3,833	1,070
MEAN	252	506	602	475	482	960	644	622	107	306	124	35.7
MAX	507	1,440	1,610	1,440	1,430	5,430	1,900	2,130	254	1,690	462	126
MIN	90	242	169	120	98	184	144	232	29	42	45	14
CFSM	1.67	3.35	3.99	3.14	3.19	6.36	4.26	4.12	0.71	2.03	0.82	0.24
IN.	1.92	3.74	4.60	3.62	3.32	7.33	4.76	4.75	0.79	2.34	0.94	0.26

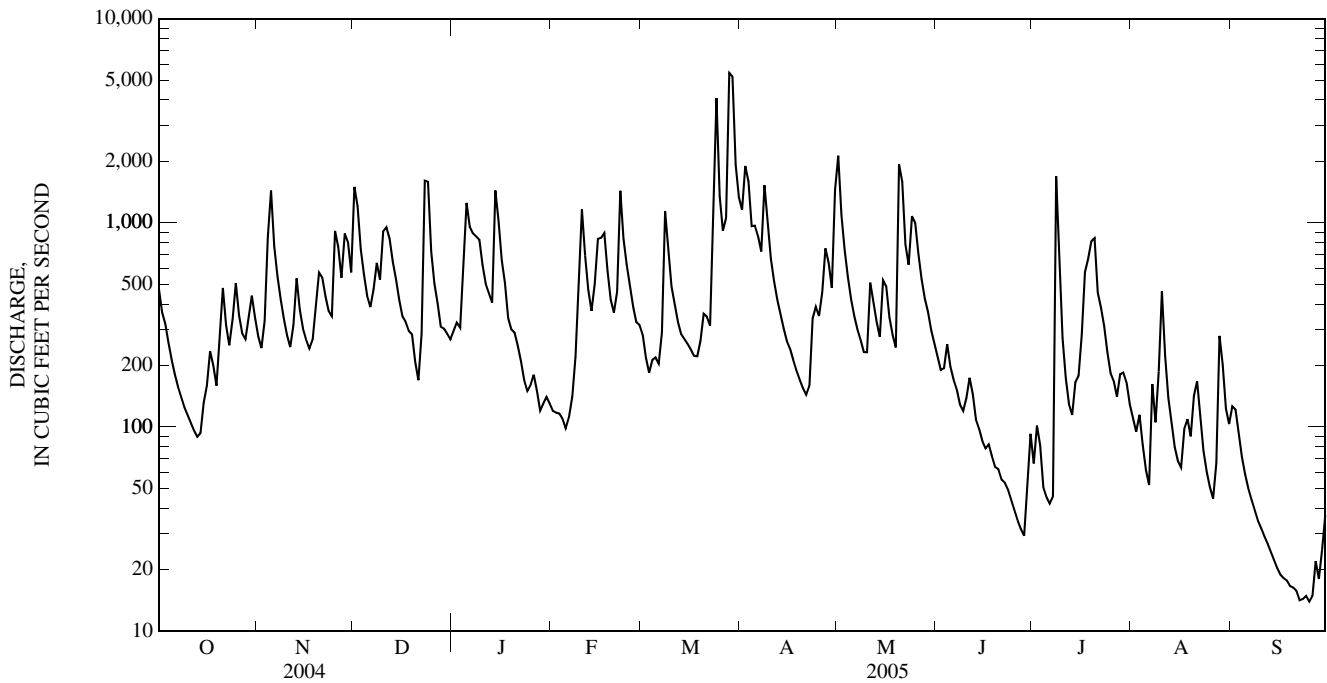
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1973 - 2005, BY WATER YEAR (WY)

	284	385	478	524	556	822	673	528	411	277	199	230
MEAN	284	385	478	524	556	822	673	528	411	277	199	230
MAX	913	973	952	1,095	1,054	1,261	1,162	918	978	460	438	724
(WY)	(1977)	(2004)	(1974)	(1999)	(2000)	(2003)	(2002)	(2003)	(1974)	(1980)	(1979)	(2003)
MIN	31.6	32.1	177	77.8	121	422	264	201	63.3	43.2	25.8	35.7
(WY)	(2002)	(2002)	(2002)	(1977)	(1978)	(1976)	(1976)	(1977)	(1999)	(1999)	(1999)	(2005)

03068800 SHAVERS FORK BELOW BOWDEN, WV—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1973 - 2005	
ANNUAL TOTAL	188,851		155,841		447	
ANNUAL MEAN	516		427		321	
HIGHEST ANNUAL MEAN					637	
LOWEST ANNUAL MEAN					321	
HIGHEST DAILY MEAN	5,300	Mar 6	5,430	Mar 28	9,010	Feb 19, 2000
LOWEST DAILY MEAN	32	Sep 7	14	(a)	9.5	Sep 14, 2002
ANNUAL SEVEN-DAY MINIMUM	52	Aug 24	15	Sep 20	11	Sep 10, 2002
MAXIMUM PEAK FLOW			13,400	Mar 28	(b)22,900	Nov 19, 2003
MAXIMUM PEAK STAGE			10.74	Mar 28	12.37	Nov 19, 2003
INSTANTANEOUS LOW FLOW			13	(c)	9.1	(d)
ANNUAL RUNOFF (CFSM)	3.42		2.83		2.96	
ANNUAL RUNOFF (INCHES)	46.52		38.39		40.24	
10 PERCENT EXCEEDS	1,010		929		968	
50 PERCENT EXCEEDS	328		279		270	
90 PERCENT EXCEEDS	106		51		62	

- a Sept. 22, 23, 25.
- b From rating curve extended above 6,700 ft³/s.
- c Sept. 22, 23, 25, 26.
- d Sept. 14, 15, 2002.
- e Estimated



03069500 CHEAT RIVER NEAR PARSONS, WV

LOCATION.--Lat 39°07'22", long 79°40'53", NAD 27, 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 75.2.

DRAINAGE AREA.--722 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). WDR WV-97-1: Drainage area, 1888(M), 1914(P), 1915-16(M), 1917(P), 1924(P), 1939(P), 1940(M), 1942(M), 1948-49(M), 1955-57(M), 1962-64(M), 1967(M), 1971-73(M), 1977(M).

GAGE.--Water-stage recorder with satellite telemeter. Datum of gage is 1,589.66 ft above NGVD 12. 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.--No estimated daily discharges. Records good.

EXTREMES OUTSIDE PERIOD OF RECORD--Flood of 1844 was about 85,000 ft³/s. Flood of July 10, 1888, reached a stage of 20.5 ft; discharge, 71,000 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)
Mar 24	0800	19,700	10.69	Mar 29	0600	*24,800	*11.73

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,590	1,460	6,030	1,260	596	1,300	4,030	8,150	889	186	341	606
2	1,170	1,200	5,860	1,300	584	1,030	5,040	4,870	750	156	303	477
3	1,050	1,550	3,540	1,250	579	866	6,220	3,230	706	205	260	343
4	841	3,340	2,500	3,120	576	893	4,200	2,340	732	262	252	252
5	670	6,930	1,950	6,770	535	1,010	4,480	1,820	678	381	203	203
6	562	4,020	1,670	6,000	544	923	3,670	1,510	558	317	174	170
7	492	2,650	2,060	4,790	684	1,350	2,880	1,300	506	200	729	149
8	437	1,970	2,760	4,230	1,210	7,320	4,610	1,150	454	3,940	598	133
9	391	1,530	2,430	4,110	3,040	4,620	3,750	974	456	2,550	588	118
10	359	1,260	4,050	3,040	7,160	2,850	2,670	874	766	1,080	1,520	109
11	332	1,080	4,220	2,360	4,080	2,210	2,100	1,930	904	585	965	100
12	308	1,300	3,730	2,400	2,670	1,820	1,710	1,790	791	415	588	92
13	288	2,120	2,940	2,260	2,040	1,540	1,470	1,440	513	699	426	85
14	315	1,660	2,400	5,070	2,700	1,320	1,250	1,150	421	611	329	79
15	365	1,370	1,970	4,930	4,660	1,200	1,060	1,410	376	561	267	74
16	458	1,210	1,620	3,180	4,000	1,170	905	1,590	334	819	249	71
17	819	1,080	1,590	2,390	3,780	1,100	797	1,240	364	2,200	298	67
18	704	1,160	1,410	1,700	2,670	1,080	725	1,030	332	1,840	293	64
19	597	1,460	1,350	1,450	1,950	1,360	667	869	274	1,990	257	61
20	755	2,210	999	1,440	1,690	2,110	616	5,180	241	2,480	271	59
21	1,820	2,260	982	1,240	2,250	2,200	573	7,090	222	1,440	373	57
22	1,310	1,870	1,250	1,070	4,110	1,940	595	3,550	227	1,140	419	54
23	970	1,590	3,560	823	3,240	4,510	1,230	2,470	239	1,110	268	53
24	1,190	1,520	6,420	754	2,500	14,500	1,520	4,620	210	847	198	53
25	1,900	3,240	3,340	812	2,050	6,980	1,500	4,660	178	625	163	51
26	1,410	3,360	2,300	895	1,660	4,450	2,360	3,310	156	579	144	54
27	1,130	2,470	1,770	793	1,400	4,020	3,090	2,370	139	491	196	68
28	1,120	2,700	1,370	622	1,360	10,900	2,610	1,830	126	480	971	86
29	1,790	2,930	1,340	627	---	20,100	1,980	1,610	122	612	817	89
30	2,980	2,230	1,230	661	---	8,750	4,240	1,290	155	508	454	110
31	1,990	---	1,140	613	---	5,340	---	1,080	---	411	327	---
TOTAL	30,113	64,730	79,781	71,960	64,318	120,762	72,548	77,727	12,819	29,720	13,241	3,987
MEAN	971	2,158	2,574	2,321	2,297	3,896	2,418	2,507	427	959	427	133
MAX	2,980	6,930	6,420	6,770	7,160	20,100	6,220	8,150	904	3,940	1,520	606
MIN	288	1,080	982	613	535	866	573	869	122	156	144	51
CFSM	1.35	2.99	3.56	3.22	3.18	5.40	3.35	3.47	0.59	1.33	0.59	0.18
IN.	1.55	3.34	4.11	3.71	3.31	6.22	3.74	4.00	0.66	1.53	0.68	0.21

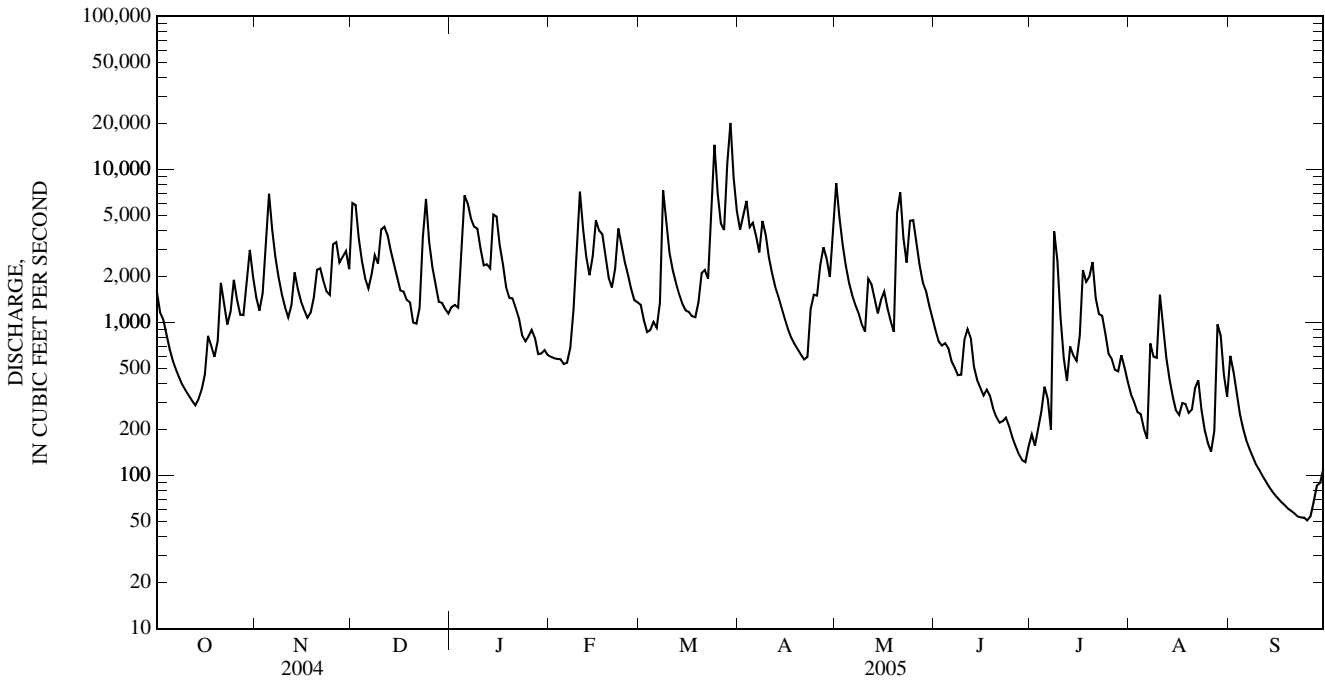
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1913 - 2005, BY WATER YEAR (WY)

MEAN	888	1,441	2,074	2,330	2,593	3,268	2,581	2,051	1,256	940	846	625
MAX	3,882	7,540	4,969	5,217	6,223	8,028	6,272	7,187	4,013	4,228	3,203	3,093
(WY)	(1977)	(1986)	(1973)	(1996)	(1994)	(1963)	(1958)	(1996)	(1974)	(1996)	(1942)	(2003)
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)

03069500 CHEAT RIVER NEAR PARSONS, WV—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1913 - 2005	
ANNUAL TOTAL	821,764		641,706		1,736	
ANNUAL MEAN	2,245		1,758		3,124	
HIGHEST ANNUAL MEAN					1,111	1996
LOWEST ANNUAL MEAN					1,111	1930
HIGHEST DAILY MEAN	19,000	Mar 6	20,100	Mar 29	70,000	Nov 5, 1985
LOWEST DAILY MEAN	103	Sep 7	51	Sep 25	10	Aug 12, 1930
ANNUAL SEVEN-DAY MINIMUM	177	Aug 24	54	Sep 20	11	Oct 9, 1930
MAXIMUM PEAK FLOW			24,800	Mar 29	(a)170,000	Nov 5, 1985
MAXIMUM PEAK STAGE			11.73	Mar 29	(b)24.30	Nov 5, 1985
INSTANTANEOUS LOW FLOW			50	(c)	(d)9.0	Aug 12, 1930
ANNUAL RUNOFF (CFSM)	3.11		2.44		2.40	
ANNUAL RUNOFF (INCHES)	42.34		33.06		32.67	
10 PERCENT EXCEEDS	4,800		4,110		4,010	
50 PERCENT EXCEEDS	1,440		1,190		974	
90 PERCENT EXCEEDS	366		192		177	

- a From rating curve extended above 55,000 ft³/s.
- b From floodmarks.
- c Sept. 25, 26.
- d Observed.



03069870 CHEAT RIVER AT HWY 50 NEAR ROWLESBURG, WV

LOCATION.--Lat 39°19'11", long 79°39'25", NAD 27, Preston County, Hydrologic Unit 05020004, on left bank at WV Route 50 Highway bridge at Macomber, 3 mi upstream from Rowlesburg, and at mile 48.6.

DRAINAGE AREA.--912 mi².

PERIOD OF RECORD.--October 1997 to current year.

REVISED RECORDS.--WDR WV-04-1: 1998-2003(M).

GAGE.--Water-stage recorder with satellite telemeter. Datum of gage is 1,405.00 ft above NGVD 29.

REMARKS.--Records good except those above 20,000 ft³/s which are fair, and those for periods of estimated daily discharges, (no gage-height record), which are poor.

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 24	1300	19,600	11.06	Mar 29	0900	*25,700	*12.17

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2,090	2,060	7,020	1,350	990	1,740	5,860	10,500	1,040	173	415	564
2	1,400	1,580	9,470	1,510	936	1,480	5,780	7,490	865	195	358	654
3	1,160	1,770	5,640	1,390	1,030	1,170	9,530	4,930	755	163	321	470
4	1,010	4,110	3,760	3,820	974	1,120	6,510	3,430	743	233	291	354
5	793	10,500	2,760	10,200	840	1,260	6,690	2,540	752	281	264	278
6	662	6,530	2,190	10,000	817	1,190	5,650	2,000	662	443	222	229
7	577	4,070	2,430	7,820	992	1,730	4,290	1,660	615	299	364	197
8	516	2,810	3,890	6,570	1,710	10,700	5,300	1,440	559	2,960	697	170
9	463	2,050	3,580	6,910	4,640	8,140	5,610	1,210	494	4,130	526	149
10	424	1,600	5,300	4,910	10,900	4,710	3,810	1,030	661	1,560	1,140	134
11	389	1,330	6,570	3,630	7,230	3,370	2,890	1,780	832	778	1,220	124
12	363	1,370	6,060	4,200	4,430	2,700	2,280	2,250	888	530	704	112
13	345	2,630	4,720	3,870	3,150	2,160	1,890	1,880	662	534	507	103
14	349	2,410	3,730	6,140	3,640	1,770	1,570	1,410	507	712	397	94
15	399	1,860	2,930	8,200	7,430	1,570	1,300	1,460	462	629	322	87
16	e520	1,570	2,310	5,100	6,140	1,520	1,100	1,950	425	640	279	82
17	e970	1,370	2,130	3,670	5,790	1,470	961	1,540	404	1,990	278	77
18	e850	1,340	1,910	e2,400	4,260	1,400	867	1,230	413	2,570	303	73
19	e700	1,700	1,730	1,860	2,900	1,660	796	1,040	352	2,500	316	69
20	e900	3,290	1,730	2,030	2,370	2,650	735	3,680	305	3,110	293	66
21	e2,200	3,630	1,420	1,710	2,520	3,330	682	10,400	275	2,070	531	63
22	e1,900	2,950	1,470	1,390	5,180	2,770	787	5,530	269	1,310	498	61
23	1,300	2,330	2,950	1,550	4,870	4,310	2,240	3,460	286	1,210	406	59
24	1,190	2,000	9,300	1,210	3,630	15,700	2,640	5,200	272	1,060	282	58
25	2,400	3,910	e5,200	1,350	2,940	10,500	2,550	6,590	230	748	221	58
26	1,970	5,730	e3,500	1,560	2,280	6,720	4,240	4,870	198	650	189	58
27	1,470	3,950	e2,500	1,350	1,850	5,410	4,770	3,350	173	602	210	64
28	1,320	3,320	e1,800	949	1,720	9,870	4,100	2,450	152	553	953	67
29	1,500	4,170	1,650	892	---	22,600	2,910	2,040	161	611	1,140	98
30	4,320	3,100	1,520	1,180	---	12,600	3,860	1,600	145	591	667	104
31	3,040	---	1,340	1,130	---	7,960	---	1,260	---	507	475	---
TOTAL	37,490	91,040	112,510	109,851	96,159	155,280	102,198	101,200	14,557	34,342	14,789	4,776
MEAN	1,209	3,035	3,629	3,544	3,434	5,009	3,407	3,265	485	1,108	477	159
MAX	4,320	10,500	9,470	10,200	10,900	22,600	9,530	10,500	1,040	4,130	1,220	654
MIN	345	1,330	1,340	892	817	1,120	682	1,030	145	163	189	58
CFSM	1.33	3.33	3.98	3.89	3.77	5.50	3.74	3.58	0.53	1.22	0.52	0.17
IN.	1.53	3.72	4.59	4.49	3.93	6.34	4.17	4.13	0.59	1.40	0.60	0.20

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1998 - 2005, BY WATER YEAR (WY)

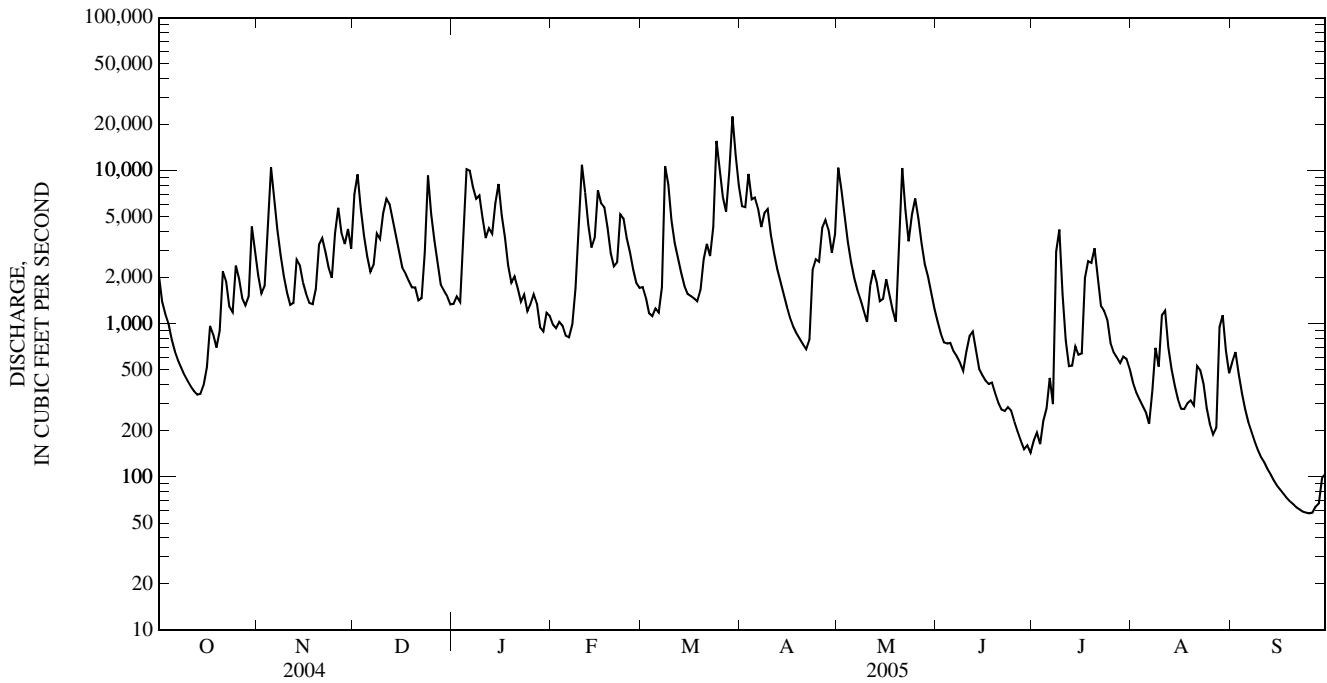
MEAN	968	2,276	2,422	3,265	3,740	4,993	4,507	3,193	2,271	1,608	755	1,195
MAX	2,010	5,082	3,629	5,751	5,499	6,894	5,929	4,425	4,601	3,879	1,508	4,257
(WY)	(2003)	(2004)	(2005)	(1998)	(2000)	(2003)	(2002)	(2002)	(2003)	(2001)	(2003)	(2003)
MIN	142	156	797	1,382	1,524	3,340	3,407	1,588	254	126	93.6	159
(WY)	(2002)	(2002)	(1999)	(2000)	(2002)	(2000)	(2005)	(1999)	(1999)	(1999)	(1999)	(2005)

03069870 CHEAT RIVER AT HWY 50 NEAR ROWLESBURG, WV—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1998 - 2005	
ANNUAL TOTAL	1,133,221		874,192			
ANNUAL MEAN	3,096		2,395		2,591	
HIGHEST ANNUAL MEAN					3,578	2003
LOWEST ANNUAL MEAN					1,759	1999
HIGHEST DAILY MEAN	21,300	Mar 6	22,600	Mar 29	33,200	Feb 19, 2000
LOWEST DAILY MEAN	165	Sep 7	58	(a)	38	Aug 25, 1999
ANNUAL SEVEN-DAY MINIMUM	276	Sep 2	60	Sep 21	47	Aug 21, 1999
MAXIMUM PEAK FLOW			25,700	Mar 29	43,800	Feb 19, 2000
MAXIMUM PEAK STAGE			12.17	Mar 29	16.02	Feb 19, 2000
INSTANTANEOUS LOW FLOW			56	Sep 26	36	Aug 25, 1999
ANNUAL RUNOFF (CFSM)	3.40		2.63		2.84	
ANNUAL RUNOFF (INCHES)	46.27		35.70		38.64	
10 PERCENT EXCEEDS	6,870		5,780		6,350	
50 PERCENT EXCEEDS	1,890		1,470		1,480	
90 PERCENT EXCEEDS	462		226		216	

a Sept. 24-26.

e Estimated



03070500 BIG SANDY CREEK AT ROCKVILLE, WV

LOCATION.--Lat 39°37'18", long 79°42'18", NAD 27, 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). WDR WV-97-1: 1922(P), 1924(P).

GAGE.--Water-stage recorder with satellite telemeter. Elevation of gage is approximately 1,310 ft above NGVD 29, from topographic map. Prior to Oct. 4, 1924, nonrecording gages at highway bridge at same datum.

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

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

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan 5	1700	6,520	11.32	Mar 8	0600	6,400	11.25
Jan 12	0400	*8,470	*12.42	Mar 29	0200	7,030	11.62

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	104	350	1,210	242	149	333	762	386	211	104	95	96
2	92	286	1,070	220	160	286	826	342	177	59	46	79
3	90	344	774	273	165	269	906	322	190	40	36	56
4	81	492	597	1,410	172	237	1,010	283	203	32	26	44
5	71	805	479	4,320	184	279	1,450	247	157	34	15	36
6	62	625	398	4,210	210	299	1,010	226	146	82	11	28
7	58	491	439	2,050	327	895	780	214	660	60	11	22
8	55	385	541	1,990	756	4,580	651	206	301	178	15	17
9	52	302	489	1,500	1,700	1,580	515	178	219	255	14	13
10	53	253	829	1,020	2,810	962	424	162	161	96	8.8	11
11	49	227	1,500	1,790	1,310	744	361	151	201	63	7.0	9.1
12	48	389	1,110	5,880	891	622	310	186	417	50	6.5	8.0
13	51	498	892	1,920	693	505	278	160	188	234	6.5	7.6
14	94	392	700	2,210	1,170	430	242	141	143	302	7.2	7.1
15	102	336	569	1,410	1,720	384	213	287	115	238	12	6.9
16	101	301	471	988	1,170	363	186	268	108	165	11	6.9
17	129	274	424	765	930	347	170	221	126	207	15	6.9
18	119	353	367	546	713	361	161	189	95	132	12	6.8
19	613	636	344	493	555	411	152	165	79	121	17	6.4
20	390	1,180	258	493	473	468	144	805	67	96	45	6.2
21	275	947	289	375	582	471	139	777	59	97	221	6.2
22	214	711	306	289	569	417	151	511	59	88	100	6.2
23	176	594	568	314	491	1,010	427	418	60	56	60	5.9
24	195	536	813	230	456	1,480	465	522	53	46	44	5.8
25	218	690	609	266	425	1,090	587	469	46	41	34	5.8
26	184	655	494	275	368	879	775	412	41	54	29	5.8
27	165	566	394	257	321	745	620	339	35	57	34	6.4
28	153	695	300	155	342	2,580	489	324	30	83	73	8.4
29	425	634	351	149	---	4,830	402	387	30	59	66	13
30	890	552	292	149	---	1,750	394	295	43	44	62	22
31	489	---	263	149	---	1,070	---	255	---	39	64	---
TOTAL	5,798	15,499	18,140	36,338	19,812	30,677	15,000	9,848	4,420	3,212	1,204.0	559.4
MEAN	187	517	585	1,172	708	990	500	318	147	104	38.8	18.6
MAX	890	1,180	1,500	5,880	2,810	4,830	1,450	805	660	302	221	96
MIN	48	227	258	149	149	237	139	141	30	32	6.5	5.8
CFSM	0.94	2.58	2.93	5.86	3.54	4.95	2.50	1.59	0.74	0.52	0.19	0.09
IN.	1.08	2.88	3.37	6.76	3.69	5.71	2.79	1.83	0.82	0.60	0.22	0.10

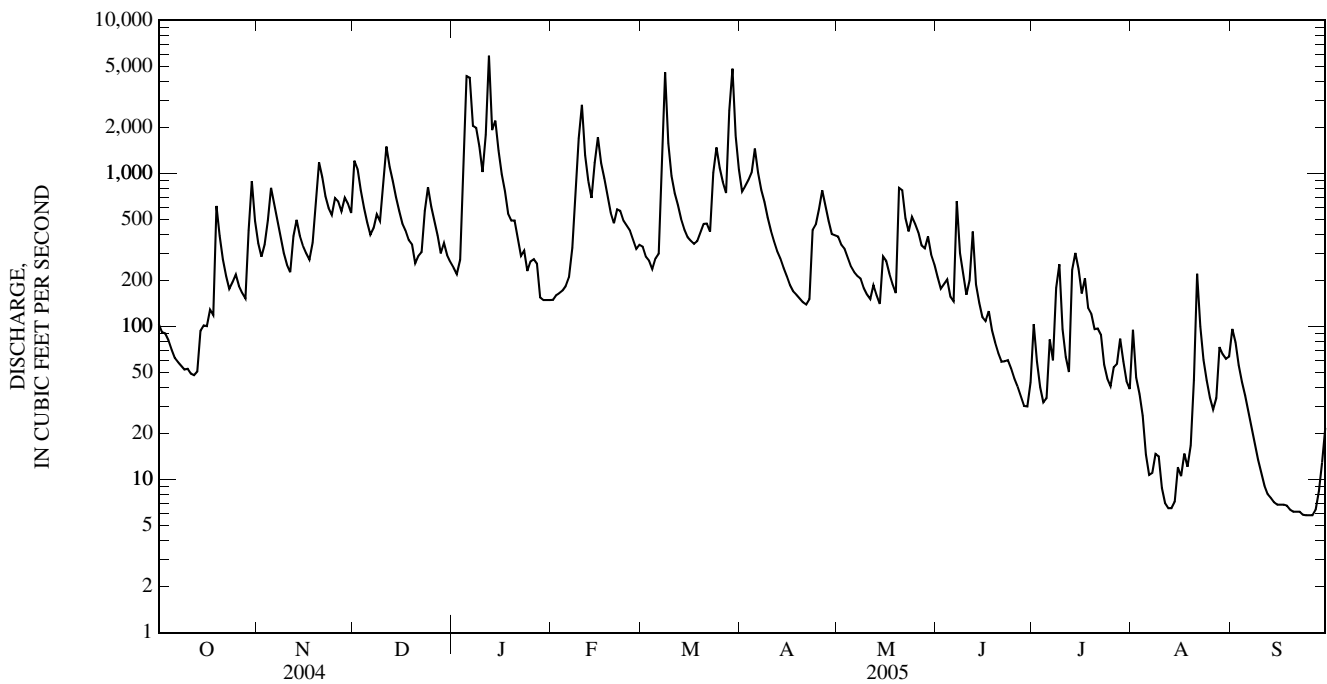
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1909 - 2005, BY WATER YEAR (WY)

MEAN	169	340	552	640	696	812	638	491	292	177	135	128
MAX	853	1,540	1,241	1,749	1,766	1,742	1,318	1,102	1,115	1,071	1,035	734
(WY)	(1912)	(1986)	(1973)	(1937)	(1918)	(1963)	(1940)	(1921)	(1941)	(1912)	(1956)	(1911)
MIN	0.33	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)

03070500 BIG SANDY CREEK AT ROCKVILLE, WV—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1909 - 2005	
ANNUAL TOTAL	202,155		160,507.4			
ANNUAL MEAN	552		440		421	
HIGHEST ANNUAL MEAN					671	1912
LOWEST ANNUAL MEAN					240	1954
HIGHEST DAILY MEAN	4,680	Apr 13	5,880	Jan 12	15,700	Jan 13, 1911
LOWEST DAILY MEAN	31	Jul 11	5.8	(a)	0.10	(b)
ANNUAL SEVEN-DAY MINIMUM	43	Jul 5	6.0	Sep 20	0.10	Oct 21, 1953
MAXIMUM PEAK FLOW			8,470	Jan 12	(c)21,300	Jul 24, 1912
MAXIMUM PEAK STAGE			12.42	Jan 12	(d)18.00	Jul 24, 1912
INSTANTANEOUS LOW FLOW			5.8	(f)	0.10	(b)
ANNUAL RUNOFF (CFSM)	2.76		2.20		2.10	
ANNUAL RUNOFF (INCHES)	37.60		29.85		28.59	
10 PERCENT EXCEEDS	1,210		972		988	
50 PERCENT EXCEEDS	348		257		215	
90 PERCENT EXCEEDS	68		17		20	

- a Sept. 24-26.
- b Oct. 21-27, 1953.
- c From rating curve extended above 10,000 ft³/s on basis of velocity-area studies.
- d Observed.
- f Sept. 23, 24, 25, 26, 27.



03110830 KINGS CREEK AT WEIRTON, WV

LOCATION.--Lat 40°26'08", long 80°35'34", NAD 27, Hancock County, Hydrologic Unit 05030101, at county road bridge 0.2 mi upstream from State Route 2, and at mile 1.4.

DRAINAGE AREA.--49.0 mi².

PERIOD OF RECORD.--October 1976 to September 1978, December 2002 to current year.

GAGE.--Water-stage recorder with satellite telemeter. Datum of gage is 698.34 ft above NGVD 29.

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

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Oct 19	0230	804	3.54	Jan 12	0530	1,080	3.97
Dec 1	0900	979	3.82	Apr 2	1130	1,430	4.52
Jan 6	0130	*2,520	*6.12				

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e56	81	562	47	38	78	94	107	26	26	2.3	43
2	e49	75	295	41	38	66	895	91	23	9.3	2.1	19
3	e41	103	184	95	36	59	578	79	22	5.9	1.9	11
4	e35	112	124	320	37	55	346	68	21	4.7	1.9	6.2
5	e29	123	97	771	37	58	214	59	19	66	6.4	4.3
6	e25	100	83	1,740	42	66	152	55	19	47	4.9	3.9
7	e21	85	96	473	55	101	118	53	17	18	2.8	3.3
8	e17	66	89	343	95	163	97	50	15	12	2.5	3.0
9	e16	55	88	209	119	110	80	43	14	8.7	2.7	2.7
10	e15	49	179	157	135	95	70	41	13	6.2	2.5	2.6
11	e14	46	132	361	94	89	61	38	13	4.8	2.2	2.4
12	e13	67	109	687	81	81	56	46	13	4.3	2.0	2.2
13	e22	51	96	297	69	72	53	38	11	4.2	1.8	2.1
14	63	42	79	432	256	64	47	126	10	6.2	1.6	2.2
15	56	39	66	226	338	59	42	98	10	6.0	1.5	2.2
16	48	38	60	153	205	55	38	68	9.8	4.1	2.1	2.9
17	33	37	58	118	140	53	36	54	11	4.9	2.5	3.8
18	43	38	53	91	107	51	36	47	9.3	9.5	2.2	3.5
19	419	61	52	100	86	48	34	42	7.8	5.9	1.9	3.0
20	140	86	51	82	78	50	35	50	7.0	4.3	1.8	3.2
21	87	77	76	68	119	46	51	42	6.3	3.4	10	3.0
22	62	71	47	64	101	43	41	36	7.0	3.2	3.6	2.8
23	50	67	162	60	86	66	244	39	5.5	2.9	2.4	3.4
24	87	81	128	54	80	96	191	47	4.5	2.6	2.0	3.5
25	69	112	91	66	75	82	207	36	4.1	2.7	1.7	3.3
26	56	89	83	57	69	75	158	30	4.0	5.1	1.8	7.9
27	50	84	69	49	63	69	183	27	3.8	13	7.0	9.2
28	44	145	67	e42	71	157	128	37	7.6	4.8	5.7	4.5
29	75	110	55	e45	---	283	105	47	11	3.4	8.1	12
30	187	99	51	e41	---	155	128	33	15	2.8	20	9.0
31	109	---	52	44	---	117	---	30	---	2.5	148	---
TOTAL	2,031	2,289	3,434	7,333	2,750	2,662	4,518	1,657	359.7	304.4	259.9	185.1
MEAN	65.5	76.3	111	237	98.2	85.9	151	53.5	12.0	9.82	8.38	6.17
MAX	419	145	562	1,740	338	283	895	126	26	66	148	43
MIN	13	37	47	41	36	43	34	27	3.8	2.5	1.5	2.1
CFSM	1.34	1.56	2.27	4.84	2.01	1.76	3.08	1.09	0.25	0.20	0.17	0.13
IN.	1.55	1.74	2.61	5.58	2.09	2.03	3.44	1.26	0.27	0.23	0.20	0.14

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1977 - 2005, BY WATER YEAR (WY)

	37.3	47.6	85.6	109	72.6	109	108	84.9	46.7	31.1	33.2	68.5
MEAN	37.3	47.6	85.6	109	72.6	109	108	84.9	46.7	31.1	33.2	68.5
MAX	65.5	79.9	111	237	98.2	160	151	134	78.6	68.2	80.7	250
(WY)	(2005)	(2004)	(2005)	(2005)	(2005)	(1978)	(2005)	(2003)	(2004)	(2003)	(2004)	(2004)
MIN	15.6	12.7	31.3	8.29	20.2	76.4	67.1	49.8	12.0	9.82	8.38	6.17
(WY)	(1978)	(1977)	(1977)	(1977)	(1978)	(2004)	(2003)	(1977)	(2005)	(2005)	(2005)	(2005)

03110830 KINGS CREEK AT WEIRTON, WV—Continued

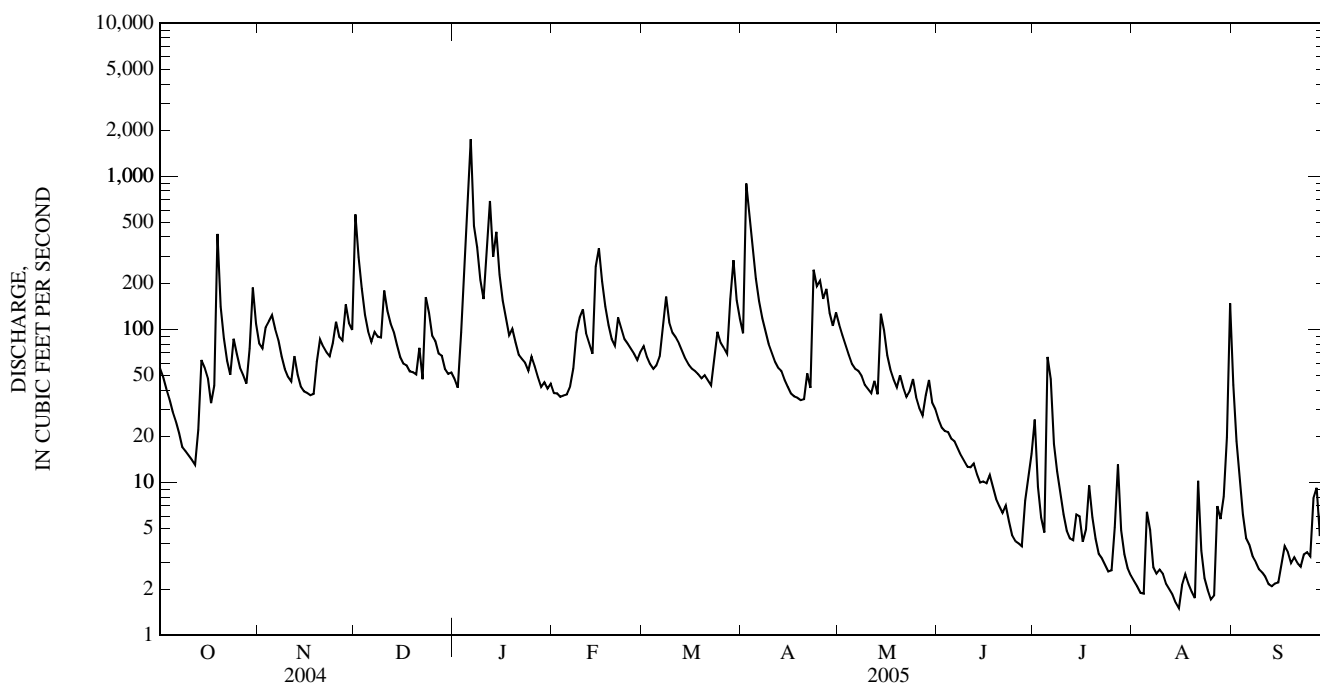
SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1977 - 2005	
ANNUAL TOTAL	37,524.2		27,783.1		69.4	
ANNUAL MEAN	103		76.1		41.2	
HIGHEST ANNUAL MEAN					99.6	2004
LOWEST ANNUAL MEAN					41.2	1977
HIGHEST DAILY MEAN	(e)2,000	Sep 17	1,740	Jan 6	(e)2,000	Sep 17, 2004
LOWEST DAILY MEAN	8.3	Jul 25	1.5	Aug 15	1.5	Aug 15, 2005
ANNUAL SEVEN-DAY MINIMUM	12	Jul 19	1.9	Aug 13	1.9	Aug 13, 2005
MAXIMUM PEAK FLOW			2,520	Jan 6	(a)8,700	Sep 17, 2004
MAXIMUM PEAK STAGE			6.12	Jan 6	(b)17.21	Sep 17, 2004
INSTANTANEOUS LOW FLOW			1.5	(c)	1.5	(c)
ANNUAL RUNOFF (CFSM)	2.10		1.56		1.42	
ANNUAL RUNOFF (INCHES)	28.55		21.14		19.30	
10 PERCENT EXCEEDS	183		152		141	
50 PERCENT EXCEEDS	60		48		37	
90 PERCENT EXCEEDS	24		3.0		6.2	

a From rating curve extended above 1,400 ft³/s on the basis of theoretical bridge computation.

b From floodmark.

c Aug. 14, 15, 16, 20, 26.

e Estimated.



WHEELING CREEK BASIN

03111950 DUNKARD FORK NEAR MAJORSVILLE, WV
(Detention Reservoir)

LOCATION.--Lat 39°57'10", long 80°31'33", NAD 27, Marshall County, Hydrologic Unit 05030106.

DAM NAME.--Wheeling Creek No. 3.

SURFACE AREA.--31 acres.

DRAINAGE AREA.--77.2 mi².

PERIOD OF RECORD.--June 2002 to current year.

GAGE.--Water-stage recorder with satellite telemeter. Datum of gage is 800.0 ft above NGVD 29.

REMARKS.-- Normal Pool = 40.4 ft (Normal Storage = 221 acre-ft)

Top of Riser = 46.4 ft

Emergency Spillway = 84.8 ft

Top of Dam = 102.4 ft

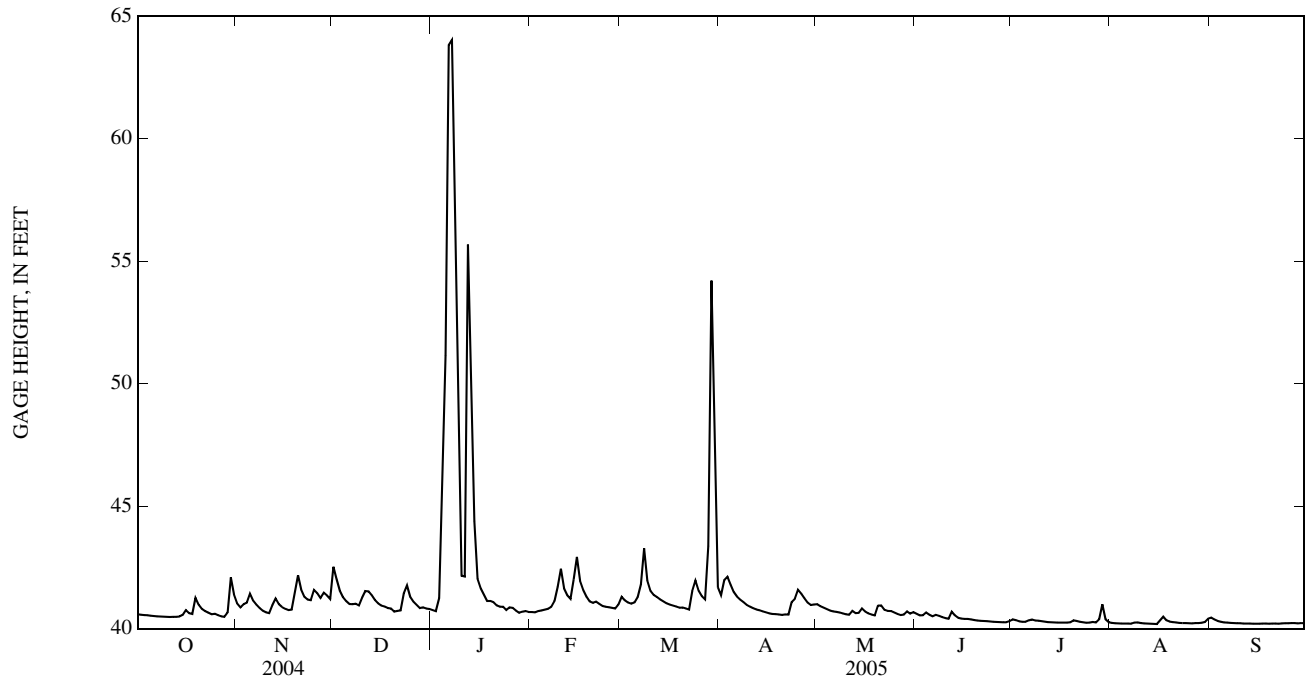
EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 82.66 ft, Sept. 18, 2004; minimum gage height, 40.19 ft, Aug. 14, 15, 16, and Sept. 14, 2005.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 66.80 ft, Jan. 6; minimum gage height, 40.19 ft, Aug. 14, 15, 16, and Sept. 14.

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	40.59	41.02	42.53	40.76	40.68	41.30	41.37	41.00	40.61	40.38	40.23	40.45
2	40.57	40.87	42.02	40.71	40.67	41.16	41.98	40.92	40.54	40.34	40.22	40.37
3	40.55	41.00	41.55	41.25	40.72	41.07	42.12	40.85	40.55	40.30	40.22	40.31
4	40.55	41.06	41.29	47.31	40.75	41.02	41.79	40.80	40.66	40.28	40.21	40.28
5	40.53	41.43	41.12	51.15	40.77	41.07	41.49	40.74	40.57	40.28	40.21	40.26
6	40.51	41.14	41.01	63.83	40.81	41.29	41.30	40.71	40.51	40.34	40.21	40.24
7	40.50	40.98	41.00	64.04	40.89	41.81	41.18	40.68	40.56	40.38	40.20	40.23
8	40.50	40.84	41.02	57.75	41.13	43.28	41.08	40.66	40.52	40.33	40.25	40.23
9	40.49	40.73	40.95	50.45	41.71	41.97	40.97	40.62	40.47	40.32	40.25	40.22
10	40.48	40.67	41.26	42.16	42.44	41.54	40.90	40.59	40.43	40.31	40.23	40.22
11	40.48	40.63	41.53	42.13	41.64	41.38	40.84	40.57	40.41	40.29	40.22	40.21
12	40.48	40.96	41.52	55.68	41.37	41.29	40.79	40.72	40.69	40.27	40.21	40.21
13	40.48	41.23	41.36	51.63	41.22	41.20	40.75	40.63	40.54	40.26	40.20	40.21
14	40.49	41.00	41.17	44.39	42.02	41.11	40.70	40.64	40.45	40.26	40.20	40.20
15	40.56	40.88	41.03	42.04	42.92	41.03	40.67	40.82	40.41	40.25	40.19	40.20
16	40.76	40.81	40.94	41.65	41.95	40.98	40.63	40.70	40.40	40.25	40.34	40.20
17	40.63	40.76	40.90	41.39	41.58	40.94	40.60	40.62	40.40	40.25	40.49	40.21
18	40.60	40.78	40.84	41.13	41.30	40.90	40.59	40.57	40.38	40.25	40.34	40.21
19	41.26	41.49	40.82	41.13	41.11	40.86	40.58	40.54	40.35	40.26	40.28	40.20
20	40.98	42.18	40.70	41.08	41.05	40.86	40.56	40.94	40.33	40.34	40.27	40.21
21	40.81	41.60	40.72	40.95	41.11	40.82	40.58	40.94	40.32	40.31	40.25	40.21
22	40.72	41.30	40.74	40.89	41.01	40.78	40.57	40.77	40.31	40.28	40.23	40.20
23	40.66	41.19	41.43	40.90	40.93	41.53	41.08	40.72	40.30	40.26	40.23	40.22
24	40.59	41.16	41.76	40.76	40.90	41.97	41.21	40.72	40.29	40.24	40.23	40.22
25	40.61	41.58	41.30	40.87	40.88	41.55	41.58	40.66	40.28	40.25	40.22	40.22
26	40.55	41.45	41.10	40.85	40.85	41.33	41.43	40.60	40.27	40.28	40.22	40.23
27	40.50	41.25	40.97	40.74	40.82	41.20	41.24	40.55	40.27	40.26	40.23	40.23
28	40.48	41.47	40.84	40.65	40.99	43.36	41.06	40.57	40.26	40.39	40.23	40.22
29	40.66	41.36	40.87	40.69	---	54.21	40.96	40.71	40.26	40.99	40.24	40.23
30	42.09	41.22	40.83	40.72	---	47.23	40.98	40.61	40.30	40.38	40.27	40.22
31	41.39	---	40.80	40.68	---	41.70	---	40.67	---	40.26	40.41	---
MEAN	40.68	41.13	41.16	44.85	41.22	41.99	41.05	40.70	40.42	40.32	40.25	40.24
MAX	42.09	42.18	42.53	64.04	42.92	54.21	42.12	41.00	40.69	40.99	40.49	40.45
MIN	40.48	40.63	40.70	40.65	40.67	40.78	40.56	40.54	40.26	40.24	40.19	40.20

03111950 DUNKARD FORK NEAR MAJORSVILLE, WV—Continued



WHEELING CREEK BASIN

03112000 WHEELING CREEK AT ELM GROVE, WV

LOCATION.--Lat 40°02'40", long 80°39'40", NAD 27, Ohio County, Hydrologic Unit 05030106, on right bank at highway bridge at Elm Grove, 500 ft downstream from Little Wheeling Creek, and at mile 7.8.

DRAINAGE AREA.--281 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). WDR WV-97-1: Drainage area.

GAGE.--Water-stage recorder with satellite telemeter. Datum of gage is 667.59 ft above NGVD 29.

REMARKS.--No estimated daily discharges. Records good. The flow from 205 mi² upstream from station is partially controlled, but not diverted, by seven floodwater detention reservoirs with a total combined detention capacity of 24,148 acre-ft. Cumulative detention as construction progressed 1975 to 1995.

PEAK DISCHARGE FOR CURRENT YEAR.--Maximum discharge, 9,190 ft³/s, Jan. 6, gage height, 7.84 ft.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	124	433	2,350	308	237	512	846	375	149	86	18	130
2	114	340	2,120	277	246	463	1,680	333	123	75	14	69
3	104	385	1,400	942	204	405	1,870	302	144	52	12	37
4	97	404	885	3,880	214	370	1,290	275	195	39	10	25
5	87	479	631	5,270	224	404	874	247	162	40	9.9	19
6	80	424	518	7,690	241	469	672	228	140	63	9.7	15
7	74	357	509	5,340	279	806	542	214	214	65	9.1	13
8	72	302	553	5,060	378	2,250	474	201	179	50	43	11
9	68	250	508	4,040	664	1,430	407	180	146	45	36	10
10	64	214	735	2,960	1,680	965	362	162	112	41	28	8.8
11	59	195	831	2,160	945	725	327	153	109	34	22	7.9
12	60	309	843	5,670	640	631	298	201	477	29	17	7.1
13	59	436	745	3,710	500	536	275	193	295	27	14	6.5
14	78	361	594	3,680	1,070	469	252	259	180	30	11	5.6
15	95	304	490	2,100	2,430	421	228	522	141	26	9.5	4.8
16	138	270	431	1,300	1,420	389	207	363	123	23	38	5.6
17	119	253	401	872	1,050	365	191	277	124	27	73	9.7
18	142	270	372	598	724	342	181	228	102	33	51	5.8
19	457	525	353	617	503	319	171	197	84	38	30	6.4
20	350	1,540	318	507	456	319	164	253	73	38	21	5.8
21	217	1,050	309	420	500	302	193	302	65	37	18	5.3
22	161	677	303	387	461	277	181	234	60	29	17	4.5
23	130	534	658	372	399	692	497	228	61	23	15	7.2
24	132	524	1,340	320	373	1,360	606	254	53	20	14	7.6
25	140	715	729	386	362	917	806	219	45	21	12	7.6
26	135	689	529	319	341	673	703	182	41	27	10	9.5
27	116	546	444	284	323	549	550	156	38	30	14	10
28	104	768	394	246	362	1,700	444	163	49	25	14	8.5
29	243	766	374	268	---	3,970	381	190	52	66	76	17
30	1,350	612	346	244	---	2,890	380	169	59	80	84	14
31	754	---	330	267	---	1,520	---	159	---	27	235	---
TOTAL	5,923	14,932	21,343	60,494	17,226	27,440	16,052	7,419	3,795	1,246	985.2	494.2
MEAN	191	498	688	1,951	615	885	535	239	126	40.2	31.8	16.5
MAX	1,350	1,540	2,350	7,690	2,430	3,970	1,870	522	477	86	235	130
MIN	59	195	303	244	204	277	164	153	38	20	9.1	4.5
CFSM	0.68	1.77	2.45	6.94	2.19	3.15	1.90	0.85	0.45	0.14	0.11	0.06
IN.	0.78	1.98	2.83	8.01	2.28	3.63	2.13	0.98	0.50	0.16	0.13	0.07

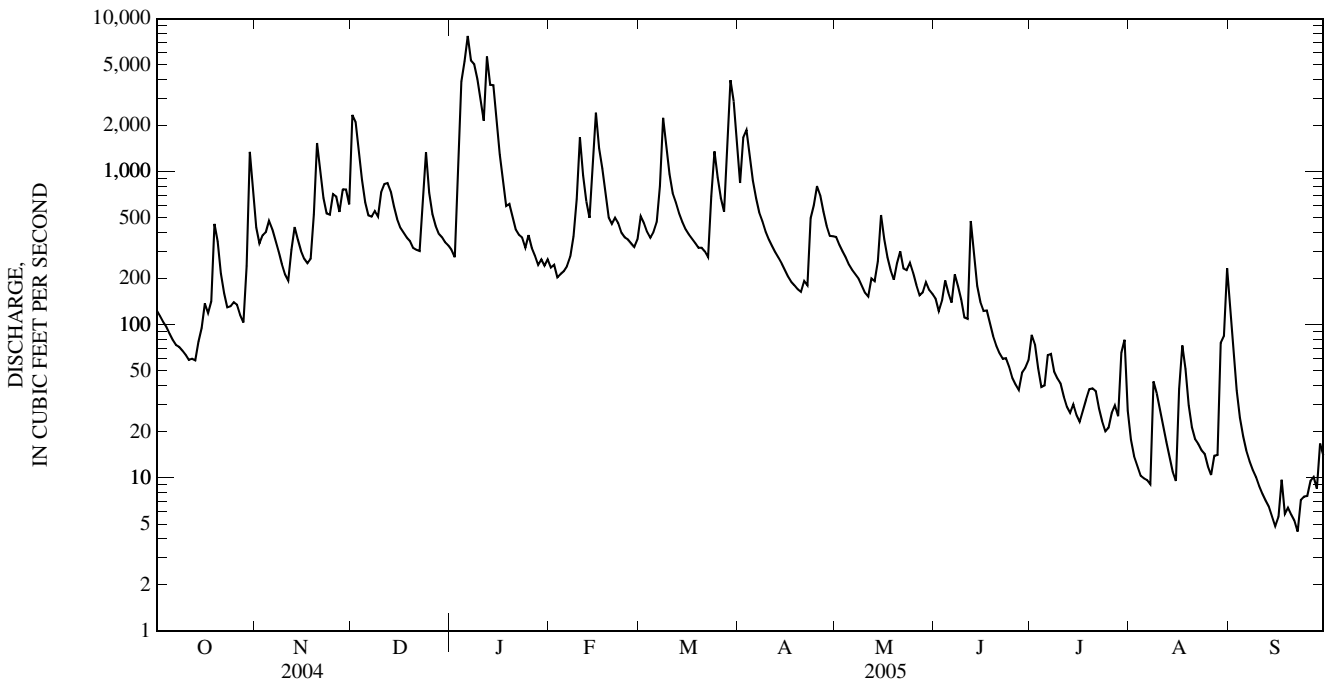
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 2005, BY WATER YEAR (WY)

	80.7	210	377	520	606	733	587	427	239	142	101	104
MEAN	80.7	210	377	520	606	733	587	427	239	142	101	104
MAX	627	2,085	1,369	1,951	1,249	1,670	1,336	1,107	1,004	885	1,424	1,484
(WY)	(1991)	(1986)	(1991)	(2005)	(1975)	(1963)	(1961)	(1967)	(1981)	(1956)	(1980)	(2004)
MIN	0.53	1.89	5.45	21.4	85.0	126	115	66.0	16.1	3.90	2.06	0.88
(WY)	(1964)	(1964)	(1964)	(1967)	(1964)	(1969)	(1971)	(1986)	(1962)	(1962)	(1957)	(1966)

03112000 WHEELING CREEK AT ELM GROVE, WV—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1941 - 2005	
ANNUAL TOTAL	228,054		177,349.4		343	
ANNUAL MEAN	623		486		653	
HIGHEST ANNUAL MEAN					112	
LOWEST ANNUAL MEAN					1954	
HIGHEST DAILY MEAN	8,140	Sep 17	7,690	Jan 6	13,100	Dec 30, 1942
LOWEST DAILY MEAN	32	Jul 25	4.5	Sep 22	0.10	(a)
ANNUAL SEVEN-DAY MINIMUM	48	Jul 19	6.1	Sep 18	0.24	Sep 21, 1964
MAXIMUM PEAK FLOW			9,190	Jan 6	(b)22,300	Sep 17, 2004
MAXIMUM PEAK STAGE			7.84	Jan 6	(c)13.83	Sep 17, 2004
INSTANTANEOUS LOW FLOW			3.9	(d)	0.10	(f)
ANNUAL RUNOFF (CFSM)	2.22		1.73		1.22	
ANNUAL RUNOFF (INCHES)	30.19		23.48		16.57	
10 PERCENT EXCEEDS	1,420		953		836	
50 PERCENT EXCEEDS	309		246		139	
90 PERCENT EXCEEDS	68		14		10	

- 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 From high-water mark in well.
- d Sept. 16, 22, 23.
- f Oct. 7, 1963, Sept. 26, 27, 1964.



LITTLE KANAWHA RIVER BASIN

03151400 LITTLE KANAWHA RIVER NEAR WILDCAT, WV

LOCATION.--Lat 38°44'36", long 80°31'32", NAD 27, 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 141.

DRAINAGE AREA.--112 mi².

PERIOD OF RECORD.--December 1973 to September 1983, October 1985 to current year.

GAGE.--Water-stage recorder with satellite telemeter. Datum of gage is 850.00 ft above NGVD 29.

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 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 8	1100	*2,340	*8.45	No other peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	37	93	794	97	e140	652	336	1,560	73	21	24	28
2	30	85	760	89	e145	499	726	745	58	21	21	28
3	27	157	440	84	e150	355	965	425	52	14	17	19
4	26	814	295	143	e170	277	941	286	48	9.6	13	13
5	22	988	220	393	e165	282	637	212	41	7.7	10	9.2
6	19	454	185	531	e160	332	423	171	34	6.5	8.3	7.0
7	17	284	193	471	e150	430	320	146	29	10	6.8	5.7
8	15	199	213	507	e170	1,640	1,000	133	25	190	6.0	4.7
9	14	145	238	525	205	1,010	698	107	33	114	5.6	3.9
10	13	116	534	395	666	553	426	91	53	54	5.7	3.5
11	12	101	837	290	583	406	299	78	41	32	5.6	3.3
12	12	215	742	233	401	361	229	77	43	23	5.3	2.6
13	13	435	562	193	312	334	188	67	33	18	4.8	2.3
14	283	334	419	1,160	306	301	149	70	31	26	4.1	2.1
15	190	250	323	823	360	312	120	126	31	30	3.5	1.9
16	161	197	264	464	361	309	99	104	27	39	3.5	1.9
17	247	160	229	318	339	284	86	86	23	36	5.2	1.9
18	171	157	200	224	286	264	79	73	21	100	7.6	1.8
19	142	259	185	205	230	272	72	64	17	128	8.9	1.6
20	598	517	152	176	196	316	64	617	14	103	20	1.5
21	539	568	198	147	207	310	59	713	11	82	16	1.5
22	269	414	145	e140	389	251	64	368	10	179	11	1.4
23	179	300	197	e120	367	278	173	248	8.8	102	7.6	1.4
24	211	242	342	e100	315	989	251	363	8.0	58	5.7	1.4
25	259	286	300	e130	279	642	461	486	6.9	40	4.4	1.4
26	206	336	240	e125	230	418	814	379	6.0	41	3.8	1.3
27	160	302	190	e120	219	307	564	255	5.0	32	4.6	1.6
28	134	260	148	e110	306	747	384	189	4.6	66	22	1.5
29	115	205	139	e130	---	1,500	291	156	50	66	29	1.9
30	116	177	121	e140	---	909	1,170	114	27	42	38	2.2
31	107	---	107	e150	---	505	---	92	---	30	33	---
TOTAL	4,344	9,050	9,912	8,733	7,807	16,045	12,088	8,601	864.3	1,720.8	361.0	158.5
MEAN	140	302	320	282	279	518	403	277	28.8	55.5	11.6	5.28
MAX	598	988	837	1,160	666	1,640	1,170	1,560	73	190	38	28
MIN	12	85	107	84	140	251	59	64	4.6	6.5	3.5	1.3
CFSM	1.25	2.69	2.85	2.52	2.49	4.62	3.60	2.48	0.26	0.50	0.10	0.05
IN.	1.44	3.01	3.29	2.90	2.59	5.33	4.01	2.86	0.29	0.57	0.12	0.05

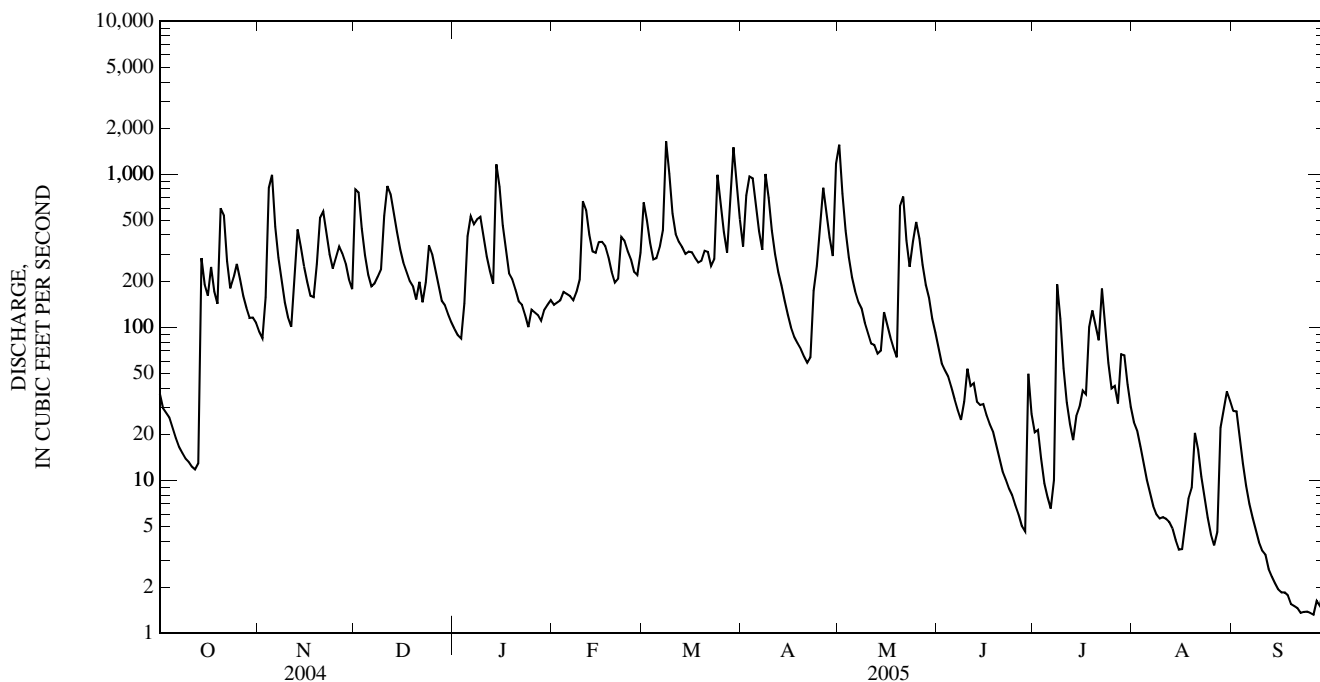
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1974 - 2005, BY WATER YEAR (WY)

MEAN	88.1	210	299	346	378	417	343	277	150	122	88.8	61.7
MAX	426	841	717	732	705	745	600	761	551	419	473	365
(WY)	(1977)	(1986)	(1979)	(1994)	(1994)	(1997)	(1980)	(1996)	(1981)	(1996)	(2000)	(2003)
MIN	3.70	10.7	55.5	74.5	61.8	132	105	33.7	5.03	4.31	1.41	2.14
(WY)	(1995)	(1995)	(2002)	(1977)	(1978)	(1987)	(1999)	(1991)	(1991)	(1988)	(1993)	(1995)

03151400 LITTLE KANAWHA RIVER NEAR WILDCAT, WV—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1974 - 2005	
ANNUAL TOTAL	101,113.1		79,684.6		230	
ANNUAL MEAN	276		218		134	
HIGHEST ANNUAL MEAN					357	1994
LOWEST ANNUAL MEAN					134	1999
HIGHEST DAILY MEAN	4,270	May 28	1,640	Mar 8	9,070	Jul 31, 1996
LOWEST DAILY MEAN	7.3	Sep 7	1.3	Sep 26	0.11	Aug 17, 1987
ANNUAL SEVEN-DAY MINIMUM	12	Sep 1	1.4	Sep 20	0.14	Aug 15, 1987
MAXIMUM PEAK FLOW			2,340	Mar 8	(a)19,600	Jul 31, 1996
MAXIMUM PEAK STAGE			8.45	Mar 8	18.47	Jul 31, 1996
INSTANTANEOUS LOW FLOW			1.2	(b)	0.11	Aug 17, 1987
ANNUAL RUNOFF (CFSM)	2.47		1.95		2.05	
ANNUAL RUNOFF (INCHES)	33.58		26.47		27.90	
10 PERCENT EXCEEDS	584		536		547	
50 PERCENT EXCEEDS	171		145		112	
90 PERCENT EXCEEDS	20		5.7		8.6	

a From slope-area measurement.
 b Sept. 23, 26.
 e Estimated.



NOTE.--The following peaks above the base discharge of 2,200 ft³/s for the 2004 water year were omitted from the report WDR WV-04-1 and are published herein.

PEAK DISCHARGES FOR 2004 WATER 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)
Nov 12	2400	4,210	10.44	Mar 6	1000	3,750	10.00
Nov 19	2400	3,550	9.81	Apr 13	1700	5,180	11.28
Feb 6	1500	4,520	10.72	May 28	0700	*7,790	*13.14

LITTLE KANAWHA RIVER BASIN
03151550 SALTICK CREEK NEAR FLATWOODS, WV
(Detention Reservoir)

LOCATION.--Lat 38°43'55", long 80°35'43", NAD 83, Braxton County, Hydrologic Unit 05030203.

DAM NAME.--Saltlick Creek No. 9.

SURFACE AREA.--16 acres.

DRAINAGE AREA.--9.75 mi².

PERIOD OF RECORD.--May 2004 to current year.

GAGE.--Water-stage recorder with satellite telemeter. Datum of gage is 797.22 ft above NGVD 29.

REMARKS.-- Normal Pool = 60.58 ft (Normal Storage = 131 acre-ft)

Top of Riser = 63.00 ft

Emergency Spillway = 95.68 ft

Top of Dam = 114.08 ft

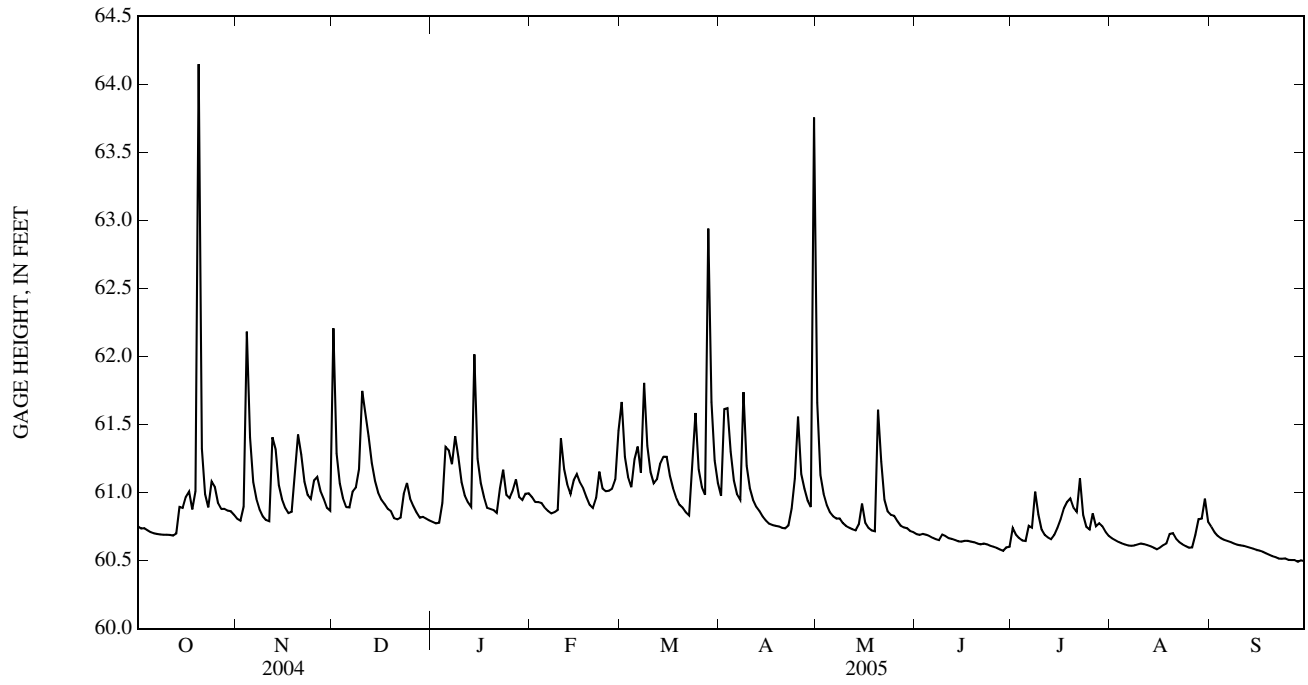
EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 83.69 ft, May 28, 2004; minimum gage height, 60.48 ft, Sept. 28, 29, 2005.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 66.98 ft, Oct. 20; minimum gage height, 60.48 ft, Sept. 28, 29.

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	60.75	60.81	62.21	60.78	60.97	61.67	60.98	61.66	60.70	60.74	60.66	60.75
2	60.74	60.79	61.29	60.77	60.93	61.26	61.61	61.13	60.69	60.69	60.65	60.71
3	60.74	60.90	61.07	60.78	60.93	61.11	61.62	60.99	60.70	60.67	60.64	60.68
4	60.72	62.18	60.96	60.92	60.92	61.04	61.30	60.91	60.69	60.65	60.63	60.66
5	60.71	61.41	60.89	61.34	60.89	61.24	61.09	60.85	60.68	60.64	60.62	60.65
6	60.70	61.08	60.89	61.31	60.87	61.34	60.99	60.83	60.67	60.76	60.61	60.64
7	60.70	60.95	61.01	61.21	60.85	61.15	60.95	60.81	60.66	60.74	60.61	60.64
8	60.69	60.88	61.04	61.41	60.86	61.81	61.74	60.81	60.65	61.01	60.61	60.63
9	60.69	60.83	61.17	61.26	60.87	61.34	61.20	60.78	60.69	60.84	60.62	60.62
10	60.69	60.80	61.75	61.08	61.40	61.15	61.03	60.76	60.68	60.73	60.63	60.61
11	60.69	60.79	61.57	60.98	61.17	61.07	60.95	60.74	60.66	60.69	60.62	60.61
12	60.68	61.41	61.41	60.93	61.06	61.10	60.90	60.73	60.66	60.67	60.61	60.60
13	60.70	61.32	61.22	60.90	60.99	61.21	60.86	60.72	60.65	60.66	60.61	60.59
14	60.89	61.06	61.09	62.02	61.09	61.26	60.82	60.77	60.64	60.69	60.59	60.59
15	60.89	60.95	61.00	61.25	61.14	61.26	60.80	60.92	60.64	60.74	60.58	60.58
16	60.97	60.89	60.95	61.07	61.07	61.12	60.77	60.78	60.65	60.80	60.60	60.57
17	61.01	60.85	60.92	60.97	61.03	61.03	60.76	60.74	60.65	60.88	60.61	60.57
18	60.88	60.86	60.88	60.89	60.97	60.96	60.76	60.72	60.64	60.93	60.63	60.55
19	61.01	61.16	60.86	60.88	60.91	60.91	60.75	60.72	60.63	60.96	60.70	60.54
20	64.15	61.43	60.81	60.87	60.89	60.89	60.74	61.61	60.62	60.89	60.70	60.53
21	61.32	61.28	60.80	60.85	60.96	60.85	60.74	61.23	60.62	60.86	60.66	60.53
22	60.99	61.08	60.82	61.03	61.15	60.83	60.76	60.95	60.63	61.10	60.64	60.51
23	60.89	60.98	60.99	61.17	61.03	61.17	60.88	60.86	60.62	60.84	60.62	60.51
24	61.08	60.95	61.07	60.98	61.01	61.58	61.10	60.84	60.61	60.75	60.61	60.52
25	61.04	61.09	60.96	60.96	61.01	61.17	61.56	60.83	60.60	60.73	60.59	60.51
26	60.92	61.11	60.90	61.01	61.03	61.04	61.14	60.79	60.59	60.85	60.60	60.50
27	60.88	61.01	60.85	61.10	61.10	60.98	61.03	60.76	60.58	60.75	60.69	60.50
28	60.88	60.95	60.82	60.97	61.46	62.94	60.94	60.74	60.57	60.77	60.80	60.49
29	60.87	60.89	60.82	60.95	---	61.67	60.89	60.74	60.60	60.75	60.81	60.50
30	60.86	60.87	60.81	60.99	---	61.23	63.76	60.72	60.60	60.71	60.95	60.50
31	60.84	---	60.79	60.99	---	61.07	---	60.71	---	60.68	60.78	---
MEAN	60.95	61.05	61.05	61.05	61.02	61.24	61.11	60.88	60.64	60.78	60.65	60.58
MAX	64.15	62.18	62.21	62.02	61.46	62.94	63.76	61.66	60.70	61.10	60.95	60.75
MIN	60.68	60.79	60.79	60.77	60.85	60.83	60.74	60.71	60.57	60.64	60.58	60.49

03151550 SALTICK CREEK NEAR FLATWOODS, WV—Continued



03155000 LITTLE KANAWHA RIVER AT PALESTINE, WV

LOCATION.--Lat 39°03'32", long 81°23'23", NAD 27, 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 28.4.

DRAINAGE AREA.--1,516 mi².

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), WDR WV-97-1: Drainage area.

GAGE.--Water-stage recorder with satellite telemeter. Datum of gage is 585.51 ft above NGVD 29. 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 NGVD 29.

REMARKS.--No estimated daily discharges. Records good. Flow partially regulated since 1968 by five floodwater-detention reservoirs affecting 49.5 mi². Flow regulated since March 1979 by Burnsville Lake.

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, 18,100 ft³/s, Aug. 30, gage height, 23.50 ft.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	235	753	4,680	1,020	2,260	11,400	3,730	8,780	631	653	313	2,430
2	290	645	8,850	992	1,840	10,500	6,040	5,760	536	350	236	1,350
3	450	621	5,730	1,020	1,780	5,830	9,750	4,030	477	251	220	944
4	348	5,260	3,780	2,400	1,930	4,020	8,370	3,120	434	197	204	659
5	264	14,200	2,830	5,480	2,180	2,920	4,920	1,820	399	157	182	447
6	226	7,050	1,900	11,100	1,900	4,050	3,270	1,410	372	134	155	326
7	204	3,870	2,080	8,540	1,660	4,850	2,630	1,250	335	134	130	252
8	188	2,990	3,050	8,950	1,590	9,390	2,320	1,070	278	279	123	207
9	174	2,130	2,670	9,280	1,640	12,600	2,520	934	235	283	133	169
10	165	1,490	4,000	5,670	3,460	7,540	2,740	870	198	245	111	143
11	157	1,180	9,440	4,690	6,120	4,910	2,300	814	255	373	115	127
12	151	2,980	8,740	3,910	4,380	3,380	1,760	772	255	284	120	116
13	154	6,660	7,030	3,160	3,400	3,340	1,400	643	205	200	110	107
14	772	4,950	5,170	3,470	3,580	3,860	1,250	580	215	202	91	100
15	1,230	2,860	4,070	7,200	5,460	3,800	1,100	3,290	214	194	82	91
16	2,190	2,100	2,430	5,030	4,950	3,340	933	3,250	169	214	80	85
17	2,020	1,760	1,980	4,060	3,560	2,710	841	1,630	157	350	68	81
18	1,930	1,510	1,730	2,750	2,780	2,220	775	1,080	160	417	108	78
19	4,780	3,360	1,550	1,990	2,220	1,890	706	896	151	1,050	443	74
20	5,520	7,210	1,410	1,690	1,850	1,640	658	5,510	133	1,780	414	71
21	4,640	6,910	1,210	1,450	1,700	1,510	626	14,700	117	1,250	255	69
22	3,300	4,220	1,060	1,360	1,850	1,380	705	6,390	111	947	208	65
23	1,790	3,310	1,700	1,910	1,960	1,690	1,480	2,980	104	698	197	59
24	1,450	2,430	3,850	1,950	1,830	3,460	2,990	1,930	98	462	168	59
25	2,140	2,060	3,660	1,870	1,910	3,990	6,680	2,190	92	480	147	61
26	2,130	2,270	2,300	2,090	2,090	3,580	7,010	1,750	85	475	126	60
27	1,520	2,220	1,820	2,240	2,250	2,730	5,270	1,550	76	347	158	61
28	1,380	2,190	1,910	2,420	3,260	4,410	3,610	1,370	73	761	901	60
29	1,250	2,280	1,520	2,030	---	10,700	2,370	1,170	77	1,070	2,010	63
30	1,080	2,070	1,250	2,020	---	8,220	3,760	955	185	768	11,300	68
31	875	---	1,090	2,050	---	5,050	---	766	---	478	10,700	---
TOTAL	43,003	103,539	104,490	113,792	75,390	150,910	92,514	83,260	6,827	15,483	29,608	8,482
MEAN	1,387	3,451	3,371	3,671	2,692	4,868	3,084	2,686	228	499	955	283
MAX	5,520	14,200	9,440	11,100	6,120	12,600	9,750	14,700	631	1,780	11,300	2,430
MIN	151	621	1,060	992	1,590	1,380	626	580	73	134	68	59

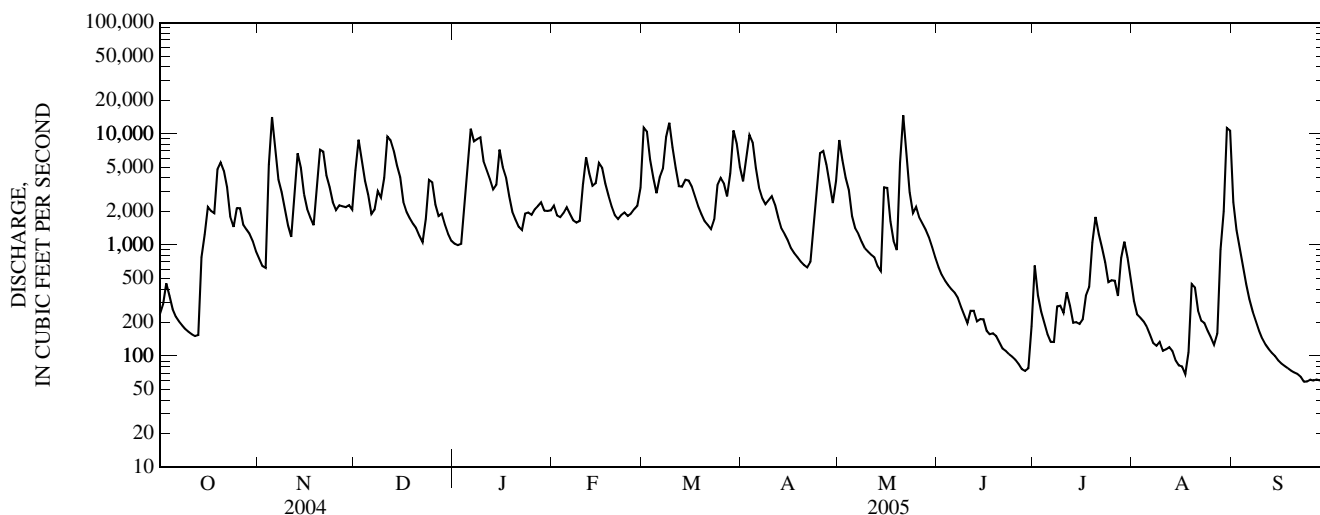
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1968 - 2005, BY WATER YEAR (WY)

MEAN	725	1,953	2,931	3,455	4,138	4,257	3,235	2,715	1,318	809	792	616
MAX	3,933	8,281	9,517	8,946	8,985	9,934	7,210	7,490	5,710	2,450	2,778	2,941
(WY)	(1977)	(1986)	(1979)	(1994)	(1994)	(1997)	(1972)	(1996)	(1981)	(1990)	(1996)	(1971)
MIN	75.3	137	309	444	827	873	774	243	81.3	51.1	28.5	29.2
(WY)	(1989)	(1999)	(1999)	(2000)	(2002)	(1969)	(1999)	(1982)	(1991)	(1999)	(1988)	(1999)

03155000 LITTLE KANAWHA RIVER AT PALESTINE, WV—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1968 - 2005	
ANNUAL TOTAL	1,049,564		827,298			
ANNUAL MEAN	2,868		2,267		2,236	
HIGHEST ANNUAL MEAN					3,628 1994	
LOWEST ANNUAL MEAN					1,119 1969	
HIGHEST DAILY MEAN	35,400	Apr 14	14,700	May 21	(a)45,200	Mar 3, 1997
LOWEST DAILY MEAN	88	(b)	59	(c)	15	Aug 21, 1987
ANNUAL SEVEN-DAY MINIMUM	107	Aug 14	60	Sep 23	18	Jul 6, 1988
MAXIMUM PEAK FLOW			18,100	Aug 30	(a)48,100	Mar 2, 1997
MAXIMUM PEAK STAGE			23.50	Aug 30	(d)40.04	Mar 2, 1997
INSTANTANEOUS LOW FLOW			56	Sep 23	14	Aug 21, 1987
10 PERCENT EXCEEDS	6,470		5,580		5,670	
50 PERCENT EXCEEDS	1,400		1,520		930	
90 PERCENT EXCEEDS	173		119		117	

- a Adjusted for backwater.
- b Aug. 20, Sept. 7.
- c Sept. 23, 24.
- d Backwater.



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	1,145	2,631	3,242	4,141	4,875	3,259	1,951	1,193	855	785	390
MAX (WY)	3,010 (1955)	4,401 (1963)	6,366 (1943)	7,468 (1952)	8,437 (1956)	10,940 (1963)	7,233 (1948)	7,573 (1967)	4,820 (1950)	5,069 (1958)	3,756 (1958)	2,401 (1950)
MIN (WY)	6.14 (1954)	2.41 (1954)	84.8 (1966)	552 (1967)	499 (1941)	1,428 (1966)	677 (1947)	323 (1962)	50.5 (1965)	14.7 (1966)	9.85 (1965)	14.4 (1953)

SUMMARY STATISTICS

WATER YEARS 1940 - 1967

ANNUAL MEAN	2,065	
HIGHEST ANNUAL MEAN	3,216	1950
LOWEST ANNUAL MEAN	1,068	1966
HIGHEST DAILY MEAN	48,600	Mar 8, 1967
LOWEST DAILY MEAN	.90	Jul 15, 1959
ANNUAL SEVEN-DAY MINIMUM	1.3	Aug 30, 1965
INSTANTANEOUS PEAK FLOW	(*)50,700	Mar 7, 1967
INSTANTANEOUS PEAK STAGE	(#)39.14	Mar 7, 1967
INSTANTANEOUS LOW FLOW	(&).60	Jul 14, 1959
10 PERCENT EXCEEDS	5,440	
50 PERCENT EXCEEDS	694	
90 PERCENT EXCEEDS	56	

- * From rating curve extended above 39,000 ft³/s.
- # Backwater.
- & Filling pool above old lock 3.

LITTLE KANAWHA RIVER BASIN

03155405 NORTH FORK HUGHES RIVER NEAR CAIRO, WV
(Detention Reservoir)

LOCATION.--Lat 39°13'08", long 81°06'00", NAD 27, Ritchie County, Hydrologic Unit 05030203.

DAM NAME.--North Fork Hughes River No. 21-C.

DRAINAGE AREA.--92 mi².

PERIOD OF RECORD.--December 2002 to current year.

GAGE.--Water-stage recorder with satellite telemeter. Datum of gage is 670.0 ft above NGVD 29.

REMARKS.-- Normal Pool = 42.0 ft
Emergency Spillway = 67.0 ft
Top of Dam = 90.4 ft (corrected)

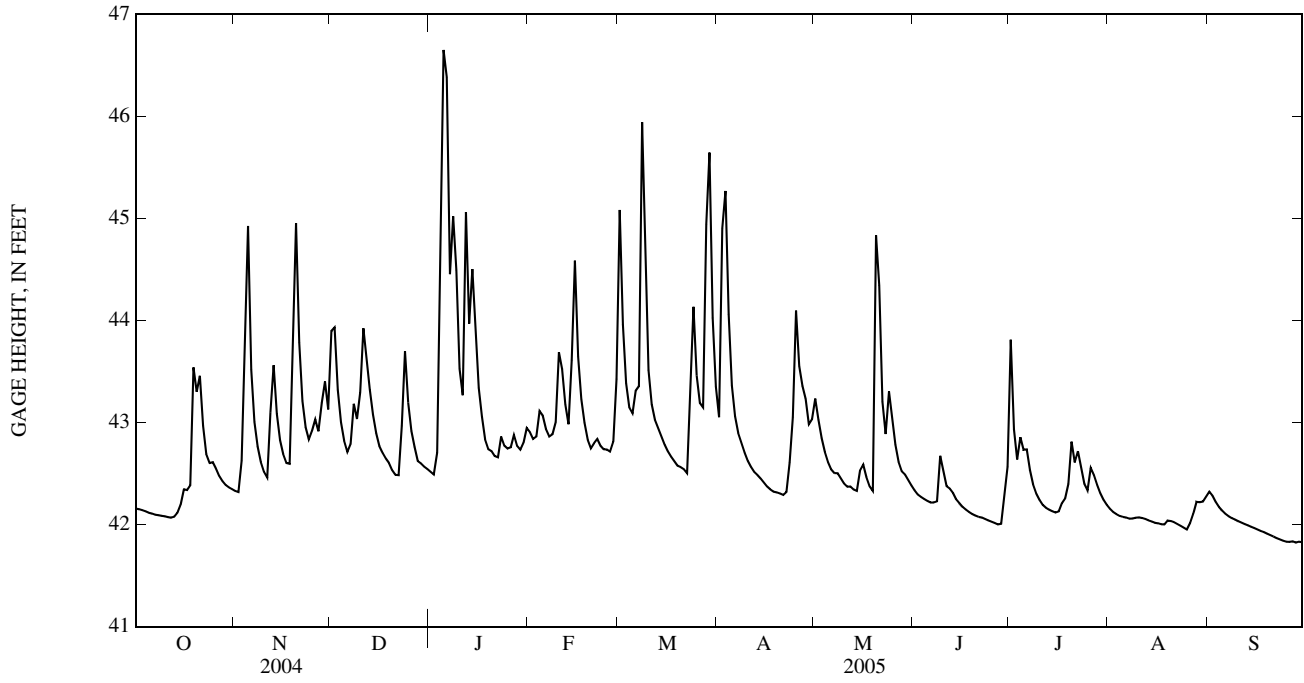
EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 57.64 ft, Nov. 20, 2003; minimum gage height, less than 33.0 ft many days December 2002 to April 2003 during initial filling of the reservoir.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 48.19 ft, Jan. 5; minimum gage height, 41.80 ft, Sept. 29.

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	42.16	42.33	43.90	42.52	42.91	45.08	43.05	43.23	42.34	43.81	42.16	42.32
2	42.15	42.32	43.93	42.49	42.84	43.96	44.90	43.03	42.29	42.93	42.12	42.28
3	42.14	42.63	43.32	42.70	42.86	43.38	45.27	42.85	42.27	42.64	42.10	42.22
4	42.13	43.97	43.00	45.32	43.11	43.15	44.06	42.71	42.25	42.86	42.09	42.17
5	42.12	44.93	42.82	46.65	43.07	43.09	43.36	42.61	42.23	42.73	42.08	42.14
6	42.11	43.52	42.71	46.38	42.94	43.31	43.06	42.54	42.22	42.74	42.07	42.11
7	42.10	43.01	42.79	44.45	42.86	43.36	42.90	42.51	42.22	42.53	42.06	42.08
8	42.09	42.76	43.18	45.02	42.89	45.94	42.80	42.50	42.23	42.39	42.06	42.06
9	42.09	42.61	43.04	44.49	43.01	44.44	42.71	42.45	42.67	42.30	42.07	42.05
10	42.08	42.52	43.30	43.53	43.69	43.51	42.62	42.40	42.53	42.24	42.07	42.03
11	42.07	42.46	43.92	43.27	43.52	43.18	42.56	42.37	42.38	42.19	42.06	42.02
12	42.07	43.10	43.64	45.06	43.18	43.03	42.52	42.37	42.35	42.16	42.05	42.00
13	42.08	43.56	43.32	43.97	42.98	42.95	42.49	42.34	42.31	42.15	42.04	41.99
14	42.12	43.09	43.08	44.50	43.61	42.86	42.45	42.33	42.25	42.13	42.03	41.98
15	42.20	42.83	42.90	43.96	44.59	42.78	42.41	42.53	42.21	42.12	42.02	41.97
16	42.34	42.69	42.77	43.34	43.65	42.72	42.37	42.59	42.17	42.13	42.01	41.95
17	42.34	42.60	42.70	43.06	43.23	42.67	42.34	42.46	42.15	42.21	42.00	41.94
18	42.39	42.60	42.65	42.83	43.00	42.62	42.32	42.37	42.12	42.26	42.00	41.93
19	43.54	43.66	42.60	42.74	42.83	42.58	42.31	42.33	42.10	42.40	42.04	41.91
20	43.30	44.95	42.53	42.72	42.75	42.56	42.30	44.84	42.09	42.81	42.03	41.90
21	43.46	43.78	42.49	42.67	42.80	42.54	42.29	44.34	42.08	42.61	42.02	41.88
22	42.97	43.21	42.48	42.66	42.84	42.50	42.32	43.20	42.07	42.72	42.01	41.87
23	42.69	42.95	42.97	42.86	42.77	43.19	42.61	42.89	42.05	42.56	41.99	41.85
24	42.60	42.84	43.70	42.77	42.74	44.13	43.05	43.31	42.04	42.40	41.97	41.84
25	42.61	42.92	43.19	42.74	42.74	43.46	44.10	43.03	42.03	42.34	41.95	41.83
26	42.55	43.03	42.92	42.76	42.72	43.19	43.55	42.78	42.02	42.56	42.01	41.83
27	42.48	42.91	42.76	42.88	42.81	43.15	43.36	42.62	42.00	42.49	42.11	41.84
28	42.43	43.19	42.62	42.77	43.43	44.94	43.23	42.52	42.01	42.39	42.22	41.82
29	42.39	43.40	42.60	42.73	---	45.65	42.98	42.49	42.29	42.31	42.22	41.83
30	42.37	43.13	42.57	42.80	---	44.03	43.03	42.44	42.57	42.24	42.23	41.83
31	42.35	---	42.54	42.95	---	43.35	---	42.38	---	42.19	42.27	---
MEAN	42.40	43.12	43.00	43.54	43.08	43.46	42.98	42.75	42.22	42.47	42.07	41.98
MAX	43.54	44.95	43.93	46.65	44.59	45.94	45.27	44.84	42.67	43.81	42.27	42.32
MIN	42.07	42.32	42.48	42.49	42.72	42.50	42.29	42.33	42.00	42.12	41.95	41.82

03155405 NORTH FORK HUGHES RIVER NEAR CAIRO, WV—Continued



MILL CREEK BASIN

03159750 TUG FORK AT STATTS MILLS, WV
(Detention Reservoir)

LOCATION.--Lat 38°44'37", long 81°37'32", NAD 83, Jackson County, Hydrologic Unit 05030202.

DAM NAME.--Mill Creek No. 13.

DRAINAGE AREA.--52.3 mi².

PERIOD OF RECORD.--November 2001 to current year.

GAGE.--Water-stage recorder with satellite telemeter. Datum of gage is 591.5 ft above NGVD 29.

REMARKS.-- Normal Pool = 50.7 ft (Normal storage = 2,830 acre-ft)

Top of Riser = 56.9 ft

Emergency Spillway = 79.9 ft

Top of Dam = 93.4 ft

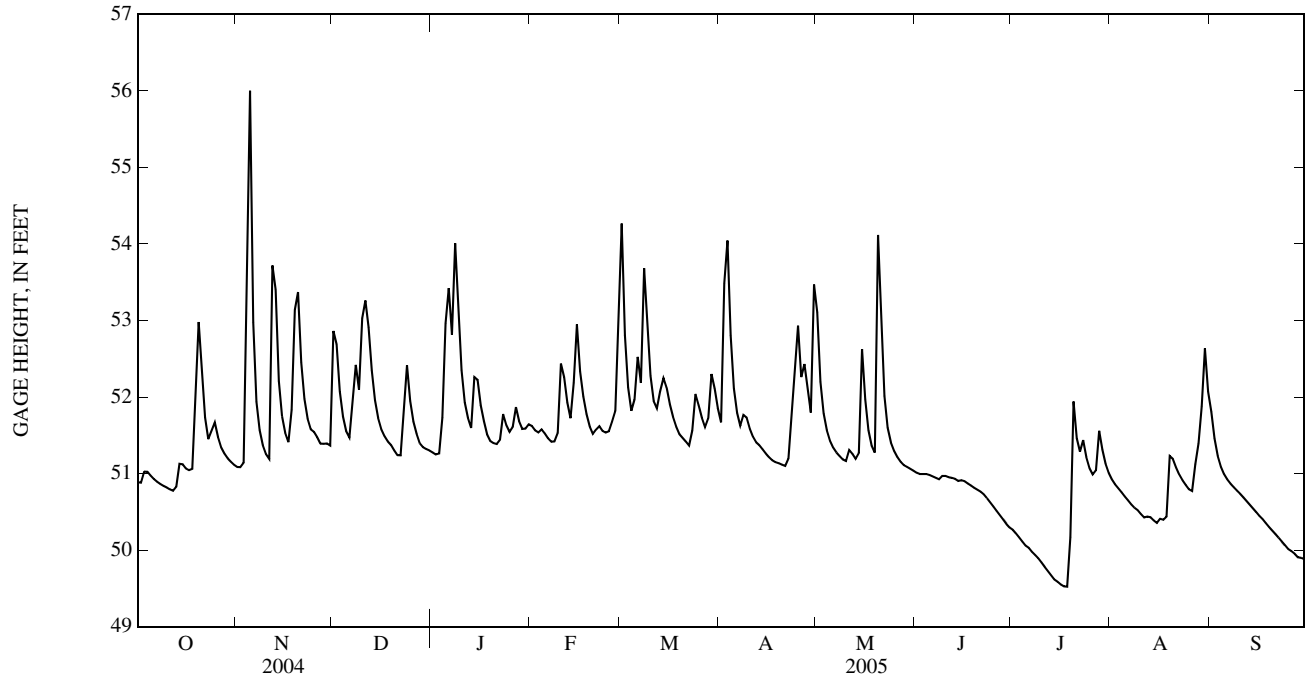
EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 70.73 ft, May 28, 2004; minimum gage height, less than 43.77 ft, Dec. 7, 2001.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 57.82 ft, Nov. 4; minimum gage height, 49.51 ft, July 17, 19.

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	50.89	51.09	52.86	51.28	51.62	54.27	51.67	53.11	51.01	50.27	50.92	51.81
2	50.88	51.08	52.69	51.25	51.56	52.81	53.49	52.20	50.99	50.22	50.86	51.46
3	51.02	51.14	52.07	51.26	51.54	52.13	54.04	51.79	51.00	50.17	50.80	51.23
4	51.02	54.49	51.75	51.73	51.58	51.82	52.80	51.57	51.00	50.11	50.75	51.09
5	50.97	56.00	51.55	52.96	51.53	51.97	52.11	51.43	50.98	50.06	50.70	50.99
6	50.93	52.98	51.47	53.42	51.46	52.52	51.79	51.34	50.96	50.03	50.65	50.92
7	50.89	51.94	51.94	52.82	51.42	52.18	51.62	51.28	50.94	49.98	50.60	50.87
8	50.86	51.57	52.42	54.01	51.42	53.68	51.77	51.23	50.92	49.94	50.55	50.82
9	50.84	51.37	52.10	53.27	51.53	53.00	51.73	51.18	50.97	49.89	50.52	50.78
10	50.82	51.25	53.03	52.35	52.44	52.28	51.59	51.16	50.97	49.84	50.47	50.73
11	50.79	51.19	53.26	51.93	52.26	51.95	51.48	51.31	50.95	49.78	50.43	50.69
12	50.77	53.72	52.91	51.73	51.93	51.85	51.41	51.26	50.94	49.73	50.44	50.64
13	50.83	53.40	52.35	51.60	51.72	52.07	51.37	51.19	50.93	49.67	50.43	50.59
14	51.13	52.21	51.96	52.26	52.19	52.25	51.32	51.27	50.90	49.62	50.39	50.54
15	51.12	51.75	51.72	52.23	52.95	52.12	51.26	52.63	50.91	49.59	50.35	50.50
16	51.07	51.53	51.58	51.89	52.33	51.91	51.21	51.97	50.90	49.55	50.41	50.45
17	51.05	51.41	51.49	51.68	52.01	51.74	51.17	51.57	50.87	49.53	50.40	50.40
18	51.06	51.83	51.42	51.51	51.78	51.61	51.15	51.37	50.84	49.52	50.44	50.35
19	52.16	53.14	51.37	51.42	51.62	51.52	51.13	51.27	50.81	50.17	51.23	50.30
20	52.98	53.37	51.30	51.40	51.52	51.47	51.12	54.12	50.79	51.94	51.19	50.26
21	52.30	52.45	51.24	51.38	51.58	51.42	51.10	53.19	50.76	51.46	51.08	50.21
22	51.73	51.97	51.24	51.44	51.62	51.37	51.20	52.02	50.73	51.29	50.99	50.16
23	51.45	51.72	51.86	51.78	51.56	51.56	51.70	51.60	50.68	51.44	50.91	50.11
24	51.56	51.58	52.41	51.63	51.53	52.04	52.25	51.40	50.62	51.21	50.85	50.06
25	51.67	51.54	51.95	51.55	51.55	51.89	52.93	51.29	50.57	51.07	50.80	50.01
26	51.48	51.47	51.68	51.61	51.68	51.73	52.26	51.22	50.51	50.99	50.77	49.99
27	51.34	51.39	51.52	51.87	51.82	51.61	52.43	51.16	50.46	51.04	51.12	49.95
28	51.26	51.39	51.40	51.69	52.75	51.72	52.12	51.11	50.40	51.56	51.39	49.91
29	51.20	51.39	51.35	51.58	---	52.30	51.80	51.09	50.34	51.31	51.88	49.90
30	51.16	51.37	51.32	51.59	---	52.11	53.47	51.06	50.30	51.13	52.63	49.88
31	51.11	---	51.30	51.64	---	51.85	---	51.04	---	51.01	52.07	---
MEAN	51.24	52.09	51.89	51.93	51.80	52.09	51.88	51.63	50.80	50.42	50.87	50.52
MAX	52.98	56.00	53.26	54.01	52.95	54.27	54.04	54.12	51.01	51.94	52.63	51.81
MIN	50.77	51.08	51.24	51.25	51.42	51.37	51.10	51.04	50.30	49.52	50.35	49.88

03159750 TUG FORK AT STATTS MILLS, WV—Continued



03178150 MIDDLE FORK BRUSH CREEK AT EDISON, WV
(Detention Reservoir)

LOCATION.--Lat 37°18'22", long 81°09'54", NAD 27, Mercer County, Hydrologic Unit 05050002.

DAM NAME.--Brush Creek No. 19-A.

SURFACE AREA.--68 acres.

DRAINAGE AREA.--2.05 mi².

PERIOD OF RECORD.--June 2002 to current year.

GAGE.--Water-stage recorder with satellite telemeter. Datum of gage is 2,461.0 ft above NGVD 29.

REMARKS.-- Normal Pool = 22.0 ft (Normal Storage = 968 acre-ft)

Top of Riser = 23.7 ft

Emergency Spillway = 28.0 ft

Top of Dam = 37.6 ft

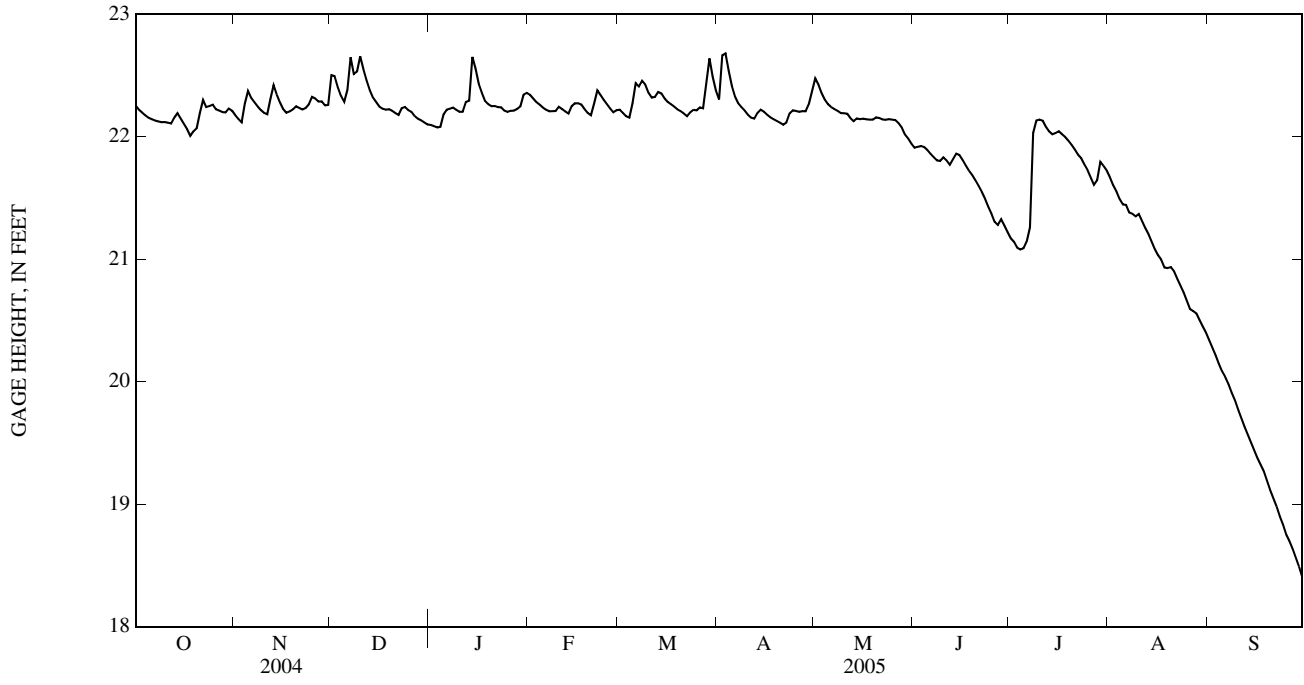
EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 24.47 ft, Nov. 19, 2003; minimum gage height, 17.71 ft, Oct. 15, 2002.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 22.82 ft, Apr. 2; minimum gage height, 18.37 ft, Sept. 30.

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22.25	22.18	22.50	22.10	22.34	22.22	22.30	22.48	21.91	21.17	21.67	20.34
2	22.22	22.15	22.50	22.09	22.31	22.20	22.67	22.43	21.92	21.14	21.61	20.28
3	22.20	22.12	22.41	22.08	22.28	22.17	22.68	22.36	21.93	21.10	21.55	20.22
4	22.17	22.27	22.33	22.08	22.26	22.16	22.54	22.30	21.92	21.08	21.49	20.15
5	22.16	22.38	22.29	22.18	22.24	22.27	22.42	22.27	21.89	21.09	21.45	20.09
6	22.14	22.32	22.38	22.22	22.22	22.44	22.33	22.24	21.86	21.15	21.44	20.04
7	22.13	22.28	22.65	22.23	22.21	22.41	22.27	22.23	21.83	21.26	21.38	19.98
8	22.13	22.25	22.51	22.24	22.21	22.46	22.24	22.21	21.81	22.03	21.37	19.91
9	22.12	22.22	22.53	22.22	22.21	22.43	22.21	22.19	21.80	22.13	21.35	19.85
10	22.12	22.20	22.66	22.20	22.24	22.36	22.18	22.19	21.83	22.14	21.37	19.77
11	22.12	22.18	22.55	22.20	22.23	22.32	22.16	22.19	21.81	22.13	21.31	19.70
12	22.11	22.31	22.46	22.28	22.21	22.33	22.15	22.15	21.77	22.08	21.26	19.63
13	22.16	22.42	22.38	22.29	22.19	22.37	22.20	22.13	21.82	22.04	21.21	19.57
14	22.19	22.34	22.32	22.65	22.25	22.35	22.22	22.15	21.86	22.02	21.15	19.50
15	22.15	22.28	22.28	22.56	22.27	22.31	22.21	22.14	21.85	22.03	21.08	19.44
16	22.11	22.23	22.25	22.43	22.27	22.28	22.18	22.15	21.81	22.04	21.03	19.38
17	22.06	22.20	22.23	22.36	22.26	22.27	22.16	22.14	21.76	22.02	21.00	19.32
18	22.01	22.21	22.22	22.29	22.23	22.25	22.14	22.14	21.72	22.00	20.93	19.27
19	22.05	22.22	22.22	22.27	22.19	22.22	22.13	22.14	21.69	21.97	20.93	19.19
20	22.07	22.25	22.21	22.25	22.18	22.21	22.12	22.16	21.65	21.94	20.94	19.11
21	22.19	22.24	22.19	22.25	22.27	22.19	22.10	22.15	21.60	21.90	20.90	19.05
22	22.30	22.22	22.18	22.24	22.38	22.17	22.12	22.14	21.55	21.86	20.84	18.98
23	22.24	22.23	22.23	22.24	22.34	22.20	22.19	22.14	21.50	21.83	20.79	18.90
24	22.25	22.26	22.24	22.21	22.30	22.22	22.22	22.14	21.43	21.77	20.73	18.83
25	22.26	22.33	22.22	22.20	22.27	22.22	22.21	22.14	21.38	21.73	20.66	18.75
26	22.22	22.31	22.20	22.21	22.23	22.24	22.20	22.14	21.31	21.67	20.59	18.70
27	22.21	22.29	22.17	22.21	22.20	22.23	22.21	22.11	21.28	21.61	20.58	18.64
28	22.20	22.29	22.15	22.23	22.22	22.43	22.21	22.08	21.33	21.65	20.56	18.56
29	22.20	22.26	22.13	22.25	---	22.64	22.27	22.02	21.28	21.80	20.50	18.49
30	22.23	22.26	22.12	22.34	---	22.49	22.37	21.99	21.22	21.76	20.45	18.40
31	22.21	---	22.10	22.36	---	22.38	---	21.95	---	21.72	20.40	---
MEAN	22.17	22.26	22.32	22.26	22.25	22.30	22.25	22.17	21.68	21.74	21.05	19.40
MAX	22.30	22.42	22.66	22.65	22.38	22.64	22.68	22.48	21.93	22.14	21.67	20.34
MIN	22.01	22.12	22.10	22.08	22.18	22.16	22.10	21.95	21.22	21.08	20.40	18.40

03178150 MIDDLE FORK BRUSH CREEK AT EDISON, WV—Continued



KANAWHA RIVER BASIN

03179000 BLUESTONE RIVER NEAR PIPESTEM, WV

LOCATION.--Lat 37°32'38", long 81°00'38", NAD 27, 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.--395 mi².

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

REVISED RECORDS.--WSP 1705: 1959. WDR WV-82-1: Drainage area. WDR WV-97-1: Drainage area.

GAGE.--Water-stage recorder with satellite telemeter. Datum of gage is 1,527.35 ft above NGVD 29 (U.S. Army Corps of Engineers bench mark).

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

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 10	0400	*4,510	*9.14	No other peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	478	511	2,740	323	974	659	1,030	1,800	135	188	344	129
2	369	434	2,490	308	853	582	2,290	1,540	153	280	216	111
3	332	375	1,430	285	818	512	2,860	1,030	238	181	163	95
4	279	1,070	979	277	852	502	2,410	766	226	126	137	84
5	237	1,690	754	530	824	994	1,700	608	200	102	120	76
6	207	1,050	811	738	779	2,060	1,210	518	165	113	119	70
7	185	747	2,590	720	759	1,760	947	461	144	195	135	65
8	168	573	2,020	808	856	2,040	812	414	138	1,590	133	63
9	156	464	2,290	891	1,000	2,050	743	364	156	788	170	60
10	149	412	4,050	790	1,070	1,450	604	331	217	370	238	57
11	141	362	2,550	711	931	1,160	524	340	215	242	177	55
12	134	589	1,840	1,080	792	1,130	485	307	158	187	132	53
13	258	1,080	1,400	1,030	709	1,500	576	272	211	158	106	50
14	587	927	1,060	2,770	1,000	1,490	575	301	403	255	92	49
15	417	711	837	2,530	1,260	1,260	552	338	310	317	84	48
16	307	578	694	1,470	1,090	1,050	497	300	214	593	89	47
17	250	489	615	1,040	963	942	442	258	161	516	102	47
18	206	435	549	762	798	836	406	234	135	566	96	45
19	493	404	507	639	677	745	377	221	120	557	1,100	44
20	704	417	419	603	600	707	347	291	115	432	627	43
21	694	392	390	553	910	666	321	283	104	349	417	42
22	897	355	398	496	1,800	605	330	238	96	258	253	40
23	608	351	446	458	1,380	711	464	216	90	200	180	39
24	575	477	627	366	1,060	1,080	455	232	84	174	146	38
25	761	1,090	584	406	879	1,030	466	234	78	142	120	37
26	616	1,330	518	443	715	1,020	443	212	73	124	107	38
27	569	993	449	529	613	909	425	190	170	116	233	39
28	666	804	375	533	613	1,490	399	174	342	130	370	41
29	673	636	367	519	---	2,610	384	162	144	281	247	42
30	678	576	352	787	---	2,030	791	149	119	641	174	41
31	613	---	333	1,050	---	1,380	---	144	---	718	148	---
TOTAL	13,407	20,322	35,464	24,445	25,575	36,960	23,865	12,928	5,114	10,889	6,775	1,688
MEAN	432	677	1,144	789	913	1,192	796	417	170	351	219	56.3
MAX	897	1,690	4,050	2,770	1,800	2,610	2,860	1,800	403	1,590	1,100	129
MIN	134	351	333	277	600	502	321	144	73	102	84	37
CFSM	1.09	1.71	2.90	2.00	2.31	3.02	2.01	1.06	0.43	0.89	0.55	0.14
IN.	1.26	1.91	3.34	2.30	2.41	3.48	2.25	1.22	0.48	1.03	0.64	0.16

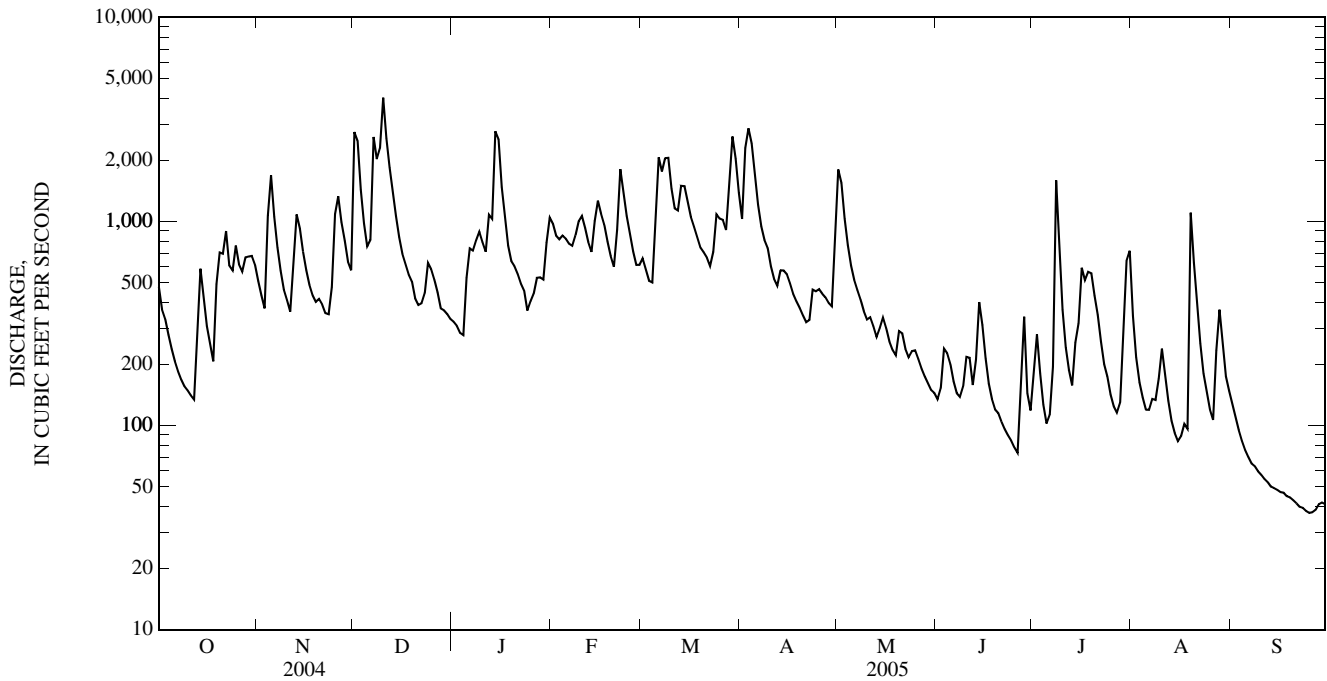
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1950 - 2005, BY WATER YEAR (WY)

MEAN	146	265	485	675	927	1,063	816	648	317	179	131	104
MAX	796	1,306	1,485	2,107	2,148	3,276	2,855	1,499	1,163	1,172	557	667
(WY)	(1977)	(2004)	(1973)	(1957)	(1957)	(1955)	(1987)	(2001)	(1979)	(2001)	(2003)	(2004)
MIN	16.7	20.0	33.8	53.7	187	188	174	154	54.2	40.5	23.8	13.9
(WY)	(1954)	(1954)	(1966)	(1966)	(2002)	(1988)	(1986)	(1964)	(1999)	(1999)	(1988)	(1955)

03179000 BLUESTONE RIVER NEAR PIPESTEM, WV—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1950 - 2005	
ANNUAL TOTAL	272,076		217,432			
ANNUAL MEAN	743		596		477	
HIGHEST ANNUAL MEAN					773	
LOWEST ANNUAL MEAN					178	
HIGHEST DAILY MEAN	7,310	Apr 14	4,050	Dec 10	15,900	Apr 5, 1977
LOWEST DAILY MEAN	60	Sep 6	37	Sep 25	7.0	Sep 22, 1955
ANNUAL SEVEN-DAY MINIMUM	68	Sep 1	39	Sep 22	8.5	Sep 18, 1955
MAXIMUM PEAK FLOW			4,510	Dec 10	19,300	Apr 5, 1977
MAXIMUM PEAK STAGE			9.14	Dec 10	15.82	Apr 5, 1977
INSTANTANEOUS LOW FLOW			36	Sep 26	7.0	(a)
ANNUAL RUNOFF (CFSM)	1.88		1.51		1.21	
ANNUAL RUNOFF (INCHES)	25.62		20.48		16.42	
10 PERCENT EXCEEDS	1,660		1,260		1,120	
50 PERCENT EXCEEDS	515		435		210	
90 PERCENT EXCEEDS	159		96		38	

a Sept. 21-23, 30, 1955.



KANAWHA RIVER BASIN

03180500 GREENBRIER RIVER AT DURBIN, WV

LOCATION.--Lat 38°32'37", long 79°50'00", NAD 27, 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. WDR WV-97-1: 1944-46(M), 1951(M), 1953(M), 1955(P), 1956(M), 1958(M), WDR WV-02-1: 1999(M).

GAGE.--Water-stage recorder with satellite telemeter. Datum of gage is 2,699.71 ft above NGVD 29.

REMARKS.--Records good except those for periods of estimated daily discharges (no gage-height record, ice effect), which are poor.

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)
Mar 24	0230	*3,990	*5.63	Mar 28	1700	3,520	5.33

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	306	203	1,080	181	e83	e240	541	1,300	163	38	97	64
2	237	188	1,060	162	e80	e200	814	910	148	58	90	48
3	195	192	703	159	e77	e180	976	613	182	38	71	39
4	157	589	481	210	e73	e170	835	431	160	25	59	33
5	132	986	360	281	e71	e160	726	331	129	21	50	29
6	109	690	324	339	e80	e170	580	279	112	20	48	26
7	95	484	360	379	e100	e200	461	244	103	26	e47	23
8	83	356	447	498	e220	906	609	213	94	619	e70	21
9	75	280	552	557	462	697	527	184	97	255	e360	20
10	71	234	892	494	575	493	438	166	139	161	e260	19
11	64	206	831	391	490	394	357	197	109	111	e200	18
12	58	302	645	327	395	336	304	195	93	83	154	16
13	80	331	519	281	320	289	268	170	80	81	121	15
14	100	318	404	860	355	258	226	164	81	215	95	e15
15	e86	292	329	838	482	243	194	261	64	193	78	e14
16	e180	264	293	618	533	238	168	233	57	239	110	e14
17	e200	234	292	441	500	228	153	216	56	423	114	e13
18	e150	225	242	343	419	223	143	194	49	342	77	e13
19	e130	222	225	e240	347	273	134	178	48	345	93	e14
20	e260	246	e200	e200	295	368	124	1,290	41	393	89	e14
21	e240	246	e160	e160	315	386	117	1,450	37	308	84	e13
22	e200	246	e260	e140	592	410	239	790	34	337	68	e13
23	e220	240	627	e120	544	1,190	514	541	31	276	55	e13
24	e350	296	928	e100	476	2,770	527	587	28	200	49	e14
25	e310	540	654	e110	381	1,280	460	596	25	157	42	e14
26	e280	548	462	e120	311	858	484	541	23	137	38	e15
27	247	470	346	e96	265	834	471	425	21	109	87	e17
28	226	550	308	e80	256	2,230	388	337	23	126	125	17
29	218	513	313	e90	---	2,250	329	277	48	133	78	e15
30	235	453	220	e86	---	1,200	938	226	34	118	60	e13
31	220	---	195	e84	---	766	---	194	---	116	59	---
TOTAL	5,514	10,944	14,712	8,985	9,097	20,440	13,045	13,733	2,309	5,703	3,028	612
MEAN	178	365	475	290	325	659	435	443	77.0	184	97.7	20.4
MAX	350	986	1,080	860	592	2,770	976	1,450	182	619	360	64
MIN	58	188	160	80	71	160	117	164	21	20	38	13
CFSM	1.34	2.74	3.57	2.18	2.44	4.96	3.27	3.33	0.58	1.38	0.73	0.15
IN.	1.54	3.06	4.11	2.51	2.54	5.72	3.65	3.84	0.65	1.60	0.85	0.17

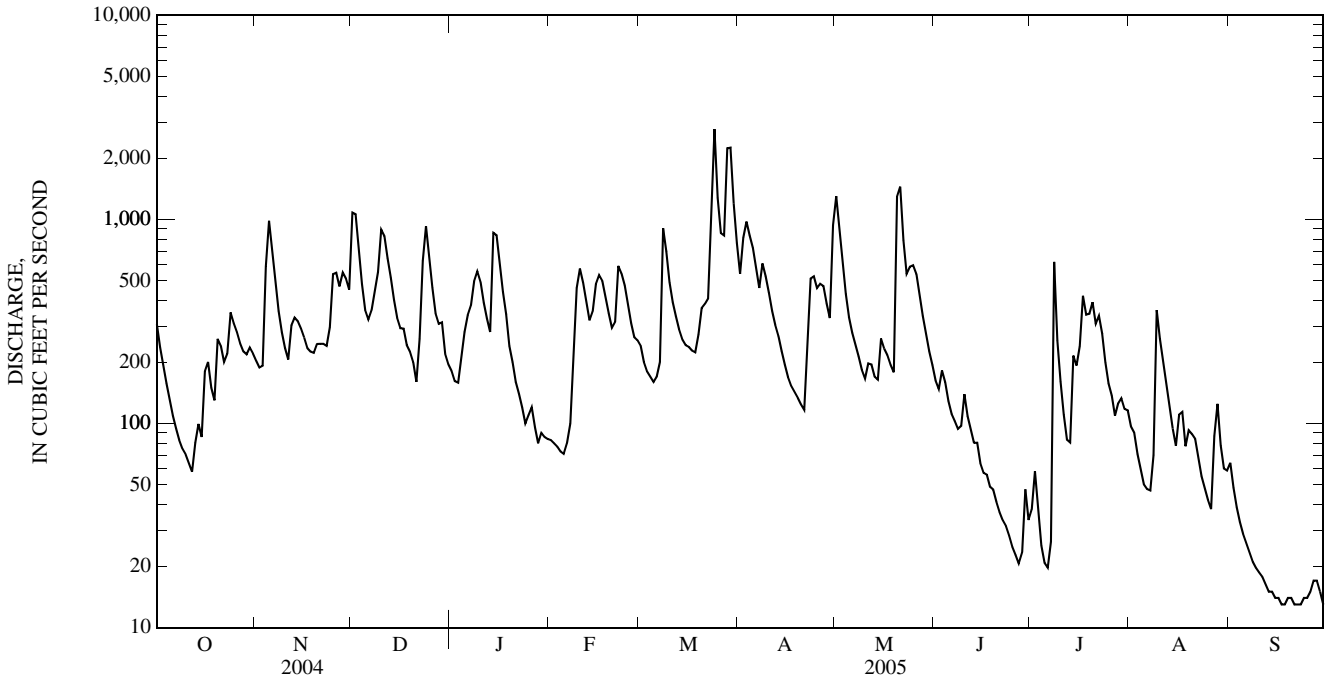
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1943 - 2005, BY WATER YEAR (WY)

MEAN	106	226	324	366	429	575	429	334	162	101	88.2	72.2
MAX	665	1,336	796	1,023	1,033	1,255	1,041	1,153	652	541	515	427
(WY)	(1977)	(1986)	(1973)	(1996)	(1994)	(1963)	(1958)	(1996)	(2003)	(1996)	(1996)	(1996)
MIN	2.06	10.1	46.6	51.7	120	234	142	77.9	21.9	10.9	6.01	1.82
(WY)	(1954)	(1954)	(1961)	(1981)	(1993)	(1957)	(1955)	(1976)	(1991)	(1988)	(1999)	(1953)

03180500 GREENBRIER RIVER AT DURBIN, WV—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1943 - 2005	
ANNUAL TOTAL	129,264		108,122			
ANNUAL MEAN	353		296		267	
HIGHEST ANNUAL MEAN					472 1996	
LOWEST ANNUAL MEAN					164 1999	
HIGHEST DAILY MEAN	2,960	Apr 14	2,770	Mar 24	13,200	Nov 4, 1985
LOWEST DAILY MEAN	(e)13	(a)	(e)13	(b)	0.50	(c)
ANNUAL SEVEN-DAY MINIMUM	14	Sep 1	13	Sep 17	0.51	Sep 28, 1953
MAXIMUM PEAK FLOW			3,990	Mar 24	(d)37,100	Nov 4, 1985
MAXIMUM PEAK STAGE			5.63	Mar 24	(f)15.82	Nov 4, 1985
INSTANTANEOUS LOW FLOW			(g)	(h)	0.00	(i)
ANNUAL RUNOFF (CFSM)	2.66		2.23		2.01	
ANNUAL RUNOFF (INCHES)	36.16		30.24		27.30	
10 PERCENT EXCEEDS	743		615		620	
50 PERCENT EXCEEDS	246		218		140	
90 PERCENT EXCEEDS	44		32		17	

- a Sept. 5-7.
- b Sept. 17, 18, 21, 22, 23, 30.
- c Sept. 29 to Oct. 4, 1953, Oct. 2, 3, 1968, and Sept. 11, 1995.
- d From rating curve extended above 5,000 ft³/s on basis of slope-area measurement of peak flow.
- e Estimated.
- f From floodmark.
- g Less than 13 ft³/s.
- h Not determined.
- i Oct. 2, 3, 1968.



KANAWHA RIVER BASIN

03182050 MARLIN RUN AT MARLINTON, WV
(Detention Reservoir)

LOCATION.--Lat 38°13'12", long 80°04'52", NAD 27, Pocahontas County, Hydrologic Unit 05050003.

DAM NAME.--Marlin Run No. 1.

SURFACE AREA.--2 acres.

DRAINAGE AREA.--1.02 mi², (corrected).

PERIOD OF RECORD.--November 2002 to current year.

GAGE.--Water-stage recorder with satellite telemeter. Datum of gage is 2,190.0 ft above NGVD 29.

REMARKS.-- Normal Pool = 29.5 ft (Normal Storage = 15 acre-ft)

Top of Riser = 31.3 ft

Emergency Spillway = 65.0 ft

Top of Dam = 71.6 ft

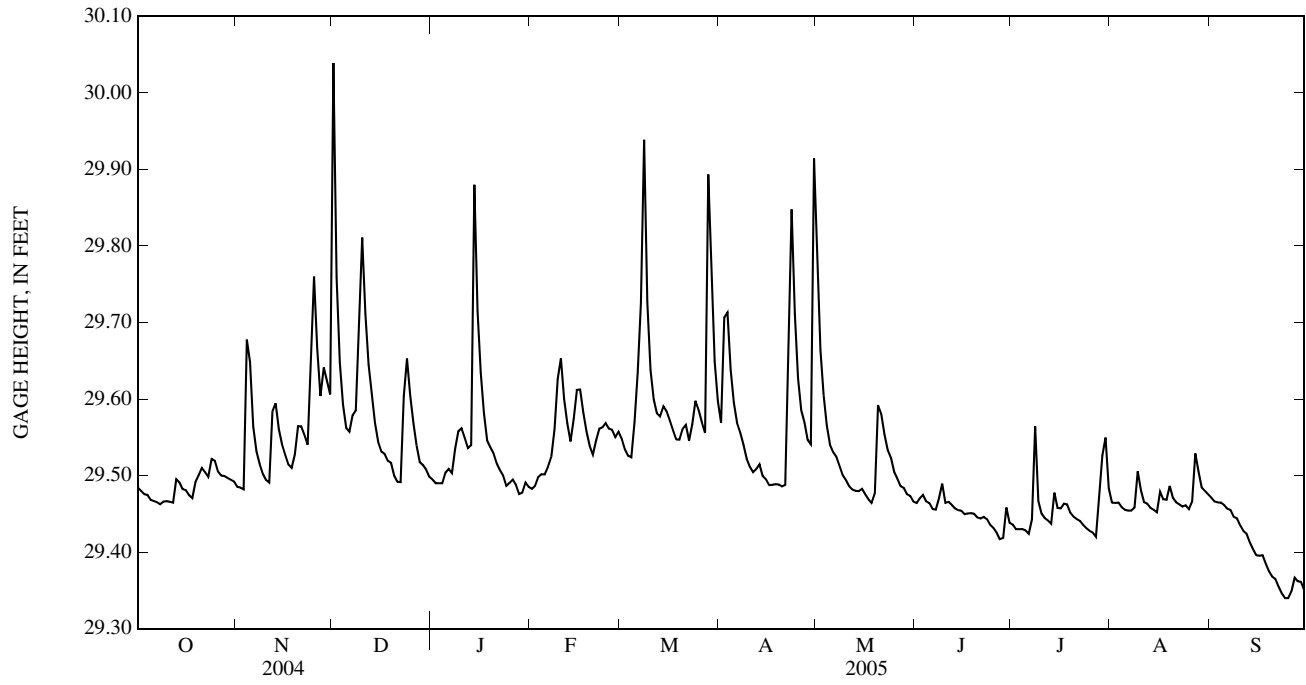
EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 32.72 ft, Nov. 19, 2003; minimum gage height, 29.27 ft, Sept. 5, 6, 7, 2004.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 30.24 ft, Dec. 1; minimum gage height, 29.34 ft, Sept. 23-26, 30.

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	29.48	29.49	30.04	29.49	29.48	29.55	29.57	29.79	29.46	29.44	29.46	29.47
2	29.48	29.48	29.76	29.49	29.49	29.53	29.71	29.66	29.47	29.43	29.46	29.47
3	29.48	29.48	29.65	29.49	29.50	29.53	29.71	29.61	29.47	29.43	29.46	29.46
4	29.47	29.68	29.59	29.49	29.50	29.52	29.64	29.57	29.47	29.43	29.46	29.46
5	29.47	29.65	29.56	29.50	29.50	29.57	29.59	29.54	29.46	29.43	29.46	29.46
6	29.47	29.56	29.56	29.51	29.51	29.63	29.57	29.53	29.46	29.42	29.45	29.46
7	29.47	29.53	29.58	29.50	29.52	29.73	29.56	29.52	29.46	29.44	29.45	29.45
8	29.46	29.52	29.59	29.54	29.56	29.94	29.54	29.51	29.47	29.56	29.46	29.45
9	29.47	29.50	29.70	29.56	29.63	29.73	29.52	29.50	29.49	29.47	29.51	29.44
10	29.47	29.49	29.81	29.56	29.65	29.64	29.51	29.49	29.46	29.45	29.48	29.43
11	29.47	29.49	29.71	29.55	29.60	29.60	29.50	29.49	29.47	29.44	29.47	29.43
12	29.46	29.58	29.64	29.54	29.57	29.58	29.51	29.48	29.46	29.44	29.46	29.42
13	29.50	29.59	29.61	29.54	29.54	29.58	29.51	29.48	29.46	29.44	29.46	29.41
14	29.49	29.56	29.57	29.88	29.57	29.59	29.50	29.48	29.45	29.48	29.46	29.40
15	29.48	29.54	29.54	29.71	29.61	29.58	29.50	29.48	29.45	29.46	29.45	29.40
16	29.48	29.53	29.53	29.63	29.61	29.57	29.49	29.48	29.45	29.46	29.48	29.40
17	29.47	29.51	29.53	29.58	29.58	29.56	29.49	29.47	29.45	29.46	29.47	29.40
18	29.47	29.51	29.52	29.55	29.56	29.55	29.49	29.46	29.45	29.46	29.47	29.38
19	29.49	29.53	29.52	29.54	29.54	29.55	29.49	29.48	29.45	29.45	29.49	29.37
20	29.50	29.56	29.50	29.53	29.53	29.56	29.49	29.59	29.45	29.45	29.47	29.37
21	29.51	29.56	29.49	29.52	29.55	29.57	29.49	29.58	29.44	29.44	29.47	29.36
22	29.50	29.55	29.49	29.51	29.56	29.55	29.62	29.55	29.45	29.44	29.46	29.35
23	29.50	29.54	29.60	29.50	29.56	29.57	29.85	29.53	29.44	29.44	29.46	29.35
24	29.52	29.63	29.65	29.49	29.57	29.60	29.71	29.52	29.44	29.43	29.46	29.34
25	29.52	29.76	29.60	29.49	29.56	29.59	29.63	29.50	29.43	29.43	29.46	29.34
26	29.51	29.67	29.57	29.49	29.56	29.57	29.59	29.50	29.43	29.43	29.47	29.35
27	29.50	29.60	29.54	29.49	29.55	29.56	29.57	29.49	29.42	29.42	29.53	29.37
28	29.50	29.64	29.52	29.48	29.56	29.89	29.55	29.48	29.42	29.47	29.51	29.36
29	29.50	29.62	29.51	29.48	---	29.78	29.54	29.48	29.46	29.53	29.48	29.36
30	29.49	29.61	29.51	29.49	---	29.65	29.91	29.47	29.44	29.55	29.48	29.35
31	29.49	---	29.50	29.49	---	29.60	---	29.47	---	29.48	29.48	---
MEAN	29.49	29.57	29.60	29.54	29.55	29.61	29.58	29.52	29.45	29.45	29.47	29.40
MAX	29.52	29.76	30.04	29.88	29.65	29.94	29.91	29.79	29.49	29.56	29.53	29.47
MIN	29.46	29.48	29.49	29.48	29.48	29.52	29.49	29.46	29.42	29.42	29.45	29.34

03182050 MARLIN RUN AT MARLINTON, WV—Continued



03182500 GREENBRIER RIVER AT BUCKEYE, WV

LOCATION.--Lat 38°11'09", long 80°07'51", NAD 27, 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. 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 with satellite telemeter. Datum of gage is 2,085.89 ft above NGVD 29. Prior to Feb. 27, 1939, nonrecording gage at same site and datum.

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

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 11,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar 28	2100	*14,100	*10.99	No other peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,030	463	5,910	515	377	843	1,850	4,880	353	133	515	168
2	721	416	4,690	473	359	705	2,770	3,030	315	107	390	148
3	553	381	2,670	431	374	590	4,090	2,020	316	96	282	130
4	435	1,380	1,750	433	355	537	3,030	1,430	369	147	210	106
5	352	3,730	1,270	674	347	700	2,340	1,080	323	114	164	91
6	296	2,160	1,020	852	360	765	1,820	874	273	87	137	80
7	253	1,450	1,030	919	420	1,270	1,450	756	249	86	126	72
8	225	1,050	1,460	1,050	585	4,680	1,590	672	232	1,190	241	66
9	203	783	1,950	1,400	1,050	3,500	1,510	561	224	1,140	284	61
10	189	614	4,440	1,400	1,750	2,090	1,190	483	208	542	600	58
11	177	516	3,210	1,180	1,630	1,540	985	438	231	338	513	54
12	165	654	2,320	995	1,300	1,280	836	431	205	245	372	51
13	217	1,230	1,790	854	1,060	1,080	751	404	185	203	280	48
14	318	1,080	1,390	3,280	1,030	1,100	652	371	167	353	215	46
15	326	923	1,090	3,430	1,630	1,060	552	414	166	598	171	44
16	298	799	892	2,230	1,590	1,020	471	524	150	537	185	42
17	298	682	834	1,600	1,480	940	418	441	129	624	299	42
18	295	595	732	1,090	1,220	859	391	401	118	810	250	41
19	290	572	664	871	964	890	371	374	112	677	225	39
20	391	801	546	867	857	1,120	349	2,010	104	611	214	40
21	580	892	435	772	804	1,320	329	4,200	99	555	195	42
22	540	836	610	612	1,600	1,260	503	2,260	92	445	148	40
23	457	766	1,020	620	1,670	1,760	2,700	1,470	86	425	133	40
24	490	1,090	2,830	e480	1,450	8,140	2,500	1,220	78	346	110	39
25	789	3,330	2,030	e400	1,240	4,280	1,810	1,100	73	267	97	40
26	700	2,500	1,550	e470	1,050	2,570	1,580	1,000	68	220	90	41
27	597	1,780	1,120	556	900	1,990	1,460	859	63	190	155	45
28	543	1,980	829	450	864	6,740	1,230	699	61	180	394	47
29	506	1,990	760	384	---	8,470	1,020	581	161	427	342	48
30	515	1,620	684	389	---	4,110	3,680	483	154	1,430	242	44
31	522	---	565	420	---	2,580	---	408	---	836	194	---
TOTAL	13,271	37,063	52,091	30,097	28,316	69,789	44,228	35,874	5,364	13,959	7,773	1,853
MEAN	428	1,235	1,680	971	1,011	2,251	1,474	1,157	179	450	251	61.8
MAX	1,030	3,730	5,910	3,430	1,750	8,470	4,090	4,880	369	1,430	600	168
MIN	165	381	435	384	347	537	329	371	61	86	90	39
CFSM	0.79	2.29	3.11	1.80	1.87	4.17	2.73	2.14	0.33	0.83	0.46	0.11
IN.	0.91	2.55	3.59	2.07	1.95	4.81	3.05	2.47	0.37	0.96	0.54	0.13

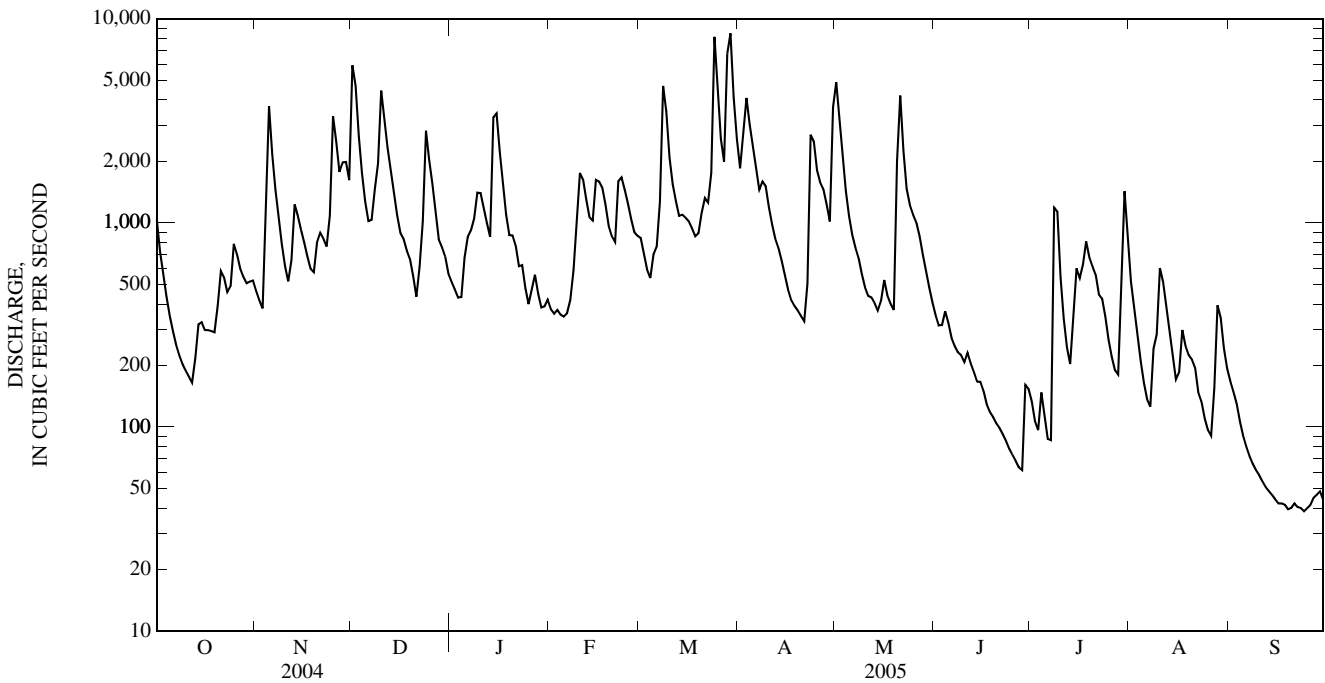
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1930 - 2005, BY WATER YEAR (WY)

MEAN	342	673	1,079	1,282	1,503	1,962	1,400	1,115	533	339	313	227
MAX	2,626	3,602	2,811	3,542	3,431	4,672	3,097	3,219	2,313	1,333	2,000	1,380
(WY)	(1977)	(1986)	(1973)	(1996)	(1994)	(1963)	(1958)	(1996)	(2003)	(1972)	(1942)	(2003)
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)

03182500 GREENBRIER RIVER AT BUCKEYE, WV—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1930 - 2005	
ANNUAL TOTAL	409,962		339,678		895	
ANNUAL MEAN	1,120		931		1,573	
HIGHEST ANNUAL MEAN					492	
LOWEST ANNUAL MEAN					1941	
HIGHEST DAILY MEAN	11,900	Apr 14	8,470	Mar 29	44,400	Nov 5, 1985
LOWEST DAILY MEAN	65	Sep 3	39	(a)	5.2	Aug 13, 1930
ANNUAL SEVEN-DAY MINIMUM	68	Sep 1	40	Sep 19	7.3	Sep 28, 1930
MAXIMUM PEAK FLOW			14,100	Mar 28	(b)82,000	Nov 5, 1985
MAXIMUM PEAK STAGE			10.99	Mar 28	(c)23.20	Nov 5, 1985
INSTANTANEOUS LOW FLOW			38	(d)	3.8	Aug 13, 1930
ANNUAL RUNOFF (CFSM)	2.07		1.72		1.66	
ANNUAL RUNOFF (INCHES)	28.24		23.40		22.52	
10 PERCENT EXCEEDS	2,560		2,020		2,100	
50 PERCENT EXCEEDS	692		556		425	
90 PERCENT EXCEEDS	128		94		56	

- a Sept. 19, 24.
- b From rating curve extended above 33,000 ft³/s on basis of slope-area measurement of peak flow.
- c From floodmarks.
- d Sept. 19, 20, 23, 24, 25, 26.
- e Estimated.



KANAWHA RIVER BASIN

03182888 DRY CREEK AT TUCKAHOE, WV
(Detention Reservoir)

LOCATION.--Lat 37°44'28"(corrected), long 80°16'42"(corrected), NAD 27, Greenbrier County, Hydrologic Unit 05050003.

DAM NAME.--Howard Creek No. 12.

SURFACE AREA.--39 acres.

DRAINAGE AREA.--13.5 mi², (corrected).

PERIOD OF RECORD.--October 2003 to current year.

GAGE.--Water-stage recorder with satellite telemeter. Datum of gage is 2,016.54 ft above NGVD 29.

REMARKS.-- Normal Pool = 46.46 ft (Normal Storage = 459 acre-ft)

Top of Riser = 51.13 ft

Emergency Spillway = 77.46 ft

Top of Dam = 98.56 ft

Gage orifice = 42.30 ft

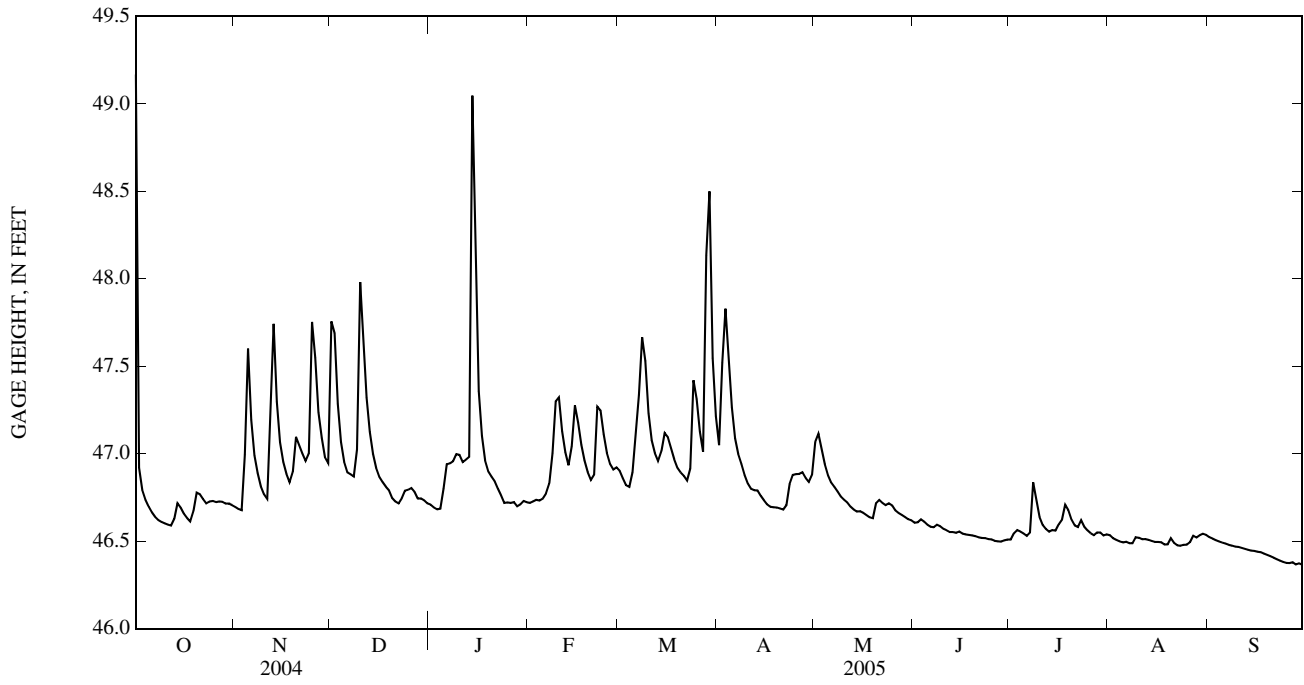
EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 64.23 ft, Sept. 28, 2004; minimum gage height, 43.36 ft, Sept. 26, 28, 29, 30, 2005.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 52.84 ft, Oct. 1; minimum gage height, 43.36 ft, Sept. 26, 28, 29, 30.

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	49.17	46.70	47.76	46.71	46.72	46.90	47.05	47.07	46.61	46.51	46.53	46.52
2	46.92	46.68	47.69	46.69	46.73	46.86	47.52	47.11	46.61	46.54	46.52	46.51
3	46.79	46.68	47.28	46.68	46.74	46.82	47.83	47.03	46.62	46.56	46.51	46.51
4	46.74	46.99	47.07	46.69	46.73	46.81	47.51	46.94	46.61	46.55	46.50	46.50
5	46.70	47.60	46.95	46.80	46.74	46.89	47.27	46.88	46.59	46.54	46.49	46.49
6	46.66	47.19	46.89	46.94	46.77	47.13	47.09	46.84	46.58	46.53	46.50	46.49
7	46.64	46.99	46.88	46.94	46.83	47.34	47.00	46.81	46.58	46.55	46.49	46.48
8	46.62	46.89	46.87	46.96	47.00	47.66	46.94	46.78	46.59	46.84	46.49	46.47
9	46.61	46.81	47.02	47.00	47.30	47.53	46.88	46.76	46.59	46.74	46.52	46.47
10	46.60	46.77	47.98	46.99	47.32	47.23	46.83	46.74	46.57	46.64	46.52	46.47
11	46.59	46.74	47.66	46.95	47.13	47.08	46.80	46.72	46.56	46.59	46.51	46.46
12	46.59	47.22	47.32	46.97	47.01	47.00	46.79	46.70	46.55	46.57	46.51	46.46
13	46.63	47.74	47.12	46.98	46.93	46.96	46.79	46.68	46.55	46.55	46.51	46.45
14	46.72	47.30	47.00	49.05	47.04	47.02	46.76	46.67	46.55	46.56	46.50	46.45
15	46.69	47.06	46.92	48.03	47.28	47.12	46.73	46.67	46.55	46.56	46.50	46.44
16	46.66	46.95	46.87	47.36	47.18	47.09	46.71	46.66	46.54	46.60	46.50	46.44
17	46.63	46.89	46.84	47.10	47.05	47.03	46.70	46.65	46.54	46.62	46.49	46.44
18	46.61	46.84	46.81	46.96	46.96	46.97	46.69	46.64	46.54	46.71	46.48	46.43
19	46.67	46.90	46.79	46.90	46.90	46.92	46.69	46.63	46.53	46.68	46.48	46.42
20	46.78	47.10	46.75	46.87	46.85	46.89	46.69	46.72	46.53	46.62	46.52	46.41
21	46.77	47.05	46.73	46.84	46.88	46.87	46.68	46.74	46.52	46.59	46.49	46.41
22	46.74	47.00	46.72	46.80	47.27	46.85	46.71	46.72	46.52	46.58	46.48	46.40
23	46.72	46.96	46.75	46.76	47.25	46.92	46.83	46.71	46.52	46.62	46.47	46.39
24	46.73	47.00	46.79	46.72	47.11	47.42	46.88	46.72	46.51	46.58	46.48	46.38
25	46.73	47.75	46.79	46.72	47.00	47.31	46.88	46.70	46.51	46.56	46.48	46.38
26	46.72	47.55	46.80	46.72	46.94	47.13	46.88	46.68	46.50	46.55	46.49	46.38
27	46.73	47.24	46.78	46.72	46.91	47.01	46.89	46.66	46.50	46.53	46.53	46.38
28	46.72	47.09	46.74	46.70	46.92	48.14	46.86	46.65	46.50	46.55	46.52	46.37
29	46.72	46.98	46.74	46.71	---	48.50	46.84	46.64	46.50	46.55	46.53	46.37
30	46.71	46.95	46.73	46.73	---	47.55	46.88	46.63	46.51	46.53	46.54	46.36
31	46.71	---	46.72	46.72	---	47.21	---	46.62	---	46.54	46.54	---
MEAN	46.77	47.05	46.99	46.96	46.98	47.17	46.92	46.75	46.55	46.59	46.50	46.44
MAX	49.17	47.75	47.98	49.05	47.32	48.50	47.83	47.11	46.62	46.84	46.54	46.52
MIN	46.59	46.68	46.72	46.68	46.72	46.81	46.68	46.62	46.50	46.51	46.47	46.36

03182888 DRY CREEK AT TUCKAHOE, WV—Continued



03183500 GREENBRIER RIVER AT ALDERSON, WV

LOCATION.--Lat 37°43'27", long 80°38'30", NAD 27, 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. WDR WV-97-1: 1930(M), 1932(M), 1935-37(M), 1939(P), 1943(P), 1946(M), 1955(P), 1963(M), 1967(M), 1974(M), 1977(M).

GAGE.--Water-stage recorder with satellite telemeter. Datum of gage is 1,529.42 ft above NGVD 29. Prior to Oct. 15, 1929, nonrecording gage at bridge 400 ft downstream at same datum.

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

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 29	1000	*23,700	*11.14	No other peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4,130	1,220	8,550	1,220	1,040	2,330	4,670	10,400	788	582	2,310	481
2	2,550	1,090	13,600	1,140	1,030	2,130	4,560	7,430	689	506	1,320	421
3	1,850	976	7,540	1,070	1,030	1,850	8,340	5,180	650	401	920	371
4	1,460	1,320	5,060	1,000	1,070	1,630	7,280	3,780	648	314	740	333
5	1,160	6,910	3,650	1,190	1,120	1,790	5,680	2,840	630	254	527	299
6	935	6,090	2,830	1,830	1,190	3,370	4,530	2,280	635	243	451	243
7	779	4,000	2,560	2,200	1,380	4,380	3,660	1,950	584	265	377	218
8	657	2,860	2,690	2,370	1,800	6,920	3,060	1,750	585	515	348	200
9	564	2,140	3,560	2,980	2,870	9,850	2,990	1,570	514	2,330	318	188
10	502	1,660	10,200	3,340	4,260	6,130	2,660	1,380	469	2,040	433	177
11	456	1,370	9,090	3,020	4,550	4,420	2,230	1,250	494	1,150	771	178
12	421	1,810	6,500	2,680	3,550	3,560	1,950	1,180	446	733	936	137
13	475	3,930	4,970	2,330	2,900	3,080	1,800	1,070	455	513	672	127
14	691	3,670	3,930	6,410	2,720	2,910	1,670	985	471	425	511	119
15	969	2,820	3,070	9,750	4,520	3,140	1,480	959	461	582	412	117
16	939	2,310	2,480	6,470	4,880	3,090	1,280	974	391	1,250	363	114
17	843	1,960	2,090	4,610	4,110	2,860	1,130	1,080	355	1,580	365	113
18	783	1,690	1,920	3,360	3,420	2,570	1,040	1,020	335	1,990	389	108
19	833	1,530	1,760	2,510	2,760	2,330	981	852	319	2,100	487	106
20	1,280	1,700	1,570	2,260	2,270	2,280	938	1,060	292	1,680	443	111
21	1,450	2,120	1,200	2,080	2,170	2,560	891	4,510	273	1,380	446	92
22	1,500	2,120	1,060	1,850	3,130	2,670	946	4,930	262	1,210	406	87
23	1,350	1,950	1,310	1,560	4,490	2,580	2,470	3,260	257	1,000	357	87
24	1,170	1,900	3,030	1,150	3,900	5,850	5,540	2,430	250	826	309	87
25	1,550	6,600	4,240	983	3,370	8,840	4,370	2,060	245	652	265	88
26	1,940	7,630	3,140	1,130	2,840	5,590	3,500	1,820	233	532	266	81
27	1,690	5,220	2,540	1,270	2,500	4,190	3,210	1,640	229	436	344	78
28	1,470	4,220	1,910	1,100	2,340	6,580	2,870	1,450	323	523	791	74
29	1,320	4,730	1,580	855	---	19,700	2,450	1,230	285	814	981	81
30	1,240	4,100	1,500	932	---	10,400	3,210	1,060	952	723	939	89
31	1,240	---	1,400	982	---	6,470	---	927	---	3,370	640	---
TOTAL	38,197	91,646	120,530	75,632	77,210	146,050	91,386	74,307	13,520	30,919	18,837	5,005
MEAN	1,232	3,055	3,888	2,440	2,758	4,711	3,046	2,397	451	997	608	167
MAX	4,130	7,630	13,600	9,750	4,880	19,700	8,340	10,400	952	3,370	2,310	481
MIN	421	976	1,060	855	1,030	1,630	891	852	229	243	265	74
CFSM	0.90	2.24	2.85	1.79	2.02	3.45	2.23	1.76	0.33	0.73	0.45	0.12
IN.	1.04	2.50	3.29	2.06	2.11	3.98	2.49	2.03	0.37	0.84	0.51	0.14

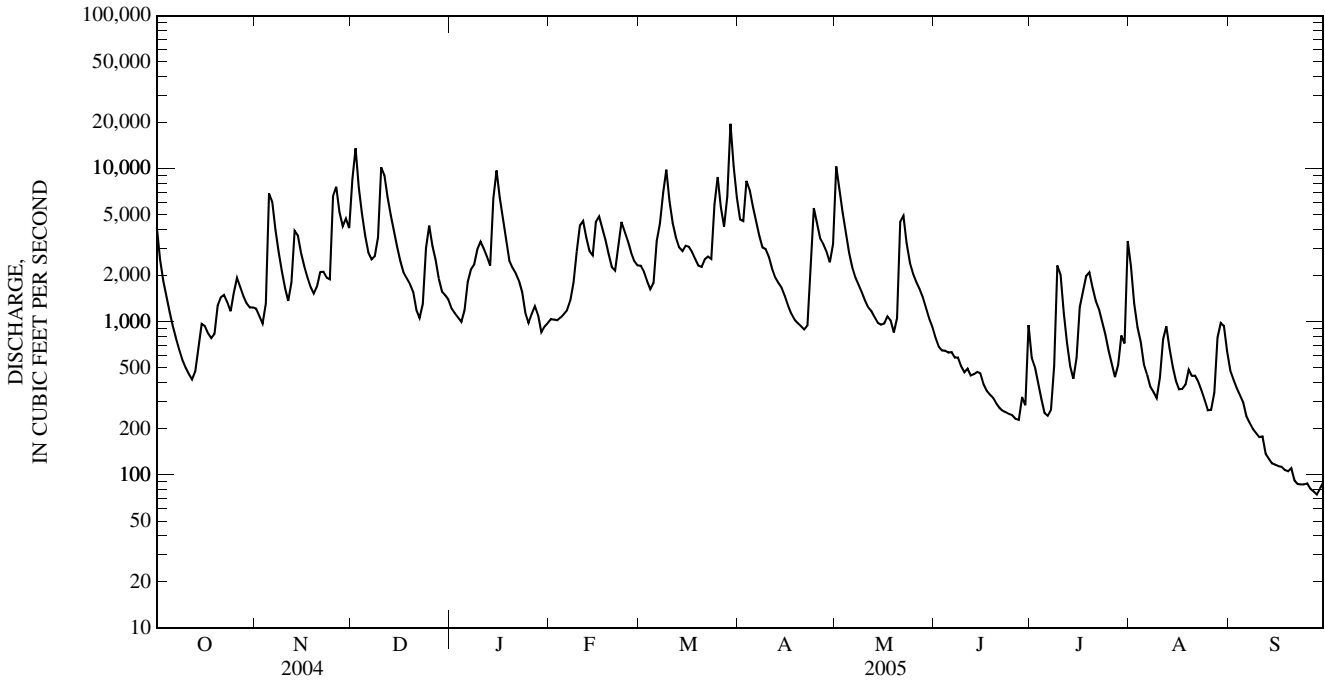
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1895 - 2005, BY WATER YEAR (WY)

MEAN	725	1,316	2,268	3,023	3,487	4,511	3,100	2,425	1,348	814	715	466
MAX	4,480	6,006	6,409	7,866	7,739	10,970	7,568	5,700	6,045	3,481	4,390	2,805
(WY)	(1977)	(1986)	(1974)	(1996)	(1897)	(1963)	(1987)	(1996)	(1907)	(1919)	(1898)	(2003)
MIN	35.6	68.9	172	242	411	1,332	802	489	203	68.9	43.2	33.8
(WY)	(1931)	(1931)	(1931)	(1981)	(1934)	(1915)	(1915)	(1941)	(1991)	(1930)	(1930)	(1930)

03183500 GREENBRIER RIVER AT ALDERSON, WV—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1895 - 2005	
ANNUAL TOTAL	938,883		783,239		2,011	
ANNUAL MEAN	2,565		2,146		3,606	
HIGHEST ANNUAL MEAN					983	
LOWEST ANNUAL MEAN					1941	
HIGHEST DAILY MEAN	28,000	Apr 14	19,700	Mar 29	63,100	Jan 20, 1996
LOWEST DAILY MEAN	143	Sep 6	74	Sep 28	26	Aug 11, 1930
ANNUAL SEVEN-DAY MINIMUM	159	Sep 1	82	Sep 23	28	Sep 29, 1930
MAXIMUM PEAK FLOW			23,700	Mar 29	(a)94,000	Jan 20, 1996
MAXIMUM PEAK STAGE			11.14	Mar 29	24.33	Jan 20, 1996
INSTANTANEOUS LOW FLOW			72	Sep 27	24	(b)
ANNUAL RUNOFF (CFSM)	1.88		1.57		1.47	
ANNUAL RUNOFF (INCHES)	25.61		21.36		20.03	
10 PERCENT EXCEEDS	5,950		4,690		4,830	
50 PERCENT EXCEEDS	1,700		1,380		957	
90 PERCENT EXCEEDS	252		270		145	

a From rating curve extended above 37,000 ft³/s on basis of slope-area measurement of peak flow.
 b Aug. 12, Oct. 1, 2, 1930.



03184000 GREENBRIER RIVER AT HILLDALE, WV

LOCATION.--Lat 37°38'24", long 80°48'19", NAD 27, Summers County, Hydrologic Unit 05050003, on left bank 100 ft downstream from State Highway 3 bridge at Hilldale, 0.1 mi upstream from Howard Creek, 0.9 mi upstream from Powley Creek, 5.0 mi southeast of Hinton, and at mile 5.5. Records include flow of Howard Creek.

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

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

REVISED RECORDS.--WSP 1435: 1955. WDR WV-82-1: Drainage area. WDR WV-97-1: 1937(P), 1938(M), 1939(P), 1940-42(M), 1953(M), 1955(M), 1960(M), 1962-64(M), 1967(P), 1969-70(M), 1972(P), 1974(M), 1977-78(P), 1984(M). WDR WV-05-1: 2004 (P).

GAGE.--Water-stage recorder with satellite telemeter. Datum of gage is 1,388.66 ft above NGVD 29 (levels by U.S. Army Corps of Engineers).

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

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 29	1400	*26,000	*13.60	No other peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5,150	1,250	8,420	1,390	1,190	2,710	5,780	10,900	897	802	3,010	582
2	3,220	1,120	16,900	1,250	1,260	2,540	5,360	9,020	818	612	1,580	466
3	2,250	994	9,640	1,170	1,180	2,210	9,580	6,200	766	522	970	406
4	1,700	1,640	6,350	1,100	1,250	1,940	9,060	4,580	733	435	777	350
5	1,310	6,740	4,630	1,380	1,340	2,050	7,030	3,490	705	356	604	307
6	1,000	7,750	3,690	2,040	1,410	4,010	5,620	2,750	666	302	471	274
7	774	4,930	3,510	2,690	1,580	5,140	4,570	2,270	641	318	425	240
8	643	3,470	3,380	2,910	2,090	7,120	3,870	1,940	558	776	381	211
9	553	2,530	4,290	3,550	3,290	12,000	3,520	1,690	554	1,720	375	189
10	490	1,890	11,400	4,020	4,830	7,780	3,360	1,470	495	2,580	373	174
11	441	1,480	11,700	3,790	5,440	5,590	2,750	1,280	476	1,350	620	161
12	403	1,650	8,090	3,430	4,490	4,490	2,360	1,170	465	852	850	150
13	418	4,320	6,170	2,990	3,640	3,980	2,090	1,050	442	598	705	142
14	726	4,380	4,920	7,360	3,360	3,690	1,900	973	483	485	543	134
15	831	3,400	3,920	12,100	4,920	3,830	1,690	918	471	445	440	126
16	873	2,700	3,170	8,190	5,920	3,840	1,450	877	416	904	369	120
17	755	2,230	2,630	5,810	5,050	3,560	1,260	869	368	1,640	347	115
18	662	1,890	2,310	4,310	4,250	3,170	1,140	916	337	2,460	345	110
19	733	1,660	2,130	3,190	3,450	2,760	1,060	808	310	2,300	423	104
20	1,160	1,750	1,860	2,720	2,790	2,590	1,020	845	295	2,010	448	100
21	2,190	2,190	1,550	2,450	2,530	2,760	963	3,520	279	1,520	437	99
22	1,650	2,350	1,180	2,170	3,430	2,960	955	5,870	253	1,200	434	95
23	1,490	2,160	1,280	1,830	5,150	2,870	1,920	3,870	238	978	367	91
24	1,270	2,100	2,310	1,300	4,760	4,580	5,650	2,830	224	804	317	88
25	1,350	6,070	4,760	1,150	4,120	10,600	5,130	2,310	208	678	266	86
26	1,970	9,510	3,740	1,120	3,480	6,560	4,050	2,030	192	554	238	84
27	1,890	6,570	2,910	1,360	2,980	4,840	3,670	1,790	178	463	410	84
28	1,610	4,970	2,280	1,300	2,740	6,490	3,340	1,580	185	400	921	84
29	1,420	5,230	1,790	1,050	---	21,800	2,860	1,330	253	1,670	1,160	86
30	1,310	4,870	1,630	1,000	---	13,500	2,710	1,130	493	1,450	999	88
31	1,270	---	1,570	1,050	---	8,010	---	1,010	---	3,060	787	---
TOTAL	41,512	103,794	144,110	91,170	91,920	169,970	105,718	81,286	13,399	34,244	20,392	5,346
MEAN	1,339	3,460	4,649	2,941	3,283	5,483	3,524	2,622	447	1,105	658	178
MAX	5,150	9,510	16,900	12,100	5,920	21,800	9,580	10,900	897	3,060	3,010	582
MIN	403	994	1,180	1,000	1,180	1,940	955	808	178	302	238	84
CFSM	0.83	2.14	2.87	1.82	2.03	3.39	2.18	1.62	0.28	0.68	0.41	0.11
IN.	0.95	2.38	3.31	2.09	2.11	3.91	2.43	1.87	0.31	0.79	0.47	0.12

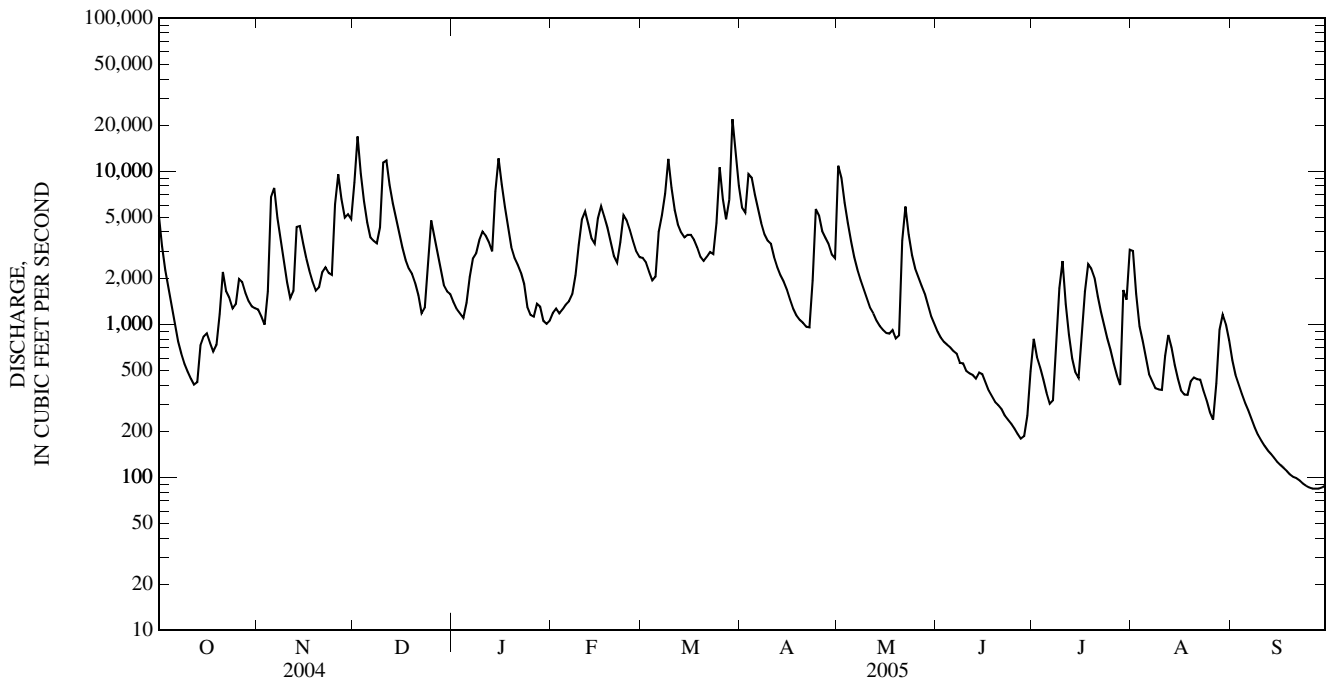
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1936 - 2005, BY WATER YEAR (WY)

MEAN	810	1,500	2,684	3,370	4,110	5,154	3,650	2,896	1,482	786	748	531
MAX	5,112	7,111	7,866	9,208	9,096	12,910	9,535	6,673	6,592	3,372	3,800	3,173
(WY)	(1977)	(2004)	(1974)	(1996)	(1994)	(1963)	(1987)	(1989)	(2003)	(1972)	(1942)	(2003)
MIN	46.4	76.8	260	302	731	1,436	901	586	219	84.4	72.1	59.6
(WY)	(1954)	(1954)	(1961)	(1981)	(2002)	(1988)	(1986)	(1941)	(1999)	(1999)	(1987)	(1946)

03184000 GREENBRIER RIVER AT HILLDALE, WV—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1936 - 2005	
ANNUAL TOTAL	1,115,867		902,861			
ANNUAL MEAN	3,049		2,474		2,304	
HIGHEST ANNUAL MEAN					4,360	2003
LOWEST ANNUAL MEAN					1,189	1941
HIGHEST DAILY MEAN	31,100	Apr 14	21,800	Mar 29	79,400	Jan 20, 1996
LOWEST DAILY MEAN	107	Sep 7	84	(a)	39	Sep 19, 1946
ANNUAL SEVEN-DAY MINIMUM	125	Sep 1	86	Sep 24	44	Oct 17, 1953
MAXIMUM PEAK FLOW			26,000	Mar 29	93,000	Jan 20, 1996
MAXIMUM PEAK STAGE			13.60	Mar 29	26.88	Jan 20, 1996
INSTANTANEOUS LOW FLOW			84	(b)	39	(c)
ANNUAL RUNOFF (CFSM)	1.88		1.53		1.42	
ANNUAL RUNOFF (INCHES)	25.64		20.75		19.33	
10 PERCENT EXCEEDS	6,880		5,630		5,590	
50 PERCENT EXCEEDS	1,950		1,580		1,080	
90 PERCENT EXCEEDS	294		289		152	

a Sept. 26-28.
 b Sept. 25, 26, 27, 28, 29.
 c Sept. 18-20, 1946, Sept. 16, 1964.



REVISIONS.--The peak discharges and associated stages for the 2004 water year have been revised, as shown in the following table.

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov 13, 2003	1900	39,000	17.15
Nov 20, 2003	1400	*48,800	*19.51
Feb 07, 2004	1700	25,100	13.34
Apr 14, 2004	1500	36,100	16.41
Sept 29, 2004	0400	29,400	14.62

03185000 PINEY CREEK AT RALEIGH, WV

LOCATION (REVISED).--Lat 37°45'38", long 81°09'45", NAD 27, Raleigh County, Hydrologic Unit 05050004, on left bank at Raleigh, 0.6 mi downstream from Whitestick Creek, 0.4 mi upstream from Beaver Creek, 1.5 mi southeast of Beckley, and at mile 11.9.

DRAINAGE AREA.--52.7 mi².

PERIOD OF RECORD.--August 1951 to September 1982, December 2002 to current year.

REVISED RECORDS.--WSP 1435: 1955(M). WDR WV-97-1: Drainage area, 1961(m), 1963(m), 1967(m), 1970(m) 1972(m), 1977(m), 1980(m). WDR WV-04-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is unknown. Prior to Dec. 4, 2002, gage located 500 ft upstream at a datum of 2,087.24 ft above NGVD 29.

REMARKS.--Records fair except those for period of estimated daily discharges (no gage-height record), which is poor.

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec 1	1100	*742	*4.05	No other peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	54	63	541	45	81	87	157	274	22	15	23	23
2	48	57	351	41	81	78	253	203	26	19	19	17
3	52	52	177	38	98	69	322	131	27	16	16	15
4	41	151	112	43	102	65	373	97	24	12	14	14
5	33	175	86	111	100	126	261	78	22	10	13	12
6	32	139	83	123	96	206	174	69	e19	20	19	11
7	28	110	99	100	96	248	130	63	e17	117	14	9.9
8	26	89	100	115	106	456	110	58	e16	230	14	9.5
9	24	71	156	112	123	410	101	53	e19	44	16	8.8
10	21	62	408	98	183	237	84	49	e24	24	15	8.4
11	18	55	343	80	147	183	76	46	e20	18	14	8.0
12	18	95	226	74	123	165	71	43	e18	15	12	7.8
13	28	107	162	66	109	166	70	41	e17	13	10	7.6
14	64	96	122	182	149	154	62	43	16	12	8.9	7.4
15	39	85	98	184	169	142	55	61	31	20	8.4	8.3
16	31	76	82	126	155	134	50	45	15	21	49	8.6
17	26	69	75	94	136	123	46	37	15	29	30	8.5
18	23	74	69	71	114	107	43	36	17	61	16	8.3
19	157	79	64	66	97	96	43	39	15	48	302	8.1
20	165	81	59	58	86	93	42	86	20	35	109	7.6
21	187	82	59	55	130	92	41	74	14	24	64	6.5
22	125	80	49	52	188	87	60	54	12	45	41	5.7
23	84	79	64	52	150	118	90	47	12	28	27	5.4
24	92	113	64	53	131	164	98	44	12	21	20	5.2
25	84	200	57	59	109	147	94	43	10	19	17	5.2
26	73	167	54	50	92	127	94	40	9.3	15	20	5.0
27	82	137	49	48	82	104	96	36	9.1	13	50	5.1
28	80	119	46	50	85	181	93	29	8.9	32	53	5.5
29	77	96	43	59	---	354	88	24	8.6	66	35	7.4
30	78	95	42	89	---	296	195	24	12	35	25	6.2
31	71	---	41	81	---	213	---	24	---	40	25	---
TOTAL	1,961	2,954	3,981	2,475	3,318	5,228	3,472	1,991	507.9	1,117	1,099.3	266.0
MEAN	63.3	98.5	128	79.8	118	169	116	64.2	16.9	36.0	35.5	8.87
MAX	187	200	541	184	188	456	373	274	31	230	302	23
MIN	18	52	41	38	81	65	41	24	8.6	10	8.4	5.0
CFSM	1.20	1.87	2.44	1.51	2.25	3.20	2.20	1.22	0.32	0.68	0.67	0.17
IN.	1.38	2.09	2.81	1.75	2.34	3.69	2.45	1.41	0.36	0.79	0.78	0.19

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1951 - 2005, BY WATER YEAR (WY)

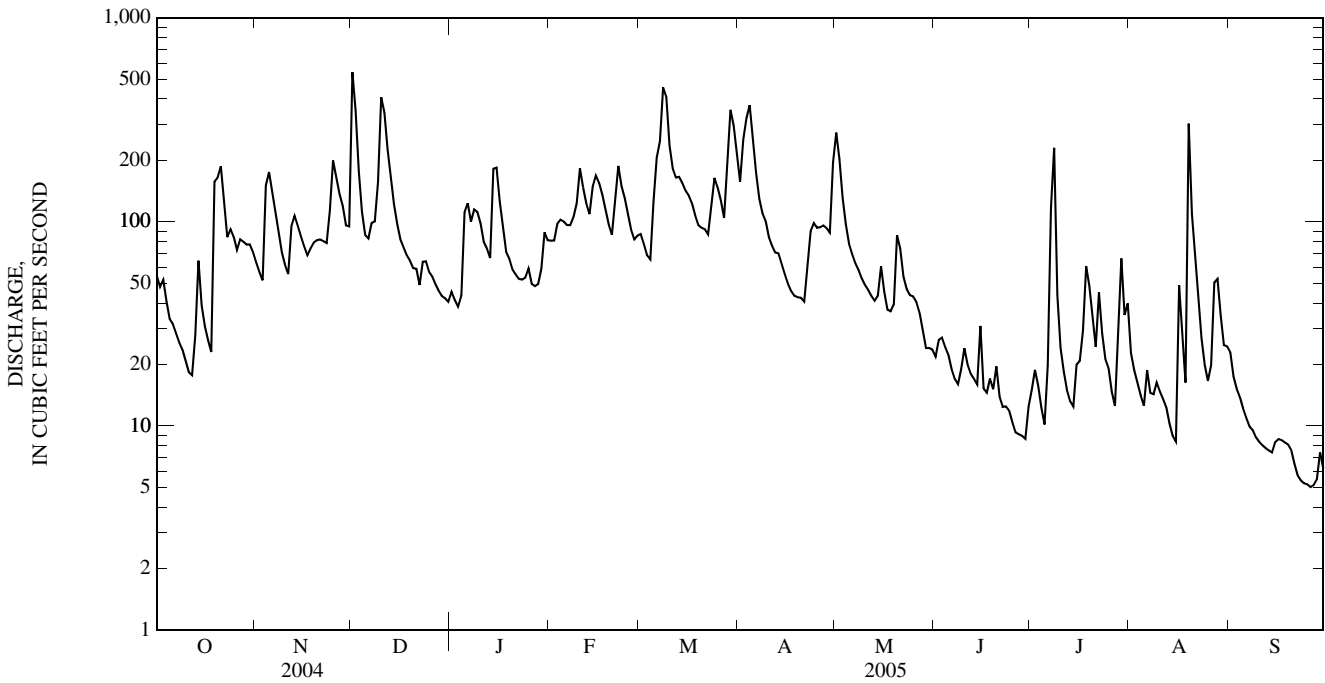
MEAN	20.2	40.9	74.4	99.0	122	140	108	84.1	47.9	29.7	25.8	18.3
MAX	108	246	156	231	342	352	271	236	211	95.4	85.8	103
(WY)	(1977)	(2004)	(1958)	(1957)	(2003)	(1963)	(2003)	(2003)	(2003)	(1962)	(1980)	(2003)
MIN	1.20	1.12	0.87	3.48	31.7	47.6	26.6	15.7	5.94	2.82	2.29	1.39
(WY)	(1964)	(1966)	(1966)	(1966)	(1978)	(1969)	(1963)	(1964)	(1964)	(1966)	(1964)	(1965)

03185000 PINEY CREEK AT RALEIGH, WV—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1951 - 2005	
ANNUAL TOTAL	43,770		28,370.2		65.1	
ANNUAL MEAN	120		77.7		130	
HIGHEST ANNUAL MEAN					30.1	2004
LOWEST ANNUAL MEAN					30.1	1966
HIGHEST DAILY MEAN	1,960	May 31	541	Dec 1	2,210	Mar 12, 1963
LOWEST DAILY MEAN	12	Aug 27	5.0	Sep 26	0.20	(a)
ANNUAL SEVEN-DAY MINIMUM	19	Sep 1	5.3	Sep 22	0.20	Sep 5, 1964
MAXIMUM PEAK FLOW			742	Dec 1	2,870	Mar 12, 1963
MAXIMUM PEAK STAGE			4.05	Dec 1	9.12	May 31, 2004
INSTANTANEOUS LOW FLOW			4.3	Sep 26	0.20	(a)
ANNUAL RUNOFF (CFSM)	2.27		1.47		1.23	
ANNUAL RUNOFF (INCHES)	30.90		20.03		16.78	
10 PERCENT EXCEEDS	222		165		147	
50 PERCENT EXCEEDS	76		58		33	
90 PERCENT EXCEEDS	30		12		4.2	

a Sept. 5-18, 21-23, 1964.

e Estimated



03185400 NEW RIVER AT THURMOND, WV

LOCATION.--Lat 37°57'18", long 81°04'36", NAD 27, Fayette County, Hydrologic Unit 05050004, on right bank at Thurmond, at Chessie System pump house, 0.1 mi upstream from Dunloup Creek, 0.3 mi upstream from railroad/highway bridge, at New River mile 25.8 and Kanawha River mile 122.4.

DRAINAGE AREA.--6,687 mi², excluding that of Dunloup Creek.

PERIOD OF RECORD.--February 1981 to current year.

REVISED RECORDS.--WDR WV-97-1: 1981-92(M).

GAGE.--Water-stage recorder with satellite telemeter. Datum of gage is 1,030.71 ft above NGVD 29.

REMARKS.--No estimated daily discharges. Records fair. Flow regulated by Claytor Lake and Bluestone Lake.

PEAK DISCHARGE FOR CURRENT YEAR.--Maximum discharge, 60,700 ft³/s, Mar. 29, gage height, 16.75 ft.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	36,700	5,700	24,200	7,560	9,070	10,300	29,000	19,800	4,780	4,520	9,300	4,110
2	22,100	8,380	37,700	7,030	10,700	12,100	29,000	22,600	4,680	4,150	7,090	2,490
3	13,800	8,680	27,800	6,660	10,500	10,500	36,000	17,000	4,980	4,030	5,750	2,600
4	10,800	10,600	19,100	6,370	9,680	9,250	33,900	13,700	6,410	4,120	3,820	2,990
5	9,180	17,700	15,000	9,060	10,500	10,100	27,600	11,400	6,630	3,940	3,770	2,700
6	8,080	21,200	11,400	9,410	8,670	12,800	23,500	10,100	6,000	3,590	3,470	2,420
7	5,710	15,000	16,100	5,130	8,240	19,400	20,600	9,120	5,490	3,900	2,890	2,130
8	7,100	11,300	20,400	4,790	12,100	24,600	18,300	8,200	5,310	11,000	3,290	2,040
9	5,650	9,510	17,700	5,320	13,000	30,300	16,300	7,880	5,890	9,510	3,730	2,010
10	5,720	8,130	30,300	8,810	15,600	26,500	13,500	7,530	6,380	8,560	3,890	2,110
11	5,180	6,910	35,400	17,500	17,000	21,400	12,200	7,000	7,260	6,540	4,200	1,860
12	4,700	7,440	27,600	17,000	16,800	18,200	10,300	6,870	7,530	4,820	5,180	1,790
13	5,200	12,300	22,400	15,100	13,100	18,000	11,700	6,380	5,650	4,120	5,080	1,670
14	8,700	16,400	17,600	18,900	12,100	16,400	11,400	6,440	5,660	3,660	4,800	1,760
15	13,800	14,800	14,500	38,400	15,900	13,200	12,400	6,750	5,840	4,290	3,450	1,600
16	8,700	11,400	13,100	37,300	17,900	14,900	13,000	6,490	5,920	4,920	2,970	1,570
17	7,130	9,620	12,100	27,400	16,400	14,400	11,300	6,880	5,240	8,350	3,250	1,570
18	6,910	9,290	10,700	19,500	14,500	15,800	10,100	6,970	4,650	9,430	2,800	1,560
19	4,810	8,710	8,690	14,000	13,700	13,200	9,700	6,490	4,510	9,530	4,050	1,550
20	9,360	8,580	6,760	11,900	11,400	11,600	9,470	7,240	3,740	7,140	5,700	1,540
21	10,200	8,520	8,080	11,900	8,020	10,900	8,480	9,530	3,680	6,310	5,130	1,530
22	8,060	7,980	9,030	11,800	13,000	12,800	8,480	13,300	3,690	5,790	4,000	1,520
23	9,510	6,570	7,040	9,030	17,600	12,800	9,650	10,700	4,070	5,140	4,170	1,520
24	6,870	6,570	9,670	6,640	15,000	14,800	14,800	8,330	4,220	4,780	3,550	1,520
25	5,770	14,300	15,700	6,910	13,600	24,800	15,300	7,680	3,620	3,970	3,280	1,510
26	7,710	33,500	15,800	8,350	11,900	21,600	12,800	7,500	3,310	3,740	3,050	1,370
27	9,150	26,100	10,200	6,930	10,400	17,100	11,200	6,700	3,260	3,740	4,180	1,320
28	8,260	18,900	8,150	8,500	9,550	17,600	9,520	6,400	3,370	4,260	5,120	1,460
29	8,200	15,800	10,400	9,730	---	47,700	9,780	5,590	4,060	5,370	5,350	1,560
30	8,210	15,900	7,830	8,210	---	50,500	11,600	5,570	4,070	5,040	5,250	1,960
31	7,850	---	7,770	6,740	---	39,100	---	5,050	---	6,540	5,150	---
TOTAL	289,120	375,790	498,220	381,880	355,930	592,650	470,880	281,190	149,900	174,800	136,710	57,340
MEAN	9,326	12,530	16,070	12,320	12,710	19,120	15,700	9,071	4,997	5,639	4,410	1,911
MAX	36,700	33,500	37,700	38,400	17,900	50,500	36,000	22,600	7,530	11,000	9,300	4,110
MIN	4,700	5,700	6,760	4,790	8,020	9,250	8,480	5,050	3,260	3,590	2,800	1,320

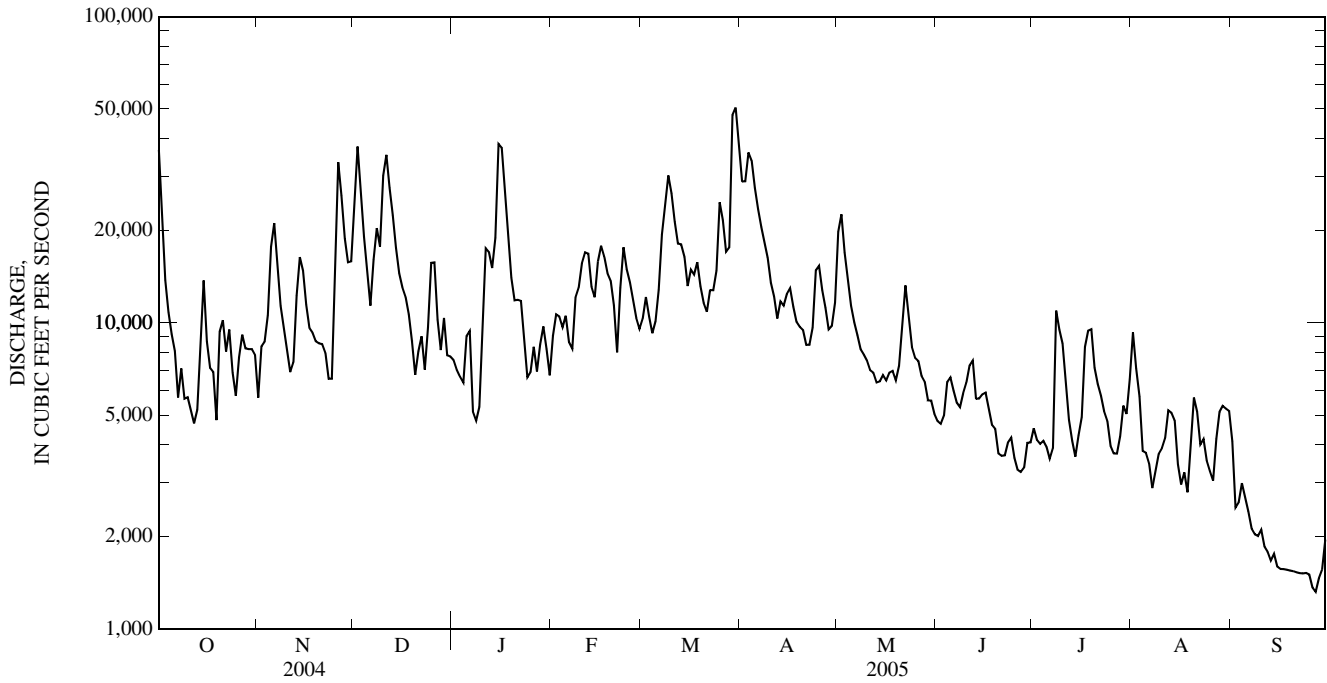
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1981 - 2005, BY WATER YEAR (WY)

MEAN	3,978	6,666	8,920	11,240	14,870	16,160	14,010	11,690	7,534	4,600	4,042	3,806
MAX	16,510	21,590	18,020	27,470	28,590	34,950	40,500	19,650	20,840	11,990	10,160	15,000
(WY)	(1990)	(2004)	(1997)	(1996)	(1994)	(1993)	(1987)	(1989)	(2003)	(2003)	(2003)	(2004)
MIN	1,388	1,499	2,366	3,517	3,631	4,154	3,958	5,033	2,010	1,532	1,393	1,626
(WY)	(1992)	(2002)	(2002)	(2000)	(2002)	(1988)	(1986)	(2000)	(1988)	(1988)	(1988)	(1998)

03185400 NEW RIVER AT THURMOND, WV—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1981 - 2005	
ANNUAL TOTAL	4,361,260		3,764,410			
ANNUAL MEAN	11,920		10,310		8,967	
HIGHEST ANNUAL MEAN					14,600	2003
LOWEST ANNUAL MEAN					4,336	1988
HIGHEST DAILY MEAN	65,300	Apr 14	50,500	Mar 30	92,500	Jan 20, 1996
LOWEST DAILY MEAN	1,960	Aug 29	1,320	Sep 27	808	Jul 11, 1988
ANNUAL SEVEN-DAY MINIMUM	2,270	Sep 1	1,460	Sep 22	852	Jul 6, 1988
MAXIMUM PEAK FLOW			60,700	Mar 29	(a)100,000	Jan 20, 1996
MAXIMUM PEAK STAGE			16.75	Mar 29	20.35	Jan 20, 1996
INSTANTANEOUS LOW FLOW			1,310	Sep 27	589	Oct 20, 1994
10 PERCENT EXCEEDS	22,800		19,200		19,300	
50 PERCENT EXCEEDS	9,180		8,350		5,610	
90 PERCENT EXCEEDS	3,710		3,290		1,820	

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



03186500 WILLIAMS RIVER AT DYER, WV

LOCATION.--Lat 38°22'44", long 80°29'03", NAD 27, 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 with satellite telemeter. Datum of gage is 2,193.46 ft above NGVD 12. Prior to June 11, 1930, nonrecording gage at same site and datum.

REMARKS.--Records good except those for the period Oct. 1 to June 17 (lagging intakes) which are fair, and for period of estimated daily discharges (ice effect), which are poor.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 4,600 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar 23	2330	6,120	8.65	Mar 28	1300	*8,050	*10.01

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	418	219	1,740	249	e135	254	715	1,790	117	32	201	156
2	305	193	1,110	280	e120	200	1,470	987	101	24	172	108
3	248	207	721	265	116	193	1,120	667	110	20	112	78
4	191	884	529	407	112	182	901	484	104	15	81	62
5	149	1,120	396	726	105	203	924	363	90	13	79	50
6	122	696	337	698	121	204	773	297	85	13	89	42
7	103	507	424	683	164	258	608	256	84	23	232	35
8	87	375	518	714	310	1,130	614	236	82	866	102	29
9	78	293	562	686	681	747	489	196	79	242	81	25
10	75	242	954	537	1,460	527	386	174	76	123	81	22
11	70	206	1,190	430	794	420	310	217	102	78	66	19
12	65	347	962	351	564	344	253	165	74	58	49	17
13	64	520	706	297	440	284	224	144	61	61	39	14
14	86	421	548	1,200	679	243	188	136	53	100	33	13
15	95	348	436	850	1,130	230	158	314	45	168	31	12
16	123	290	349	601	921	231	134	252	47	168	93	11
17	190	246	322	459	749	219	119	203	39	330	130	11
18	148	251	277	335	500	224	110	178	34	219	82	11
19	177	348	252	298	366	291	102	158	30	218	69	11
20	370	576	192	274	304	416	94	1,090	27	181	70	11
21	386	506	208	233	593	449	87	1,040	24	178	59	10
22	306	429	218	198	1,420	457	99	646	23	338	47	9.3
23	252	359	1,830	e180	803	1,580	291	491	23	182	37	8.2
24	520	384	1,230	e160	596	3,110	347	390	21	118	31	8.0
25	584	862	708	e210	463	1,180	358	381	18	89	26	7.5
26	397	657	518	e180	357	927	616	323	16	80	24	8.2
27	307	523	384	e155	294	1,000	731	278	14	66	130	9.6
28	275	861	302	e160	277	3,380	556	229	16	56	302	15
29	257	645	275	e180	---	2,420	444	194	24	58	140	16
30	309	499	232	e190	---	1,270	2,020	163	38	59	96	13
31	260	---	210	e150	---	930	---	139	---	447	87	---
TOTAL	7,017	14,014	18,640	12,336	14,574	23,503	15,241	12,581	1,657	4,623	2,871	841.8
MEAN	226	467	601	398	520	758	508	406	55.2	149	92.6	28.1
MAX	584	1,120	1,830	1,200	1,460	3,380	2,020	1,790	117	866	302	156
MIN	64	193	192	150	105	182	87	136	14	13	24	7.5
CFSM	1.77	3.65	4.70	3.11	4.07	5.92	3.97	3.17	0.43	1.17	0.72	0.22
IN.	2.04	4.07	5.42	3.59	4.24	6.83	4.43	3.66	0.48	1.34	0.83	0.24

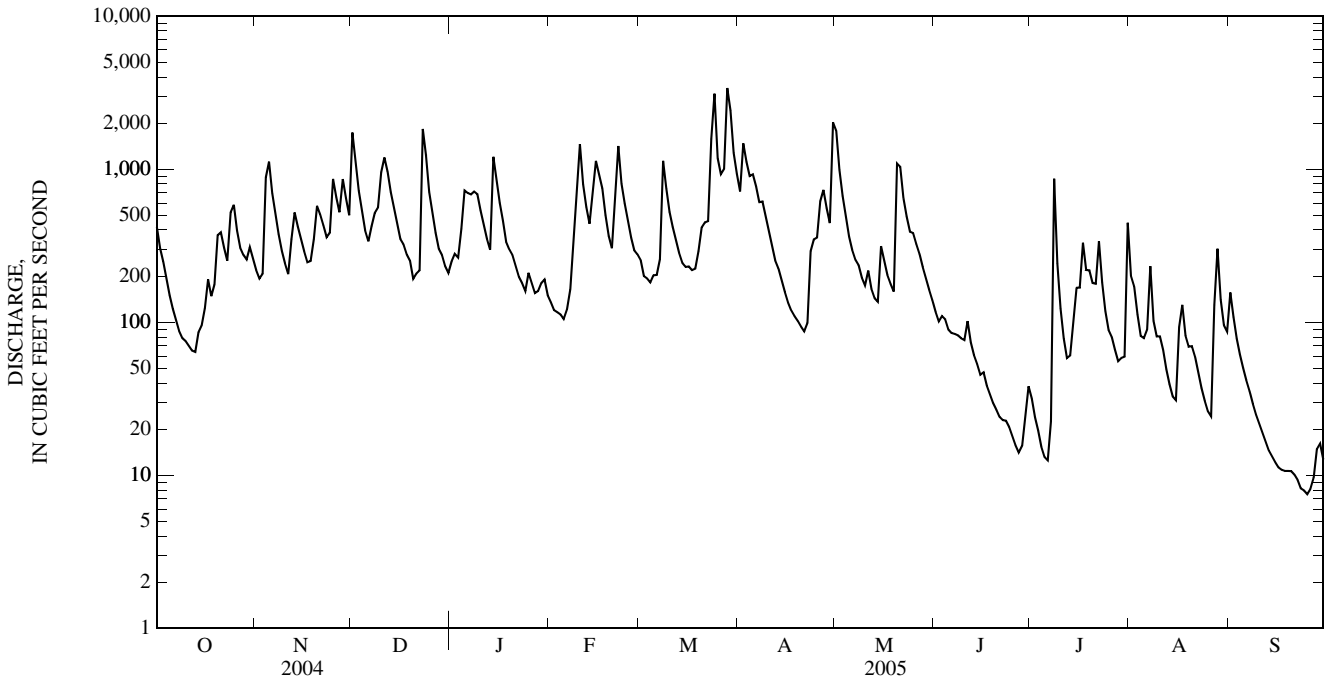
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1929 - 2005, BY WATER YEAR (WY)

MEAN	165	307	415	454	515	660	494	370	211	187	165	102
MAX	852	1,085	934	985	1,005	1,518	1,421	845	769	803	710	580
(WY)	(1930)	(1986)	(1979)	(1996)	(1939)	(1963)	(1958)	(1996)	(1940)	(1954)	(1989)	(2003)
MIN	1.07	8.87	94.9	75.7	118	326	160	66.1	19.5	5.85	6.97	2.34
(WY)	(1954)	(1954)	(1940)	(1940)	(1978)	(1976)	(1995)	(1964)	(1965)	(1930)	(1944)	(1953)

03186500 WILLIAMS RIVER AT DYER, WV—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1929 - 2005	
ANNUAL TOTAL	150,373.8		127,898.8			
ANNUAL MEAN	411		350		336	
HIGHEST ANNUAL MEAN					483	2003
LOWEST ANNUAL MEAN					187	1941
HIGHEST DAILY MEAN	3,510	Sep 28	3,380	Mar 28	10,000	Jul 4, 1932
LOWEST DAILY MEAN	6.4	Sep 5	7.5	Sep 25	0.50	(a)
ANNUAL SEVEN-DAY MINIMUM	10	Sep 1	8.7	Sep 21	0.54	Oct 11, 1953
MAXIMUM PEAK FLOW			8,050	Mar 28	(b)22,000	Jul 4, 1932
MAXIMUM PEAK STAGE			10.01	Mar 28	(c)18.45	Jul 4, 1932
INSTANTANEOUS LOW FLOW			7.5	(d)	0.49	(f)
ANNUAL RUNOFF (CFSM)	3.21		2.74		2.63	
ANNUAL RUNOFF (INCHES)	43.70		37.17		35.71	
10 PERCENT EXCEEDS	984		854		768	
50 PERCENT EXCEEDS	250		219		183	
90 PERCENT EXCEEDS	21		24		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 18.45 ft.
- c From floodmarks.
- d Sept. 25, 26.
- e Estimated
- f Sept. 12, 13, 1995.



03187500 CRANBERRY RIVER NEAR RICHWOOD, WV

LOCATION.--Lat 38°17'43", long 80°31'36", NAD 27, 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 (gage-height data for water years 1972-79 provided by U.S. Forest Service, and discharge computations made from average rating without measurement verification), March 1984 to current year.

REVISED RECORDS.--WDR WV-82-1: Drainage area. WDR WV-97-1: 1946(M), 1948(M), 1954(M), 1967(P), 1970(M), 1972-79(M), 1980-81(P), 1986(P), 1989(P), 1991-92(M), 1994(P).

GAGE.--Water-stage recorder with satellite telemeter. Elevation of gage is approximately 2,100 ft above NGVD 29, from topographic map.

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

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of July 19, 1954, reached a stage of 12.22 ft; discharge, 12,200 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)
Mar 23	2400	3,230	7.02	Mar 28	1300	*5,360	(a)*8.37

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	303	196	1,030	200	98	183	517	1,260	92	19	215	168
2	232	172	713	236	92	e130	981	690	80	15	145	117
3	205	175	451	229	91	e125	805	461	90	13	165	86
4	165	531	330	345	87	e110	625	337	81	9.8	98	66
5	135	748	259	666	80	e135	635	263	67	7.6	66	52
6	112	454	229	591	93	e130	541	219	55	6.5	49	41
7	96	329	330	541	119	155	418	189	49	9.8	77	32
8	81	255	365	505	207	583	368	171	49	559	52	26
9	69	207	377	474	416	452	306	142	42	202	45	21
10	63	174	596	370	966	329	248	123	42	101	72	17
11	55	151	754	301	547	277	208	269	68	63	52	15
12	49	241	575	256	386	236	181	163	44	45	34	13
13	48	322	427	221	300	212	177	135	32	47	25	11
14	84	253	332	867	469	184	154	123	28	56	19	9.4
15	89	218	269	603	836	166	130	264	63	118	18	8.2
16	118	192	231	424	686	165	113	219	56	96	118	7.4
17	158	172	211	325	594	155	100	179	35	137	147	7.6
18	126	182	186	250	400	157	92	154	27	110	77	7.7
19	180	251	174	220	304	192	85	135	21	122	e59	7.7
20	377	382	142	205	253	255	78	680	19	177	e60	6.6
21	364	326	145	176	427	263	73	711	17	150	61	6.0
22	264	275	159	154	986	269	89	444	17	302	44	5.4
23	213	236	1,100	135	569	943	255	328	16	171	33	4.9
24	302	245	913	120	419	1,950	287	300	15	110	26	4.6
25	364	559	500	163	323	824	279	313	12	80	21	4.1
26	268	408	359	136	258	654	422	264	9.9	72	20	4.1
27	229	317	274	119	217	734	584	219	8.2	53	180	6.2
28	220	550	224	121	202	2,250	424	181	8.8	44	343	21
29	216	441	208	140	---	1,630	334	154	15	66	169	14
30	277	335	178	143	---	908	1,470	128	17	63	119	11
31	229	---	163	111	---	671	---	109	---	326	109	---
TOTAL	5,691	9,297	12,204	9,347	10,425	15,427	10,979	9,327	1,175.9	3,350.7	2,718	800.9
MEAN	184	310	394	302	372	498	366	301	39.2	108	87.7	26.7
MAX	377	748	1,100	867	986	2,250	1,470	1,260	92	559	343	168
MIN	48	151	142	111	80	110	73	109	8.2	6.5	18	4.1
CFSM	2.28	3.85	4.90	3.75	4.63	6.19	4.55	3.74	0.49	1.34	1.09	0.33
IN.	2.63	4.30	5.65	4.32	4.82	7.14	5.08	4.32	0.54	1.55	1.26	0.37

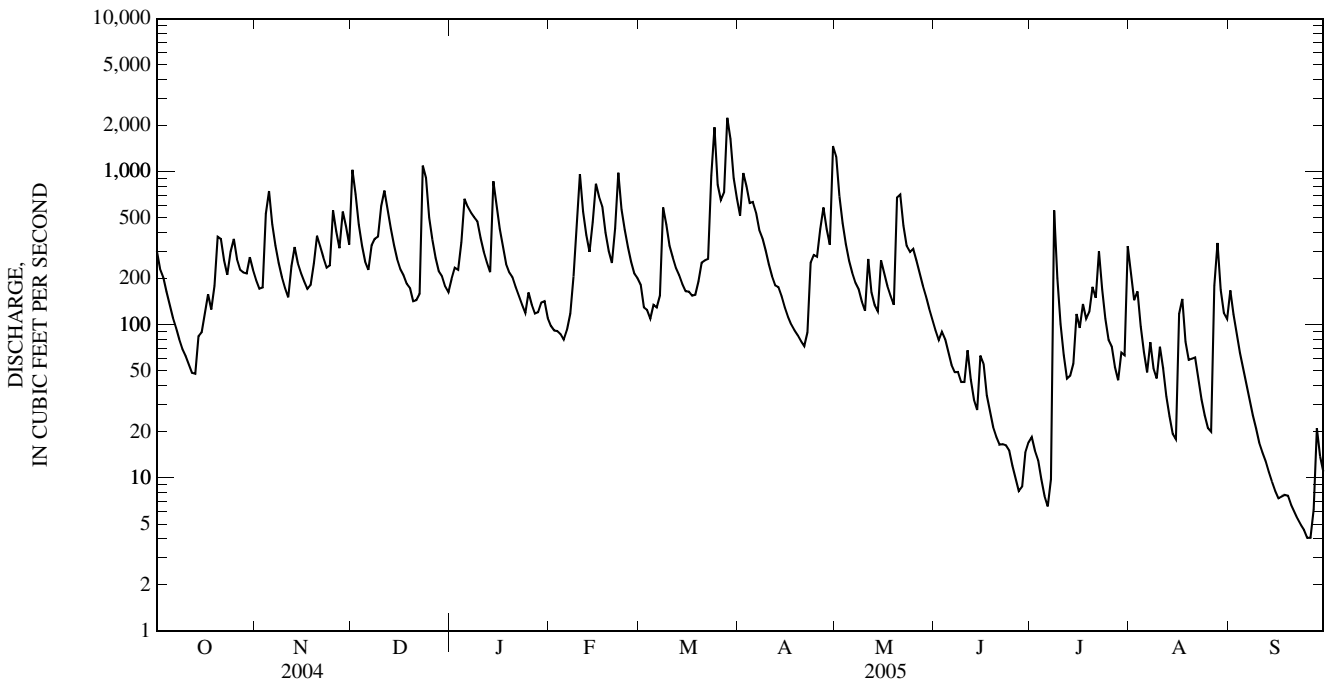
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1945 - 2005, BY WATER YEAR (WY)

MEAN	121	228	305	312	341	435	316	274	156	125	107	94.7
MAX	613	746	632	636	642	954	570	567	470	389	562	381
(WY)	(1977)	(1986)	(1979)	(1974)	(1982)	(1984)	(1987)	(1996)	(2003)	(2001)	(1989)	(2003)
MIN	6.65	12.7	63.0	40.3	68.2	232	114	86.1	12.7	7.64	8.56	2.50
(WY)	(1999)	(2002)	(1966)	(1977)	(1978)	(2001)	(1995)	(1991)	(1966)	(1993)	(1946)	(1946)

03187500 CRANBERRY RIVER NEAR RICHWOOD, WV—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1945 - 2005	
ANNUAL TOTAL	104,088.6		90,742.5			
ANNUAL MEAN	284		249		234	
HIGHEST ANNUAL MEAN					318 1979	
LOWEST ANNUAL MEAN					126 1999	
HIGHEST DAILY MEAN	2,350	May 28	2,250	Mar 28	6,770	Mar 21, 1984
LOWEST DAILY MEAN	7.3	Sep 5	4.1	(b)	0.16	Aug 21, 1987
ANNUAL SEVEN-DAY MINIMUM	10	Sep 1	5.0	Sep 21	0.28	Aug 15, 1987
MAXIMUM PEAK FLOW			5,360	Mar 28	(c)12,200	Nov 19, 2003
MAXIMUM PEAK STAGE			(a)8.37	Mar 28	(d)11.93	Aug 21, 1989
INSTANTANEOUS LOW FLOW			3.6	Sep 26	0.14	Aug 22, 1987
ANNUAL RUNOFF (CFSM)	3.54		3.09		2.91	
ANNUAL RUNOFF (INCHES)	48.16		41.99		39.50	
10 PERCENT EXCEEDS	635		578		530	
50 PERCENT EXCEEDS	184		172		136	
90 PERCENT EXCEEDS	29		18		17	

- a From crest-stage gage.
- b Sept. 25, 26.
- c From rating curve extended above 9,000 ft³/s on basis of slope-area measurement at gage height 11.00 ft.
- d From floodmarks.
- e Estimated.



03189100 GAULEY RIVER NEAR CRAIGSVILLE, WV

LOCATION.--Lat 38°17'27", long 80°38'28", NAD 27, 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 Craigs ville, 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 with satellite telemeter. Datum of gage is 1,870.00 ft above NGVD 29.

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

EXTREMES OUTSIDE PERIOD OF RECORD.--Floods of 1932 and 1954 were about 105,000 ft³/s and 67,500 ft³/s, respectively.

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)
Mar 24	0400	19,600	17.98	Apr 30	1900	12,200	16.06
Mar 28	1700	*20,100	*18.10				

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,830	1,090	5,340	947	709	1,230	2,660	8,930	578	473	1,370	711
2	1,400	975	4,400	1,130	688	1,060	4,680	4,410	494	286	994	635
3	1,300	994	2,810	1,040	693	941	4,670	2,800	498	187	726	463
4	1,040	2,670	2,100	1,330	684	847	3,830	2,050	494	122	519	359
5	827	4,750	1,660	2,670	650	1,070	3,750	1,620	414	92	389	286
6	669	2,840	1,420	2,760	701	1,110	3,040	1,350	343	73	330	229
7	563	2,100	1,720	2,760	895	1,450	2,390	1,160	395	93	690	193
8	472	1,640	1,990	2,640	1,450	4,840	2,250	1,050	368	4,560	513	164
9	400	1,300	2,060	2,610	2,430	3,480	1,940	899	299	1,920	402	141
10	358	1,080	3,310	2,130	5,200	2,410	1,590	786	293	1,050	548	121
11	318	927	4,510	1,750	3,250	1,990	1,340	1,130	388	668	394	107
12	284	1,300	3,980	1,490	2,340	1,700	1,160	847	354	480	296	95
13	276	2,070	2,860	1,280	1,890	1,480	1,080	710	258	399	238	84
14	403	1,740	2,250	4,240	2,510	1,290	953	657	221	425	194	76
15	481	1,480	1,830	3,530	4,340	1,210	816	1,210	266	775	153	67
16	544	1,270	1,540	2,480	3,400	1,240	709	1,210	245	1,110	257	62
17	810	1,110	1,400	1,950	3,030	1,190	634	979	196	1,430	521	60
18	741	1,110	1,230	1,520	2,260	1,230	583	861	157	1,150	388	56
19	958	1,460	1,150	1,290	1,790	1,470	542	758	133	1,430	320	52
20	1,670	2,250	910	1,230	1,540	1,910	503	2,880	117	1,790	365	49
21	1,820	2,070	869	1,050	1,950	1,990	469	4,120	106	1,270	306	45
22	1,430	1,790	1,010	897	5,580	1,900	540	2,540	100	2,010	243	43
23	1,180	1,540	4,610	719	3,300	4,220	1,190	1,900	104	1,390	185	41
24	1,690	1,470	4,890	586	2,470	13,500	1,660	1,690	91	915	151	39
25	2,510	2,850	2,750	759	1,980	5,200	1,750	1,840	77	662	130	38
26	1,860	2,610	2,050	752	1,610	3,610	2,860	1,590	65	585	126	35
27	1,540	2,080	1,620	673	1,370	3,550	3,120	1,320	55	460	772	35
28	1,400	2,680	1,270	509	1,270	10,300	2,380	1,100	72	390	1,450	55
29	1,280	2,460	1,190	576	---	9,980	1,900	945	260	438	878	61
30	1,420	1,980	1,020	738	---	5,320	7,370	794	250	386	591	58
31	1,280	---	915	737	---	3,530	---	676	---	1,760	510	---
TOTAL	32,754	55,686	70,664	48,773	59,980	96,248	62,359	54,812	7,691	28,779	14,949	4,460
MEAN	1,057	1,856	2,279	1,573	2,142	3,105	2,079	1,768	256	928	482	149
MAX	2,510	4,750	5,340	4,240	5,580	13,500	7,370	8,930	578	4,560	1,450	711
MIN	276	927	869	509	650	847	469	657	55	73	126	35
CFSM	2.00	3.51	4.31	2.97	4.05	5.87	3.93	3.34	0.48	1.75	0.91	0.28
IN.	2.30	3.92	4.97	3.43	4.22	6.77	4.39	3.85	0.54	2.02	1.05	0.31

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1965 - 2005, BY WATER YEAR (WY)

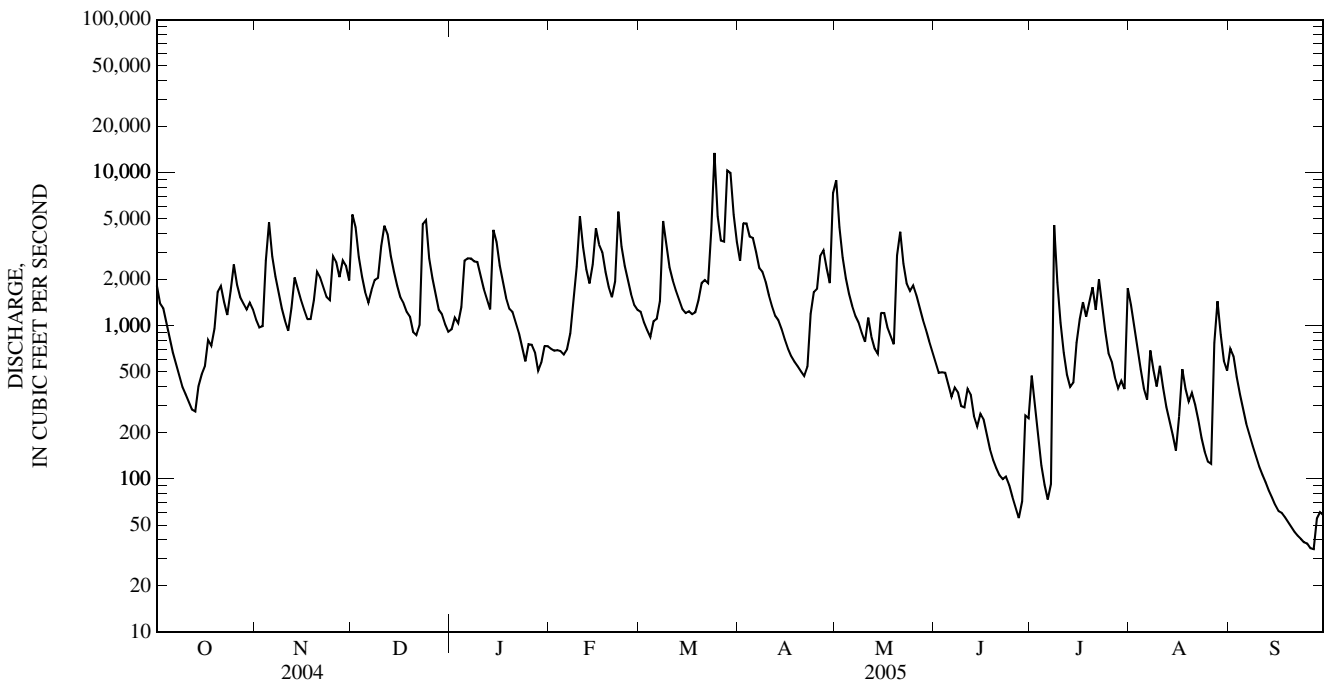
	742	1,400	1,868	1,884	2,099	2,639	2,018	1,697	955	763	661	538
MAX	3,531	4,464	3,561	3,722	3,928	4,968	3,525	3,575	2,730	2,270	2,819	2,056
(WY)	(1977)	(1986)	(1979)	(1996)	(1994)	(1967)	(1987)	(1996)	(1974)	(2001)	(1989)	(2003)
MIN	49.1	78.7	341	464	551	1,433	676	463	100	58.3	67.9	54.3
(WY)	(1993)	(2002)	(1966)	(1977)	(1978)	(1976)	(1995)	(1991)	(1991)	(1999)	(1988)	(1995)

03189100 GAULEY RIVER NEAR CRAIGSVILLE, WV—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1965 - 2005	
ANNUAL TOTAL	626,003		537,155			
ANNUAL MEAN	1,710		1,472		1,436	
HIGHEST ANNUAL MEAN					1,944	
LOWEST ANNUAL MEAN					854	
HIGHEST DAILY MEAN	14,500	May 28	13,500	Mar 24	29,800	Oct 9, 1976
LOWEST DAILY MEAN	38	Sep 5	35	(a)	8.2	Sep 12, 1995
ANNUAL SEVEN-DAY MINIMUM	56	Sep 1	39	Sep 21	9.0	Sep 10, 1995
MAXIMUM PEAK FLOW			20,100	Mar 28	(b)63,500	Nov 19, 2003
MAXIMUM PEAK STAGE			18.10	Mar 28	25.94	Nov 19, 2003
INSTANTANEOUS LOW FLOW			29	Sep 26	7.6	Aug 22, 1987
ANNUAL RUNOFF (CFSM)	3.23		2.78		2.71	
ANNUAL RUNOFF (INCHES)	44.02		37.77		36.88	
10 PERCENT EXCEEDS	3,750		3,170		3,260	
50 PERCENT EXCEEDS	1,220		1,110		840	
90 PERCENT EXCEEDS	163		132		112	

a Sept. 26, 27.

b From rating curve extended above 35,000 ft³/s.



03190400 MEADOW RIVER NEAR MOUNT LOOKOUT, WV

LOCATION.--Lat 38°11'23", long 80°56'49", NAD 27, 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.

REVISED RECORDS.--WDR WV-99-1: 1998 (m). WDR WV-04-1: 2001 (M).

GAGE.--Water-stage recorder with satellite telemeter. Elevation of gage is approximately 1,200 ft above NGVD 29, from topographic map.

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

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)
Apr 30	2300	*5,380	*8.51	No other peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,230	588	2,110	414	406	737	1,600	4,620	319	198	1,140	417
2	867	512	2,850	419	402	656	2,230	3,000	276	205	536	308
3	638	463	2,170	400	426	543	3,160	2,000	259	156	298	228
4	446	747	1,580	387	428	500	3,230	1,400	257	114	188	176
5	327	1,920	1,150	588	406	1,150	2,560	999	233	79	137	140
6	262	1,510	885	1,020	439	1,640	1,910	747	200	66	108	115
7	216	1,180	842	1,280	560	1,870	1,410	617	185	71	91	97
8	183	932	871	1,300	893	3,890	1,090	527	168	1,330	118	85
9	157	713	938	1,400	1,520	3,340	1,070	450	154	909	146	76
10	144	531	1,840	1,270	2,630	2,220	917	393	223	566	270	69
11	129	426	2,770	1,060	2,350	1,660	750	353	170	494	263	64
12	118	532	2,840	881	1,750	1,350	638	327	135	367	227	58
13	122	1,070	2,160	725	1,390	1,120	578	289	118	201	180	54
14	231	1,030	1,610	1,630	1,560	995	518	288	105	139	118	50
15	307	895	1,230	2,190	2,440	1,040	440	509	109	155	89	47
16	297	762	934	1,730	2,160	1,090	375	469	106	259	75	45
17	313	612	800	1,360	1,840	1,030	329	374	97	427	125	43
18	315	561	679	978	1,430	961	303	313	84	444	221	39
19	746	697	613	689	1,070	1,010	283	275	76	475	187	37
20	1,300	939	476	685	823	1,150	268	1,610	70	520	270	35
21	992	1,000	428	603	856	1,180	255	1,890	66	427	693	33
22	767	891	499	509	2,190	1,060	320	1,300	63	421	639	32
23	600	782	624	382	1,990	1,340	1,000	991	63	389	389	30
24	614	729	1,520	338	1,580	3,280	1,320	1,110	61	270	287	29
25	891	1,550	1,310	384	1,250	2,510	1,380	2,030	60	191	185	28
26	814	1,790	986	395	960	1,810	2,010	1,460	55	163	234	28
27	696	1,480	801	381	768	1,440	1,730	1,000	49	132	812	29
28	660	1,230	566	326	707	1,770	1,320	729	45	121	1,380	28
29	610	1,090	574	323	---	3,760	1,050	561	47	146	888	29
30	671	923	489	389	---	3,330	3,070	444	64	259	683	43
31	673	---	439	390	---	2,290	---	368	---	696	552	---
TOTAL	16,336	28,085	37,584	24,826	35,224	51,722	37,114	31,443	3,917	10,390	11,529	2,492
MEAN	527	936	1,212	801	1,258	1,668	1,237	1,014	131	335	372	83.1
MAX	1,300	1,920	2,850	2,190	2,630	3,890	3,230	4,620	319	1,330	1,380	417
MIN	118	426	428	323	402	500	255	275	45	66	75	28
CFSM	1.44	2.56	3.32	2.19	3.45	4.57	3.39	2.78	0.36	0.92	1.02	0.23
IN.	1.66	2.86	3.83	2.53	3.59	5.27	3.78	3.20	0.40	1.06	1.18	0.25

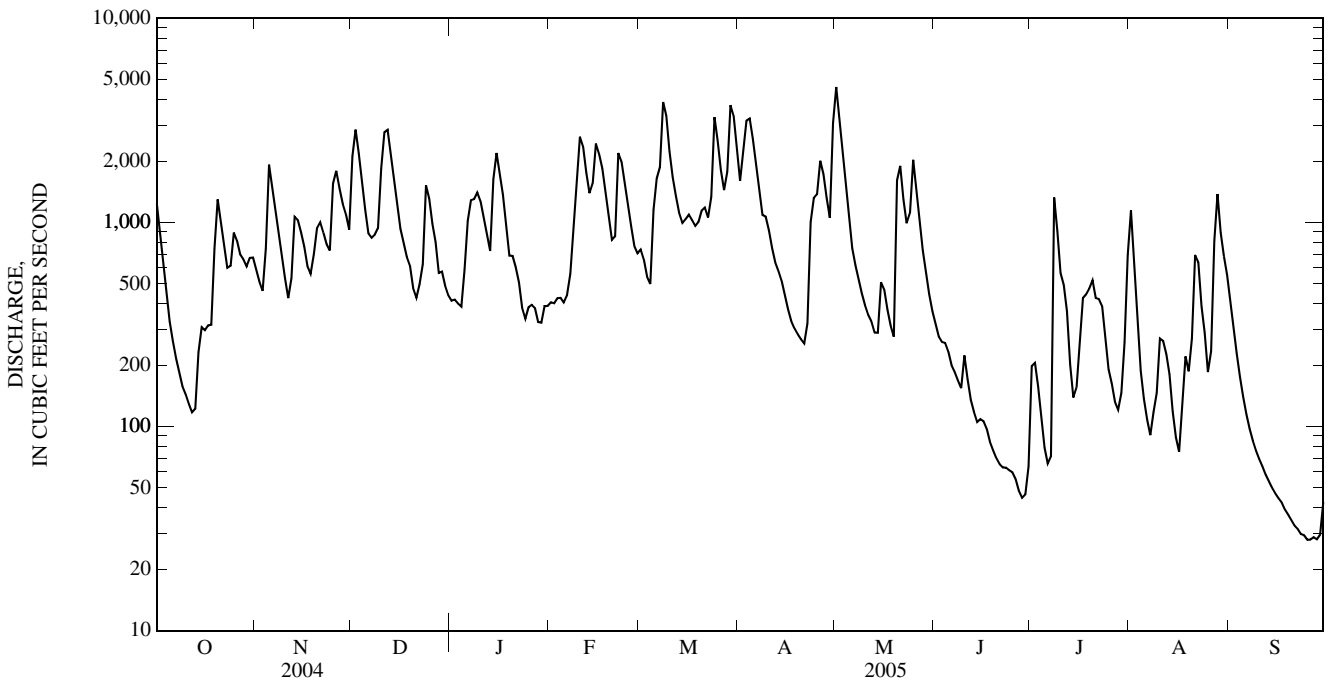
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 2005, BY WATER YEAR (WY)

MEAN	297	638	920	1,036	1,235	1,432	1,114	946	502	331	296	189
MAX	1,574	2,383	1,710	2,246	2,366	2,583	2,687	1,944	1,642	1,241	1,074	793
(WY)	(1977)	(2004)	(1973)	(1996)	(1998)	(1993)	(1987)	(1996)	(2003)	(2001)	(1969)	(2003)
MIN	8.18	25.4	158	140	355	599	368	271	53.7	32.2	12.9	13.1
(WY)	(1992)	(2002)	(2002)	(1977)	(2002)	(1988)	(1995)	(1976)	(1999)	(1991)	(1987)	(1983)

03190400 MEADOW RIVER NEAR MOUNT LOOKOUT, WV—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1966 - 2005	
ANNUAL TOTAL	326,526		290,662			
ANNUAL MEAN	892		796		740	
HIGHEST ANNUAL MEAN					1,055	2003
LOWEST ANNUAL MEAN					410	1988
HIGHEST DAILY MEAN	7,250	Apr 14	4,620	May 1	14,200	Feb 26, 1972
LOWEST DAILY MEAN	26	Sep 7	28	(a)	4.1	(b)
ANNUAL SEVEN-DAY MINIMUM	33	Sep 2	29	Sep 23	5.7	Oct 8, 1991
MAXIMUM PEAK FLOW			5,380	Apr 30	(c)27,200	Nov 19, 2003
MAXIMUM PEAK STAGE			8.51	Apr 30	(d)16.31	Nov 19, 2003
INSTANTANEOUS LOW FLOW			27	(f)	3.0	Aug 22, 1987
ANNUAL RUNOFF (CFSM)	2.44		2.18		2.03	
ANNUAL RUNOFF (INCHES)	33.28		29.62		27.56	
10 PERCENT EXCEEDS	2,040		1,840		1,840	
50 PERCENT EXCEEDS	615		561		410	
90 PERCENT EXCEEDS	92		76		44	

a Sept. 25, 26, 28.
 b Aug. 21, 22, 1987.
 c From rating curve extended above 15,000 ft³/s on basis of slope-conveyance study.
 d From floodmarks.
 f Sept. 25, 26, 28, 29.



03191500 PETERS CREEK NEAR LOCKWOOD, WV

LOCATION.--Lat 38°15'45", long 81°01'24", NAD 27, Nicholas County, Hydrologic Unit 05050005, on left bank, along State Route 39, 0.8 mi downstream from Tate Run, 1.6 mi upstream from Line Creek and Lockwood, and at mile 5.3.

DRAINAGE AREA.--40.2 mi².

PERIOD OF RECORD.--October 1945 to September 1971, October 1979 to September 1982, October 1996 to September 1998. February 2003 to current year.

REVISED RECORDS.--WDR WV-80-1: Drainage area.

GAGE.--Water-stage recorder with satellite telemeter. Datum of gage is 1,064.70 ft above NGVD 29. Prior to February 2003 at site 0.1 mi downstream at datum 0.07 ft higher. Prior to September 30, 1971, at site 0.6 mi downstream at datum 1,059.52 ft above sea level. Prior to November 2, 1945, nonrecording gage and November 2, 1945, to Aug. 2, 1955, water-stage recorder near present site at datum 1,072.19 ft above sea level.

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

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,200 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Feb 21	1930	*707	*8.07	No peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	37	42	291	45	83	197	118	409	30	60	11	21
2	33	39	223	41	82	154	250	208	29	22	9.9	15
3	41	41	142	41	88	119	317	137	30	14	9.5	13
4	31	274	102	52	89	103	272	102	25	11	8.2	11
5	27	281	79	156	83	232	171	82	23	9.9	8.1	9.7
6	23	145	74	176	74	254	125	71	21	8.7	8.4	8.4
7	21	97	78	157	69	212	109	63	41	63	7.8	7.4
8	19	70	67	182	75	409	102	56	24	154	9.2	6.7
9	18	53	102	170	81	270	86	47	20	45	9.6	6.0
10	17	45	197	133	154	181	75	43	19	25	7.9	6.1
11	16	41	348	103	137	166	67	39	17	18	7.4	6.1
12	16	117	312	86	111	179	65	34	15	14	6.9	5.4
13	67	162	201	74	92	203	61	30	14	13	6.4	5.4
14	176	120	139	247	128	173	53	37	14	15	6.0	5.3
15	105	90	107	184	146	153	46	76	14	16	5.7	5.0
16	100	72	90	128	137	134	40	45	12	17	9.9	4.9
17	98	59	82	95	111	116	37	37	12	20	12	5.0
18	72	75	74	73	93	101	35	31	11	26	8.1	5.0
19	182	149	69	70	77	91	34	31	11	43	11	4.1
20	192	205	56	60	67	86	31	155	9.2	68	12	3.7
21	123	149	60	54	222	77	32	113	8.8	49	14	4.5
22	82	113	55	60	367	68	58	78	12	35	7.9	4.7
23	60	92	89	60	192	152	147	63	11	29	7.1	4.3
24	181	87	105	52	143	358	187	110	8.7	20	6.7	4.2
25	152	156	92	56	112	198	215	176	8.3	20	5.3	4.2
26	97	155	78	58	95	136	170	116	8.0	29	113	4.1
27	78	121	63	65	84	110	124	82	6.8	19	315	6.6
28	66	102	53	61	118	239	91	63	7.3	22	104	4.7
29	59	77	51	63	---	361	82	51	14	19	41	8.0
30	55	72	48	78	---	241	483	42	65	15	29	7.6
31	48	---	45	79	---	157	---	35	---	13	23	---
TOTAL	2,292	3,301	3,572	2,959	3,310	5,630	3,683	2,662	541.1	932.6	841.0	207.1
MEAN	73.9	110	115	95.5	118	182	123	85.9	18.0	30.1	27.1	6.90
MAX	192	281	348	247	367	409	483	409	65	154	315	21
MIN	16	39	45	41	67	68	31	30	6.8	8.7	5.3	3.7
CFSM	1.84	2.74	2.87	2.37	2.94	4.52	3.05	2.14	0.45	0.75	0.67	0.17
IN.	2.12	3.05	3.31	2.74	3.06	5.21	3.41	2.46	0.50	0.86	0.78	0.19

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1946 - 2005, BY WATER YEAR (WY)

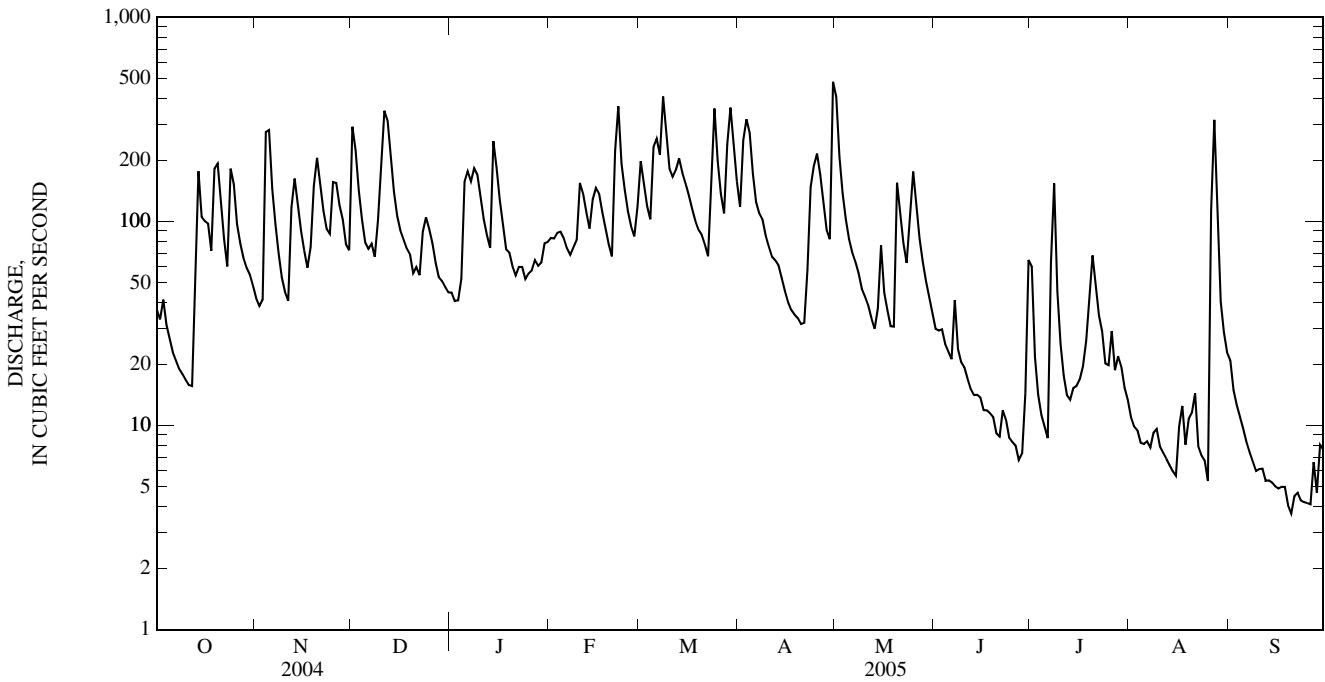
	19.6	50.0	80.0	96.1	115	134	97.8	73.8	45.8	33.4	30.8	17.0
MEAN	19.6	50.0	80.0	96.1	115	134	97.8	73.8	45.8	33.4	30.8	17.0
MAX	105	230	168	191	204	297	191	171	219	134	172	115
(WY)	(1980)	(2004)	(1951)	(1950)	(1955)	(1963)	(2004)	(1967)	(2003)	(1958)	(1958)	(2003)
MIN	0.12	0.52	4.60	22.0	30.8	52.6	23.5	13.3	2.32	1.85	0.24	0.29
(WY)	(1954)	(1954)	(1966)	(1966)	(1954)	(1966)	(1963)	(1964)	(1966)	(1957)	(1957)	(1946)

03191500 PETERS CREEK NEAR LOCKWOOD, WV—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1946 - 2005	
ANNUAL TOTAL	33,839.4		29,930.8		65.2	
ANNUAL MEAN	92.5		82.0		108	
HIGHEST ANNUAL MEAN					1950	
LOWEST ANNUAL MEAN					29.3	
HIGHEST DAILY MEAN	1,010	Feb 6	483	Apr 30	3,000	Aug 2, 1958
LOWEST DAILY MEAN	6.3	Jul 21	3.7	Sep 20	0.00	(a)
ANNUAL SEVEN-DAY MINIMUM	7.5	Jul 15	4.2	Sep 19	0.00	Sep 3, 1957
MAXIMUM PEAK FLOW			707	Feb 21	(b)8,340	Jun 16, 2003
MAXIMUM PEAK STAGE			8.07	Feb 21	18.35	Jun 16, 2003
INSTANTANEOUS LOW FLOW			3.2	Sep 26	0.00	(a)
ANNUAL RUNOFF (CFSM)	2.30		2.04		1.62	
ANNUAL RUNOFF (INCHES)	31.31		27.70		22.05	
10 PERCENT EXCEEDS	198		183		154	
50 PERCENT EXCEEDS	53		63		28	
90 PERCENT EXCEEDS	14		8.0		3.3	

a Sept. 6-9, 1957.

b From rating curve extended above 7,800 ft³/s on basis of step-backwater analysis.



03192000 GAULEY RIVER ABOVE BELVA, WV

LOCATION.--Lat 38°14'00", long 81°10'52", NAD 27, 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 with satellite telemeter. Datum of gage is 669.00 ft above NGVD 12.

REMARKS.--No estimated daily discharges. Records good. Flow regulated since May 1965 by Summersville Lake.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of 1918 reached a stage of about 30 ft; discharge of about 112,000 ft³/s.

PEAK DISCHARGE FOR CURRENT YEAR.--Maximum discharge, 22,900 ft³/s, May 1, gage height, 11.97 ft.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

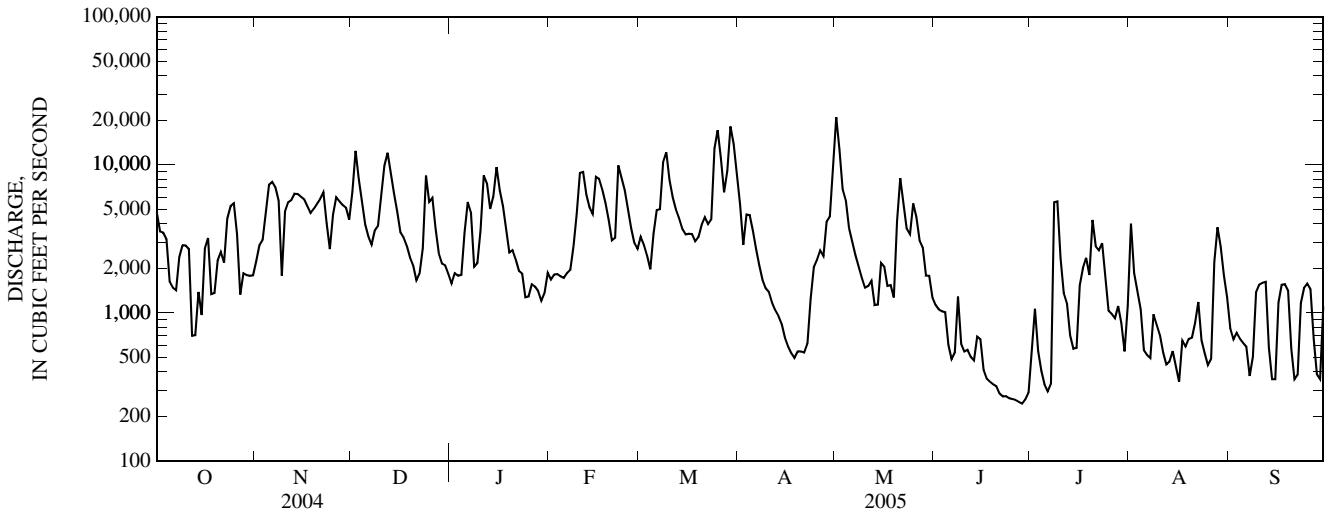
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4,730	2,240	6,580	1,580	1,680	3,270	5,400	21,000	1,130	596	4,010	785
2	3,540	2,870	12,400	1,850	1,820	2,890	2,880	12,700	1,060	1,070	1,850	662
3	3,480	3,110	8,000	1,780	1,830	2,440	4,620	6,850	1,030	552	1,370	732
4	3,150	4,820	5,670	1,810	1,770	1,970	4,570	5,750	1,010	406	1,050	670
5	1,620	7,330	3,960	3,500	1,720	3,410	3,590	3,740	607	329	560	627
6	1,480	7,670	3,280	5,600	1,860	4,940	2,700	3,040	487	295	520	592
7	1,420	7,050	2,900	4,770	1,960	5,010	2,100	2,450	537	332	495	375
8	2,380	5,720	3,600	2,050	2,820	10,400	1,680	2,060	1,290	5,580	978	504
9	2,860	1,790	3,880	2,170	4,670	12,100	1,470	1,730	618	5,650	829	1,380
10	2,860	4,840	6,330	3,620	8,820	7,870	1,390	1,480	549	2,340	709	1,550
11	2,700	5,580	9,880	8,490	8,950	6,030	1,180	1,520	562	1,370	542	1,590
12	702	5,780	12,000	7,500	6,320	4,990	1,040	1,650	506	1,160	448	1,620
13	707	6,380	8,860	5,040	5,160	4,350	953	1,130	478	704	469	582
14	1,390	6,340	6,410	6,150	4,660	3,680	844	1,140	692	574	551	357
15	968	6,080	4,830	9,640	8,310	3,390	683	2,170	665	580	432	357
16	2,720	5,850	3,500	6,730	8,030	3,430	594	2,050	413	1,530	343	1,170
17	3,200	5,270	3,230	5,270	6,810	3,410	535	1,520	360	2,010	650	1,550
18	1,340	4,730	2,840	3,670	5,500	3,040	496	1,540	343	2,350	593	1,560
19	1,360	5,040	2,380	2,550	4,230	3,250	551	1,270	329	1,800	667	1,410
20	2,260	5,450	2,090	2,650	3,080	3,930	549	4,150	320	4,240	679	575
21	2,580	5,880	1,660	2,290	3,210	4,420	539	8,120	285	2,810	859	357
22	2,190	6,500	1,850	1,920	9,900	3,990	620	5,470	273	2,640	1,180	383
23	4,330	4,030	2,730	1,840	8,180	4,290	1,240	3,720	274	2,960	654	1,170
24	5,260	2,700	8,440	1,280	6,750	12,900	2,030	3,400	265	1,680	533	1,470
25	5,490	4,610	5,600	1,290	5,100	17,100	2,280	5,480	262	1,030	444	1,580
26	3,400	6,030	5,980	1,560	3,740	11,100	2,630	4,430	258	983	488	1,450
27	1,330	5,670	3,700	1,510	2,970	6,530	2,420	3,090	251	920	2,210	673
28	1,850	5,340	2,530	1,400	2,710	9,060	4,140	2,770	244	1,110	3,780	386
29	1,800	5,130	2,150	1,210	---	18,100	4,480	1,790	260	851	2,790	357
30	1,780	4,270	2,100	1,360	---	13,800	10,300	1,780	289	550	1,790	1,110
31	1,790	---	1,830	1,870	---	8,570	---	1,270	---	1,120	1,270	---
TOTAL	76,667	154,100	151,190	103,950	132,560	203,660	68,504	120,260	15,647	50,122	33,743	27,584
MEAN	2,473	5,137	4,877	3,353	4,734	6,570	2,283	3,879	522	1,617	1,088	919
MAX	5,490	7,670	12,400	9,640	9,900	18,100	10,300	21,000	1,290	5,650	4,010	1,620
MIN	702	1,790	1,660	1,210	1,680	1,970	496	1,130	244	295	343	357

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1965 - 2005, BY WATER YEAR (WY)

MEAN	1,961	3,414	3,688	3,865	4,406	5,000	2,789	3,375	1,969	1,476	1,427	1,481
MAX	7,547	10,490	7,270	8,493	9,534	9,591	7,050	7,802	6,640	4,779	5,053	5,078
(WY)	(1977)	(2004)	(1973)	(1974)	(1994)	(1993)	(1987)	(1996)	(2003)	(2001)	(1989)	(2003)
MIN	124	70.8	85.6	276	1,471	2,187	611	538	236	187	36.8	72.5
(WY)	(1966)	(1966)	(1966)	(1966)	(2002)	(2000)	(1986)	(1991)	(1991)	(1999)	(1965)	(1965)

03192000 GAULEY RIVER ABOVE BELVA, WV—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1965 - 2005	
ANNUAL TOTAL	1,311,652		1,137,987			
ANNUAL MEAN	3,584		3,118		2,898	
HIGHEST ANNUAL MEAN					4,048	2003
LOWEST ANNUAL MEAN					1,452	1966
HIGHEST DAILY MEAN	20,200	May 29	21,000	May 1	32,000	Jul 29, 2001
LOWEST DAILY MEAN	168	Aug 31	244	Jun 28	11	Sep 10, 1965
ANNUAL SEVEN-DAY MINIMUM	249	Aug 27	259	Jun 23	17	Sep 4, 1965
MAXIMUM PEAK FLOW			22,900	May 1	47,800	Nov 19, 2003
MAXIMUM PEAK STAGE			11.97	May 1	19.23	Nov 19, 2003
INSTANTANEOUS LOW FLOW			237	Jun 29	9.6	Sep 11, 1965
10 PERCENT EXCEEDS	7,770		6,640		6,900	
50 PERCENT EXCEEDS	2,400		2,090		1,700	
90 PERCENT EXCEEDS	417		501		382	



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	1,785	3,027	4,022	4,542	5,790	3,963	2,903	1,552	1,524	1,264	532
MAX	4,859	5,609	6,421	7,870	8,926	11,660	8,691	5,737	6,164	6,141	4,871	2,824
(WY)	(1938)	(1930)	(1943)	(1937)	(1939)	(1963)	(1958)	(1929)	(1940)	(1932)	(1958)	(1950)
MIN	5.90	23.1	410	437	1,084	3,000	1,166	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	2,631	
HIGHEST ANNUAL MEAN	3,803	1950
LOWEST ANNUAL MEAN	1,606	1941
HIGHEST DAILY MEAN	60,900	Jul 5, 1932
LOWEST DAILY MEAN	3.2	Oct 21, 1953
ANNUAL SEVEN-DAY MINIMUM	3.6	Oct 20, 1953
INSTANTANEOUS PEAK FLOW	(*)105,000	Jul 5, 1932
INSTANTANEOUS PEAK STAGE	28.60	Jul 5, 1932
INSTANTANEOUS LOW FLOW	3.2	Oct 21, 1953
10 PERCENT EXCEEDS	6,280	
50 PERCENT EXCEEDS	1,390	
90 PERCENT EXCEEDS	129	

* 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.

03193000 KANAWHA RIVER AT KANAWHA FALLS, WV

LOCATION.--Lat 38°08'17", long 81°12'52", NAD 27, 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, 1901-03. WSP 1305: 1902(M), 1940. WSP 1335: 1931. WDR WV-82-1: Drainage area.

GAGE.--Water-stage recorder with satellite telemeter. Datum of gage is 621.20 ft above NGVD 29. 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 1939 by Claytor Lake, since 1949 by Bluestone Lake, and since 1965 by Summersville Lake.

PEAK DISCHARGE FOR CURRENT YEAR.--Maximum discharge, 81,400 ft³/s, Mar. 29, gage height, 15.42 ft.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	46,300	7,940	29,100	9,470	10,500	13,500	37,000	42,600	6,250	5,240	13,900	5,050
2	27,300	10,700	51,200	8,980	12,600	15,700	32,500	40,000	6,030	5,310	9,600	3,570
3	19,800	12,700	39,200	8,780	12,800	14,000	42,700	26,500	5,990	4,610	7,650	3,360
4	15,200	14,500	26,300	7,880	11,500	11,400	42,100	21,800	7,410	4,520	5,120	3,560
5	11,400	25,000	20,800	12,500	12,700	14,800	33,500	16,900	7,550	4,280	4,290	3,070
6	9,880	30,500	15,000	15,500	11,500	18,100	27,900	14,200	6,750	3,910	4,000	2,810
7	7,500	23,800	17,000	12,100	9,960	24,200	23,700	12,400	6,220	3,930	3,520	2,560
8	9,670	18,600	24,200	7,640	14,500	35,700	20,800	10,800	6,500	15,300	4,170	2,380
9	8,770	12,100	21,700	8,200	18,000	43,200	18,500	10,000	6,570	17,300	4,590	3,410
10	8,800	13,000	34,900	9,950	25,300	36,400	15,500	9,430	6,970	11,400	4,620	3,740
11	8,300	12,800	49,100	26,500	26,800	29,100	14,200	8,650	7,610	8,410	4,540	3,690
12	5,840	13,400	43,000	25,300	24,600	24,200	11,300	8,710	8,650	6,400	5,480	3,580
13	5,990	17,600	33,900	21,400	20,200	23,100	12,800	7,700	6,200	5,090	5,050	2,640
14	9,510	23,100	26,000	22,300	16,700	21,900	12,200	7,680	6,390	4,330	4,430	2,000
15	16,300	22,000	21,200	48,500	24,800	17,300	12,300	9,010	6,550	4,870	3,710	1,930
16	12,700	18,600	17,600	46,700	27,100	18,900	13,600	8,780	6,550	6,230	3,230	2,490
17	11,000	15,300	16,100	35,000	24,600	18,300	12,300	8,420	5,770	10,500	4,430	3,220
18	8,860	14,600	14,600	24,700	21,200	19,400	10,900	8,590	5,040	11,800	3,580	3,260
19	8,230	14,600	11,900	17,700	18,700	17,700	10,100	8,010	4,970	12,200	4,030	3,110
20	11,500	15,000	9,250	15,200	16,400	16,300	9,500	11,200	4,120	12,300	7,220	2,420
21	13,900	15,400	9,600	14,200	11,500	15,600	8,620	19,000	3,920	9,810	7,360	1,810
22	10,600	15,700	11,700	14,500	22,700	16,900	8,900	19,100	3,870	8,870	5,770	1,870
23	14,600	11,500	9,490	11,700	27,100	17,700	10,500	16,000	4,170	8,470	4,960	2,470
24	13,100	9,550	18,300	8,410	23,500	27,800	15,500	12,400	4,370	6,910	4,050	3,010
25	12,000	15,400	20,400	7,900	19,900	42,100	18,600	14,100	3,980	5,370	3,470	3,200
26	11,400	39,800	23,200	10,600	16,700	35,500	16,800	13,100	3,550	5,050	3,230	3,030
27	11,300	33,400	15,600	8,450	14,100	25,000	15,000	10,500	3,430	4,780	6,210	2,330
28	10,600	25,400	10,800	9,810	12,600	26,400	14,300	9,990	3,440	5,320	9,220	1,800
29	10,500	21,700	12,500	11,200	---	62,900	15,200	7,760	4,160	6,290	7,910	1,800
30	10,400	20,100	10,700	10,500	---	69,700	23,400	7,780	4,300	5,710	6,860	2,680
31	10,500	---	9,640	8,760	---	52,100	---	6,790	---	6,940	6,650	---
TOTAL	391,750	543,790	673,980	500,330	508,560	824,900	560,220	427,900	167,280	231,450	172,850	85,850
MEAN	12,640	18,130	21,740	16,140	18,160	26,610	18,670	13,800	5,576	7,466	5,576	2,862
MAX	46,300	39,800	51,200	48,500	27,100	69,700	42,700	42,600	8,650	17,300	13,900	5,050
MIN	5,840	7,940	9,250	7,640	9,960	11,400	8,620	6,790	3,430	3,910	3,230	1,800

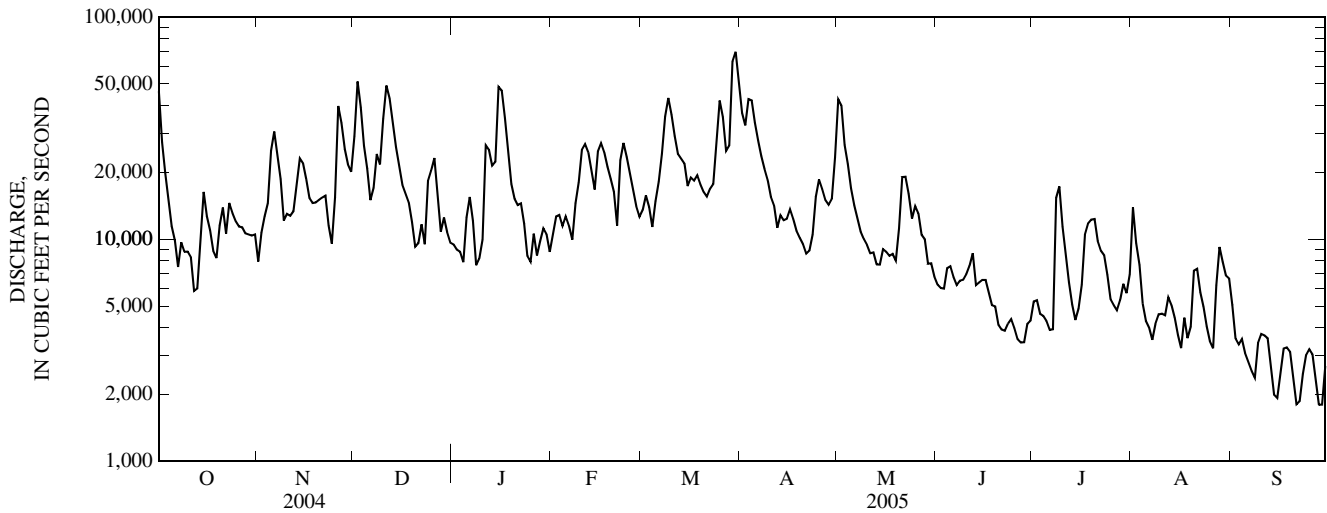
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 2005, BY WATER YEAR (WY)

MEAN	5,894	9,164	12,970	15,980	20,130	23,520	18,020	14,640	9,309	6,412	5,889	4,969
MAX	24,980	35,220	29,690	38,490	42,410	50,300	50,240	29,510	30,120	16,040	23,350	18,960
(WY)	(1977)	(2004)	(1973)	(1996)	(1957)	(1955)	(1987)	(1996)	(2003)	(2001)	(1940)	(2004)
MIN	1,452	1,669	2,174	2,412	5,457	7,583	5,065	4,051	2,450	2,167	1,945	1,510
(WY)	(1954)	(1954)	(1966)	(1940)	(2002)	(1988)	(1986)	(1941)	(1999)	(1966)	(1944)	(1953)

03193000 KANAWHA RIVER AT KANAWHA FALLS, WV—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1939 - 2005	
ANNUAL TOTAL	6,111,310		5,088,860		12,200	
ANNUAL MEAN	16,700		13,940		19,960	
HIGHEST ANNUAL MEAN					6,792	2003
LOWEST ANNUAL MEAN					1988	
HIGHEST DAILY MEAN	84,900	Apr 14	69,700	Mar 30	163,000	Aug 15, 1940
LOWEST DAILY MEAN	2,320	Aug 29	1,800	(a)	970	Sep 30, 1953
ANNUAL SEVEN-DAY MINIMUM	2,570	Aug 28	2,520	Sep 23	1,230	Sep 23, 1963
MAXIMUM PEAK FLOW			81,400	Mar 29	248,000	Aug 15, 1940
MAXIMUM PEAK STAGE			15.42	Mar 29	(b)29.60	Aug 15, 1940
INSTANTANEOUS LOW FLOW			1,380	Sep 23	(c)	(c)
10 PERCENT EXCEEDS	35,300		26,600		27,000	
50 PERCENT EXCEEDS	13,100		11,300		7,640	
90 PERCENT EXCEEDS	4,500		3,700		2,590	

a Sept. 28, 29.
 b 31.60 ft gage height at current datum.
 c Not determined.



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	6,529	8,513	12,670	19,170	21,700	24,400	19,440	14,670	10,260	7,556	6,486	5,279
MAX (WY)	23,470 (1938)	23,460 (1878)	34,030 (1902)	38,890 (1882)	52,880 (1884)	52,620 (1899)	46,930 (1901)	38,140 (1901)	35,870 (1901)	20,210 (1916)	22,440 (1901)	21,070 (1888)
MIN (WY)	1,133 (1931)	1,514 (1923)	2,691 (1931)	5,600 (1931)	3,181 (1934)	10,160 (1925)	8,151 (1915)	4,797 (1930)	2,546 (1930)	1,290 (1930)	1,394 (1925)	1,308 (1930)

SUMMARY STATISTICS

WATER YEARS 1877 - 1938

ANNUAL MEAN	13,020	
HIGHEST ANNUAL MEAN	21,210	1901
LOWEST ANNUAL MEAN	7,591	1904
HIGHEST DAILY MEAN	266,000	May 23, 1901
LOWEST DAILY MEAN	690	Oct 29, 1921
ANNUAL SEVEN-DAY MINIMUM	984	Oct 7, 1930
INSTANTANEOUS PEAK FLOW	(*)320,000	Sep 14, 1878
INSTANTANEOUS PEAK STAGE	(#)37.80	Sep 14, 1878
INSTANTANEOUS LOW FLOW	640	Aug 15, 1930
10 PERCENT EXCEEDS	27,900	
50 PERCENT EXCEEDS	8,330	
90 PERCENT EXCEEDS	2,550	

* From gage-height relationship and rating curve extended above 150,000 ft³/s.
 # Site then in use, 39.80 ft gage height at current datum.

03194700 ELK RIVER BELOW WEBSTER SPRINGS, WV

LOCATION.--Lat 38°35'50", long 80°29'26", NAD 27, 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 1929 to September 1959 (estimated annual maximum discharge only), October 1959 to September 1983, October 1985 to current year.

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

GAGE.--Water-stage recorder with satellite telemeter. Elevation of gage is approximately 1,020.1 ft above NGVD 29, from barometric leveling.

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

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)
Mar 24	0300	*10,400	*10.06	No other peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	639	432	2,160	343	309	517	1,090	4,220	253	93	447	182
2	437	378	2,200	381	309	460	1,490	2,210	218	87	321	194
3	360	406	1,390	371	320	400	1,980	1,360	201	76	197	140
4	301	1,330	952	731	333	354	1,760	910	193	59	141	106
5	246	2,680	705	1,610	315	422	1,800	672	184	44	107	84
6	206	1,520	576	1,610	310	433	1,410	536	161	38	85	69
7	178	989	645	1,600	376	584	1,050	457	164	44	93	58
8	155	703	872	1,480	617	2,740	2,130	420	159	1,470	107	50
9	137	522	868	1,480	1,150	2,010	1,650	361	130	741	94	43
10	124	419	1,520	1,120	2,400	1,250	1,110	317	144	403	81	38
11	112	357	2,020	839	1,680	918	815	296	151	241	117	34
12	105	454	2,080	681	1,130	758	640	286	121	161	96	31
13	104	868	1,460	575	847	651	524	253	107	142	71	28
14	121	755	1,070	1,760	921	554	435	234	93	316	58	26
15	149	615	815	1,800	1,830	528	366	335	87	417	52	24
16	160	510	656	1,190	1,520	543	322	460	79	456	62	22
17	221	434	581	882	1,370	518	291	361	72	457	105	21
18	267	412	514	630	993	513	267	311	67	435	122	19
19	236	521	474	518	742	616	250	275	63	537	98	18
20	286	916	413	484	612	881	233	1,030	58	781	113	17
21	558	928	370	420	615	977	218	1,870	53	509	129	16
22	449	787	402	372	2,280	894	231	1,160	50	769	105	16
23	362	657	1,400	335	1,550	1,660	365	819	48	475	79	17
24	484	583	2,280	294	1,120	6,670	630	782	46	322	62	15
25	1,040	1,450	1,340	313	861	2,630	694	954	41	240	51	15
26	713	1,530	922	305	667	1,690	1,250	844	37	205	45	20
27	539	1,080	690	303	551	1,490	1,550	663	33	174	66	20
28	475	1,170	507	300	504	3,230	1,180	522	31	152	179	22
29	439	1,160	465	274	---	4,180	862	439	40	190	231	39
30	529	893	405	293	---	2,470	2,300	355	80	164	174	37
31	503	---	363	313	---	1,550	---	300	---	267	129	---
TOTAL	10,635	25,459	31,115	23,607	26,232	43,091	28,893	24,012	3,164	10,465	3,817	1,421
MEAN	343	849	1,004	762	937	1,390	963	775	105	338	123	47.4
MAX	1,040	2,680	2,280	1,800	2,400	6,670	2,300	4,220	253	1,470	447	194
MIN	104	357	363	274	309	354	218	234	31	38	45	15
CFSM	1.29	3.19	3.77	2.86	3.52	5.23	3.62	2.91	0.40	1.27	0.46	0.18
IN.	1.49	3.56	4.35	3.30	3.67	6.03	4.04	3.36	0.44	1.46	0.53	0.20

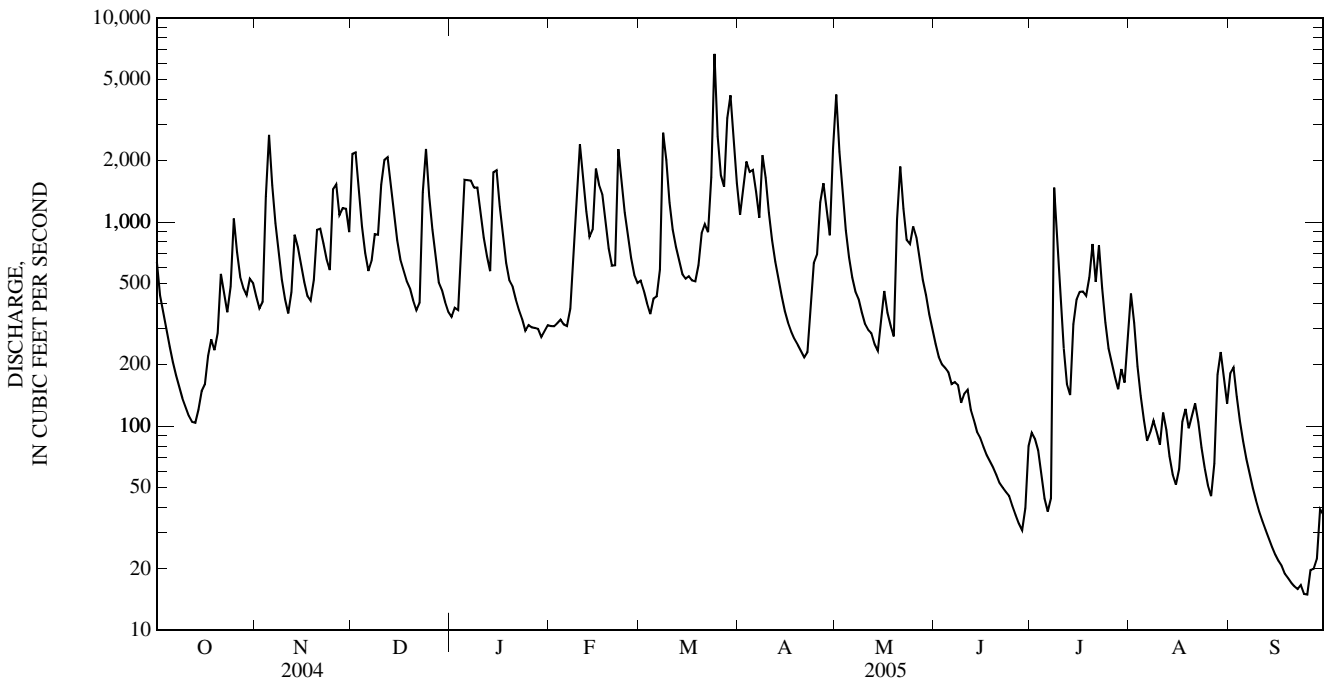
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1960 - 2005, BY WATER YEAR (WY)

MEAN	330	687	886	890	1,037	1,337	1,047	799	471	358	301	234
MAX	1,376	2,293	1,940	1,866	2,124	2,820	1,784	2,077	1,435	958	1,171	1,090
(WY)	(1977)	(1986)	(1973)	(1996)	(1994)	(1963)	(2002)	(1996)	(1974)	(1996)	(1989)	(2003)
MIN	15.1	45.1	199	202	227	731	312	137	48.9	31.6	23.3	16.4
(WY)	(1964)	(2002)	(1966)	(1977)	(1978)	(2000)	(1963)	(1964)	(1965)	(1999)	(1993)	(1999)

03194700 ELK RIVER BELOW WEBSTER SPRINGS, WV—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1960 - 2005	
ANNUAL TOTAL	277,999		231,911			
ANNUAL MEAN	760		635		695	
HIGHEST ANNUAL MEAN					997 1996	
LOWEST ANNUAL MEAN					415 1999	
HIGHEST DAILY MEAN	7,160	May 28	6,670	Mar 24	15,200	Apr 26, 1989
LOWEST DAILY MEAN	29	Sep 6	15	(a)	4.9	Sep 12, 1995
ANNUAL SEVEN-DAY MINIMUM	43	Sep 2	16	Sep 19	5.2	Sep 9, 1995
MAXIMUM PEAK FLOW			10,400	Mar 24	(b)38,000	Nov 4, 1985
MAXIMUM PEAK STAGE			10.06	Mar 24	(c)17.20	Nov 4, 1985
INSTANTANEOUS LOW FLOW			14	Sep 25	4.8	(d)
ANNUAL RUNOFF (CFSM)	2.86		2.39		2.61	
ANNUAL RUNOFF (INCHES)	38.88		32.43		35.51	
10 PERCENT EXCEEDS	1,780		1,540		1,630	
50 PERCENT EXCEEDS	474		419		388	
90 PERCENT EXCEEDS	71		52		59	

- a Sept. 24, 25.
- b From rating curve extended above 24,000 ft³/s.
- c From floodmarks.
- d Sept. 11-13, 1995.



03197000 ELK RIVER AT QUEEN SHOALS, WV

LOCATION.--Lat 38°28'15", long 81°17'03", NAD 27, 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). WDR WV-04-1: 1981-2003(M).

GAGE.--Water-stage recorder with satellite telemeter. Datum of gage is 604.09 ft above NGVD 29. Prior to June 19, 1932, nonrecording gage. June 19, 1932, to Sept. 30, 1946, water-stage recorder, at bridge 100 ft upstream at same datum.

REMARKS.--Records good except those above 10,000 ft³/s, which are fair. Flow regulated since April 1959 by Sutton Lake.

PEAK DISCHARGE FOR CURRENT YEAR.--Maximum discharge, 9,440 ft³/s, Mar. 9, gage height, 9.98 ft.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3,580	1,590	5,100	1,310	1,960	5,140	5,930	8,460	876	265	257	777
2	2,040	1,460	5,790	1,230	2,100	4,160	4,000	9,100	825	265	259	420
3	1,340	1,280	5,840	1,150	2,040	3,510	4,920	7,010	804	202	483	270
4	1,090	1,990	5,110	1,100	1,900	2,920	5,100	4,440	731	177	512	221
5	985	5,430	3,670	1,930	1,710	2,790	6,030	2,830	513	160	402	194
6	757	5,330	2,670	3,460	1,640	3,770	6,000	2,100	453	149	357	177
7	713	5,000	2,130	3,370	1,620	3,680	3,910	1,810	436	147	349	163
8	661	4,260	2,090	2,780	1,710	5,670	4,960	1,620	387	311	307	153
9	626	3,480	2,070	3,240	2,010	9,100	6,120	1,410	331	2,530	227	145
10	537	2,270	3,670	2,440	3,040	7,660	5,340	1,230	264	2,150	185	145
11	514	1,540	5,890	4,200	4,540	5,930	3,770	1,100	275	1,000	160	151
12	501	1,920	7,740	5,000	4,770	4,280	2,610	795	273	602	153	148
13	523	3,200	6,790	4,390	3,790	3,640	2,010	750	275	407	146	141
14	1,230	3,570	5,480	5,610	3,340	3,590	1,290	983	255	358	137	139
15	2,190	3,220	3,870	6,670	3,310	3,830	968	1,270	250	337	130	158
16	2,370	2,520	2,830	5,750	4,330	3,060	816	1,090	296	281	157	287
17	2,190	2,080	2,450	4,860	4,540	2,930	726	1,050	282	704	167	296
18	1,920	1,930	2,180	4,230	3,660	2,810	673	1,140	259	942	162	322
19	2,030	2,570	1,880	3,390	2,770	2,600	644	879	215	1,010	189	294
20	2,150	4,870	1,580	2,560	2,440	2,490	613	3,080	177	1,350	183	286
21	2,720	5,940	1,400	2,090	2,160	2,980	583	4,620	158	1,700	237	267
22	2,350	4,680	1,500	1,770	3,040	3,130	572	4,920	156	1,470	308	226
23	1,450	3,560	1,620	2,110	4,820	2,900	687	3,180	165	1,380	251	226
24	1,410	2,820	2,340	1,790	4,910	5,360	1,200	2,460	167	1,450	173	261
25	2,180	2,640	3,390	1,650	4,280	8,560	3,280	2,430	153	968	145	302
26	3,110	2,910	3,710	1,570	2,980	8,270	4,260	2,210	147	805	158	303
27	2,540	4,070	3,360	1,870	2,510	6,010	4,990	2,030	142	757	313	307
28	2,070	4,290	3,050	1,790	2,810	5,520	5,050	1,900	138	613	496	298
29	1,900	3,450	1,950	1,700	---	7,970	3,490	1,480	146	519	646	274
30	1,600	3,090	1,060	1,680	---	8,990	4,870	1,010	184	364	1,940	235
31	1,530	---	1,330	1,770	---	8,210	---	931	---	283	1,500	---
TOTAL	50,807	96,960	103,540	88,460	84,730	151,460	95,412	79,318	9,733	23,656	11,089	7,586
MEAN	1,639	3,232	3,340	2,854	3,026	4,886	3,180	2,559	324	763	358	253
MAX	3,580	5,940	7,740	6,670	4,910	9,100	6,120	9,100	876	2,530	1,940	777
MIN	501	1,280	1,060	1,100	1,620	2,490	572	750	138	147	130	139

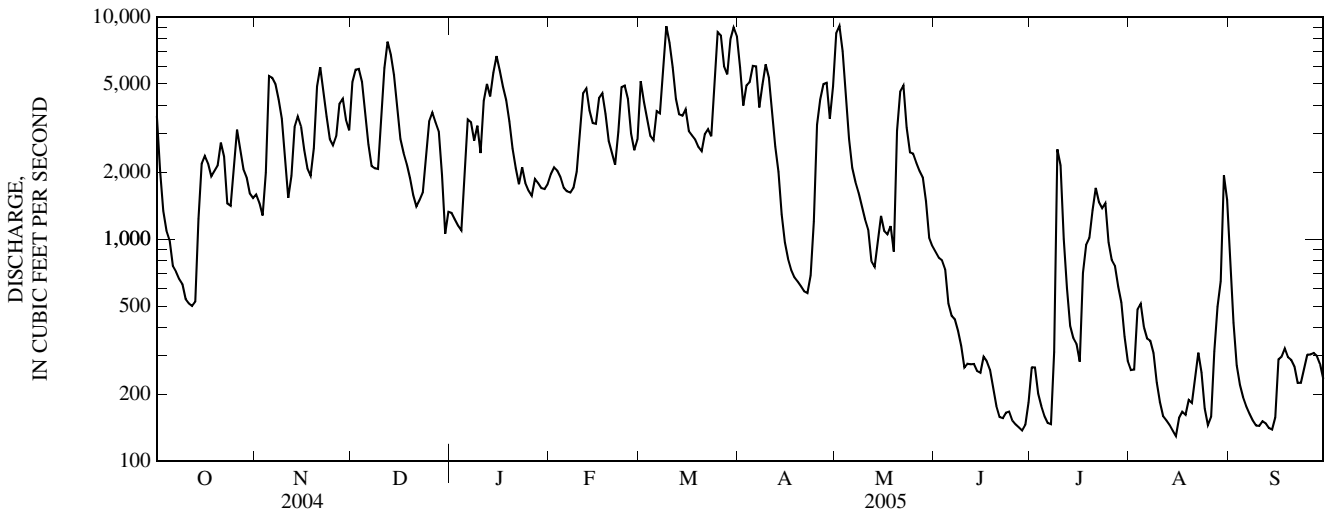
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1959 - 2005, BY WATER YEAR (WY)

MEAN	1,018	2,092	2,837	2,995	3,535	4,164	2,857	2,624	1,376	884	909	685
MAX	5,017	6,700	7,402	6,743	7,296	9,051	5,649	6,601	4,745	2,735	3,487	3,072
(WY)	(1977)	(2004)	(1973)	(1994)	(1994)	(1967)	(1987)	(1989)	(1981)	(1992)	(1972)	(1971)
MIN	142	352	244	594	955	1,633	562	409	132	120	83.7	111
(WY)	(1959)	(2002)	(1966)	(1977)	(2002)	(1987)	(1963)	(1964)	(1965)	(1964)	(1965)	(1959)

03197000 ELK RIVER AT QUEEN SHOALS, WV—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1959 - 2005	
ANNUAL TOTAL	942,419		802,751			
ANNUAL MEAN	2,575		2,199		2,159	
HIGHEST ANNUAL MEAN					3,249	1994
LOWEST ANNUAL MEAN					1,063	1966
HIGHEST DAILY MEAN	14,900	Apr 14	9,100	(a)	35,300	Mar 15, 1967
LOWEST DAILY MEAN	136	Sep 7	130	Aug 15	9.0	Sep 27, 1959
ANNUAL SEVEN-DAY MINIMUM	156	Sep 1	146	Sep 8	12	Sep 24, 1959
MAXIMUM PEAK FLOW			9,440	Mar 9	(b)47,000	Mar 2, 1997
MAXIMUM PEAK STAGE			9.98	Mar 9	25.36	Mar 2, 1997
INSTANTANEOUS LOW FLOW			126	Aug 15	(c)	(c)
10 PERCENT EXCEEDS	5,990		5,070		5,590	
50 PERCENT EXCEEDS	1,840		1,710		1,150	
90 PERCENT EXCEEDS	280		184		225	

a Mar. 9, May 2.
 b From rating curve extended above 40,000 ft³/s.
 c Not determined.



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	1,093	2,233	3,130	3,578	4,210	2,995	2,149	1,061	1,279	980	408
MAX	3,510	3,488	5,245	6,482	7,715	7,339	5,307	4,352	3,111	6,268	4,453	2,398
(WY)	(1938)	(1930)	(1943)	(1937)	(1939)	(1936)	(1958)	(1940)	(1932)	(1958)	(1950)	
MIN	3.46	7.50	204	402	759	2,154	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	1,967	
HIGHEST ANNUAL MEAN	2,821	1950
LOWEST ANNUAL MEAN	1,214	1941
HIGHEST DAILY MEAN	58,100	Jul 5, 1932
LOWEST DAILY MEAN	.30	(*)
ANNUAL SEVEN-DAY MINIMUM	.86	Oct 30, 1953
INSTANTANEOUS PEAK FLOW	(#)72,000	Jul 5, 1932
INSTANTANEOUS PEAK STAGE	29.20	Jul 5, 1932
INSTANTANEOUS LOW FLOW	.30	(&)
10 PERCENT EXCEEDS	4,650	
50 PERCENT EXCEEDS	955	
90 PERCENT EXCEEDS	90	

* Nov. 3, 4, 1953.
 # From rating curve extended above 40,000 ft³/s.
 & Nov. 4, 5, 1953.

03197910 UNNAMED TRIBUTARY TO ELK TWOMILE CREEK NEAR CHARLESTON, WV
(Detention Reservoir)

LOCATION.--Lat 38°21'39", long 81°30'46", NAD 83, Kanawha County, Hydrologic Unit 05050007.

DAM NAME.--Elk Twomile No. 14.

SURFACE AREA.--3.4 acres.

DRAINAGE AREA.--0.65 mi².

PERIOD OF RECORD.--May 2004 to current year.

GAGE.--Water-stage recorder with satellite telemeter. Datum of gage is 831.67 ft above NGVD 29.

REMARKS.-- Normal Pool = 40.13 ft (Normal Storage = 39.8 acre-ft)

Top of Riser = 50.00 ft

Emergency Spillway = 57.73 ft

Top of Dam = 66.03 ft

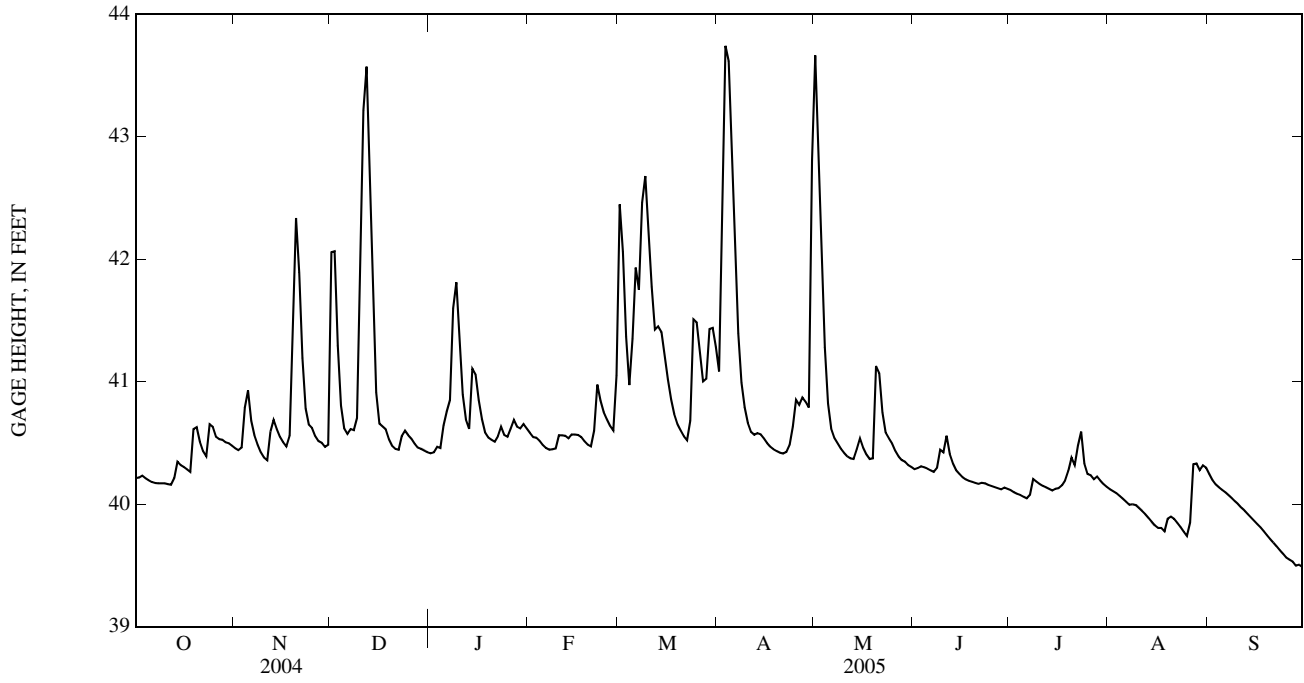
EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 48.26 ft, Sept. 18, 2004; minimum gage height, 39.47 ft, Sept. 30, 2005.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 43.94 ft, Apr. 3; minimum gage height, 39.47 ft, Sept. 30.

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	40.21	40.46	42.06	40.41	40.58	42.45	41.08	43.66	40.29	40.11	40.12	40.25
2	40.22	40.44	42.06	40.42	40.55	42.06	42.14	42.88	40.29	40.10	40.11	40.20
3	40.23	40.46	41.29	40.47	40.54	41.37	43.74	42.00	40.31	40.08	40.09	40.16
4	40.21	40.79	40.80	40.46	40.52	40.97	43.62	41.28	40.30	40.08	40.07	40.14
5	40.20	40.93	40.62	40.64	40.48	41.35	42.85	40.82	40.29	40.06	40.04	40.12
6	40.18	40.68	40.57	40.76	40.46	41.93	42.04	40.62	40.28	40.05	40.02	40.10
7	40.17	40.56	40.61	40.85	40.44	41.75	41.39	40.54	40.26	40.08	40.00	40.07
8	40.17	40.49	40.60	41.60	40.45	42.46	40.99	40.50	40.30	40.21	40.00	40.05
9	40.17	40.42	40.70	41.81	40.46	42.68	40.79	40.45	40.45	40.18	39.99	40.02
10	40.17	40.38	41.53	41.31	40.56	42.27	40.66	40.42	40.42	40.16	39.97	40.00
11	40.16	40.36	43.22	40.89	40.56	41.78	40.59	40.39	40.56	40.15	39.94	39.97
12	40.16	40.59	43.57	40.69	40.56	41.43	40.57	40.37	40.41	40.14	39.92	39.95
13	40.21	40.69	42.64	40.62	40.54	41.45	40.58	40.37	40.33	40.12	39.89	39.92
14	40.35	40.61	41.59	41.11	40.57	41.41	40.57	40.45	40.28	40.11	39.86	39.89
15	40.32	40.55	40.91	41.06	40.57	41.22	40.54	40.54	40.25	40.13	39.83	39.86
16	40.30	40.51	40.66	40.85	40.57	41.02	40.50	40.46	40.22	40.13	39.81	39.84
17	40.28	40.47	40.63	40.69	40.55	40.86	40.47	40.41	40.20	40.15	39.81	39.81
18	40.26	40.56	40.61	40.59	40.51	40.73	40.45	40.37	40.19	40.19	39.78	39.78
19	40.61	41.38	40.53	40.54	40.49	40.65	40.43	40.37	40.18	40.27	39.88	39.75
20	40.63	42.34	40.48	40.53	40.47	40.60	40.42	41.13	40.17	40.38	39.90	39.72
21	40.51	41.89	40.45	40.51	40.60	40.55	40.41	41.07	40.16	40.32	39.88	39.69
22	40.43	41.19	40.44	40.55	40.98	40.52	40.43	40.75	40.17	40.48	39.85	39.66
23	40.39	40.78	40.56	40.63	40.85	40.68	40.48	40.59	40.17	40.59	39.81	39.62
24	40.65	40.65	40.60	40.56	40.75	41.51	40.63	40.54	40.16	40.33	39.78	39.60
25	40.63	40.62	40.56	40.55	40.69	41.49	40.85	40.49	40.15	40.25	39.74	39.56
26	40.55	40.56	40.53	40.62	40.64	41.24	40.81	40.43	40.14	40.24	39.85	39.55
27	40.53	40.52	40.49	40.69	40.60	41.00	40.87	40.39	40.13	40.20	40.33	39.53
28	40.53	40.50	40.46	40.63	41.05	41.02	40.84	40.36	40.12	40.23	40.33	39.50
29	40.51	40.47	40.45	40.62	---	41.43	40.79	40.35	40.14	40.19	40.28	39.51
30	40.50	40.49	40.44	40.65	---	41.44	42.81	40.32	40.12	40.16	40.32	39.49
31	40.48	---	40.42	40.62	---	41.28	---	40.30	---	40.14	40.30	---
MEAN	40.35	40.71	41.00	40.74	40.59	41.37	41.11	40.76	40.25	40.19	39.98	39.84
MAX	40.65	42.34	43.57	41.81	41.05	42.68	43.74	43.66	40.56	40.59	40.33	40.25
MIN	40.16	40.36	40.42	40.41	40.44	40.52	40.41	40.30	40.12	40.05	39.74	39.49

03197910 UNNAMED TRIBUTARY TO ELK TWOMILE CREEK NEAR CHARLESTON, WV—Continued



03198000 KANAWHA RIVER AT CHARLESTON, WV

LOCATION.--Lat 38°22'17", long 81°42'08", NAD 27, 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 with satellite telemeter. Datum of gage is 548.00 ft above NGVD 29 (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 above 30,000 ft³/s, fair 10,000 to 30,000 ft³/s, and poor less than 10,000 ft³/s. The rating lacks sensitivity at flows less than 10,000 ft³/s, and records for flows less than 10,000 ft³/s are estimated based on stations 03193000 Kanawha River at Kanawha Falls, 03197000 Elk River at Queen Shoals, and 03200500 Coal River at Tornado. Flow regulated since 1939 by increasing number of reservoirs upstream from station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Sept. 29, 1861, reached a stage of about 54.3 ft.

PEAK DISCHARGE FOR CURRENT YEAR.--Maximum discharge, 86,300 ft³/s, Mar. 30, gage height, 27.81 ft.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	52,900	e10,700	36,400	13,800	16,000	27,200	48,900	55,700	e7,970	e5,700	15,700	e6,620
2	31,200	10,100	58,500	12,100	18,200	26,200	42,600	55,700	e7,640	e5,700	e9,460	e4,590
3	21,100	12,900	51,600	10,900	16,900	22,800	54,600	38,400	e7,650	e4,990	10,800	e4,030
4	17,200	17,800	35,700	10,200	15,000	17,500	54,100	30,500	10,300	e4,710	e6,100	e4,070
5	11,900	31,000	27,700	18,100	16,600	23,900	45,100	22,700	e8,610	e4,510	e5,000	e3,600
6	11,000	37,000	20,400	22,500	14,500	28,700	37,200	18,500	e7,730	e4,180	e4,590	e3,280
7	e8,750	30,300	20,100	20,800	13,700	32,300	31,400	16,800	e7,210	e4,220	e4,180	e2,990
8	12,200	24,000	27,900	18,500	16,900	46,500	27,000	14,400	e7,310	15,700	e4,730	e2,800
9	e9,680	18,300	26,700	18,000	20,700	56,400	26,700	13,300	e7,290	20,100	e4,930	e3,600
10	11,400	15,300	39,300	16,600	29,900	50,700	22,300	10,000	e7,350	14,100	e4,800	e3,930
11	e8,950	14,800	59,100	30,800	33,600	41,100	20,800	e11,000	e7,920	e9,870	e4,630	e3,880
12	e6,840	18,000	57,800	33,700	32,800	33,900	15,100	12,500	e8,670	e7,390	e5,280	e3,780
13	e6,820	22,100	47,900	29,300	27,300	31,900	15,600	e9,460	e6,820	e5,860	e4,960	e2,970
14	10,700	27,500	36,700	29,000	22,700	31,700	15,400	12,300	e6,750	e5,060	e4,400	e2,360
15	18,800	26,200	28,400	54,800	29,600	26,100	13,300	13,500	e6,860	10,700	e3,800	e2,330
16	15,500	22,300	23,500	56,000	35,000	25,800	15,400	12,900	e6,940	10,300	e3,490	e3,040
17	14,200	18,700	20,500	45,000	33,100	25,000	11,500	11,900	e6,290	14,000	e4,790	e3,770
18	10,400	16,800	18,700	32,800	28,500	25,400	11,600	e10,900	e5,540	15,200	e3,960	e3,870
19	14,200	21,400	17,000	24,500	24,000	22,900	11,300	e9,970	e5,290	16,600	e4,490	e3,650
20	16,600	24,300	11,300	20,300	21,900	21,100	10,600	18,300	e4,490	16,700	10,800	e3,010
21	18,100	25,000	12,200	18,300	16,900	20,200	11,000	27,800	e4,210	11,400	11,700	e2,340
22	13,900	23,200	15,800	19,200	28,700	21,000	10,700	24,900	e4,190	12,000	11,300	e2,360
23	16,800	19,600	14,000	18,400	36,100	24,000	14,400	21,900	e4,440	e10,400	10,200	e2,920
24	16,300	15,300	22,100	12,900	33,900	37,700	20,100	17,600	e4,620	11,900	e4,420	e3,520
25	14,900	18,000	23,900	12,400	28,400	51,800	24,800	18,100	e4,240	e6,880	e3,750	e3,750
26	14,800	41,900	30,100	15,500	22,800	50,100	24,300	17,300	e3,850	e6,280	10,500	e3,650
27	14,000	39,500	21,800	12,700	18,900	34,100	22,800	12,200	e3,710	e6,000	e7,350	e2,980
28	15,400	31,900	16,300	15,000	21,600	33,300	22,600	11,500	e3,690	e6,490	10,900	e2,420
29	14,200	26,300	17,000	14,400	---	62,400	20,800	e10,300	e4,320	11,200	13,300	e2,370
30	14,000	23,900	13,900	16,500	---	81,800	36,300	11,800	e4,660	e6,300	e9,880	e3,160
31	14,700	---	12,700	12,100	---	64,900	---	e8,640	---	11,400	e9,060	---
TOTAL	477,440	684,100	865,000	685,100	674,200	1,097,500	738,300	580,770	186,560	295,840	223,250	101,640
MEAN	15,400	22,800	27,900	22,100	24,080	35,400	24,610	18,730	6,219	9,543	7,202	3,388
MAX	52,900	41,900	59,100	56,000	36,100	81,800	54,600	55,700	10,300	20,100	15,700	6,620
MIN	6,820	10,100	11,300	10,200	13,700	17,500	10,600	8,640	3,690	4,180	3,490	2,330

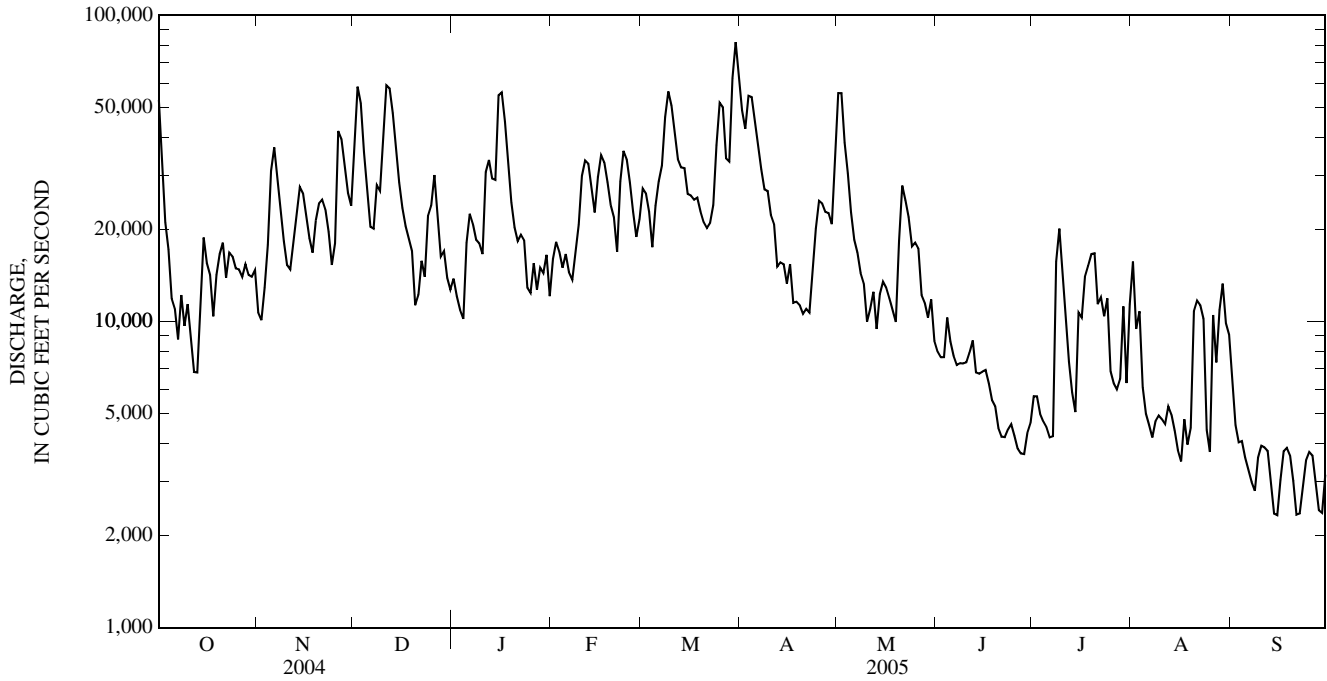
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 2005, BY WATER YEAR (WY)

MEAN	7,018	11,620	16,920	20,790	25,450	30,050	22,580	18,280	10,970	7,718	6,889	5,722
MAX	30,780	45,580	40,920	46,440	52,020	62,900	59,000	38,550	33,350	19,030	19,030	20,820
(WY)	(1977)	(2004)	(1973)	(1996)	(1994)	(1963)	(1987)	(1989)	(2003)	(2001)	(1958)	(2004)
MIN	1,465	1,703	2,461	4,226	7,122	10,680	6,553	4,894	2,745	2,394	2,080	1,553
(WY)	(1954)	(1954)	(1966)	(1966)	(2002)	(1988)	(1986)	(1941)	(1999)	(1966)	(1944)	(1953)

03198000 KANAWHA RIVER AT CHARLESTON, WV—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1941 - 2005	
ANNUAL TOTAL	7,763,160		6,609,700		15,290	
ANNUAL MEAN	21,210		18,110		8,649	
HIGHEST ANNUAL MEAN					22,790	2004
LOWEST ANNUAL MEAN					8,649	1988
HIGHEST DAILY MEAN	109,000	Apr 14	81,800	Mar 30	160,000	Mar 7, 1967
LOWEST DAILY MEAN	(e)2,760	Sep 7	(e)2,330	Sep 15	1,100	Jul 30, 1966
ANNUAL SEVEN-DAY MINIMUM	2,990	Sep 1	3,070	Sep 21	1,250	Sep 26, 1953
MAXIMUM PEAK FLOW			86,300	Mar 30	216,000	Aug 15, 1940
MAXIMUM PEAK STAGE			27.81	Mar 30	39.72	Mar 7, 1955
INSTANTANEOUS LOW FLOW			(a)	(a)	1,030	(b)
10 PERCENT EXCEEDS	45,400		35,900		33,900	
50 PERCENT EXCEEDS	16,800		15,000		9,640	
90 PERCENT EXCEEDS	5,260		4,180		3,100	

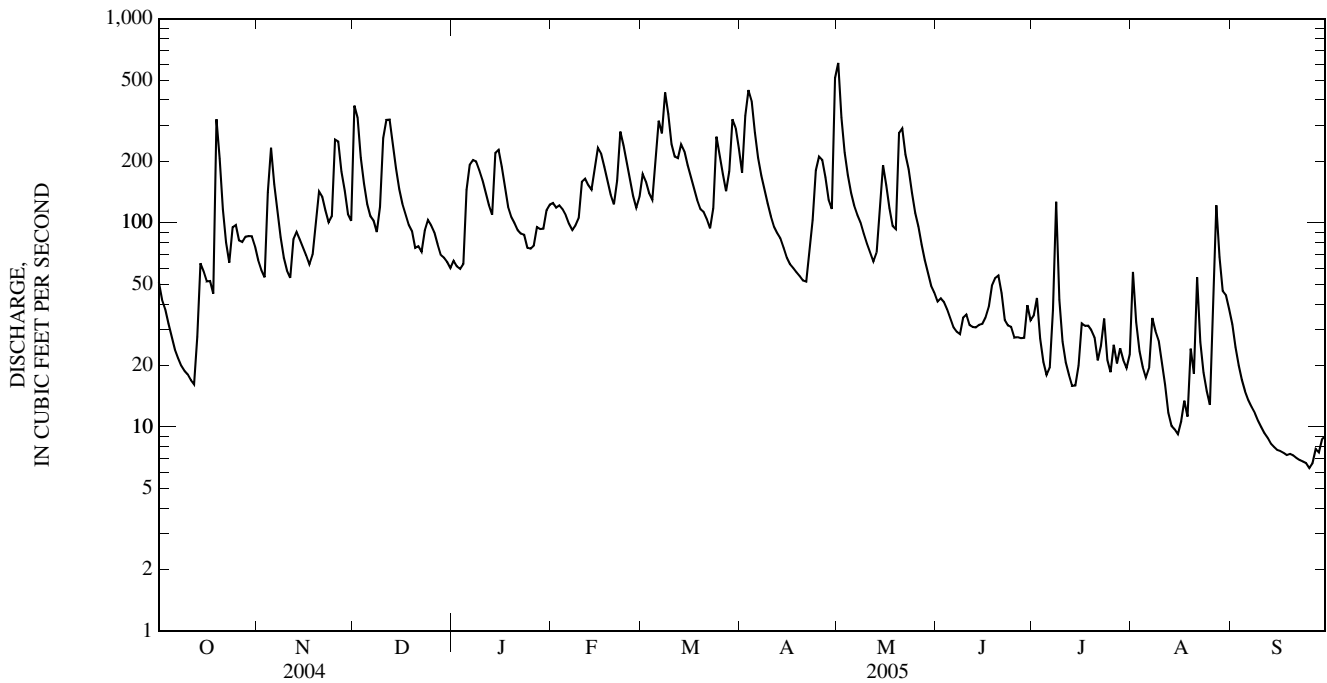
a Not determined.
 b Minimum discharge less than 1,030 ft³/s during Oct. 1-5, 1953.
 c Estimated.



03198350 CLEAR FORK AT WHITESVILLE, WV—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1997 - 2005	
ANNUAL TOTAL	46,227.7		36,865.2		89.4	
ANNUAL MEAN	126		101		141	
HIGHEST ANNUAL MEAN					2004	
LOWEST ANNUAL MEAN					1999	
HIGHEST DAILY MEAN	1,430	May 31	607	May 1	2,760	Jul 8, 2001
LOWEST DAILY MEAN	7.6	(a)	6.3	Sep 25	2.5	(b)
ANNUAL SEVEN-DAY MINIMUM	8.2	Sep 1	6.8	Sep 20	2.8	Sep 21, 1999
MAXIMUM PEAK FLOW			838	Apr 30	(c)12,000	Jul 8, 2001
MAXIMUM PEAK STAGE			14.48	Apr 30	(d)28.47	Jul 8, 2001
INSTANTANEOUS LOW FLOW			5.9	(f)	2.1	Sep 27, 1999
ANNUAL RUNOFF (CFSM)	2.01		1.61		1.42	
ANNUAL RUNOFF (INCHES)	27.38		21.84		19.34	
10 PERCENT EXCEEDS	252		219		195	
50 PERCENT EXCEEDS	84		79		50	
90 PERCENT EXCEEDS	18		16		8.7	

- a Sept. 6, 7.
- b Sept. 26, 27, 1999.
- c From rating curve extended above 3,300 ft³/s based on slope-area measurement of flow made July 10, 2001.
- d From floodmarks.
- f Sept. 25, 26.



03198500 BIG COAL RIVER AT ASHFORD, WV

LOCATION.--Lat 38°10'47", long 81°42'42", NAD 27, 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 with satellite telemeter. Datum of gage is 622.46 ft above NGVD 29. Prior to Aug. 9, 1916, nonrecording gage at site 1.0 mi upstream at different datum. May 7, 1930, to Feb. 10, 1939, nonrecording gage at present site and datum.

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

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 5,500 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Apr 30	1430	*5,550	*10.22	No other peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	432	394	2,040	376	943	1,330	1,120	3,940	244	95	147	218
2	324	348	2,510	388	880	1,220	1,680	2,100	233	98	144	180
3	300	324	1,540	366	828	1,020	2,850	1,470	250	93	122	150
4	248	481	1,110	361	829	902	2,430	1,110	233	84	95	130
5	196	1,300	876	693	769	1,100	1,830	887	213	87	81	117
6	167	964	728	1,130	704	1,760	1,380	738	200	87	71	108
7	141	714	687	1,310	636	1,670	1,120	640	205	122	76	100
8	127	559	631	1,540	605	2,260	969	580	222	524	97	93
9	115	445	638	1,520	612	2,380	825	509	226	368	91	89
10	109	377	1,360	1,280	794	1,790	708	449	207	191	83	81
11	107	343	1,780	1,050	899	1,480	621	403	193	140	76	74
12	98	419	1,880	885	873	1,440	568	367	179	117	71	69
13	118	635	1,590	749	848	1,680	531	335	177	103	65	65
14	254	596	1,220	1,120	899	1,650	492	511	159	95	63	66
15	319	531	960	1,420	1,380	1,400	435	694	143	107	62	66
16	274	473	791	1,220	1,310	1,190	391	724	142	134	79	61
17	258	417	693	1,010	1,130	1,040	367	542	141	171	134	62
18	226	421	619	794	960	911	349	437	126	145	85	59
19	1,140	617	568	671	821	792	324	391	122	201	161	60
20	1,490	999	493	627	717	732	305	1,010	116	348	358	55
21	912	966	444	589	806	676	293	1,190	116	190	297	50
22	695	814	436	551	1,440	612	407	908	116	144	228	50
23	503	693	496	617	1,470	747	582	735	108	160	151	49
24	536	622	613	543	1,220	1,880	897	624	98	163	117	47
25	575	1,270	591	554	1,040	1,530	1,180	548	92	127	94	47
26	497	1,580	548	563	868	1,220	1,100	473	90	113	142	48
27	458	1,030	500	620	749	1,010	996	401	86	110	573	47
28	469	808	433	633	872	1,010	807	357	85	129	490	48
29	443	651	411	630	---	1,550	710	332	99	106	330	51
30	460	561	396	776	---	1,710	3,940	299	106	108	328	61
31	444	---	378	929	---	1,380	---	272	---	121	255	---
TOTAL	12,435	20,352	27,960	25,515	25,902	41,072	30,207	23,976	4,727	4,781	5,166	2,401
MEAN	401	678	902	823	925	1,325	1,007	773	158	154	167	80.0
MAX	1,490	1,580	2,510	1,540	1,470	2,380	3,940	3,940	250	524	573	218
MIN	98	324	378	361	605	612	293	272	85	84	62	47
CFSM	1.03	1.74	2.31	2.11	2.37	3.39	2.58	1.98	0.40	0.39	0.43	0.20
IN.	1.18	1.94	2.66	2.43	2.46	3.91	2.87	2.28	0.45	0.45	0.49	0.23

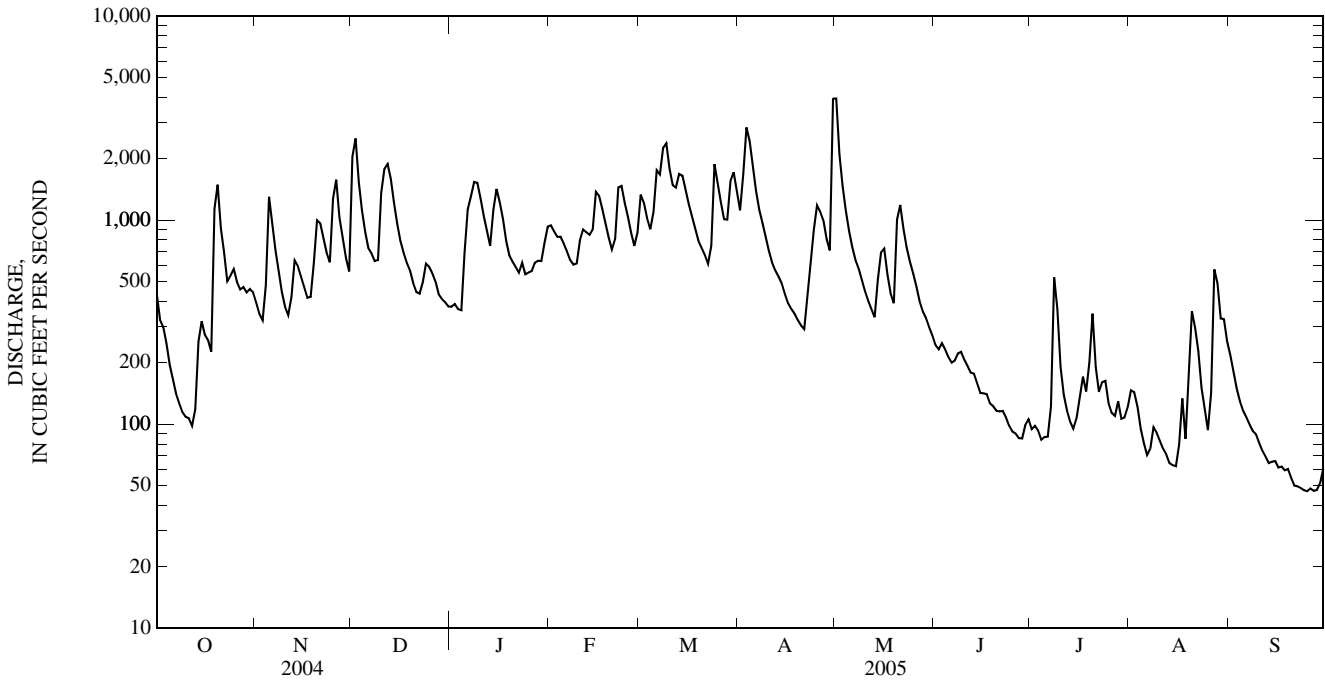
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1908 - 2005, BY WATER YEAR (WY)

MEAN	126	268	562	822	1,010	1,188	912	623	323	237	175	111
MAX	1,086	1,994	2,043	2,241	2,294	2,866	2,448	2,169	1,208	1,457	1,570	651
(WY)	(1990)	(2004)	(1943)	(1974)	(2003)	(1955)	(1987)	(1996)	(1981)	(2001)	(1916)	(2003)
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)

03198500 BIG COAL RIVER AT ASHFORD, WV—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1908 - 2005	
ANNUAL TOTAL	281,414		224,494			
ANNUAL MEAN	769		615		529	
HIGHEST ANNUAL MEAN					872 2004	
LOWEST ANNUAL MEAN					206 1941	
HIGHEST DAILY MEAN	7,180	Apr 14	3,940	(a)	20,400	Mar 7, 1967
LOWEST DAILY MEAN	78	Sep 7	47	(b)	0.00	(c)
ANNUAL SEVEN-DAY MINIMUM	88	Sep 1	48	Sep 22	0.00	Oct 6, 1930
MAXIMUM PEAK FLOW			5,550	Apr 30	(d)35,800	Aug 9, 1916
MAXIMUM PEAK STAGE			10.22	Apr 30	(f)36.30	Aug 9, 1916
INSTANTANEOUS LOW FLOW			45	(g)	0.00	(c)
ANNUAL RUNOFF (CFSM)	1.97		1.57		1.35	
ANNUAL RUNOFF (INCHES)	26.77		21.36		18.38	
10 PERCENT EXCEEDS	1,580		1,380		1,260	
50 PERCENT EXCEEDS	520		481		233	
90 PERCENT EXCEEDS	151		87		30	

- a Apr. 30, May 1.
- b Sept. 24, 25, 27.
- c Sept. 18-21, 24, Oct. 6-12, 1930.
- d From rating curve extended above 25,000 ft³/s.
- f Observed. From floodmark, site and datum then in use. The peak stage is 35.66 ft at present site and datum.
- g Sept. 25, 28, 29.



03200500 COAL RIVER AT TORNADO, WV

LOCATION.--Lat 38°20'20", long 81°50'30", NAD 27, 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, November 1928 to September 1931, August 1961 to current year.

REVISED RECORDS.--WDR WV-82-1: Drainage area. WDR WV-97-1: 1962-63(M), 1967(M), 1970(M).

GAGE.--Water-stage recorder with satellite telemeter. Datum of gage is 570.46 ft above NGVD 29. 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 discharge (ice effect), which is poor.

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)
Apr 30	2200	*16,200	*19.47	No other peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	652	770	4,030	844	1,910	4,440	2,510	11,500	584	286	257	544
2	545	683	5,770	865	1,800	3,490	3,730	5,270	537	227	272	445
3	597	635	3,430	834	1,680	2,640	6,890	3,470	595	257	271	360
4	490	934	2,390	823	1,630	2,200	5,640	2,550	574	217	217	297
5	421	2,420	1,850	1,720	1,490	2,790	4,210	2,040	544	229	192	265
6	368	2,040	1,560	2,530	1,380	3,680	3,140	1,720	496	237	162	242
7	344	1,510	1,530	2,950	1,270	3,620	2,530	1,500	488	273	162	212
8	316	1,200	1,410	3,990	1,210	5,020	2,200	1,360	490	1,030	214	210
9	307	966	1,390	3,940	1,210	5,660	1,900	1,210	521	952	216	194
10	298	807	3,100	3,040	1,530	4,150	1,640	1,070	485	493	194	175
11	293	721	4,010	2,380	1,700	3,320	1,450	988	474	348	177	151
12	280	1,060	4,050	1,980	1,670	3,140	1,330	900	414	295	166	151
13	263	1,350	3,400	1,700	1,630	3,610	1,260	844	399	274	148	140
14	521	1,260	2,590	2,320	1,710	3,670	1,170	1,090	403	254	132	134
15	582	1,130	2,030	3,100	2,310	3,070	1,060	1,260	374	233	129	147
16	545	1,030	1,690	2,660	2,500	2,580	959	1,330	313	305	129	143
17	537	941	1,470	2,200	2,300	2,250	880	1,070	308	398	348	147
18	487	960	1,330	1,750	1,970	1,980	844	928	286	469	234	144
19	2,100	1,900	1,220	1,490	1,710	1,740	790	870	268	905	341	131
20	3,530	2,680	1,090	1,400	1,530	1,600	728	1,960	259	1,350	628	131
21	1,970	2,450	930	1,330	1,720	1,480	689	2,370	254	607	476	115
22	1,450	2,000	965	1,270	3,160	1,340	824	1,750	265	428	456	132
23	1,070	1,670	1,110	1,480	3,090	1,510	1,090	1,440	250	387	296	131
24	1,210	1,450	1,390	1,250	2,580	4,000	1,560	1,310	241	383	280	123
25	1,190	1,790	1,330	e1,330	2,240	3,350	2,190	1,120	225	302	224	103
26	1,040	2,600	1,240	1,330	1,870	2,650	2,040	999	220	258	255	110
27	948	1,910	1,140	1,400	1,650	2,200	2,050	874	219	249	1,300	101
28	935	1,560	1,010	1,350	2,400	2,200	1,780	791	209	352	1,350	102
29	877	1,330	953	1,340	---	3,330	1,580	740	226	307	1,160	107
30	866	1,180	927	1,620	---	3,780	9,230	674	255	245	927	121
31	829	---	874	1,890	---	3,120	---	631	---	246	689	---
TOTAL	25,861	42,937	61,209	58,106	52,850	93,610	67,894	55,629	11,176	12,796	12,002	5,508
MEAN	834	1,431	1,974	1,874	1,888	3,020	2,263	1,794	373	413	387	184
MAX	3,530	2,680	5,770	3,990	3,160	5,660	9,230	11,500	595	1,350	1,350	544
MIN	263	635	874	823	1,210	1,340	689	631	209	217	129	101
CFSM	0.97	1.66	2.29	2.17	2.19	3.50	2.63	2.08	0.43	0.48	0.45	0.21
IN.	1.12	1.85	2.64	2.51	2.28	4.04	2.93	2.40	0.48	0.55	0.52	0.24

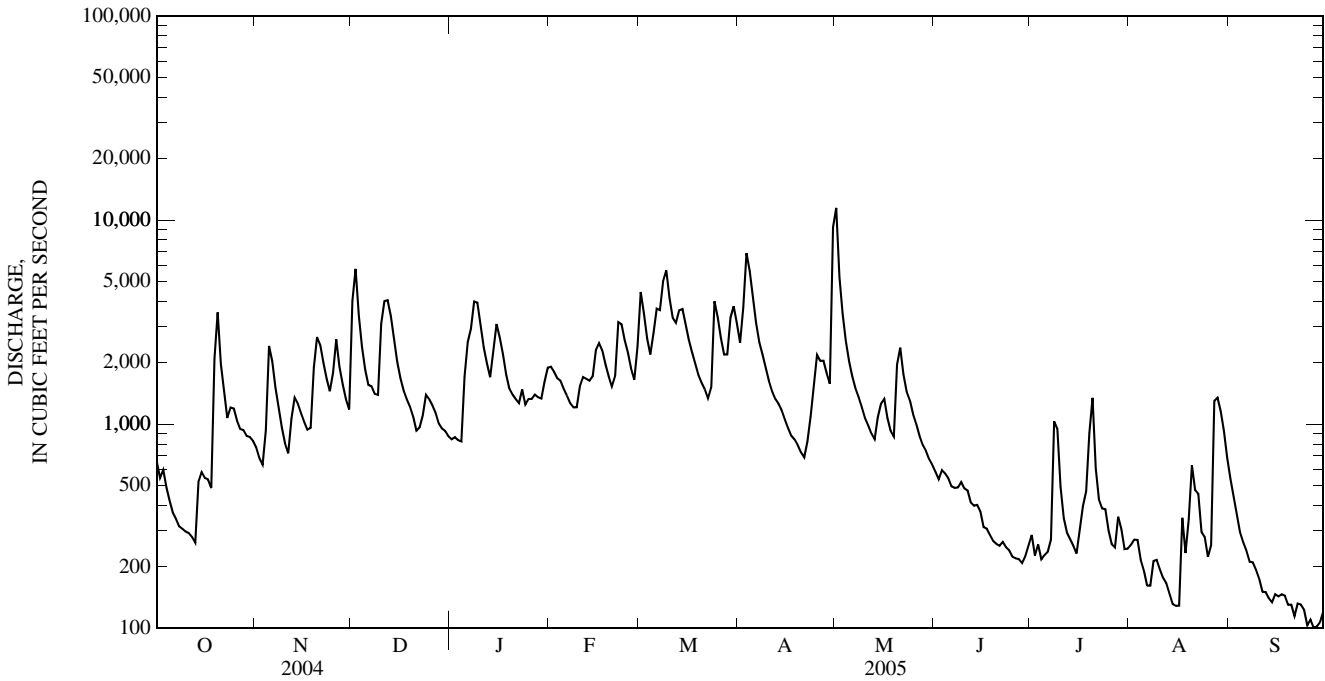
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1908 - 2005, BY WATER YEAR (WY)

MEAN	367	834	1,326	1,709	2,188	2,463	2,027	1,598	870	574	437	325
MAX	1,832	4,457	3,723	4,433	5,296	5,634	4,812	5,122	2,840	2,248	1,394	1,484
(WY)	(1990)	(2004)	(1973)	(1979)	(2003)	(1963)	(1987)	(1996)	(2003)	(2001)	(1968)	(2003)
MIN	3.05	10.5	46.7	209	479	757	509	234	47.2	8.67	26.1	7.00
(WY)	(1931)	(1931)	(1931)	(1931)	(2002)	(1910)	(1986)	(1930)	(1930)	(1930)	(1930)	(1930)

03200500 COAL RIVER AT TORNADO, WV—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1908 - 2005	
ANNUAL TOTAL	593,983		499,578		1,223	
ANNUAL MEAN	1,623		1,369		1,859	
HIGHEST ANNUAL MEAN					2004	
LOWEST ANNUAL MEAN					1988	
HIGHEST DAILY MEAN	16,600	Apr 14	11,500	May 1	32,000	Dec 31, 1969
LOWEST DAILY MEAN	182	Sep 7	101	Sep 27	(e)2.0	(a)
ANNUAL SEVEN-DAY MINIMUM	209	Sep 1	110	Sep 24	2.0	Oct 1, 1930
MAXIMUM PEAK FLOW			16,200	Apr 30	35,500	Mar 7, 1967
MAXIMUM PEAK STAGE			19.47	Apr 30	31.98	Mar 7, 1967
INSTANTANEOUS LOW FLOW			93	(b)	2.0	Oct 1, 1930
ANNUAL RUNOFF (CFSM)	1.88		1.59		1.42	
ANNUAL RUNOFF (INCHES)	25.63		21.56		19.28	
10 PERCENT EXCEEDS	3,340		3,100		2,740	
50 PERCENT EXCEEDS	1,120		1,070		656	
90 PERCENT EXCEEDS	327		215		116	

a Oct. 1-10, 1930.
 b Sept. 27, 28.
 e Estimated



03201405 HURRICANE CREEK AT HURRICANE, WV

LOCATION.--Lat 38°26'43", long 82°00'25", NAD 27, Putnam County, Hydrologic Unit 05050008, on right bank at Interstate 64 bridge over Hurricane Creek and just upstream from the Hurricane Waste Water Treatment Plant chain-linked fence.

DRAINAGE AREA.--26.8 mi².

PERIOD OF RECORD.--October 1998 to current year.

REVISED RECORDS.--WDR WV-04-1: 1999-2003(P).

GAGE.--Water-stage recorder with satellite telemeter. Datum of gage is 600.00 ft above NGVD 29.

REMARKS.--Records good, except those for periods of estimated daily discharges (no gage-height record, ice effect), which are poor.

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Oct 20	0400	1,420	13.35	Jul 27	2200	*1,820	*14.38
Nov 12	1100	835	11.10	Aug 26	1300	1,020	11.98
Apr 30	1100	1,140	12.45	Aug 29	2000	1,490	13.55

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.5	9.7	341	11	30	247	30	98	2.5	1.0	3.0	23
2	4.2	8.5	87	11	25	77	265	45	2.0	1.4	2.3	13
3	5.0	11	41	14	28	47	222	27	17	0.93	1.9	8.1
4	4.0	319	27	56	25	37	69	19	9.3	0.83	1.7	5.5
5	3.3	101	20	284	21	214	41	15	4.1	1.4	1.6	3.3
6	3.0	36	27	132	18	109	29	13	2.9	2.8	1.3	2.6
7	3.1	21	109	92	17	62	26	11	2.1	2.3	1.3	2.1
8	3.0	14	64	359	22	271	31	9.9	1.9	13	1.8	5.1
9	3.0	9.7	122	99	45	95	21	8.1	1.6	9.4	1.5	2.3
10	3.2	8.0	299	55	122	59	17	6.9	3.7	2.4	1.3	1.6
11	3.1	8.4	e220	39	56	46	15	6.3	52	1.4	1.2	1.5
12	3.2	369	e110	32	38	56	15	5.3	6.7	1.1	1.1	1.8
13	6.1	107	e58	26	29	102	15	5.6	3.7	0.99	1.2	1.3
14	14	38	34	109	124	80	12	10	4.0	0.92	2.1	1.2
15	4.8	23	23	47	86	67	9.8	10	6.6	1.0	1.8	1.3
16	4.7	17	18	33	52	46	8.1	5.1	2.5	1.7	2.0	1.4
17	4.3	14	16	24	36	35	7.6	3.9	1.6	11	2.1	3.1
18	4.8	29	14	17	26	27	7.4	3.2	1.4	33	2.5	2.5
19	100	274	13	17	21	23	7.0	9.3	1.3	24	6.4	1.7
20	551	156	9.0	19	20	21	6.3	70	1.2	38	2.5	1.7
21	55	66	9.1	19	66	17	6.9	15	1.2	6.5	1.7	1.6
22	23	38	11	44	81	15	23	7.9	1.6	9.6	1.2	1.5
23	14	27	118	e41	41	71	99	10	1.4	6.2	1.0	1.6
24	140	27	55	e28	38	116	127	20	1.2	2.5	1.0	1.7
25	42	26	27	24	34	48	120	8.6	1.1	1.8	0.95	1.8
26	18	17	20	37	30	33	47	5.8	1.0	1.4	393	2.7
27	15	14	15	37	25	26	64	6.3	0.98	442	216	3.3
28	12	17	13	e21	403	72	34	5.5	0.89	233	28	2.7
29	10	13	13	25	---	134	27	4.5	0.88	16	659	5.9
30	9.8	42	12	40	---	57	527	3.1	0.90	7.3	164	2.7
31	7.9	---	11	36	---	38	---	2.9	---	4.6	50	---
TOTAL	1,078.0	1,860.3	1,956.1	1,828	1,559	2,348	1,929.1	471.2	139.25	879.47	1,556.45	109.6
MEAN	34.8	62.0	63.1	59.0	55.7	75.7	64.3	15.2	4.64	28.4	50.2	3.65
MAX	551	369	341	359	403	271	527	98	52	442	659	23
MIN	3.0	8.0	9.0	11	17	15	6.3	2.9	0.88	0.83	0.95	1.2
CFSM	1.30	2.31	2.35	2.20	2.08	2.83	2.40	0.57	0.17	1.06	1.87	0.14
IN.	1.50	2.58	2.72	2.54	2.16	3.26	2.68	0.65	0.19	1.22	2.16	0.15

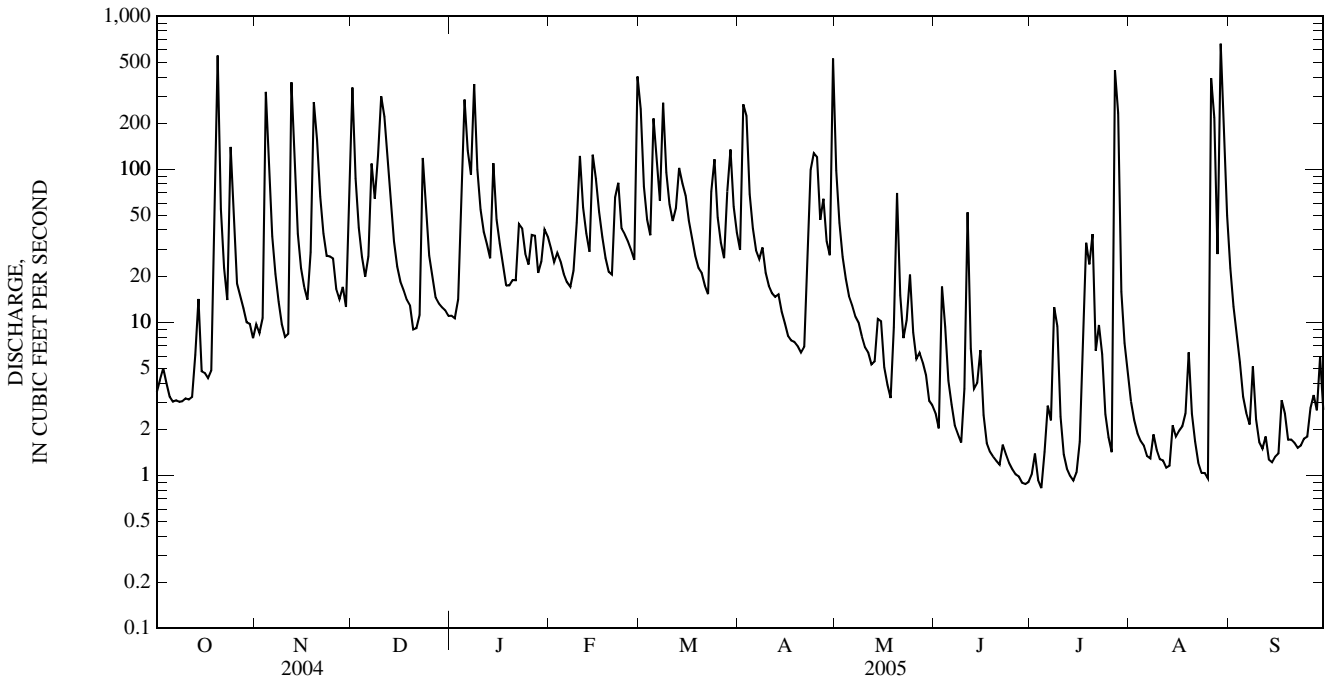
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1998 - 2005, BY WATER YEAR (WY)

	12.2	42.2	30.7	39.8	63.3	61.5	51.4	47.2	21.9	30.4	21.7	20.9
MEAN	12.2	42.2	30.7	39.8	63.3	61.5	51.4	47.2	21.9	30.4	21.7	20.9
MAX	34.8	161	63.1	76.3	157	104	85.2	116	66.3	80.6	50.2	102
(WY)	(2005)	(2004)	(2005)	(2004)	(2003)	(2002)	(2004)	(2001)	(2003)	(2000)	(2005)	(2004)
MIN	1.50	1.96	6.79	9.18	10.3	24.9	11.5	2.25	0.79	0.42	6.08	0.69
(WY)	(2002)	(2002)	(2002)	(2000)	(2002)	(2003)	(1999)	(1999)	(1999)	(1999)	(2002)	(1999)

03201405 HURRICANE CREEK AT HURRICANE, WV—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1998 - 2005	
ANNUAL TOTAL	20,779.97		15,714.47		36.8	
ANNUAL MEAN	56.8		43.1		62.2	
HIGHEST ANNUAL MEAN					17.8	
LOWEST ANNUAL MEAN					1,660	
HIGHEST DAILY MEAN	1,270	May 28	659	Aug 29	1,660	Nov 19, 2003
LOWEST DAILY MEAN	(e)0.90	Sep 7	0.83	Jul 4	0.08	(a)
ANNUAL SEVEN-DAY MINIMUM	1.1	Jul 15	0.96	Jun 25	0.09	Jul 13, 1999
MAXIMUM PEAK FLOW			1,820	Jul 27	3,690	Nov 19, 2003
MAXIMUM PEAK STAGE			14.38	Jul 27	18.01	Nov 19, 2003
INSTANTANEOUS LOW FLOW			0.76	(b)	0.06	(a)
ANNUAL RUNOFF (CFSM)	2.12		1.61		1.37	
ANNUAL RUNOFF (INCHES)	28.84		21.81		18.64	
10 PERCENT EXCEEDS	121		109		83	
50 PERCENT EXCEEDS	16		14		8.1	
90 PERCENT EXCEEDS	2.8		1.4		1.1	

a July 18, 19, 1999.
 b July 4, 5.
 e Estimated



GUYANDOTTE RIVER BASIN

03202400 GUYANDOTTE RIVER AT BAILEYSVILLE, WV

LOCATION.--Lat 37°36'14", long 81°38'43", NAD 27, 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 with satellite telemeter. Datum of gage is 1,140.00 ft above NGVD 29. Prior to Sept. 10, 1969, at site 25 ft upstream at same datum.

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

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 4,400 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 1	1830	*2,850	*6.92	No peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	256	352	1,850	272	782	749	826	1,520	150	260	477	153
2	217	320	1,860	270	733	667	1,280	1,210	155	459	282	135
3	237	293	1,090	256	813	590	1,840	873	172	228	191	117
4	217	381	774	272	878	553	1,860	675	175	146	155	106
5	193	659	606	724	814	668	1,410	552	155	143	135	97
6	177	555	585	900	711	1,280	1,050	487	141	167	141	93
7	165	460	771	739	632	1,340	853	440	135	222	142	88
8	152	383	905	756	624	1,820	737	398	133	1,130	131	85
9	143	321	1,020	864	637	1,810	660	358	127	495	144	84
10	141	286	2,540	782	706	1,300	559	331	134	274	138	81
11	137	264	1,860	644	651	1,050	505	316	133	198	118	77
12	139	337	1,370	637	587	962	471	292	121	165	106	74
13	159	467	1,100	569	551	1,080	475	277	116	143	97	73
14	408	430	866	1,260	668	1,170	424	286	115	138	92	73
15	312	387	702	1,510	904	1,060	376	297	138	144	89	72
16	238	355	595	1,090	912	941	342	278	123	179	90	67
17	205	324	538	831	857	838	321	242	107	205	104	71
18	181	312	489	646	746	728	310	229	100	751	132	67
19	548	322	456	560	643	646	299	215	99	840	1,320	64
20	750	339	388	529	567	603	289	265	99	475	693	62
21	655	355	357	497	767	571	281	291	100	332	347	60
22	727	360	358	442	1,610	534	289	241	96	258	230	60
23	492	358	359	445	1,320	600	358	224	94	221	175	60
24	500	449	376	338	1,000	1,000	409	221	88	183	146	60
25	554	1,140	333	406	816	1,020	462	215	86	158	128	61
26	478	1,010	320	371	665	860	460	205	85	142	123	63
27	465	721	305	370	576	724	464	190	86	137	259	69
28	495	584	270	341	598	749	423	175	86	150	400	67
29	477	467	283	369	---	1,220	406	167	92	187	250	64
30	452	418	276	624	---	1,260	865	164	117	229	189	62
31	400	---	270	813	---	1,020	---	158	---	233	164	---
TOTAL	10,670	13,409	23,872	19,127	21,768	29,413	19,304	11,792	3,558	8,992	7,188	2,365
MEAN	344	447	770	617	777	949	643	380	119	290	232	78.8
MAX	750	1,140	2,540	1,510	1,610	1,820	1,860	1,520	175	1,130	1,320	153
MIN	137	264	270	256	551	534	281	158	85	137	89	60
CFSM	1.12	1.46	2.52	2.02	2.54	3.10	2.10	1.24	0.39	0.95	0.76	0.26
IN.	1.30	1.63	2.90	2.33	2.65	3.58	2.35	1.43	0.43	1.09	0.87	0.29

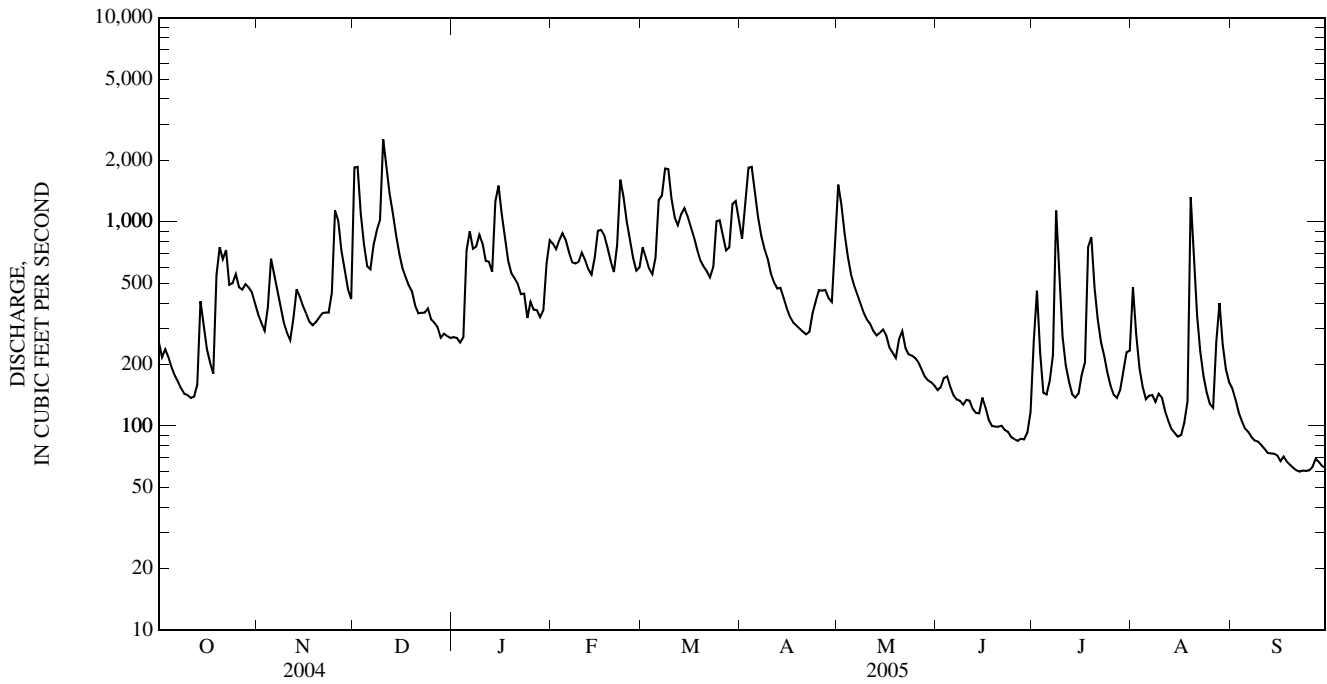
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1968 - 2005, BY WATER YEAR (WY)

MEAN	144	250	408	593	765	792	733	624	329	228	172	113
MAX	680	1,143	1,294	1,894	1,824	1,969	2,003	1,395	1,262	1,452	649	367
(WY)	(1990)	(2004)	(1973)	(1974)	(2003)	(1975)	(1987)	(2001)	(1981)	(2001)	(1972)	(2003)
MIN	35.6	33.8	62.4	127	173	193	211	198	88.6	65.2	49.8	47.1
(WY)	(1979)	(1979)	(1998)	(2000)	(2002)	(1988)	(1986)	(1976)	(1999)	(1999)	(1970)	(1998)

03202400 GUYANDOTTE RIVER AT BAILEYSVILLE, WV—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1968 - 2005	
ANNUAL TOTAL	212,607		171,458			
ANNUAL MEAN	581		470		428	
HIGHEST ANNUAL MEAN					692	
LOWEST ANNUAL MEAN					174	
HIGHEST DAILY MEAN	5,770	May 31	2,540	Dec 10	17,900	Apr 5, 1977
LOWEST DAILY MEAN	102	Sep 7	60	(a)	23	Nov 11, 1978
ANNUAL SEVEN-DAY MINIMUM	110	Sep 1	61	Sep 20	27	Oct 17, 1978
MAXIMUM PEAK FLOW			2,850	Dec 1	(b)46,400	Jul 8, 2001
MAXIMUM PEAK STAGE			6.92	Dec 1	(c)31.25	Jul 8, 2001
INSTANTANEOUS LOW FLOW			58	Sep 22	21	Oct 14, 1970
ANNUAL RUNOFF (CFSM)	1.90		1.54		1.40	
ANNUAL RUNOFF (INCHES)	25.85		20.84		19.01	
10 PERCENT EXCEEDS	1,090		1,010		926	
50 PERCENT EXCEEDS	418		355		236	
90 PERCENT EXCEEDS	158		97		59	

- a Sept. 21-24.
- b From rating curve extended above 37,000 ft³/s on basis of slope-conveyance measurement.
- c From floodmarks.



GUYANDOTTE RIVER BASIN

03202750 CLEAR FORK AT CLEAR FORK, WV

LOCATION.--Lat 37°37'23", long 81°42'27", NAD 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.

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

REVISED RECORDS.--WDR WV-81-1: Drainage area. WDR WV-94-1: 1993.

GAGE.--Water-stage recorder with satellite telemeter. Elevation of gage is approximately 1,150 ft above NGVD 29, 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.--No estimated daily discharges. Records fair.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,600 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec 1	1500	*2,430	*7.41	Apr 30	2400	2,150	6.98

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	127	150	1,640	107	421	392	284	1,530	45	27	46	88
2	99	130	1,050	113	362	326	749	725	47	46	54	69
3	94	116	541	112	394	263	1,160	431	50	34	35	56
4	78	215	333	129	423	243	968	286	43	28	27	47
5	67	443	239	775	361	383	615	214	39	23	23	39
6	58	315	238	734	283	959	391	178	35	26	26	34
7	51	228	297	516	233	801	281	154	46	56	22	31
8	47	174	344	450	234	988	228	134	51	246	25	28
9	44	136	461	427	228	839	195	115	41	88	35	25
10	42	114	1,090	412	272	555	160	102	39	47	39	23
11	39	102	897	307	264	426	139	95	37	35	31	22
12	38	180	698	236	245	400	131	85	34	29	23	21
13	53	257	528	195	233	536	129	80	31	25	19	20
14	95	221	356	419	421	551	115	101	29	25	17	19
15	90	184	257	476	758	442	99	106	38	33	16	18
16	88	160	205	359	604	341	88	100	37	38	23	18
17	80	138	180	264	443	276	81	86	29	41	91	18
18	69	136	160	205	332	224	78	77	26	173	49	17
19	604	154	149	183	254	193	77	71	24	170	914	16
20	524	200	123	162	207	177	74	120	23	104	319	15
21	411	240	123	154	295	161	72	124	22	106	159	14
22	272	242	114	136	775	146	105	105	21	87	88	13
23	193	218	130	145	620	175	155	93	20	68	61	13
24	242	242	141	118	415	393	279	90	19	55	46	12
25	288	1,150	127	175	299	402	356	82	19	42	37	12
26	238	892	124	137	221	319	360	71	19	35	43	13
27	246	492	116	148	189	247	319	63	18	32	266	21
28	295	336	103	139	218	260	235	59	18	39	328	19
29	273	235	101	159	---	426	220	55	20	39	162	18
30	226	214	98	330	---	483	1,190	51	20	32	107	19
31	182	---	94	468	---	380	---	47	---	28	87	---
TOTAL	5,253	8,014	11,057	8,690	10,004	12,707	9,333	5,630	940	1,857	3,218	778
MEAN	169	267	357	280	357	410	311	182	31.3	59.9	104	25.9
MAX	604	1,150	1,640	775	775	988	1,190	1,530	51	246	914	88
MIN	38	102	94	107	189	146	72	47	18	23	16	12
CFSM	1.34	2.12	2.83	2.22	2.84	3.25	2.47	1.44	0.25	0.48	0.82	0.21
IN.	1.55	2.37	3.26	2.57	2.95	3.75	2.76	1.66	0.28	0.55	0.95	0.23

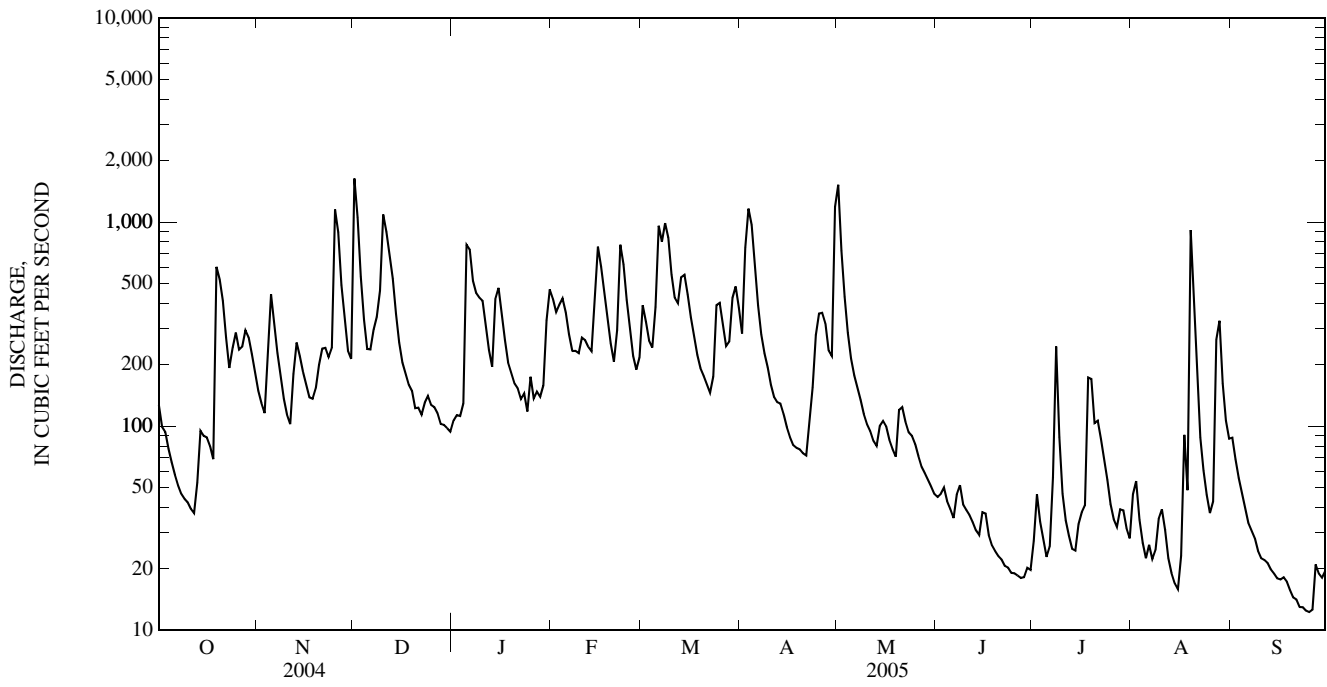
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1974 - 2005, BY WATER YEAR (WY)

	62.7	136	209	291	366	373	317	260	135	90.0	67.0	47.4
MEAN	62.7	136	209	291	366	373	317	260	135	90.0	67.0	47.4
MAX	365	548	491	833	790	981	766	664	551	475	308	153
(WY)	(1990)	(2004)	(1979)	(1979)	(2003)	(1975)	(1987)	(1996)	(1981)	(2001)	(1977)	(1996)
MIN	5.27	10.7	37.6	47.5	89.7	96.0	74.8	38.9	16.9	12.2	6.32	5.21
(WY)	(1992)	(1999)	(1998)	(1977)	(2002)	(1988)	(1986)	(1976)	(1999)	(1988)	(1987)	(1999)

03202750 CLEAR FORK AT CLEAR FORK, WV—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1974 - 2005	
ANNUAL TOTAL	96,891		77,481		195	
ANNUAL MEAN	265		212		318	
HIGHEST ANNUAL MEAN					76.5	
LOWEST ANNUAL MEAN					1988	
HIGHEST DAILY MEAN	5,130	May 31	1,640	Dec 1	6,380	Apr 5, 1977
LOWEST DAILY MEAN	18	Sep 7	12	(a)	2.2	Sep 26, 1999
ANNUAL SEVEN-DAY MINIMUM	23	Sep 1	13	Sep 20	2.8	Sep 22, 1999
MAXIMUM PEAK FLOW			2,430	Dec 1	(b)10,700	Jul 8, 2001
MAXIMUM PEAK STAGE			7.41	Dec 1	(c)18.64	Apr 5, 1977
INSTANTANEOUS LOW FLOW			11	Sep 25	1.7	Sep 27, 1999
ANNUAL RUNOFF (CFSM)	2.10		1.68		1.55	
ANNUAL RUNOFF (INCHES)	28.61		22.88		21.07	
10 PERCENT EXCEEDS	551		471		448	
50 PERCENT EXCEEDS	154		130		90	
90 PERCENT EXCEEDS	38		23		13	

- a Sept. 24, 25.
- b From slope-conveyance measurement of peak flow.
- c Site and datum then in use.



03203600 GUYANDOTTE RIVER AT LOGAN, WV

LOCATION.--Lat 37°50'32", long 81°58'34", NAD 27, Logan County, Hydrologic Unit 05070101, on right bank 200 ft downstream from Midelburg Bridge at Logan, 0.8 mi downstream from Dingess Run, 1.1 mi upstream from Island Creek, and at mile 81.0.

DRAINAGE AREA.--833 mi².

PERIOD OF RECORD.--October 1960 to September 1962 (annual maximum only), October 1962 to current year. Gage-height records collected in this vicinity since November 1915 are contained in reports of National Weather Service.

REVISED RECORDS.--WDR WV-82-1: Drainage area. WDR WV-94-1: 1993.

GAGE.--Water-stage recorder with satellite telemeter. Datum of gage is 640.49 ft above NGVD 29. Datum published as 640.00 ft, 1963 to 1993. Prior to Oct. 1, 1962, at datum 1.32 ft lower.

REMARKS.--No estimated daily discharges. Records good. Flow regulated since February 1980 by R. D. Bailey Lake at mile 112.

PEAK DISCHARGE FOR CURRENT YEAR.--Maximum discharge, 6,970 ft³/s, May 1, gage height, 12.20 ft.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	793	993	3,470	819	2,520	2,810	1,950	6,230	392	240	357	438
2	700	960	5,270	840	2,160	2,710	1,780	4,850	408	830	483	310
3	705	895	4,380	909	2,040	2,000	4,850	2,760	408	839	579	285
4	682	940	2,630	847	2,260	1,760	3,910	2,120	372	548	440	270
5	664	1,530	1,820	1,940	2,070	1,970	3,820	1,680	349	382	285	260
6	550	1,750	1,640	3,350	1,830	2,660	2,850	1,380	316	347	245	253
7	416	1,650	1,700	2,730	1,670	3,540	2,310	1,280	295	781	234	234
8	400	1,290	1,970	1,300	1,520	4,570	1,860	1,120	293	2,230	307	199
9	368	1,010	2,210	1,270	1,550	4,570	1,700	1,040	281	1,880	299	190
10	407	866	3,590	1,040	1,680	4,030	1,480	865	274	877	267	187
11	333	772	4,970	4,190	1,750	2,880	1,430	838	266	539	249	162
12	325	875	4,600	3,500	1,630	2,520	1,070	806	264	497	243	110
13	362	1,190	3,230	1,850	1,540	2,720	1,170	760	242	374	216	124
14	566	1,370	2,360	2,570	1,880	2,880	1,130	771	241	350	189	99
15	857	1,370	1,900	3,260	2,660	2,940	1,050	951	258	322	186	113
16	942	1,040	1,200	2,990	3,040	2,330	765	970	287	344	185	173
17	865	989	1,580	2,010	2,880	2,050	747	768	264	416	230	210
18	462	1,020	1,520	1,880	2,310	1,830	877	632	228	953	271	151
19	1,720	1,120	1,240	1,720	1,890	1,640	855	612	212	1,830	1,700	136
20	2,670	1,280	1,090	1,430	1,630	1,480	739	751	198	1,330	2,810	132
21	1,890	1,300	934	1,410	1,960	1,440	675	699	204	862	1,330	129
22	1,740	1,380	862	1,290	3,240	1,280	796	819	191	658	802	128
23	1,470	1,390	1,110	1,120	4,230	1,370	1,020	713	190	628	502	127
24	1,350	1,350	1,150	993	3,000	1,970	1,320	629	173	431	433	129
25	1,500	1,500	1,110	815	2,210	2,560	1,580	587	146	386	344	127
26	1,660	2,770	1,070	1,150	1,830	2,410	1,630	565	143	348	298	131
27	1,520	2,870	953	1,310	1,590	1,810	1,510	538	143	343	626	149
28	1,450	2,440	883	970	1,680	1,990	1,440	439	153	373	952	139
29	1,510	1,620	746	1,220	---	2,850	1,410	426	160	381	1,060	146
30	1,460	1,400	797	1,830	---	3,120	4,490	415	154	461	903	145
31	1,340	---	783	2,610	---	3,010	---	406	---	365	476	---
TOTAL	31,677	40,930	62,768	55,163	60,250	77,700	52,214	37,420	7,505	21,145	17,501	5,386
MEAN	1,022	1,364	2,025	1,779	2,152	2,506	1,740	1,207	250	682	565	180
MAX	2,670	2,870	5,270	4,190	4,230	4,570	4,850	6,230	408	2,230	2,810	438
MIN	325	772	746	815	1,520	1,280	675	406	143	240	185	99

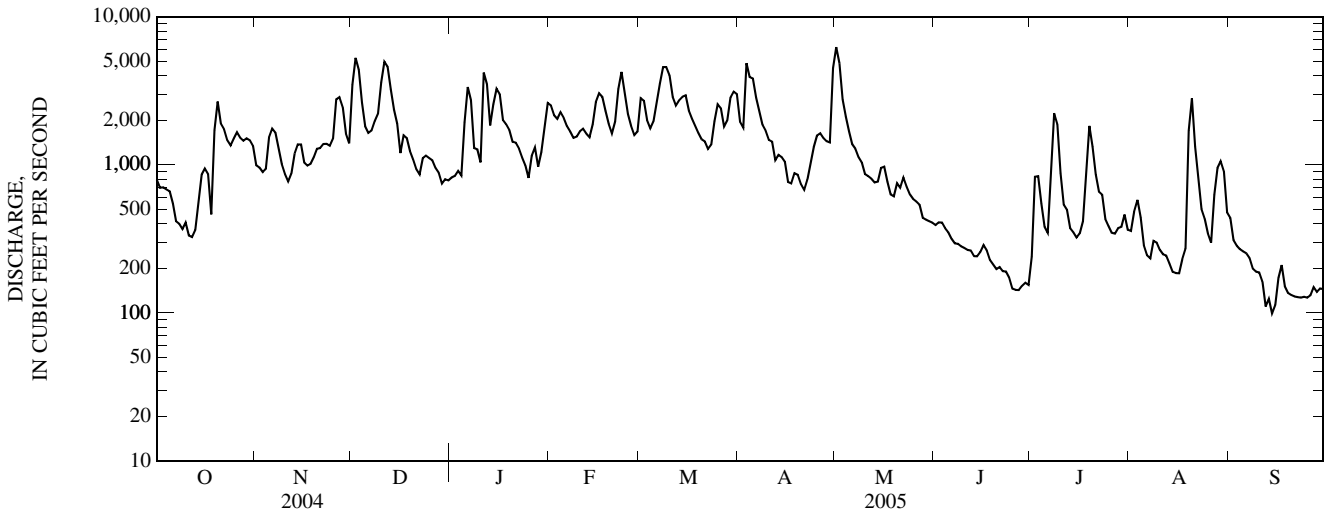
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1980 - 2005, BY WATER YEAR (WY)

MEAN	394	747	1,074	1,509	2,142	2,139	1,838	1,678	916	564	406	307
MAX	2,211	2,754	2,255	3,267	4,250	4,370	5,213	3,889	3,430	1,852	1,108	891
(WY)	(1990)	(2004)	(1992)	(1994)	(1994)	(1993)	(1987)	(1996)	(1981)	(2001)	(2000)	(2003)
MIN	162	98.9	235	375	543	449	354	577	150	120	89.1	70.2
(WY)	(1999)	(1988)	(1998)	(2000)	(2002)	(1988)	(1986)	(2000)	(1999)	(1988)	(1987)	(1999)

03203600 GUYANDOTTE RIVER AT LOGAN, WV—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1980 - 2005	
ANNUAL TOTAL	584,945		469,659		1,137	
ANNUAL MEAN	1,598		1,287		1,712	
HIGHEST ANNUAL MEAN					432	
LOWEST ANNUAL MEAN					1988	
HIGHEST DAILY MEAN	13,900	May 31	6,230	May 1	14,800	May 7, 1984
LOWEST DAILY MEAN	178	Sep 6	99	Sep 14	48	(a)
ANNUAL SEVEN-DAY MINIMUM	212	Sep 1	129	Sep 20	51	Sep 14, 1999
MAXIMUM PEAK FLOW			6,970	May 1	27,200	May 7, 1984
MAXIMUM PEAK STAGE			12.20	May 1	26.21	May 31, 2004
INSTANTANEOUS LOW FLOW			98	Sep 14	45	Oct 26, 1991
10 PERCENT EXCEEDS	3,920		2,810		2,930	
50 PERCENT EXCEEDS	1,140		993		612	
90 PERCENT EXCEEDS	368		208		153	

a July 10, Aug. 18, 1988.



STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1963 - 1979, BY WATER YEAR (WY) [UNREGULATED]

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	427	739	1,491	1,995	1,984	2,606	1,921	1,398	796	462	493	319
MAX	1,462	2,111	3,582	5,381	5,021	5,732	3,891	2,471	3,578	1,592	2,107	1,142
(WY)	(1977)	(1978)	(1973)	(1974)	(1972)	(1975)	(1977)	(1975)	(1979)	(1979)	(1972)	(1966)
MIN	48.8	69.0	67.5	125	857	813	526	362	171	122	90.1	83.2
(WY)	(1964)	(1966)	(1966)	(1966)	(1968)	(1969)	(1963)	(1964)	(1970)	(1964)	(1964)	(1965)

SUMMARY STATISTICS	WATER YEARS 1963 - 1979	
ANNUAL MEAN	1,217	
HIGHEST ANNUAL MEAN	1,936	1979
LOWEST ANNUAL MEAN	570	1969
HIGHEST DAILY MEAN	40,800	Mar 12, 1963
LOWEST DAILY MEAN	34	Sep 17, 1964
ANNUAL SEVEN-DAY MINIMUM	41	Sep 13, 1964
INSTANTANEOUS PEAK FLOW	(*)55,000	Mar 12, 1963
INSTANTANEOUS PEAK STAGE	34.98	Mar 12, 1963
INSTANTANEOUS LOW FLOW	33	Sep 17, 1964
10 PERCENT EXCEEDS	2,560	
50 PERCENT EXCEEDS	602	
90 PERCENT EXCEEDS	110	

* 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.

GUYANDOTTE RIVER BASIN

03204250 MUD RIVER AT PALERMO, WV
(Detention Reservoir)

LOCATION.--Lat 38°09'54", long 82°03'31" (corrected), NAD 83, Lincoln County, Hydrologic Unit 05070102.

DAM NAME.--Upper Mud No. 2-A.

SURFACE AREA.--306 acres.

DRAINAGE AREA.--51.3 mi².

PERIOD OF RECORD.--October 2003 to current year.

GAGE.--Water-stage recorder with satellite telemeter. Datum of gage is 700.0 ft above NGVD 29, (corrected).

REMARKS.-- Normal Pool = 21.5 ft (Normal Storage = 4,490 acre-ft)

Top of Riser = 29.0 ft

Emergency Spillway = 42.5 ft

Top of Dam = 59.5 ft

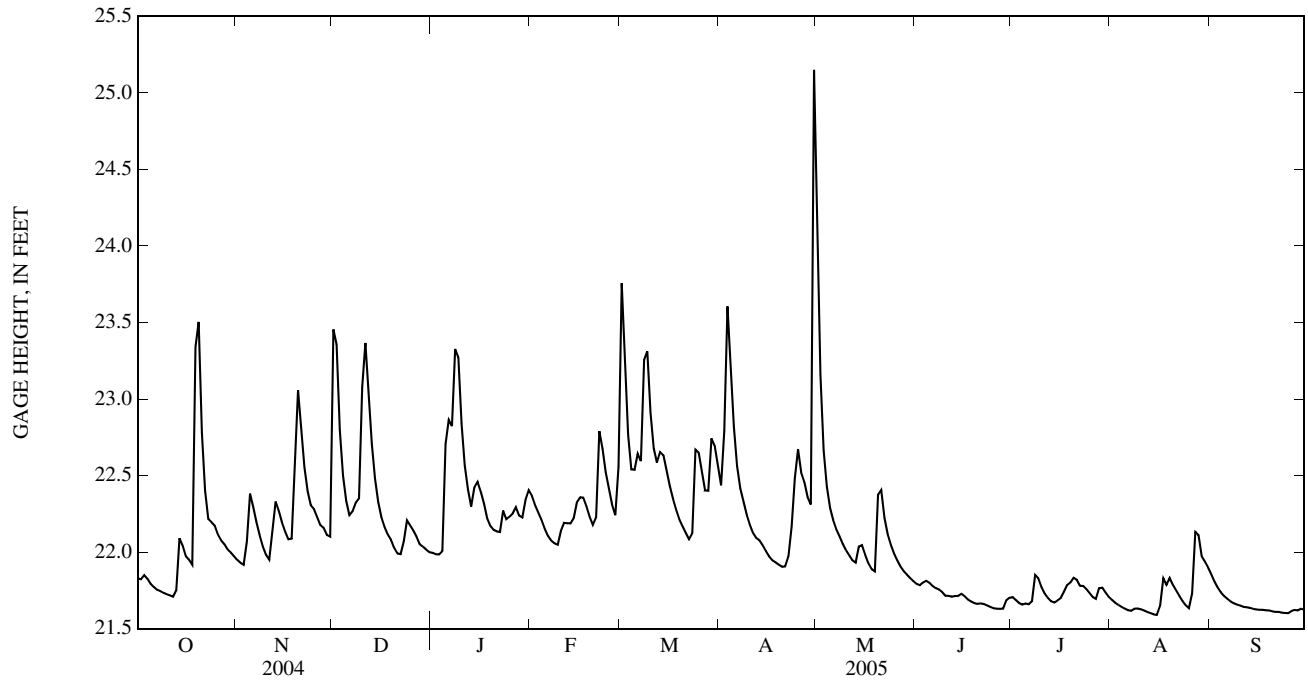
EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 27.98 ft, Nov. 19, 2003; minimum gage height, 21.58 ft, Aug. 16, 2005.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 26.73 ft, Apr. 30; minimum gage height, 21.58 ft, Aug. 16.

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21.83	21.95	23.45	22.00	22.37	23.76	22.44	24.48	21.79	21.71	21.69	21.86
2	21.82	21.93	23.36	21.99	22.31	23.20	22.79	23.16	21.78	21.69	21.67	21.81
3	21.85	21.92	22.80	21.99	22.26	22.77	23.60	22.67	21.80	21.67	21.65	21.77
4	21.83	22.07	22.50	22.01	22.21	22.54	23.26	22.43	21.81	21.66	21.64	21.74
5	21.79	22.38	22.34	22.71	22.15	22.54	22.82	22.29	21.80	21.66	21.63	21.71
6	21.77	22.29	22.24	22.86	22.11	22.64	22.56	22.21	21.78	21.66	21.62	21.70
7	21.75	22.20	22.27	22.82	22.07	22.59	22.42	22.15	21.76	21.68	21.62	21.68
8	21.75	22.11	22.32	23.33	22.06	23.25	22.33	22.10	21.76	21.85	21.63	21.66
9	21.73	22.04	22.35	23.27	22.05	23.31	22.25	22.05	21.74	21.83	21.63	21.66
10	21.73	21.98	23.08	22.84	22.14	22.91	22.18	22.01	21.72	21.77	21.63	21.65
11	21.72	21.95	23.37	22.57	22.19	22.68	22.13	21.98	21.71	21.73	21.62	21.64
12	21.71	22.13	23.02	22.41	22.19	22.58	22.09	21.95	21.71	21.70	21.61	21.64
13	21.75	22.33	22.71	22.30	22.19	22.65	22.08	21.93	21.71	21.68	21.60	21.64
14	22.09	22.27	22.48	22.42	22.22	22.63	22.04	22.04	21.71	21.67	21.59	21.63
15	22.04	22.19	22.33	22.46	22.33	22.53	22.01	22.05	21.73	21.68	21.59	21.63
16	21.97	22.13	22.23	22.40	22.36	22.43	21.97	21.98	21.71	21.70	21.65	21.62
17	21.95	22.08	22.17	22.32	22.36	22.35	21.95	21.93	21.69	21.74	21.83	21.62
18	21.92	22.09	22.12	22.22	22.30	22.28	21.93	21.89	21.68	21.78	21.79	21.62
19	23.34	22.49	22.08	22.17	22.23	22.21	21.92	21.87	21.67	21.80	21.83	21.62
20	23.50	23.06	22.03	22.15	22.18	22.17	21.90	22.37	21.66	21.83	21.79	21.61
21	22.78	22.79	21.99	22.14	22.23	22.12	21.91	22.41	21.67	21.82	21.75	21.61
22	22.40	22.55	21.99	22.13	22.79	22.08	21.97	22.23	21.66	21.78	21.71	21.61
23	22.22	22.40	22.07	22.27	22.68	22.12	22.17	22.12	21.65	21.78	21.68	21.60
24	22.20	22.31	22.21	22.22	22.52	22.67	22.48	22.05	21.64	21.76	21.65	21.60
25	22.17	22.28	22.17	22.23	22.41	22.65	22.67	21.99	21.63	21.73	21.63	21.60
26	22.11	22.23	22.14	22.25	22.31	22.52	22.52	21.95	21.63	21.71	21.73	21.61
27	22.08	22.18	22.10	22.29	22.24	22.40	22.46	21.91	21.63	21.69	22.13	21.62
28	22.05	22.16	22.05	22.24	22.56	22.40	22.36	21.87	21.63	21.76	22.11	21.62
29	22.02	22.11	22.03	22.23	---	22.74	22.31	21.85	21.68	21.77	21.97	21.63
30	22.00	22.10	22.02	22.34	---	22.70	25.15	21.83	21.70	21.74	21.94	21.62
31	21.97	---	22.00	22.40	---	22.56	---	21.81	---	21.71	21.90	---
MEAN	22.06	22.22	22.39	22.39	22.29	22.61	22.42	22.18	21.71	21.73	21.73	21.65
MAX	23.50	23.06	23.45	23.33	22.79	23.76	25.15	24.48	21.81	21.85	22.13	21.86
MIN	21.71	21.92	21.99	21.99	22.05	22.08	21.90	21.81	21.63	21.66	21.59	21.60

03204250 MUD RIVER AT PALERMO, WV—Continued



TWELVEPOLE CREEK BASIN

03206600 EAST FORK TWELVEPOLE CREEK NEAR DUNLOW, WV

LOCATION.--Lat 38°01'02", long 82°17'46", NAD 27, 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. WDR WV-04-1: 1991-2003(P). WDR WV-05-1: 1967(M), 1970(P), 1974(P), 1977(M), 1979(M), 1989(M), 1990(P), 1992-94(P), 1995(M), 1996-98(P), 1999-2001(M), 2002-04(P).

GAGE.--Water-stage recorder with satellite telemeter. Datum of gage is 710.00 ft above NGVD 29. 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.

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)
Apr 30	1300	*2,350	*12.73	No other peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	32	528	37	77	274	80	354	8.4	2.0	1.3	6.4
2	13	29	247	35	69	174	164	166	8.8	2.1	1.2	4.3
3	20	28	141	36	65	121	341	105	13	1.9	1.1	3.2
4	14	59	96	40	57	97	203	75	13	2.0	1.0	2.6
5	12	75	72	161	50	98	131	58	8.9	2.1	0.92	2.2
6	9.8	63	61	170	46	93	97	49	7.6	2.4	0.82	1.9
7	9.8	54	70	159	42	89	79	42	6.6	3.6	0.82	1.7
8	8.3	44	63	370	42	214	68	37	6.3	11	0.85	1.6
9	7.9	37	126	246	41	187	56	32	5.7	5.0	0.91	1.6
10	7.3	32	294	154	54	140	48	28	5.5	3.0	1.00	1.5
11	6.5	30	226	109	49	117	42	25	6.2	2.4	1.0	1.5
12	6.4	54	161	87	48	114	40	22	7.3	2.2	0.90	1.5
13	13	56	117	72	48	129	42	21	6.5	1.9	0.81	1.4
14	42	50	86	96	57	118	37	25	6.1	2.0	0.74	1.4
15	22	46	68	84	68	99	33	21	4.5	6.6	0.63	1.3
16	20	43	57	78	69	84	29	17	3.6	9.7	1.1	1.4
17	20	39	51	68	65	72	26	15	3.1	6.4	4.0	4.1
18	16	42	45	63	59	63	26	14	2.9	19	4.4	2.6
19	382	75	42	58	53	55	25	15	2.7	12	6.6	2.1
20	193	105	33	52	49	51	24	65	2.6	5.8	7.0	1.8
21	111	97	35	49	59	45	22	36	2.7	7.2	3.2	1.6
22	82	83	34	e55	87	41	23	26	2.5	10	2.1	1.5
23	63	70	54	e49	80	79	43	23	2.3	4.6	1.8	1.4
24	68	65	54	e47	75	126	67	21	2.1	2.9	2.7	1.3
25	57	71	50	e52	67	94	87	18	2.0	2.5	1.8	1.3
26	50	61	47	e50	59	82	76	16	1.9	2.2	8.4	1.9
27	48	57	42	e48	52	72	84	14	1.8	2.1	29	3.5
28	45	57	40	e52	144	81	72	13	1.8	2.1	15	2.7
29	42	48	38	65	---	120	72	11	1.8	2.0	6.1	3.0
30	40	65	36	83	---	101	1,490	10	1.8	2.0	21	3.7
31	38	---	33	80	---	94	---	9.4	---	1.6	9.5	---
TOTAL	1,479.0	1,667	3,047	2,805	1,731	3,324	3,627	1,383.4	150.0	142.3	137.70	68.0
MEAN	47.7	55.6	98.3	90.5	61.8	107	121	44.6	5.00	4.59	4.44	2.27
MAX	382	105	528	370	144	274	1,490	354	13	19	29	6.4
MIN	6.4	28	33	35	41	41	22	9.4	1.8	1.6	0.63	1.3
CFSM	1.24	1.44	2.55	2.35	1.61	2.79	3.14	1.16	0.13	0.12	0.12	0.06
IN.	1.43	1.61	2.94	2.71	1.67	3.21	3.50	1.34	0.14	0.14	0.13	0.07

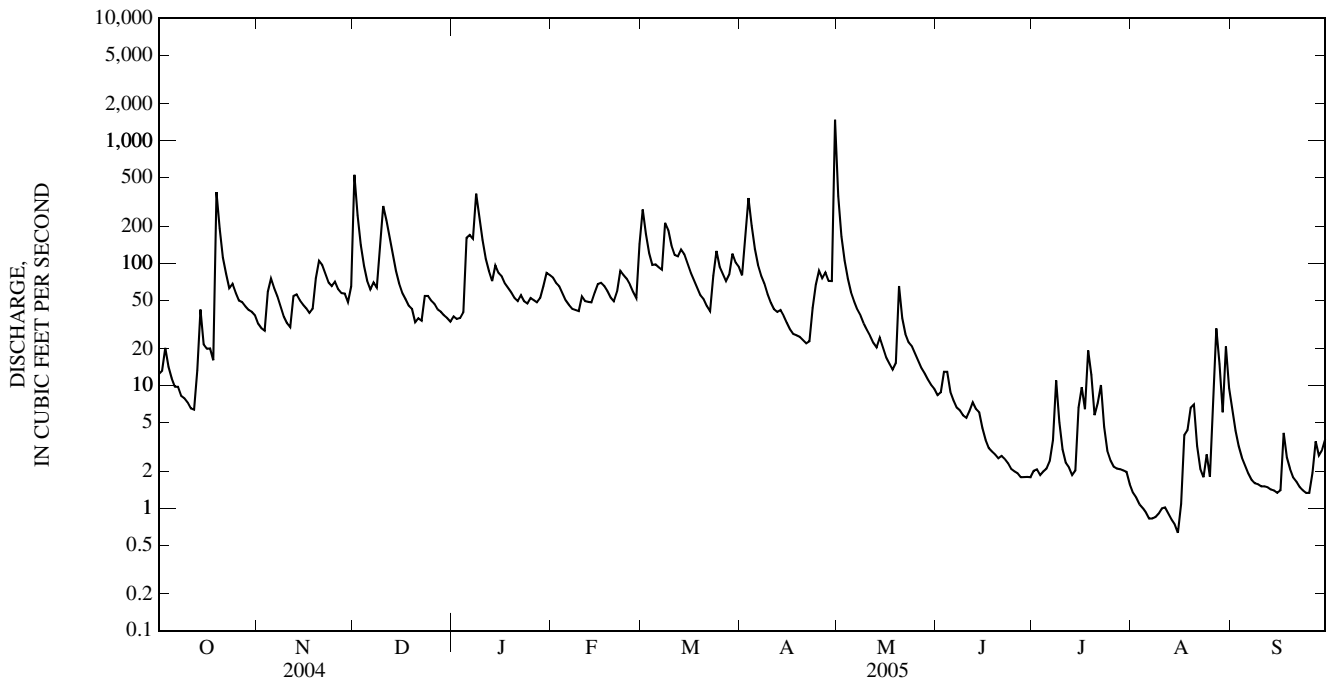
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1965 - 2005, BY WATER YEAR (WY)

	12.1	33.3	65.7	76.7	99.1	107	91.1	66.9	38.7	15.7	11.7	11.2
MEAN	12.1	33.3	65.7	76.7	99.1	107	91.1	66.9	38.7	15.7	11.7	11.2
MAX	92.6	179	279	247	334	282	212	240	216	92.4	79.4	98.3
(WY)	(1990)	(2004)	(1979)	(1994)	(2003)	(1994)	(1987)	(1996)	(2003)	(1971)	(1977)	(2004)
MIN	0.65	1.28	1.52	8.75	11.2	23.3	13.3	9.11	0.70	1.86	0.71	0.20
(WY)	(1992)	(2002)	(1966)	(2000)	(2002)	(1969)	(1986)	(1991)	(1966)	(1988)	(1967)	(1967)

03206600 EAST FORK TWELVEPOLE CREEK NEAR DUNLOW, WV—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1965 - 2005	
ANNUAL TOTAL	24,271.5		19,561.40		52.2	
ANNUAL MEAN	66.3		53.6		18.9	
HIGHEST ANNUAL MEAN					98.3	1979
LOWEST ANNUAL MEAN					18.9	1988
HIGHEST DAILY MEAN	925	Sep 17	1,490	Apr 30	3,110	Dec 9, 1978
LOWEST DAILY MEAN	3.6	Sep 7	0.63	Aug 15	0.00	(a)
ANNUAL SEVEN-DAY MINIMUM	5.4	Jul 15	0.86	Aug 9	0.01	Sep 18, 1967
MAXIMUM PEAK FLOW			2,350	Apr 30	(b)5,040	Dec 9, 1978
MAXIMUM PEAK STAGE			12.73	Apr 30	15.84	Dec 9, 1978
INSTANTANEOUS LOW FLOW			0.60	(c)	0.00	(a)
ANNUAL RUNOFF (CFSM)	1.72		1.39		1.36	
ANNUAL RUNOFF (INCHES)	23.45		18.90		18.41	
10 PERCENT EXCEEDS	140		112		120	
50 PERCENT EXCEEDS	38		37		18	
90 PERCENT EXCEEDS	8.3		1.8		1.3	

- a Sept. 15-17, 1998.
- b From rating curve extended above 1,300 ft³/s on basis of slope-area measurements at gage-heights 15.84 and 13.18 ft and slope-conveyance determination.
- c Aug. 15, 16.
- e Estimated.



03206600 EAST FORK TWELVEPOLE CREEK NEAR DUNLOW, WV—Continued

REVISIONS.--The peak discharges and annual maximum (*) reported for water years 1967, 1970, 1974, 1977, 1979, 1989, 1990, 1992-2004 have been revised as shown in the following table. They supercede values published in the reports from 1967-2004.

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar 07, 1967	0600	*2,340	*12.35	May 08, 1996	2100	1,510	10.89
Dec 30, 1969	2100	*2,530	*12.64	May 16, 1996	0800	*2,010	*12.05
Feb 15, 1970	1730	2,430	12.49	Mar 01, 1997	1830	937	9.62
Nov 27, 1973	1530	*2,960	*13.26	Mar 03, 1997	1830	*2,320	*12.67
Jan 10, 1974	1800	2,580	12.72	May 26, 1997	1100	891	9.50
Apr 05, 1977	0430	*2,650	*12.82	Apr 19, 1998	1800	1,680	11.22
Dec 09, 1978	0630	*5,100	*15.84	Jun 12, 1998	1700	*1,830	*11.49
Jun 16, 1989	0230	*3,800	*14.74	Jan 09, 1999	1030	*1,440	*10.76
Dec 18, 1990	2030	1,430	10.74	Jun 22, 2000	1000	*1,440	*10.75
Dec 30, 1990	2300	*2,180	*12.39	Feb 17, 2001	0300	*773	*9.18
Dec 03, 1991	0030	*2,130	*12.28	Mar 19, 2002	2300	1,060	9.93
Jun 14, 1992	1100	1,170	10.19	Mar 20, 2002	1600	*1,500	*10.88
Feb 21, 1993	1800	1,230	10.32	Mar 31, 2002	2300	1,340	10.55
Mar 04, 1993	2300	*1,800	*11.45	Apr 28, 2002	2300	1,030	9.84
Mar 24, 1993	0930	918	9.57	Feb 16, 2003	1500	2,920	13.79
Jan 07, 1994	1930	*2,570	*13.16	Feb 23, 2003	0700	1,850	11.53
Feb 09, 1994	1630	1,410	10.69	Jun 17, 2003	0100	*3,880	*15.45
Feb 11, 1994	1830	1,090	9.99	Jun 18, 2003	0700	2,510	13.05
Feb 23, 1994	1200	1,500	10.87	Sept 04, 2003	1000	1,030	9.84
Mar 02, 1994	2100	941	9.63	Nov 12, 2003	2100	*2,880	*13.71
Mar 10, 1994	0430	1,310	10.48	Nov 19, 2003	2100	2,120	12.27
Mar 28, 1994	0900	2,090	11.95	Feb 06, 2004	1300	1,180	10.18
May 08, 1994	0500	2,190	12.41	Mar 06, 2004	0800	1,140	10.08
May 19, 1995	0900	*1,590	*11.05	Jun 25, 2004	2200	1,410	10.73
Jan 19, 1996	0900	1,440	10.75	Sept 17, 2004	unknown	2,100	13.18
May 06, 1996	0200	1,270	10.40				

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BIG SANDY RIVER BASIN

03212750 TUG FORK AT WELCH, WV

LOCATION.--Lat 37°26'28", long 81°36'00", NAD 27, McDowell County, Hydrologic Unit 05070201, on left bank at bridge in the Hemphill section of Welch, 20 ft downstream from Mod Branch, and at mile 131.5.

DRAINAGE AREA.--174 mi².

PERIOD OF RECORD.--January 1985 to September 1993, October 1996 to current year.

GAGE.--Water-stage recorder with satellite telemeter. Datum of gage is 1,268.00 ft above NGVD 29.

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

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 9	1900	*1,310	*6.98	No peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	100	116	503	174	460	450	512	906	160	157	254	80
2	100	111	419	166	424	411	688	683	179	143	129	76
3	99	107	308	161	435	382	835	562	171	102	108	74
4	90	145	253	167	415	368	780	482	160	97	99	72
5	85	153	221	251	391	425	670	427	152	104	93	71
6	82	140	290	256	363	525	593	388	146	106	90	69
7	80	129	599	254	342	510	548	359	144	214	93	67
8	78	119	421	270	332	714	506	334	142	366	105	67
9	77	109	699	253	325	692	465	313	149	159	105	66
10	77	105	1,000	246	355	610	427	310	157	120	96	64
11	75	102	708	258	334	585	397	293	139	107	89	64
12	75	167	577	328	325	586	390	273	133	101	87	63
13	91	181	493	321	321	637	392	276	140	97	85	62
14	109	156	421	802	383	614	375	386	137	110	83	61
15	95	140	364	624	396	567	348	331	142	157	81	61
16	86	131	331	506	412	545	327	294	128	145	81	61
17	81	124	307	419	397	513	314	270	123	159	87	63
18	78	127	285	361	374	477	301	255	120	149	80	61
19	141	124	273	333	355	449	288	243	117	142	358	60
20	125	120	242	316	345	426	276	261	114	152	189	59
21	151	118	237	301	443	400	275	234	111	123	132	60
22	152	115	226	285	567	378	287	221	109	112	105	60
23	121	119	234	273	534	443	326	216	106	104	95	60
24	135	140	217	246	492	477	339	219	104	98	89	59
25	138	239	205	250	444	461	331	206	101	94	83	59
26	123	226	199	256	404	449	318	196	100	90	91	59
27	134	192	189	269	373	428	307	188	100	90	121	58
28	136	174	179	256	410	486	288	182	101	115	107	55
29	135	154	179	291	---	639	365	176	99	135	90	59
30	135	164	174	510	---	607	575	171	96	135	86	58
31	125	---	171	521	---	560	---	165	---	172	83	---
TOTAL	3,309	4,247	10,924	9,924	11,151	15,814	12,843	9,820	3,880	4,155	3,474	1,908
MEAN	107	142	352	320	398	510	428	317	129	134	112	63.6
MAX	152	239	1,000	802	567	714	835	906	179	366	358	80
MIN	75	102	171	161	321	368	275	165	96	90	80	55
CFSM	0.61	0.81	2.03	1.84	2.29	2.93	2.46	1.82	0.74	0.77	0.64	0.37
IN.	0.71	0.91	2.34	2.12	2.38	3.38	2.75	2.10	0.83	0.89	0.74	0.41

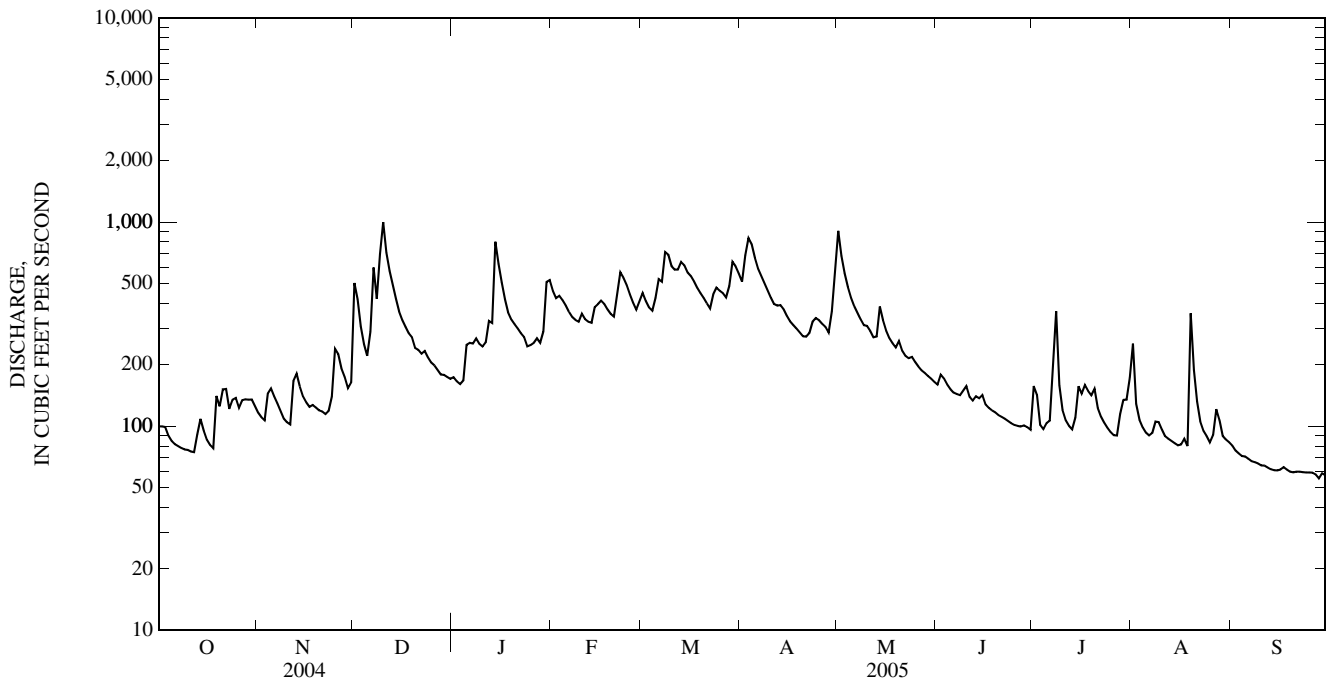
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1985 - 2005, BY WATER YEAR (WY)

MEAN	68.8	106	164	206	325	371	395	319	200	148	109	72.4
MAX	189	406	389	591	813	741	1,206	648	387	505	322	165
(WY)	(1990)	(2004)	(2004)	(2004)	(2003)	(1993)	(1987)	(1989)	(2004)	(2001)	(2003)	(2003)
MIN	34.3	35.6	35.5	42.6	69.1	83.3	155	128	74.1	56.6	39.3	39.1
(WY)	(2000)	(1999)	(2000)	(2000)	(2002)	(1988)	(1986)	(1988)	(1988)	(1988)	(1988)	(1987)

03212750 TUG FORK AT WELCH, WV—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1985 - 2005	
ANNUAL TOTAL	115,095		91,449			
ANNUAL MEAN	314		251		209	
HIGHEST ANNUAL MEAN					339	2004
LOWEST ANNUAL MEAN					75.9	1988
HIGHEST DAILY MEAN	2,470	Apr 14	1,000	Dec 10	4,300	Apr 25, 1987
LOWEST DAILY MEAN	74	Sep 6	55	Sep 28	25	Oct 19, 1999
ANNUAL SEVEN-DAY MINIMUM	76	Sep 1	58	Sep 24	27	Oct 22, 1999
MAXIMUM PEAK FLOW			1,310	Dec 9	(a)13,100	May 2, 2002
MAXIMUM PEAK STAGE			6.98	Dec 9	(b)22.09	May 2, 2002
INSTANTANEOUS LOW FLOW			54	(c)	17	Jan 10, 2001
ANNUAL RUNOFF (CFSM)	1.81		1.44		1.20	
ANNUAL RUNOFF (INCHES)	24.61		19.55		16.29	
10 PERCENT EXCEEDS	593		510		428	
50 PERCENT EXCEEDS	252		179		133	
90 PERCENT EXCEEDS	90		80		41	

a From rating curve extended above 11,500 ft³/s.
 b From floodmarks.
 c Sept. 28, 29.



BIG SANDY RIVER BASIN

03212980 DRY FORK AT BEARTOWN, WV

LOCATION.--Lat 37°23'43", long 81°48'10", NAD 27, 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, and at mile 7.1.

DRAINAGE AREA.--209 mi².

PERIOD OF RECORD.--February 1985 to September 1993, October 1996 to current year.

GAGE.--Water-stage recorder with satellite telemeter. Datum of gage is 1,056.00 ft above NGVD 29.

REMARKS.--Records good except those for October (doubtful gage-height record), which are fair, and period of estimated daily discharge (orifice plugged), which are poor.

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 9	2300	*3,230	*7.77	No other peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	168	128	1,140	170	700	573	535	1,510	115	67	223	40
2	145	e125	898	162	554	528	915	974	130	69	90	36
3	141	e125	516	155	497	461	1,450	668	134	68	66	39
4	127	e150	361	158	436	432	1,180	509	138	67	55	43
5	109	e190	282	205	392	531	836	417	125	66	54	41
6	99	e190	383	237	358	827	638	362	111	76	58	40
7	92	e170	1,420	259	331	701	528	326	115	165	68	38
8	90	e150	818	302	316	1,110	459	296	117	455	67	38
9	95	122	1,210	334	299	1,130	408	266	123	162	84	37
10	98	109	2,190	338	333	824	353	245	142	107	70	36
11	98	101	1,100	328	314	684	326	242	115	88	62	30
12	102	149	820	441	309	634	317	218	101	81	54	29
13	130	268	644	456	305	692	350	205	96	72	49	30
14	146	248	488	1,210	369	673	682	351	105	68	45	35
15	149	205	388	1,020	433	585	502	287	122	79	49	34
16	136	177	333	675	456	526	401	238	98	79	51	34
17	119	154	302	503	438	483	352	215	86	84	59	35
18	115	147	277	384	398	450	322	197	78	105	54	32
19	198	149	262	336	360	426	300	184	77	116	159	33
20	225	138	228	313	330	406	281	202	80	104	136	32
21	185	137	222	297	391	372	270	183	76	83	74	27
22	151	131	215	276	463	343	280	166	77	75	57	26
23	124	130	224	292	481	385	322	159	70	72	53	31
24	134	200	240	250	459	459	331	166	66	68	51	31
25	131	674	227	274	413	471	335	156	67	65	48	29
26	131	529	221	293	359	478	330	146	70	62	47	30
27	177	353	204	363	327	456	325	137	68	60	54	31
28	303	283	186	377	383	552	293	131	70	64	56	25
29	263	217	189	418	---	924	360	127	66	104	50	26
30	205	208	182	964	---	829	700	121	66	86	48	31
31	159	---	174	942	---	657	---	121	---	125	47	---
TOTAL	4,545	6,057	16,344	12,732	11,204	18,602	14,681	9,525	2,904	3,042	2,138	999
MEAN	147	202	527	411	400	600	489	307	96.8	98.1	69.0	33.3
MAX	303	674	2,190	1,210	700	1,130	1,450	1,510	142	455	223	43
MIN	90	101	174	155	299	343	270	121	66	60	45	25
CFSM	0.70	0.97	2.52	1.97	1.91	2.87	2.34	1.47	0.46	0.47	0.33	0.16
IN.	0.81	1.08	2.91	2.27	1.99	3.31	2.61	1.70	0.52	0.54	0.38	0.18

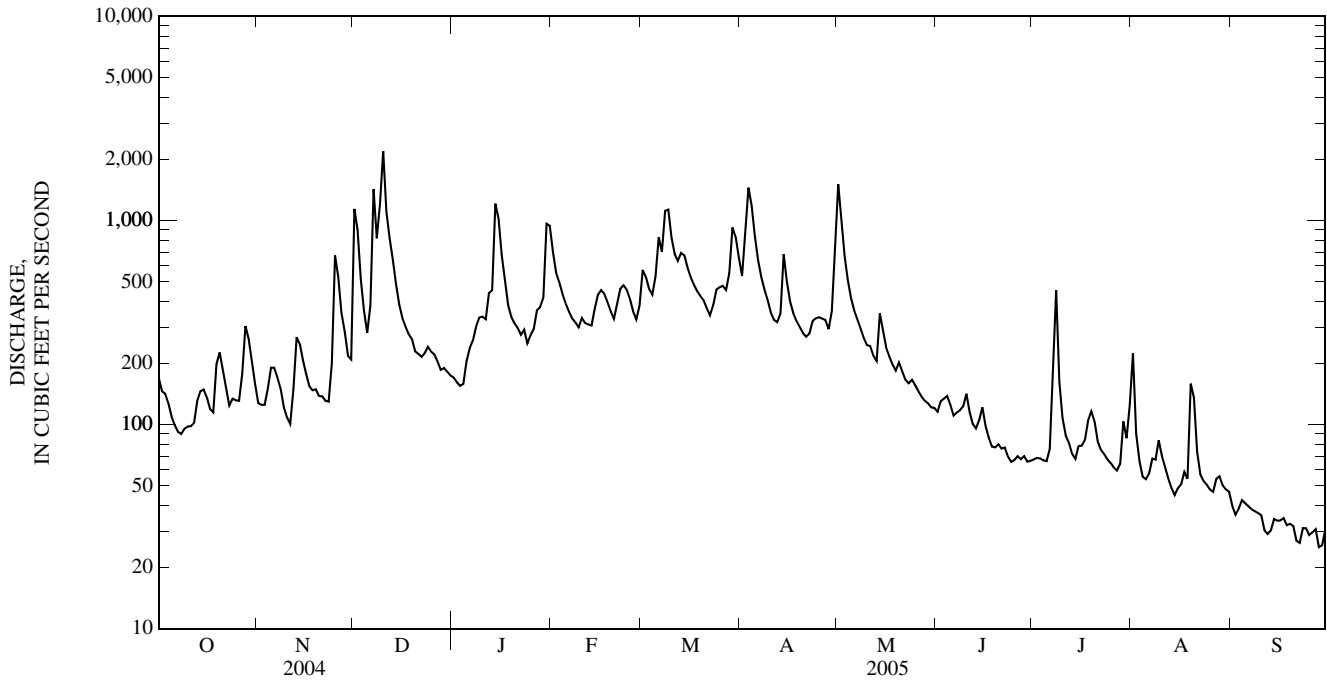
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1985 - 2005, BY WATER YEAR (WY)

	65.3	114	210	258	411	457	459	319	198	128	89.6	59.4
MEAN	65.3	114	210	258	411	457	459	319	198	128	89.6	59.4
MAX	347	378	572	631	1,098	1,033	1,455	799	545	564	345	221
(WY)	(1990)	(2004)	(1992)	(2004)	(2003)	(1993)	(1987)	(1989)	(2004)	(2001)	(2003)	(1989)
MIN	22.4	23.6	28.8	62.0	72.0	93.7	110	104	39.3	28.2	22.4	26.9
(WY)	(1998)	(1999)	(1998)	(2001)	(2002)	(1988)	(1986)	(1988)	(1988)	(1988)	(1988)	(1985)

03212980 DRY FORK AT BEARTOWN, WV—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1985 - 2005	
ANNUAL TOTAL	133,058		102,773			
ANNUAL MEAN	364		282		234	
HIGHEST ANNUAL MEAN					359 2004	
LOWEST ANNUAL MEAN					75.0 1988	
HIGHEST DAILY MEAN	3,940	Apr 14	2,190	Dec 10	6,580	Feb 16, 2003
LOWEST DAILY MEAN	55	(a)	25	Sep 28	15	(b)
ANNUAL SEVEN-DAY MINIMUM	57	Sep 1	29	Sep 22	17	Oct 26, 1999
MAXIMUM PEAK FLOW			3,230	Dec 9	(c)15,900	May 2, 2002
MAXIMUM PEAK STAGE			7.77	Dec 9	(d)15.21	May 2, 2002
INSTANTANEOUS LOW FLOW			23	(f)	13	(g)
ANNUAL RUNOFF (CFSM)	1.74		1.35		1.12	
ANNUAL RUNOFF (INCHES)	23.68		18.29		15.21	
10 PERCENT EXCEEDS	819		640		509	
50 PERCENT EXCEEDS	222		186		120	
90 PERCENT EXCEEDS	85		49		29	

- a Sept. 6, 7.
- b Oct. 29, 1987, and Sept. 3, 1988.
- c From rating curve extended above 11,700 ft³/s.
- d From floodmarks.
- e Estimated.
- f Sept. 28, 29.
- g Oct. 29, 30, 1987.



BIG SANDY RIVER BASIN

03213500 PANTHER CREEK NEAR PANTHER, WV

LOCATION.--Lat 37°26'44" (corrected), long 81°52'16" (corrected), NAD 83, McDowell County, Hydrologic Unit 05070201, on left bank 200 ft downstream from Cub Branch, 2.1 mi upstream from Trace Fork, 3.0 mi southwest of Panther, and at mile 4.2.

DRAINAGE AREA.--31.0 mi².

PERIOD OF RECORD.--July 1946 to September 1986, October 2002 to current year.

REVISED RECORDS.--WSP 1505: 1955(P). WSP 1908: 1955(M), 1957(M). WDR WV-97-1: 1948(P), 1950(M), 1955(P), 1964-81(P).

GAGE.--Water-stage recorder. Elevation of gage is approximately 1,050 ft above NGVD 29, from topographic map.

REMARKS.--Records good except those for period of estimated daily discharge (faulty gage-height record), which is poor.

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec 1	1000	*504	*5.55	No peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	17	354	17	127	187	62	259	4.8	2.8	88	2.7
2	11	14	186	16	85	124	281	144	6.9	4.2	16	2.4
3	17	13	92	15	69	81	373	85	6.9	11	8.2	2.3
4	13	56	56	18	53	63	208	57	7.4	12	5.8	2.1
5	10	76	39	40	45	66	123	41	6.1	5.0	4.7	2.0
6	8.0	45	52	60	38	80	80	34	5.1	9.3	4.7	1.9
7	6.5	31	108	64	34	75	60	29	6.2	111	4.2	1.9
8	5.7	22	104	82	33	160	48	25	5.2	115	5.3	1.9
9	5.3	16	124	93	30	168	37	21	14	26	7.1	1.9
10	4.7	14	260	78	43	109	30	23	12	13	4.7	1.8
11	4.4	12	160	63	49	89	27	20	6.9	8.4	3.9	1.8
12	4.1	25	117	65	50	108	27	17	5.6	6.6	3.5	1.8
13	6.8	33	93	68	46	161	28	14	4.8	5.6	3.2	1.7
14	17	30	59	208	58	120	27	15	4.0	5.3	3.0	1.6
15	13	26	41	176	70	80	24	15	3.7	5.5	2.9	1.6
16	11	23	33	112	75	66	22	12	3.5	6.2	2.8	1.6
17	9.0	20	29	73	71	59	21	11	3.1	6.3	3.1	2.3
18	7.6	20	26	50	61	56	20	9.6	2.8	10	3.2	1.9
19	53	19	25	44	48	53	20	9.0	2.7	8.3	32	1.7
20	42	19	20	40	40	47	19	13	2.5	6.7	12	1.7
21	25	20	20	36	51	40	19	11	2.4	5.6	6.1	1.6
22	17	21	18	34	92	35	23	8.8	2.2	5.4	4.6	1.6
23	13	23	21	39	90	43	41	8.4	2.1	6.0	3.9	1.6
24	19	31	20	e36	72	60	76	9.2	2.0	4.6	3.4	1.6
25	25	207	20	42	53	70	88	8.3	1.9	3.9	3.1	1.6
26	21	134	20	52	41	63	74	7.4	1.8	3.6	3.0	1.7
27	39	73	19	78	35	56	57	6.7	1.9	3.6	3.9	2.0
28	64	49	18	80	66	79	41	6.2	2.9	3.4	3.5	1.7
29	44	33	18	90	---	190	101	5.8	2.3	6.5	3.0	2.3
30	30	38	18	259	---	143	277	5.5	2.5	4.1	3.0	2.2
31	22	---	17	202	---	90	---	5.2	---	3.5	2.9	---
TOTAL	580.1	1,160	2,187	2,330	1,625	2,821	2,334	936.1	136.2	428.4	258.7	56.5
MEAN	18.7	38.7	70.5	75.2	58.0	91.0	77.8	30.2	4.54	13.8	8.35	1.88
MAX	64	207	354	259	127	190	373	259	14	115	88	2.7
MIN	4.1	12	17	15	30	35	19	5.2	1.8	2.8	2.8	1.6
CFSM	0.60	1.25	2.28	2.42	1.87	2.94	2.51	0.97	0.15	0.45	0.27	0.06
IN.	0.70	1.39	2.62	2.80	1.95	3.39	2.80	1.12	0.16	0.51	0.31	0.07

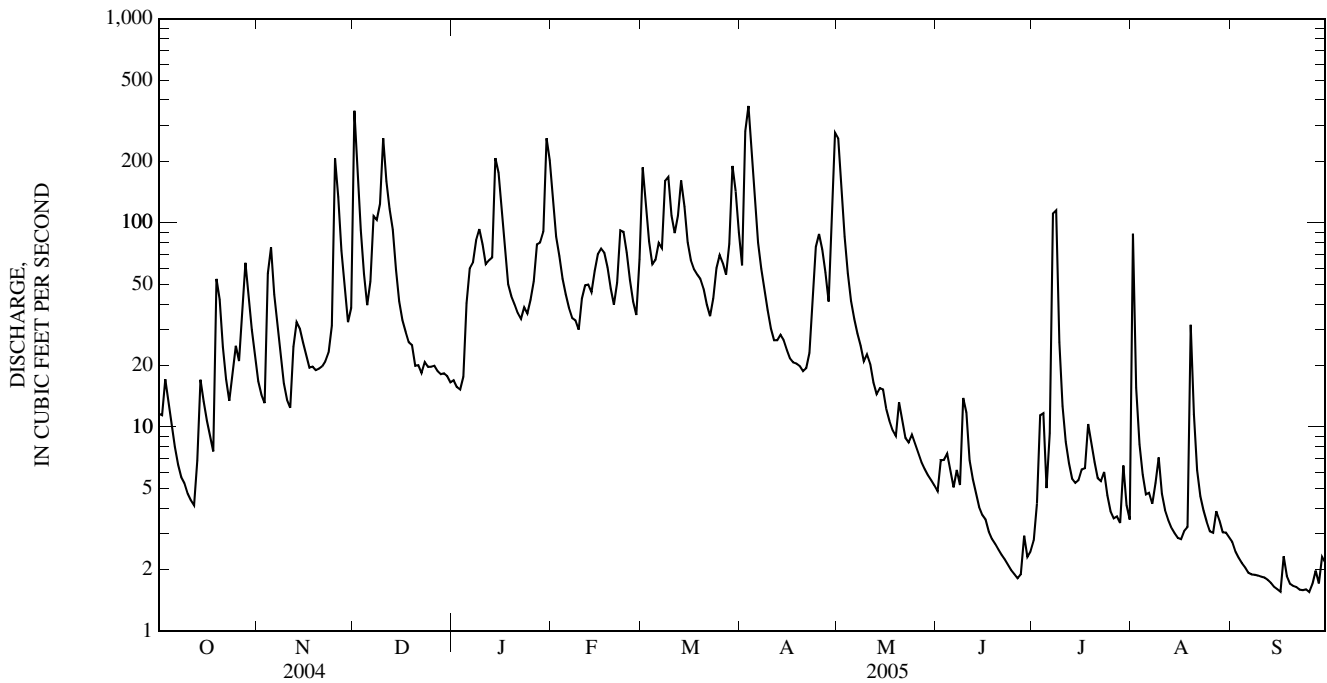
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1946 - 2005, BY WATER YEAR (WY)

MEAN	7.61	19.6	37.6	56.8	73.6	82.5	68.2	39.0	19.1	10.6	10.8	5.83
MAX	65.7	83.1	115	179	241	280	146	136	127	58.9	72.5	59.6
(WY)	(1977)	(1978)	(1973)	(1957)	(2003)	(1955)	(1948)	(1958)	(1979)	(1956)	(1958)	(1966)
MIN	0.14	0.24	0.65	1.90	9.66	18.3	9.76	6.98	1.31	1.05	0.61	0.18
(WY)	(1954)	(1954)	(1966)	(1966)	(1968)	(1984)	(1986)	(1957)	(1966)	(1959)	(1955)	(1946)

03213500 PANTHER CREEK NEAR PANTHER, WV—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1946 - 2005	
ANNUAL TOTAL	19,774.3		14,853.0		35.3	
ANNUAL MEAN	54.0		40.7		55.8	
HIGHEST ANNUAL MEAN					15.1	1979
LOWEST ANNUAL MEAN					2,300	Apr 4, 1977
HIGHEST DAILY MEAN	772	Apr 14	373	Apr 3	0.00	(b)
LOWEST DAILY MEAN	1.6	Sep 6	1.6	(a)	0.01	Sep 16, 1946
ANNUAL SEVEN-DAY MINIMUM	1.8	Sep 1	1.6	Sep 19	(c)14,700	May 2, 2002
MAXIMUM PEAK FLOW			504	Dec 1	(d)16.57	May 2, 2002
MAXIMUM PEAK STAGE			5.55	Dec 1	0.00	(b)
INSTANTANEOUS LOW FLOW			1.4	Sep 25	1.14	
ANNUAL RUNOFF (CFSM)	1.74		1.31		15.46	
ANNUAL RUNOFF (INCHES)	23.73		17.82		80	
10 PERCENT EXCEEDS	128		96		12	
50 PERCENT EXCEEDS	26		20		1.2	
90 PERCENT EXCEEDS	3.3		2.4			

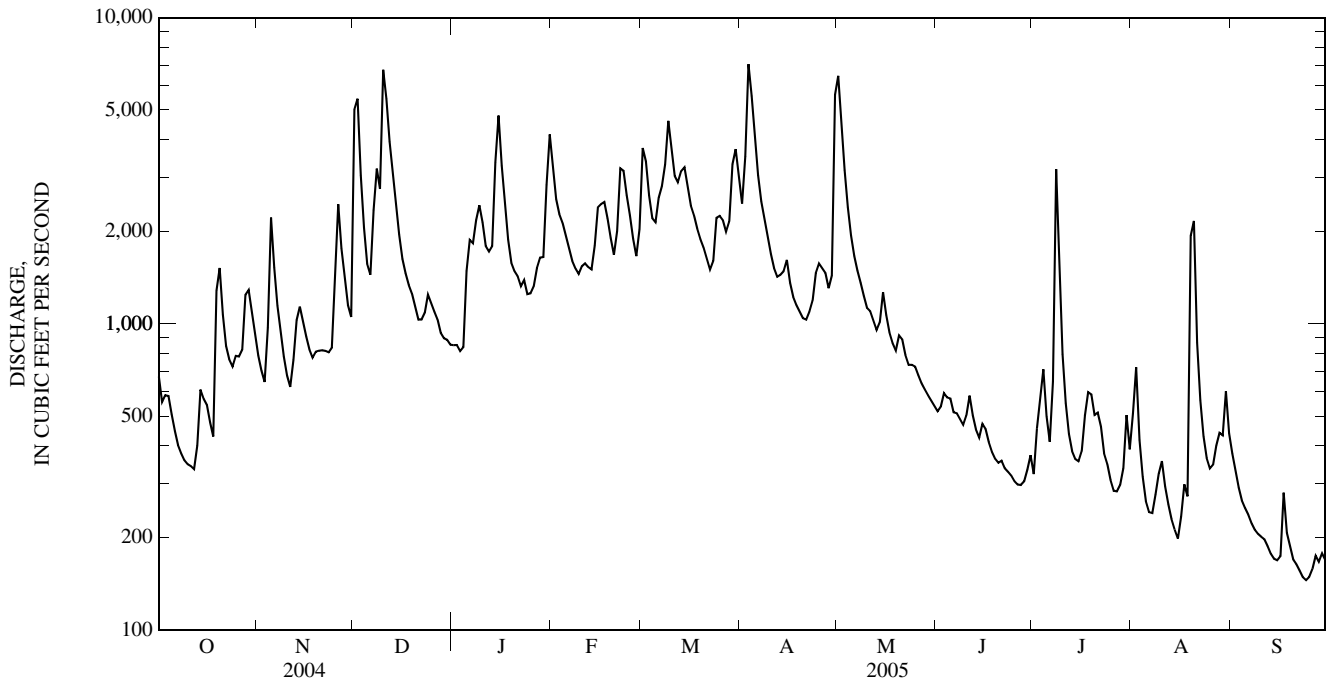
- a Sept. 14-16, 21-25.
- b Several days in September 1946, August and September, 1955.
- c From rating curve extended above 2,800 ft³/s on basis of slope-area measurement.
- d From floodmarks.
- e Estimated.



03213700 TUG FORK AT WILLIAMSON, WV—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1968 - 2005	
ANNUAL TOTAL	606,598		482,052			
ANNUAL MEAN	1,657		1,321		1,139	
HIGHEST ANNUAL MEAN					1,729	
LOWEST ANNUAL MEAN					353	
HIGHEST DAILY MEAN	17,600	Apr 14	7,050	Apr 3	74,000	Apr 5, 1977
LOWEST DAILY MEAN	212	Sep 6	145	Sep 24	56	Sep 19, 1999
ANNUAL SEVEN-DAY MINIMUM	240	Sep 1	156	Sep 20	60	Sep 22, 1999
MAXIMUM PEAK FLOW			8,090	Dec 10	(a)94,000	Apr 5, 1977
MAXIMUM PEAK STAGE			14.84	Dec 10	(b)52.56	Apr 5, 1977
INSTANTANEOUS LOW FLOW			143	(c)	52	Sep 27, 1999
ANNUAL RUNOFF (CFSM)	1.77		1.41		1.22	
ANNUAL RUNOFF (INCHES)	24.11		19.16		16.53	
10 PERCENT EXCEEDS	3,580		2,950		2,500	
50 PERCENT EXCEEDS	1,140		938		615	
90 PERCENT EXCEEDS	414		279		142	

a From rating curve extended above 18,000 ft³/s.
 b From floodmarks.
 c Sept. 24, 25.



BIG SANDY RIVER BASIN

03214500 TUG FORK AT KERMIT, WV

LOCATION.--Lat 37°50'14", long 82°24'32", NAD 27, 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 September 1918 (annual maximum discharge), October 1918 to December 1920 (annual maximum gage height), January 1929 to September 1934, October 1934 to September 1985 (estimated annual maximum discharge only), February 1985 to current year.

GAGE.--Water-stage recorder with satellite telemeter. Datum of gage is 574.74 ft above NGVD 29. Records published as near Kermit at different site and datum July 1934 to September 1985.

REMARKS.--Records good except those for period of estimated daily discharges (no gage-height record), which is fair.

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)
Apr 30	1630	*15,300	*25.03	No other peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	981	1,130	6,140	1,160	4,140	5,150	3,300	10,800	601	334	444	535
2	794	987	8,230	1,180	3,330	4,970	4,050	6,840	605	335	784	443
3	729	887	4,740	1,150	2,900	3,760	8,590	4,540	723	613	569	379
4	774	1,460	3,160	1,160	2,710	3,110	7,850	3,390	694	574	403	337
5	690	3,040	2,410	2,340	2,460	2,890	5,460	2,730	641	775	340	314
6	608	2,470	2,100	2,990	2,270	3,030	4,090	2,330	603	485	313	304
7	544	1,850	2,430	2,910	2,080	3,420	3,340	2,060	548	594	368	287
8	503	1,470	3,820	4,150	1,940	4,170	2,910	1,870	552	2,970	330	269
9	478	1,190	3,680	4,250	1,850	5,650	2,550	1,700	523	2,290	351	259
10	458	1,000	7,680	3,460	1,950	4,980	2,260	1,570	532	1,150	397	255
11	447	896	8,120	2,820	1,990	4,050	2,010	1,430	668	765	361	248
12	436	1,130	5,590	2,460	1,930	3,710	1,870	1,340	649	600	314	242
13	486	1,420	4,340	2,410	1,890	3,720	1,850	1,260	542	509	288	247
14	821	1,560	e3,490	3,350	2,140	3,920	1,810	1,410	488	492	272	230
15	755	1,450	e2,890	5,600	2,860	3,530	1,970	1,580	530	505	259	221
16	708	1,290	e2,400	4,330	3,080	3,070	1,720	1,420	489	517	268	219
17	654	1,160	e2,070	3,280	3,150	2,820	1,530	1,230	454	629	413	424
18	577	1,080	e1,860	2,600	2,880	2,570	1,430	1,110	411	956	333	303
19	2,150	1,180	e1,720	2,210	2,520	2,370	1,360	1,050	385	964	4,200	251
20	2,470	1,310	e1,600	2,040	2,260	2,220	1,290	1,560	369	765	3,220	227
21	2,190	1,350	e1,450	1,960	2,480	2,050	1,230	1,310	370	661	1,520	209
22	1,600	1,320	1,370	1,870	4,230	1,880	1,360	1,130	347	929	884	206
23	1,280	1,270	1,490	2,000	4,300	1,890	1,550	1,010	330	586	660	205
24	1,190	1,300	1,670	1,840	3,580	2,660	1,840	982	317	493	528	198
25	1,150	1,480	1,610	1,740	3,070	2,730	2,050	947	308	433	438	196
26	1,120	2,740	1,520	1,840	2,600	2,630	2,010	883	296	389	437	210
27	1,190	2,390	1,410	1,980	2,280	2,460	2,060	818	293	374	1,000	234
28	1,530	1,970	1,280	2,090	2,780	2,660	1,870	767	292	411	776	226
29	1,760	1,640	1,210	2,150	---	3,970	1,920	720	327	389	695	234
30	1,560	1,470	1,180	2,920	---	4,690	11,300	678	359	519	784	246
31	1,320	---	1,140	4,700	---	4,010	---	629	---	493	720	---
TOTAL	31,953	44,890	93,800	80,940	75,650	104,740	88,430	61,094	14,246	22,499	22,669	8,158
MEAN	1,031	1,496	3,026	2,611	2,702	3,379	2,948	1,971	475	726	731	272
MAX	2,470	3,040	8,230	5,600	4,300	5,650	11,300	10,800	723	2,970	4,200	535
MIN	436	887	1,140	1,150	1,850	1,880	1,230	629	292	334	259	196
CFSM	0.81	1.17	2.36	2.04	2.11	2.64	2.30	1.54	0.37	0.57	0.57	0.21
IN.	0.93	1.30	2.73	2.35	2.20	3.04	2.57	1.78	0.41	0.65	0.66	0.24

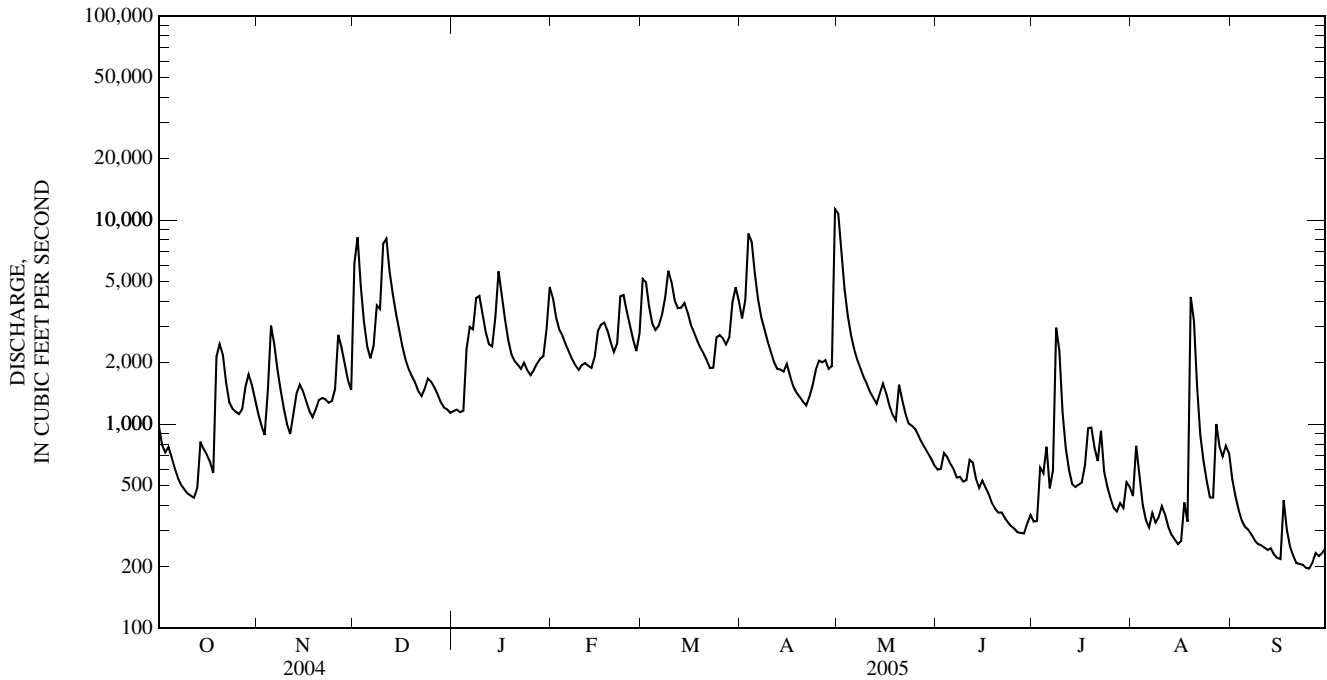
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1916 - 2005, BY WATER YEAR (WY)

MEAN	387	731	1,384	2,008	2,910	3,423	2,528	1,924	1,048	668	541	334
MAX	3,004	3,062	3,465	4,151	7,049	10,220	7,827	5,056	3,602	1,926	1,504	1,466
(WY)	(1990)	(1930)	(1992)	(1994)	(2003)	(1917)	(1987)	(1996)	(2004)	(2000)	(2000)	(2004)
MIN	21.1	44.1	119	296	512	617	629	431	114	44.5	78.7	29.4
(WY)	(1931)	(1932)	(1931)	(1931)	(2002)	(1988)	(1986)	(1930)	(1930)	(1930)	(1930)	(1930)

03214500 TUG FORK AT KERMIT, WV—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1916 - 2005	
ANNUAL TOTAL	822,095		649,069			
ANNUAL MEAN	2,246		1,778		1,488	
HIGHEST ANNUAL MEAN					2,277 1994	
LOWEST ANNUAL MEAN					476 1988	
HIGHEST DAILY MEAN	23,400	May 31	11,300	Apr 30	*78,000	Apr 5, 1977
LOWEST DAILY MEAN	323	Sep 7	196	Sep 25	14	Oct 23, 1930
ANNUAL SEVEN-DAY MINIMUM	365	Sep 1	207	Sep 20	18	Oct 5, 1930
MAXIMUM PEAK FLOW			15,300	Apr 30	*(a)104,000	Apr 6, 1977
MAXIMUM PEAK STAGE			25.03	Apr 30	*(b)52.91	Apr 6, 1977
INSTANTANEOUS LOW FLOW			192	Sep 25	(c)69	Aug 19, 1988
ANNUAL RUNOFF (CFSM)	1.75		1.39		1.16	
ANNUAL RUNOFF (INCHES)	23.89		18.86		15.79	
10 PERCENT EXCEEDS	4,490		3,780		3,440	
50 PERCENT EXCEEDS	1,520		1,350		732	
90 PERCENT EXCEEDS	576		323		145	

- a From slope-area determination of peak flow.
- b From floodmark, site and datum then in use.
- c Instantaneous low flow prior to 1985, undetermined.
- * Revised value.
- e Estimated.



DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

As the number of streams on which streamflow information is likely to be desired far exceeds the number of stream-gaging stations feasible to operate at one time, the Geological Survey collects limited streamflow data at sites other than stream-gaging stations. When limited streamflow data are collected on a systematic basis over a period of years for use in hydrologic analyses, the site at which the data are collected is called a partial-record station. Data collected at these partial-record stations are usable in low-flow or floodflow analyses, depending on the type of data collected. In addition, discharge measurements are made at other sites not included in the partial-record program. These measurements are generally made in times of drought or flood to give better areal coverage to those events. Those measurements and others collected for some special reason are called measurements at miscellaneous sites.

Records collected at partial-record stations for current water year, including crest-stage stations, are presented in the following tables. Discharge measurements made at partial-record stations, miscellaneous sites (denoted by 15-digit site identifier), and crest-stage stations are given in separate tables.

Crest-stage partial-record 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 stage at partial-record stations

Station name and number	Location	Drainage area (mi ²)	Period of record	Water year 2005 maximum		Period of record maximum		
				Date	Gage height (ft)	Date	Gage height (ft)	Discharge (ft ³ /s)
POTOMAC RIVER BASIN								
South Branch Potomac River near Moorefield, WV (01608070)	Lat 39°06'14", long 78°57'37", Hardy County, Hydrologic Unit 02070001, on left bank, 124 ft upstream from concrete highway bridge on US Route 220, 500 ft below Fort Run, 2.0 mi north of Moorefield, and at mile 55.4. Datum of gage is 765.00 ft above NGVD 29.	1,241	1994-2002# 2003-2005*	03-29-05	15.80	09-07-96	25.04	(a)38,000
MONONGAHELA RIVER BASIN								
Tygart Valley River near Elkins, WV (03050500)	Lat 38°55'25", 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 79.5. Datum of gage is 1,893.95 ft above NGVD 12.	271	1945-2004 # 2005 *	03-24-05	11.81	11-05-85	(b) 22.81	(c) 23,500
Buckhannon River at Buckhannon, WV (03052450)	Lat 39°00'19", long 80°12'34", Upshur County, Hydrologic Unit 05020001. Datum of gage is 1,410.00 ft above NGVD 29.	217	2000-2005 *	03-24-05	16.47	02-19-00	26.22	(d)
Tygart Valley River at Colfax, WV (03057000)	Lat 39°26'06", long 80°07'58", Marion County, Hydrologic Unit 05020001, on right bank at highway bridge at Colfax, 300 ft upstream from Guyses Run, and at mile 6.2. Records include flow of Guyses Run. Datum of gage is 856.27 ft above NGVD 29.	1,363	1939-1995# 1996-2005*	01-12-05	(g) 12.66	03-05-63 11-05-85	(f)19.77 ---	--- (e)31,700
West Fork River at Walkersville, WV (03057300)	Lat 38°52'07", long 80°27'29", Lewis County, Hydrologic Unit 05020002, on left bank at downstream side of highway bridge on Secondary Route 44, in Walkersville, 100 ft downstream from Right Fork, and at mile 95.8. Datum of gage is 1070.64 ft above NGVD 29.	28.8	1984-1992# 1993-2005*	03-28-05	10.36	08-18-00 11-04-85	(h)20.60 ---	--- 3,390

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

Maximum stage at partial-record stations --Continued

Station name and number	Location	Drainage area (mi ²)	Period of record	Water year 2005 maximum		Period of record maximum			
				Date	Gage height (ft)	Date	Gage height (ft)	Discharge (ft ³ /s)	
MONONGAHELA RIVER BASIN--Continued									
West Fork River at Butcherville, WV (03058500)	Lat 39°05'26", long 80°28'04", 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 65.0. Datum of gage is 993.0 ft above NGVD 29.	181	1915-2000# 2001-2005*	03-28-05	5.01	06-25-50	16.81	18,000	
West Fork River at Mount Clare, WV (03058975)	Lat 39°14'19", long 80°21'33", Harrison County, Hydrologic Unit 05020002, on right bank 4 mi south of Clarksburg and 2 mi north of Mount Clare, 0.3 mi off County Route 25 on County Route 34, and at mile 38.2. Datum of gage is 931.04 ft above NGVD 29.	368	1987-2004# 2005*	08-30-05	9.00	02-09-94	19.08	11,600	
OHIO RIVER MAIN STEM									
Ohio River near Marietta, OH (03150800)	Lat 39°23'21", long 81°29'03", Washington County, Hydrologic Unit 05030202, on right bank, 1.5 mi southwest of Marietta, 2.0 mi downstream from Muskingum River, and at mile 174.3 measured downstream from Pittsburgh, Pa. Datum of gage is 567.12 ft, Sandy Hook datum.	35,620	1969-2005*	01-08-05	41.00	09-19-04	42.37	(b)	
LITTLE KANAWHA RIVER BASIN									
Little Kanawha River below Burnsville Dam, WV (03151520)	Lat 38°50'41", long 80°37'45", Braxton County, Hydrologic Unit 05030203, on right bank 2,600 ft downstream from Burnsville Dam, 1.6 mi southeast of Burnsville, and at mile 126. Datum of gage is 750.00 ft above NGVD 29, (U.S. Army Corps of Engineers Bench Mark).	163	1976-1982# 1983-1986* 1987-1993# 1994-2005*	12-13-04	7.50	11-04-85 08-06-96	(i)11.78 ---	--- 2,540	
Little Kanawha River at Burnsville, WV (03151600)	Lat 38°51'54", long 80°40'35", Braxton County, Hydrologic Unit 05030203, on right bank, 70 ft upstream from Buffalo Creek, 1.0 mi northwest of Burnsville, 1.4 mi downstream from Oil Creek, 1.8 mi downstream from Saltlick Creek, and 1.9 mi downstream from Burnsville, and at mile 122. Datum of gage is 738.66 ft above NGVD 29.	248	1974-1978# 1979-1983* 1994-2005*	03-08-05	8.52	06-02-74	16.32	6,890	
Little Kanawha River at Glenville, WV (03152000)	Lat 38°56'02", long 80°50'21", 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 105. Datum of gage is 697.79 ft above NGVD 29.	387	1915-1922# 1929-1983# 1984-2000# 2001-2005*	08-30-05	15.71	11-05-85	(b)36.46	26,900	

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

Maximum stage at partial-record stations --Continued

Station name and number	Location	Drainage area (mi ²)	Period of record	Water year 2005 maximum		Period of record maximum		
				Date	Gage height (ft)	Date	Gage height (ft)	Discharge (ft ³ /s)
LITTLE KANAWHA RIVER BASIN--Continued								
Little Kanawha River at Grantsville, WV (03153500)	Lat 38°55'19", long 81°05'52", 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 79.7. Datum of gage is 652.83 ft above NGVD 12.	913	1929-1978# 1979-2005*	08-30-05	28.39	03-07-67	(b)43.90	35,100
West Fork Little Kanawha River at Rocksedale, WV (03154000)	Lat 38°50'39", long 81°13'22", 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 14.5. Datum of gage is 657.85 ft above NGVD 12.	205	1929-1931# 1938-1975# 1976-2005*	05-20-05	19.07	03-02-97 04-16-39	(b)31.55 ---	--- 20,200
KANAWHA RIVER BASIN								
New River at Hinton, WV (03184500)	Lat 37°40'13", long 80°53'34", 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. Datum of gage is 1,355.18 ft above NGVD 29.	6,256	1936-2003# 2004-2005*	03-29-05	8.28	08-15-40	18.97	246,000
Gauley River at Camden on Gauley, WV (03187000)	Lat 38°21'57", long 80°36'04", Webster County, Hydrologic Unit 05050005, on right bank in town of Camden on Gauley, 0.2 mi downstream from Coon Creek, and 0.9 mi upstream from Strouds Creek, and at mile 69.6. Datum of gage is 2003.28 ft above NGVD 12.	236	1909-1916# 1930-1975# 1976-2005*	03-28-05	12.80	07-04-32	27.38	42,500
Gauley River below Summersville Dam, WV (03189600)	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. Datum of gage is 1,350.00 ft above mean sea level (levels by U.S. Army Corps of Engineers).	806	1966-1982# 1983-1986# 1987-2003# 2004-2005*	04-30-05	18.07	08-24-89	19.39	18,200
Elk River at Sutton, WV (03195500)	Lat 38°39'47", 80°42'35", Braxton County, Hydrologic Unit 05050007, on left bank, 150 ft upstream from highway bridge at Sutton, 0.5 mi upstream from Granny Creek, 0.9 mi downstream from Sutton Dam, 2.5 mi downstream from Wolf Creek, and at mile 102.1. Datum of gage is 800.00 ft above NGVD 29.	542	1939-1992# 1993-2005*	03-25-05	19.59	01-29-57	39.30	34,200

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

Maximum stage at partial-record stations --Continued

Station name and number	Location	Drainage area (mi ²)	Period of record	Water year 2005 maximum		Period of record maximum		
				Date	Gage height (ft)	Date	Gage height (ft)	Discharge (ft ³ /s)
KANAWHA RIVER BASIN--Continued								
Elk River near Frametown, WV (03196600)	Lat 38°35'32", long 80°53'05", Braxton County, Hydrologic Unit 05050007, on right bank opposite mouth of Birch River, at village of Glendon, 2.2 mi upstream from Strange Creek, 3.2 mi southwest of Frametown, and at mile 82.6. Records include flow of Birch River. Datum of gage is 775.51 ft above NGVD 29.	751	1959-1981# 1982-2005*	03-25-05	8.79	07-31-96	20.39	30,300
Elk River at Clay, WV (03196800)	Lat 38°27'38", long 81°05'16", Clay County, Hydrologic Unit 05050007, on upstream side of right bank of highway bridge in the town of Clay, 0.9 mi downstream from Buffalo Creek, and 2.1 mi downstream from Lower Two Run Creek, and at mile 52.4. Datum of gage is 677.46 ft above NGVD 29.	992	1959-1978# 1979-1998* 2003-2005*	03-25-05	9.51	03-15-67	22.80	48,000
OHIO RIVER MAIN STEM								
Ohio River at Point Pleasant, WV (03201500)	Lat 38°50'25", long 82°08'30", Mason County, Hydrologic Unit 05030202, on left bank at Point Pleasant, 1,200 ft upstream from Kanawha River, and at mile 265.6, measured downstream from Pittsburgh, Pa. Datum of gage is 514.10 ft, Sandy Hook datum.	52,740	1940-1977# 1978-2005*	01-09-05	>42.86 (j)	04-16-48	55.00	(d)
GUYANDOTTE RIVER BASIN								
Guyandotte River below R. D. Bailey Dam, WV (03202915)	Lat 37°35'53", long 81°49'46", Mingo County, Hydrologic Unit 05070101, on right bank, 500 ft upstream from Little Huff Creek, 2,500 ft downstream from R.D. Bailey Dam and 0.5 mi northeast of Justice, and at mile 111.6. Datum of gage is 880.00 ft above NGVD 29.	535	1979-1982# 1983-1986* 1987-1991# 1992-2005*	(k)	9.39	06-22-79	13.90	16,800
Guyandotte River at Man, WV (03203000)	Lat 37°44'25", long 81°52'37", Logan County, Hydrologic Unit 05070101, on right bank at downstream side of highway bridge at Man, 500 ft upstream from Buffalo Creek, and 0.7 mi downstream from Huff Creek, and at mile 93.4. Datum of gage is 710.88 ft above NGVD 12.	758	1928-1962# 1963-2005*	12-01-04 05-01-05	10.74 10.74	03-12-63	24.78	49,000
Guyandotte River at Branchland, WV (03204000)	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. Datum of gage is 547.91 ft above NGVD 29.	1,224	1915-1917# 1917-1922* 1929-1995# 1996-2005*	04-30-05	22.11	03-13-63	43.83	44,500

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

Maximum stage at partial-record stations --Continued

Station name and number	Location	Drainage area (mi ²)	Period of record	Water year 2005 maximum		Period of record maximum			
				Date	Gage height (ft)	Date	Gage height (ft)	Discharge (ft ³ /s)	
OHIO RIVER MAIN STEM									
Ohio River at Huntington, WV (03206000)	Lat 38°24'48", long 82°30'02", Lawrence County Ohio, Hydrologic Unit 05090101, on right bank at lock 28 at Sybene, Ohio, 0.1 mi upstream from Fourpole Creek, 3.0 mi downstream from Symmes Creek, and at mile 311.5, measured downstream from Pittsburgh, Pa. Datum of gage is 490.26 ft, Sandy Hook datum.	55,850	1935-1986# 1987-2005*	01-09-05	51.82	01-27-37 01-28-37	69.45 ---	---	654,000
TWELVEPOLE CREEK BASIN									
East Fork Twelvepole Creek below East Lynn Dam, WV (03206790)	Lat 38°08'52", long 82°23'00", Wayne County, Hydrologic Unit 05090102, on left bank, 800 ft downstream from Laurel Creek, 1,700 ft downstream from East Lynn Dam, 1.4 mi south of the town of East Lynn, 2.3 mi upstream from Camp Creek, 6.0 mi southeast of the town of Wayne, and at mile 41.7. Datum of gage is 610.00 ft above NGVD 29.	138	1962-1982# 1983-1986* 1991-2005*	12-02-04	10.61	03-12-68	(h)31.50	4,960	
Twelvepole Creek below Wayne, WV (03207020)	Lat 38°14'56", long 82°26'04", Wayne County, Hydrologic Unit 05090102, on left bank just below highway bridge on Secondary State Route 52/43, 1.9 mi northeast of Wayne, and at mile 26.5. Datum of gage is 560.00 ft above NGVD 29. Discharges prior to 1967 are estimated as those collected 2 mi upstream at station 03207000 Twelvepole Creek at Wayne, drainage area 291 mi ² .	300	1916-1917 # 1918-1922 * 1927-1931 # 1947-1954 # 1955 * 1956-1982# 1983* 1994-2005*	04-30-05	17.75	02-28-62	29.46	15,900	

Operated as a continuous-record gaging station.

* Peak stage only.

(a) Estimated from rating curve extended above 26,000 ft³/s on basis of drainage-area comparisons.

(b) From floodmarks.

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

(d) Discharge not determined.

(e) Estimated.

(f) Backwater from West Fork River.

(g) From float-tape indicator.

(h) From floodmark, backwater.

(i) Backwater.

(j) Lagging intakes.

(k) July 24, 25, 26, 27, 2005.

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

Maximum discharge and stage at crest-stage stations.

Station name and number	Location and drainage area	Drainage area (mi ²)	Period of record	Water year 2005 maximum		
				Date	Gage height (ft)	Discharge (ft ³ /s)
POTOMAC RIVER BASIN						
Heavener Run near Brandywine, WV (01607510)	Lat 38°37'59", long 79°13'49", Pendleton County, Hydrologic Unit 02070001, on right upstream end of 6 ft corrugated culvert on US Route 33, 1.1 mi northeast of Brandywine. Elevation of gage is approximately 1,550 ft above NGVD 29, from topographic map.	1.04	1999-2005	07-08-2005	7.12	20.7
Little Cacapon River at Frenchburg, WV (01609650)	Lat 39°18'55", long 78°39'27", Hampshire County, Hydrologic Unit 02070003, on left upstream side of bridge, on County Route 50/9, 5 mi east of Romney.	28.9	1999-2005	07-09-2005	7.96	1,060
MONONGAHELA RIVER BASIN						
Unnamed Run at Gilman, WV (03050650)	Lat 38°58'35", long 79°50'16", Randolph County, Hydrologic Unit 05020001, on left upstream end of culvert on US Highway 219, 0.3 mi northeast of Gilman and 3.7 mi north of Elkins.	0.38	1999-2005	05-20-2005	4.79	32.1
Mud Lick Run near Buckhannon, WV (03052340)	Lat 39°00'17", long 80°15'23", Upshur County, Hydrologic Unit 05020001, on left upstream wingwall of culvert on US Highway 33 and 119, 1.5 mi west of Buckhannon. Datum of gage is 1,407.68 ft above NGVD 29.	2.33	1999-2005	03-24-2005	6.29	114
Shavers Fork at Cheat Bridge, WV (03067500)	Lat 38°36'40", long 79°52'30", Randolph County, Hydrologic Unit 05020004, on upstream side of old steel truss bridge at Cheat Bridge, 35 mi south of Elkins, cross Shavers Fork on new bridge, proceed 1/4 mi to side road to old bridge. Datum of gage is 3,542.93 ft above NGVD 29.	57.6	1923-1926 1992-2005	*12-09-1998 03-28-2005	*7.70 10.10	*3,310 5,510
Buffalo Creek near Rowlesburg, WV (03069880)	Lat 39°17'19", long 79°42'16", Preston County, Hydrologic Unit 05020004, on left bank, 150 ft upstream from secondary highway bridge, 4.5 mi southwest of Rowlesburg, and at mile 2.8. Elevation of gage is approximately 1,640 ft above NGVD 29, from topographic map.	12.2	1967-1977 1994-2005	05-29-1997 *01-08-1998 *01-15-1999 03-08-2005	*4.15 *3.40 *3.60 3.86	*825 *480 *565 682
MIDDLE ISLAND CREEK BASIN						
Buffalo Run near Little, WV (03114650)	Lat 39°29'13", long 81°00'27", Tyler County, Hydrologic Unit 05030201, on left bank, 1.0 mi northwest of Little, and at mile 1.4. Elevation of gage is approximately 660 ft above NGVD 29, from topographic map.	4.19	1969-1977 1994-2005	01-05-2005	10.54	---
LITTLE KANAWHA RIVER BASIN						
Buck Run near Leopold, WV (03152200)	Lat 39°07'26", long 80°41'26", Doddridge County, Hydrologic Unit 05030203, on right bank 12 ft upstream from culvert on Secondary State Route 66, 0.3 mi upstream from mouth, and 2.6 mi east of Leopold. Elevation of gage is approximately 840 ft above NGVD 29, from topographic map.	2.91	1970-1977 1994-2005	04-30-2005	5.06	---
Goose Creek near Petroleum, WV (03155525)	Lat 39°12'47", long 81°13'52", Ritchie County, Hydrologic Unit 05030203, on right upstream side of bridge, on County Route 18, 2.7 mi south of US Route 50, 2 mi south of Nutter Farm, 2.5 mi northeast of Petroleum.	25.3	1999-2005	03-28-2005	20.84	897
KANAWHA RIVER BASIN						
Payne Branch near Oakvale, WV (03177100)	Lat 37°21'28", long 80°58'40", Mercer County, Hydrologic Unit 05050002, on left upstream side of bridge, on County Route 219/3, 1.8 mi northwest of Oakvale and 4 mi east of Princeton.	8.64	2000-2005	07-08-2005	5.76	1,300

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

Maximum discharge and stage at crest-stage stations. --Continued

Station name and number	Location and drainage area	Drainage area (mi ²)	Period of record	Water year 2005 maximum		
				Date	Gage height (ft)	Discharge (ft ³ /s)
KANAWHA RIVER BASIN--Continued						
Big Creek near Bellepoint, WV (03184200)	Lat 37°40'28", long 80°48'52", Summers County, Hydrologic Unit 05050003, on left upstream wingwall of bridge, on Secondary Route 10, 4 mi northeast of Bellepoint. Datum of gage is 1,407.68 ft above NGVD 29.	8.27	1969-1977 1999-2005	07-31-2005	4.00	41.5
Anglins Creek near Nallen, WV (03190100)	Lat 38°08'28", long 80°50'13", Nicholas County, Hydrologic Unit 05050005, on left upstream side of bridge, on County Route 24/7, 0.7 mi southeast of Runa, 2 mi southeast of Pool, and 3 mi northeast of Nallen.	23.5	1999-2005	04-30-2005	6.60	590
Gilmer Run near Marlinton, WV (03193830)	Lat 38°19'12", long 80°05'52", Pocahontas County, Hydrologic Unit 05050007, on right bank 8 ft above entrance to culvert under Forest Service Road 151, 6.8 mi north of Marlinton, 200 ft off US Route 219. Elevation of gage is approximately 3,120 ft above NGVD 29, from topographic map.	1.80	1968-1977 1999-2005	03-28-2005	7.62	281
Granny Creek at Sutton, WV (03195600)	Lat 38°40'36", long 80°42'47", Braxton County, Hydrologic Unit 05050007, on right bank, 10 ft upstream from culvert on US Highway 19, 0.7 mi upstream from mouth, and 1.0 mi northwest of Sutton. Elevation of gage is approximately 840 ft above NGVD 29, from topographic map.	6.98	1967-1977 1994-2005	10-20-2004	(a)	---
Ashleycamp Run near Lefthand, WV (03197150)	Lat 38°37'34", long 81°14'02", Roane County, Hydrologic Unit 05050007, on right upstream wingwall of culvert on State Route 36, 1.25 mi east of Lefthand. Elevation of gage is approximately 780 ft above NGVD 29, from topographic map.	2.01	1999-2005	03-18-1999 11-26-1999 05-22-2001 04-28-2002 09-04-2003 11-19-2003 07-19-2005	5.32 6.29 6.00 8.81 9.13 7.33 7.15	111 188 164 431 466 283 266
Rock Creek near Danville, WV (03199300)	Lat 38°06'00", long 81°49'48", Boone County, Hydrologic Unit 05050009, on right bank 20 ft upstream from bridge on US Route 119, 1.5 mi north of Danville. Datum of gage is 675.46 ft above NGVD 29.	12.2	1979-1984 1999-2005	10-19-2004	4.90	143
Poplar Fork at Teays, WV (03201410)	Lat 38°27'02", long 81°55'54", Putnam County, Hydrologic Unit 05050008, on right wingwall at box culvert on Secondary Route 46, 0.6 mi east of Teays Valley. Datum of gage is 643.00 ft above NGVD 29.	8.47	1967-1978 1992-2005	07-27-2005	8.33	576
GUYANDOTTE RIVER BASIN						
Marsh Fork at Maben, WV (03202245)	Lat 37°38'19", long 81°23'38", Wyoming County, Hydrologic Unit 05070101, on left upstream wingwall of culvert, on State Route 97, 0.1 mi south of Maben, near Twin Falls State Park. Elevation of gage is approximately 1,590 ft above NGVD 29, from topographic map.	4.85	1978-1980 1999-2005	08-19-2005	5.47	177
Brier Creek at Fanrock, WV (03202480)	Lat 37°33'48", long 81°39'09", Wyoming County, Hydrologic Unit 05070101, on right bank on Secondary State Route 14, 0.3 mi south of Fanrock, and 0.3 mi upstream from mouth. Elevation of gage is approximately 1,220 ft above NGVD 29, from topographic map.	7.34	1969-1977 1994-2005	*05-03-2002 02-22-2005	*4.95 4.32	*246 153
OHIO RIVER BASIN						
Fourpole Creek near Huntington, WV (03206450)	Lat 38°21'45", long 82°23'37", Cabell County, Hydrologic Unit 05090101, on left upstream bridge abutment on County Route 48/1, 5 mi southeast of Huntington.	4.02	1999-2005	12-01-2004	10.43	611

* Revised.

(a) Pending field verification.

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

Discharge measurements in the following table were made at partial-record stations and miscellaneous sites throughout the State.

Discharge measurements made at partial-record stations and miscellaneous sites

Station name and number	Location	Drainage area (mi ²)	Measured previously (water years)	Measurements	
				Date	Discharge (ft ³ /s)
POTOMAC RIVER BASIN					
South Branch Potomac River near Moorefield, WV (01608070)	Lat 39°06'14", long 78°57'37", Hardy County, Hydrologic Unit 02070001, on left bank, 124 ft upstream from concrete highway bridge on US Route 220, 500 ft below Fort Run, 2.0 mi north of Moorefield, and at mile 55.4. Datum of gage is 765.00 ft above NGVD 29.	1,241	1994-2002# 2003-2004	No 2005 water year measurements made.	
MONONGAHELA RIVER BASIN					
Unnamed Run at Gilman, WV (03050650)	Lat 38°58'35", long 79°50'16", Randolph County, Hydrologic Unit 05020001, on left upstream end of culvert on US Highway 219, 0.3 mi northeast of Gilman and 3.7 mi north of Elkins.	0.38	2000 2002 2004	No 2005 water year measurements made.	
Mud Lick Run near Buckhannon, WV (03052340)	Lat 39°00'17", long 80°15'23", Upshur County, Hydrologic Unit 05020001, on left upstream wingwall of culvert on US Highway 33 and 119, 0.2 mi above mouth, and 1.5 mi west of Buckhannon. Datum of gage is 1,407.68 ft above NGVD 29.	2.33	1999-2001 2004	No 2005 water year measurements made.	
Tygart Valley River at Colfax, WV (03057000)	Lat 39°26'06", long 80°07'58", Marion County, Hydrologic Unit 05020001, on right bank at highway bridge at Colfax, 300 ft upstream from Guyses Run, and at mile 6.2. Records include flow of Guyses Run. Datum of gage is 856.27 ft above NGVD 29, supplementary adjustment of 1944.	1,363	1939-1995# 1996 1998-2001 2003-2004	No 2005 water year measurements made.	
Shavers Fork at Cheat Bridge, WV (03067500)	Lat 38°36'40", long 79°52'30", Randolph County, Hydrologic Unit 05020004, on upstream side of old steel truss bridge at Cheat Bridge, 35 mi south of Elkins, upstream from US Route 250 highway bridge. Datum of gage is 3,542.93 ft above NGVD 29.	57.6	1923-1926 1966 1972 1979-1980 1993-1996 2000-2005	(a)	(a)
MIDDLE ISLAND CREEK BASIN					
Buffalo Run near Little, WV (03114650)	Lat 39°29'13", long 81°00'27", Tyler County, Hydrologic Unit 05030201, on left bank, 1.0 mi northwest of Little, and at mile 1.4. Elevation of gage is approximately 660 ft above NGVD 29, from topographic map.	4.19	1969-1977# 1994-1995 1998 2004	No 2005 water year measurements made.	
LITTLE KANAWHA RIVER BASIN					
Buck Run near Leopold, WV (03152200)	Lat 39°07'26", long 80°41'26", Doddridge County, Hydrologic Unit 05030203, on right bank 12 ft upstream from culvert on Secondary State Route 66, 0.3 mi upstream from mouth, and 2.6 mi east of Leopold. Elevation of gage is approximately 840 ft above NGVD 29, from topographic map.	2.91	1970-1977 1994-1995 1998 2004	No 2005 water year measurements made.	
KANAWHA RIVER BASIN					
Lick Creek near Sandstone, WV (374643080533401)	Lat 37°46'43", long 80°53'34", Summers County, Hydrologic Unit 05050004, on right bank, 50 ft downstream from State Route 20 bridge over Lick Creek, about 0.5 mi north on Rt 20 from Sandstone, and at mile 0.2.	39.1	1988-2005	11-10-2004 06-30-2005 09-21-2005	23.1 2.45 0.47
Meadow Creek at Meadow Creek, WV (374847080552401)	Lat 37°48'47", long 80°55'24", Summers County, Hydrologic Unit 05050004, on the left bank, 10 ft downstream of State Route 7/1 bridge, about 0.3 mi from Meadow Creek, and at mile 0.3.	28.8	1988-2005	11-10-2004 06-30-2005 09-21-2005	17.5 5.88 0.70

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

Discharge measurements in the following table were made at partial-record stations and miscellaneous sites throughout the State.

Discharge measurements made at partial-record stations and miscellaneous sites --Continued

Station name and number	Location	Drainage area (mi ²)	Measured previously (water years)	Measurements	
				Date	Discharge (ft ³ /s)
KANAWHA RIVER BASIN-Continued					
Piney Creek near McCreery, WV (375041081054201)	Lat 37°50'41", long 81°05'42", Raleigh County, Hydrologic Unit 05050004, about 1,500 ft upstream from State Route 41 highway bridge, and at mile 0.5.	134	1990-2005	06-30-2005	32.8
Laurel Creek at Quinnimont, WV (375105081024801)	Lat 37°51'05", long 81°02'48", Fayette County, Hydrologic Unit 05050004, on the left bank downstream side of bridge, on a railroad bridge trestle, 1 mi east of Prince along State Route 41, and at mile 0.1.	27.6	1988-2005	10-27-2004 06-30-2005	34.9 5.70
Dunloup Creek near Thurmond, WV (375635081051601)	Lat 37°56'35", long 81°05'16", Fayette County, Hydrologic Unit 05050004, on State Route 25 bridge southwest of Thurmond, and at mile 1.1.	45.8	1988-2005	10-27-2004 06-30-2005	37.6 21.5
Arbuckle Creek at Minden, WV (375834081063201)	Lat 37°58'34", long 81°06'32", Fayette County, Hydrologic Unit 05050004, on upstream side of box culvert, on County Route 17/11, north of Minden.	---	2003-2005	10-27-2004 06-30-2005	4.89 0.94
Wolf Creek near Fayetteville, WV (380351081045401)	Lat 38°03'51", long 81°04'54", Fayette County, Hydrologic Unit 05050004, on the left bank, 40 ft below State Route 82 bridge, east of Fayette Station, and at mile 0.1	17.4	1988-2005	10-26-2004 06-30-2005 09-21-2005	13.5 3.29 0.85
Marr Branch near Fayetteville, WV (380427081053901)	Lat 38°04'27", long 81°05'39", Fayette County, Hydrologic Unit 05050004, on left bank about 1.1 mi from intersection of US Route 19 and State Route 82, and at mile 0.5.	3.13	1988-2005	10-26-2004 06-30-2005	8.27 0.46
Big Creek near Bellepoint, WV (03184200)	Lat 37°40'28", long 80°48'52", Summers County, Hydrologic Unit 05050003, on left upstream wingwall of bridge, on Secondary Route 10, 4 mi northeast of Bellepoint. Datum of gage is 1,407.68 ft above NGVD 29.	8.27	1969-1977 2001 2003-2004	No 2005 water year measurements made.	
New River at Hinton, WV (03184500)	Lat 37°40'13", long 80°53'34", 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. Datum of gage is 1,355.18 ft above NGVD 29.	6,256	1936-2003# 2004	No 2005 water year measurements made.	
New River below Hawks Nest Dam, WV (380649081083301)	Lat 38°06'49", long 81°08'33", Fayette County, Hydrologic Unit 05050004, on right bank, 400 ft upstream from State Route 16 bridge at Cotton Hill, 600 ft upstream from Laurel Creek, and at mile 102.2.	6,909	1990-1995 1997-2000 2005	06-07-2005 06-24-2005	129 114
Gauley River at Camden on Gauley, WV (03187000)	Lat 38°21'57", long 80°36'04", Webster County, Hydrologic Unit 05050005, on right bank in town of Camden on Gauley, 0.2 mi downstream from Coon Creek, and 0.9 mi upstream from Strouds Creek, and at mile 69.6. Datum of gage is 2003.28 ft above NGVD 12.	236	1909-1916 1930-1975# 1979 1981 1983-2000 2003-2004	No 2005 water year measurements made.	

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

Discharge measurements in the following table were made at partial-record stations and miscellaneous sites throughout the State.

Discharge measurements made at partial-record stations and miscellaneous sites --Continued

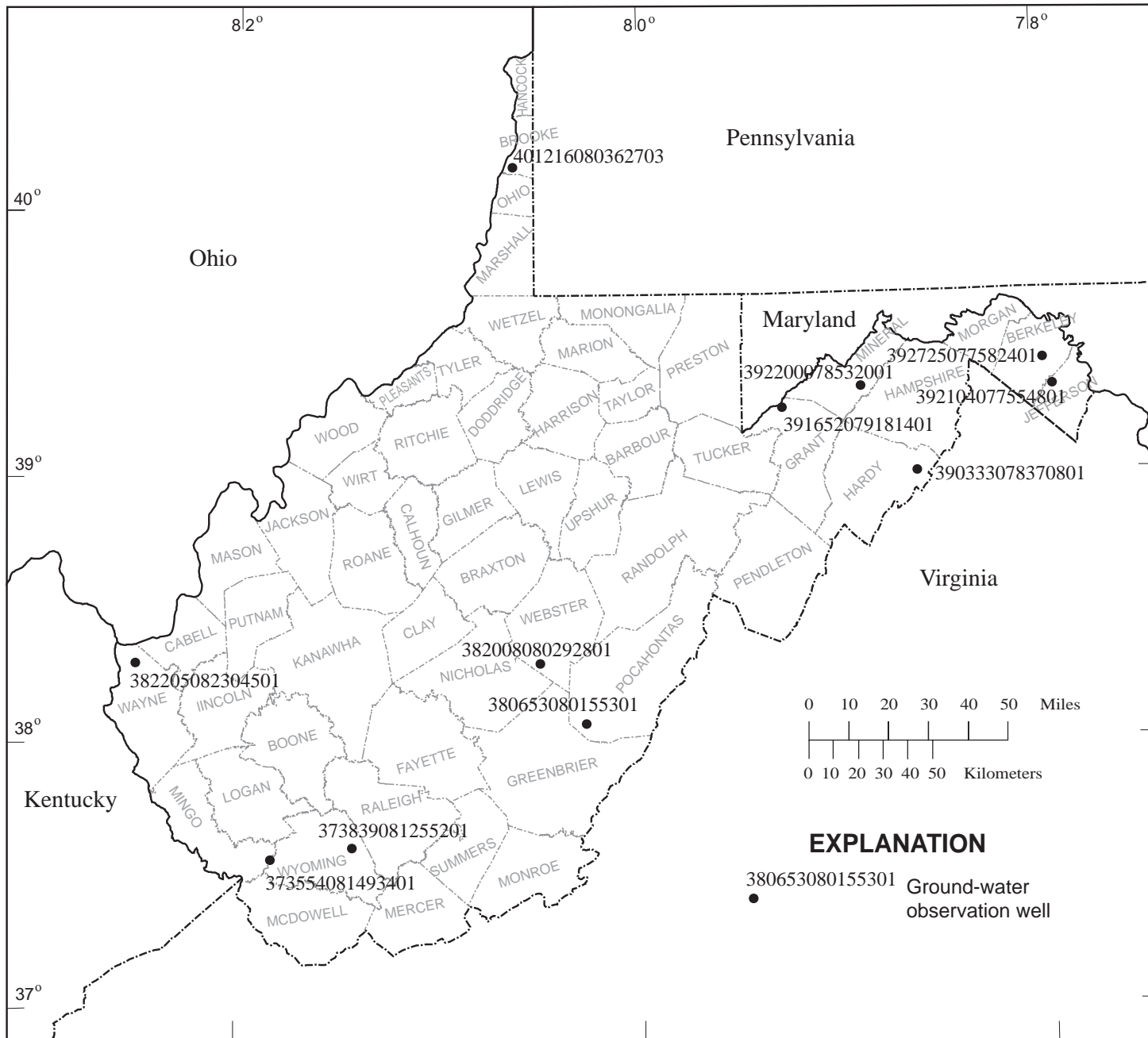
Station name and number	Location	Drainage area (mi ²)	Measured previously (water years)	Measurements	
				Date	Discharge (ft ³ /s)
KANAWHA RIVER BASIN-Continued					
Gauley River below Summersville Dam, WV (03189600)	Lat 38°12'54", long 80°53'18", Nicholas County, Hydrologic Unit 05050005, on right bank 0.4 mi downstream from Summersville Dam, 5.0 mi southwest of Summersville, and at mile 35.3. Datum of gage is 1,350.00 ft above NGVD 29 (levels by U.S. Army Corps of Engineers).	806	1966-1982#	04-15-2005	64.9
			1982-1986	06-15-2005	254
			1986-2003# 2004-2005		
Elk River at Clay, WV (03196800)	Lat 38°27'38", long 81°05'16", Clay County, Hydrologic Unit 05050007, on upstream side of right bank of highway bridge in the town of Clay, 0.9 mi downstream from Buffalo Creek, and 2.1 mi downstream from Lower Two Run Creek, and at mile 52.4. Datum of gage is 677.46 ft above NGVD 29.	992	1959-1978# 1979-1997 2002-2004	No 2005 water year measurements made.	
Ashleycamp Run near Lefthand, WV (03197150)	Lat 38°37'34", long 81°14'02", Roane County, Hydrologic Unit 05050007, on right upstream wingwall of culvert on State Route 36, 1.25 mi east of Lefthand. Elevation of gage is approximately 780 ft above NGVD 29, from topographic map.	2.01	1998 2003-2005	11-12-2003 07-19-2005	*98.9 60.2
GUYANDOTTE RIVER BASIN					
Marsh Fork at Maben, WV (03202245)	Lat 37°38'19", long 81°23'38", Wyoming County, Hydrologic Unit 05070101, on left upstream wingwall of culvert, on State Route 97, 0.1 mi south of Maben, near Twin Falls State Park. Elevation of gage is approximately 1,590 ft above NGVD 29, from topographic map.	4.85	1999-2001 2004	No 2005 water year measurements made.	

* Revised.

Operated as a continuous-record gaging station.

(a) Measurements incorporated in rating study for station 03067510, Shavers Fork near Cheat Bridge, included in this report.

Figure 5.-- Map of West Virginia showing location of ground-water observation wells.



GROUND-WATER-QUALITY RECORDS

Remark Codes

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

<u>PRINTED OUTPUT</u>	<u>REMARK</u>
E	Value is estimated.
>	Actual value is known to be greater than the value shown.
<	Actual value is known to be less than the value shown.
M	Presence of material verified, but not quantified.
N	Presumptive evidence of presence of material.
U	Material specifically analyzed for, but not detected.
A	Value is an average.
V	Analyte was detected in both the environmental sample and the associated blanks.
S	Most probable value.

Water-Quality Control Data

NOTE.--See information related to quality-control data beginning on page 24.

GROUND-WATER RECORDS

GROUND-WATER LEVELS

BERKELEY COUNTY

392725077582401. Local number, Ber-0445.

LOCATION.--Lat 39°27'25", long 77°58'24", NAD 27, Hydrologic Unit 02070004, at John Street and Porter Avenue, Martinsburg.

AQUIFER.--Beekmantown Group of Lower Ordovician age.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 8 in., depth 154 ft, cased with steel to 10 ft.

INSTRUMENTATION.--Periodic water-level measurements, November 1956 to October 1970. Digital water-level recorder--60-minute interval, October 1970 to September 2000. Electronic data logger at 60-minute interval with satellite telemetry, October 2003 to present.

DATUM.--Elevation of land-surface datum is about 465 ft above sea level. Measuring point: Top edge of recorder shelter floor, 3.30 ft above land-surface datum.

REMARKS.--Aquifer test data available. No water-level record parts or all of Mar. 19, 20, 21, 29.

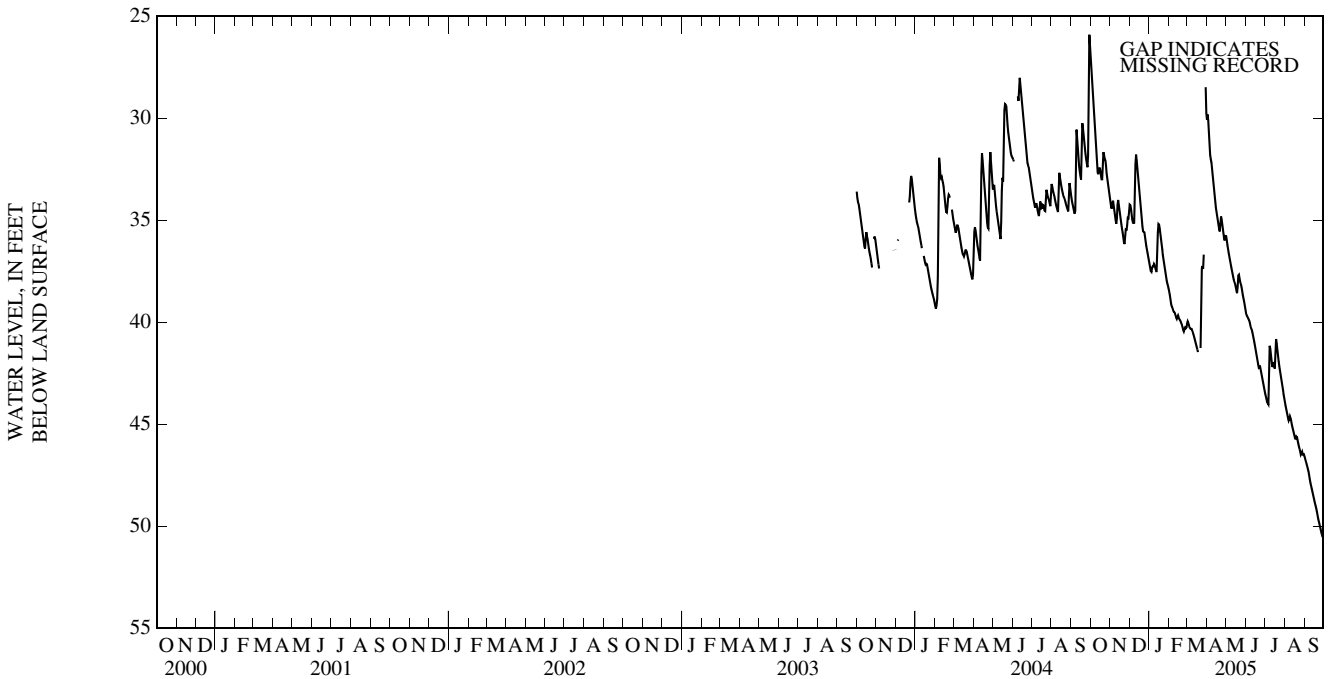
PERIOD OF RECORD.--November 1956 to Sept. 30, 2000; October 2003 to current year.

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.

EXTREMES FOR CURRENT YEAR.--Highest water level, 26.88 ft, observed, below land-surface datum, Mar. 29; lowest, 50.65 ft below land-surface datum, Sept. 30.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY OBSERVATION AT 1200 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	30.06	33.94	34.83	37.49	39.20	40.22	31.05	36.52	39.81	43.98	44.46	47.01
10	31.97	35.09	32.85	37.26	39.51	40.46	32.76	37.39	40.29	41.46	44.61	47.80
15	32.39	34.32	33.26	35.23	39.62	41.04	34.29	38.05	41.06	42.02	45.37	48.53
20	32.91	35.50	34.93	36.06	40.01	---	35.33	37.84	41.98	41.19	45.57	49.19
25	32.07	35.38	35.70	37.30	40.46	37.22	35.11	38.18	42.44	42.44	46.27	49.97
EOM	33.82	34.97	36.91	38.26	40.32	29.18	35.85	39.25	43.27	43.63	46.44	50.59



BROOKE COUNTY

401216080362703. Local number, Brk-0066.

LOCATION.--Lat 40°12'16", long 80°36'27", NAD 27, Hydrologic Unit 05030106, about 2.5 mi west of Bethany on hilltop about 1,700 ft west of Buffalo Creek.

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.--July 1982 to June 1999, continuous strip-chart water-level recorder. June 1999 to Oct. 30, 2000, digital water-level recorder--60-minute punch. Electronic data logger at 60-minute interval, Oct. 30, 2000 to present. Satellite telemetry installed at site on Feb. 28, 2002.

DATUM.--Elevation of land-surface datum is about 1,150 ft above NGVD 29. Measuring point: Top edge of recorder shelter floor, 2.14 ft above land-surface datum. For the period from June 3, 1999 to Feb. 28, 2002, measuring point was top edge of recorder shelter, 2.18 ft above land-surface datum. Prior to June 3, 1999, measuring point was top edge of recorder shelter floor, 2.20 ft above land-surface datum.

REMARKS.--Aquifer test data available.

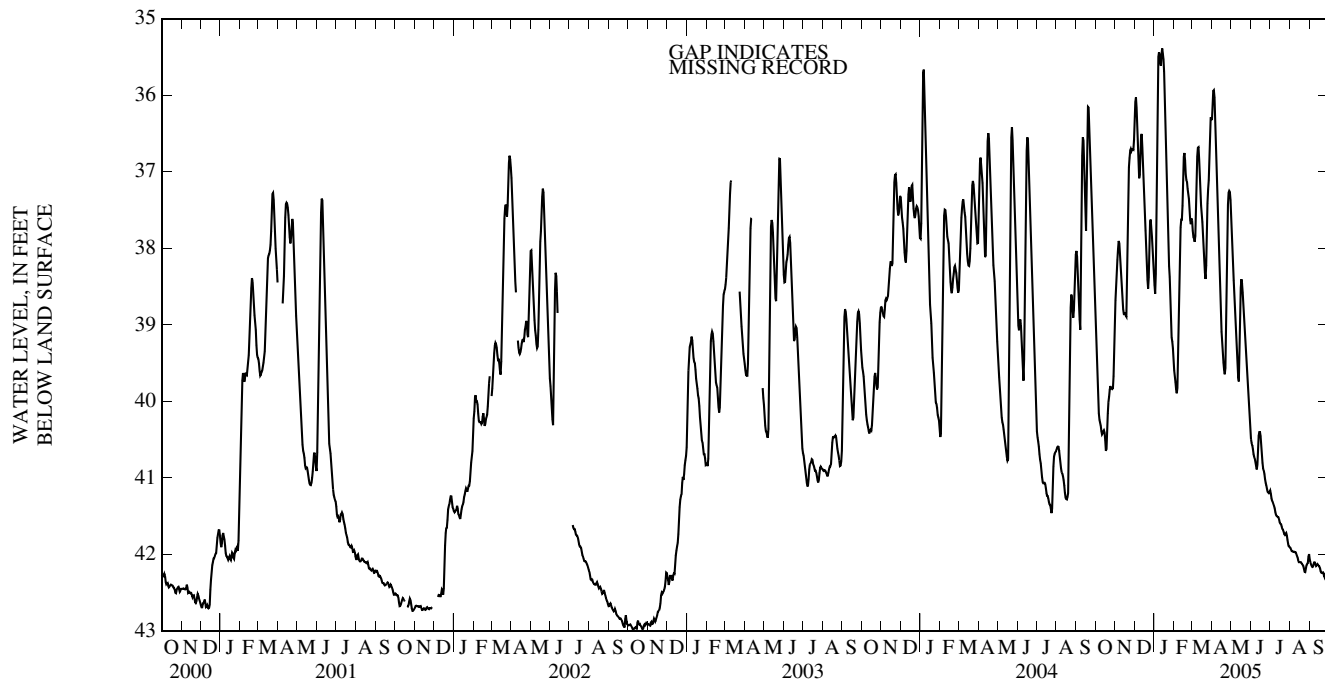
PERIOD OF RECORD.--July 1982 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 34.87 ft below land-surface datum, Apr. 3, 1985; lowest, 43.15 ft below land-surface datum, Dec. 13, 1994.

EXTREMES FOR CURRENT YEAR.--Highest water level, 35.34 ft below land-surface datum, Jan. 13, 14; lowest, 42.33 ft below land-surface datum, Sept. 30.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY OBSERVATION AT 1200 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	39.95	38.07	36.27	37.18	39.89	37.87	35.96	38.34	40.66	41.31	41.96	42.16
10	40.35	38.37	36.94	35.49	38.20	36.72	37.32	39.23	40.87	41.47	41.97	42.11
15	40.37	38.86	37.18	35.49	37.28	37.38	38.71	39.13	40.39	41.52	42.10	42.15
20	40.26	38.05	38.13	36.71	37.13	38.06	39.55	38.63	40.86	41.66	42.12	42.23
25	39.81	36.67	37.77	38.32	37.40	37.55	38.05	39.60	41.08	41.74	42.24	42.29
EOM	39.06	36.69	38.23	39.38	37.66	36.23	37.28	40.36	41.21	41.90	41.95	42.33



GRANT COUNTY

391652079181401. Local number, Grt-0090.

LOCATION.--Lat 39°16'52", long 79°18'14", NAD 27, Hydrologic Unit 02070002, about 200 ft north of U.S. Route 50, about 3.5 mi west of Mount Storm.

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 to May 16, 2000. Electronic data logger at 60-minute interval, May 16, 2000 to present.

DATUM.--Elevation of land-surface datum is about 2,890 ft above NGVD 29. Measuring point: Top edge of recorder shelter floor, 1.49 ft above land-surface datum. Prior to July 30, 2003, measuring point was the top edge of the recorder shelter floor 1.50 ft above land-surface datum.

REMARKS.--Well is near reclaimed surface mine. No water-level record Mar. 25-30.

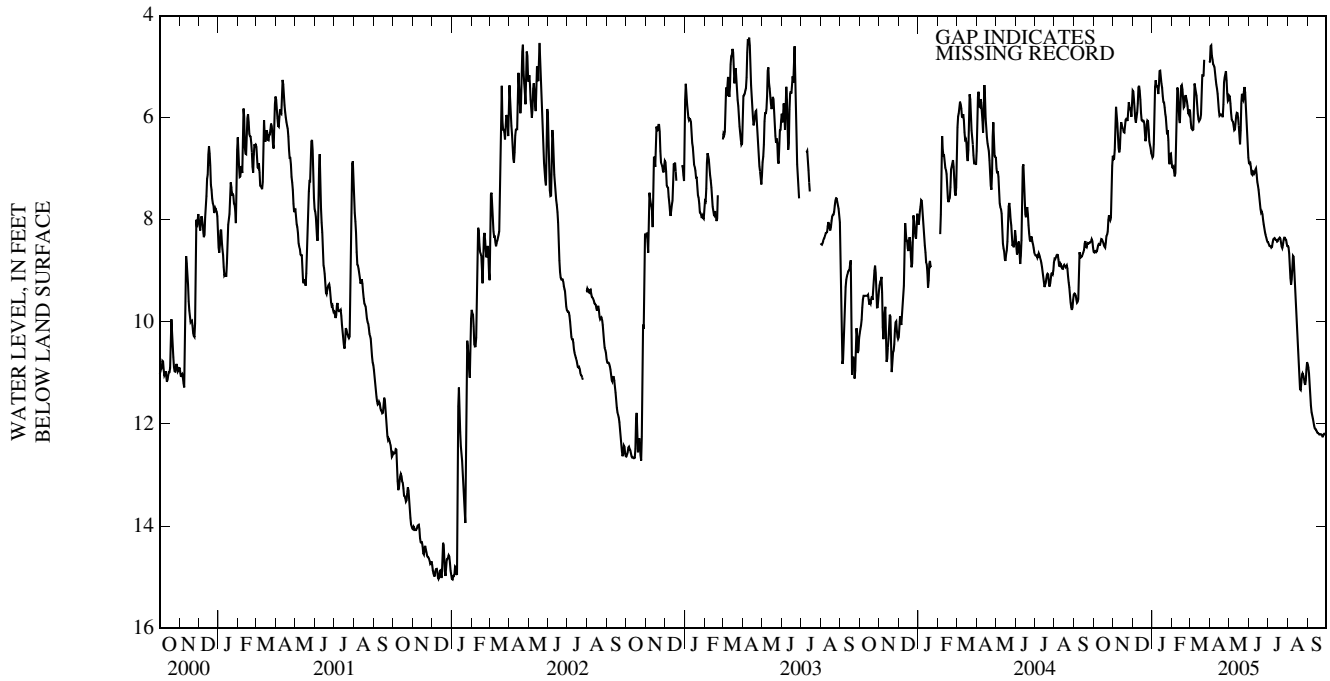
PERIOD OF RECORD.--June 1978 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 4.12 ft below land-surface datum, Apr. 22, 2002; lowest, 21.24 ft below land-surface datum, Nov. 28, 29, 1982.

EXTREMES FOR CURRENT YEAR.--Highest water level, 4.38 ft below land-surface datum, Apr. 3; lowest, 12.27 ft below land-surface datum, Sept. 25, 30.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY OBSERVATION AT 1200 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	8.62	5.71	5.95	5.62	7.13	6.20	4.81	6.00	7.06	8.50	9.03	11.32
10	8.47	6.68	5.52	5.45	5.28	5.46	5.18	6.27	7.09	8.39	8.62	11.93
15	8.40	6.18	6.01	5.30	5.40	6.06	5.78	5.95	7.30	8.40	10.02	12.11
20	8.56	6.07	6.17	5.72	5.86	5.24	5.94	5.93	7.85	8.35	11.23	12.21
25	7.85	5.65	6.03	6.29	5.71	---	5.25	5.39	8.13	8.44	11.02	12.26
EOM	6.72	6.01	6.71	6.80	5.89	4.82	5.70	6.69	8.43	8.51	10.79	12.24



HARDY COUNTY

390333078370801. Local Number, Hrd-0301.

LOCATION.--Lat 39°03'33", long 78°37'08", NAD 83, Hydrologic Unit 02070003, about 200 ft east of Trout Run Rd, 1.5 mi southwest of Wardensville.

AQUIFER.--Marcellus Formation of the Helderberg Group near the contact with the Oriskany Sandstone Group.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 6 in., depth 160 ft, cased with steel to 58 ft.

INSTRUMENTATION.--Electronic data logger at 60-minute interval with satellite telemetry, June 24, 2004 to present.

DATUM.--Elevation of land-surface datum is about 1,165 ft above NGVD 29. Measuring point: Top of casing, 1.76 ft above land-surface datum.

REMARKS.--Aquifer test data and water-quality data available. No water-level record Oct. 14-18, 31, Nov. 1-4, due to recorder malfunction.

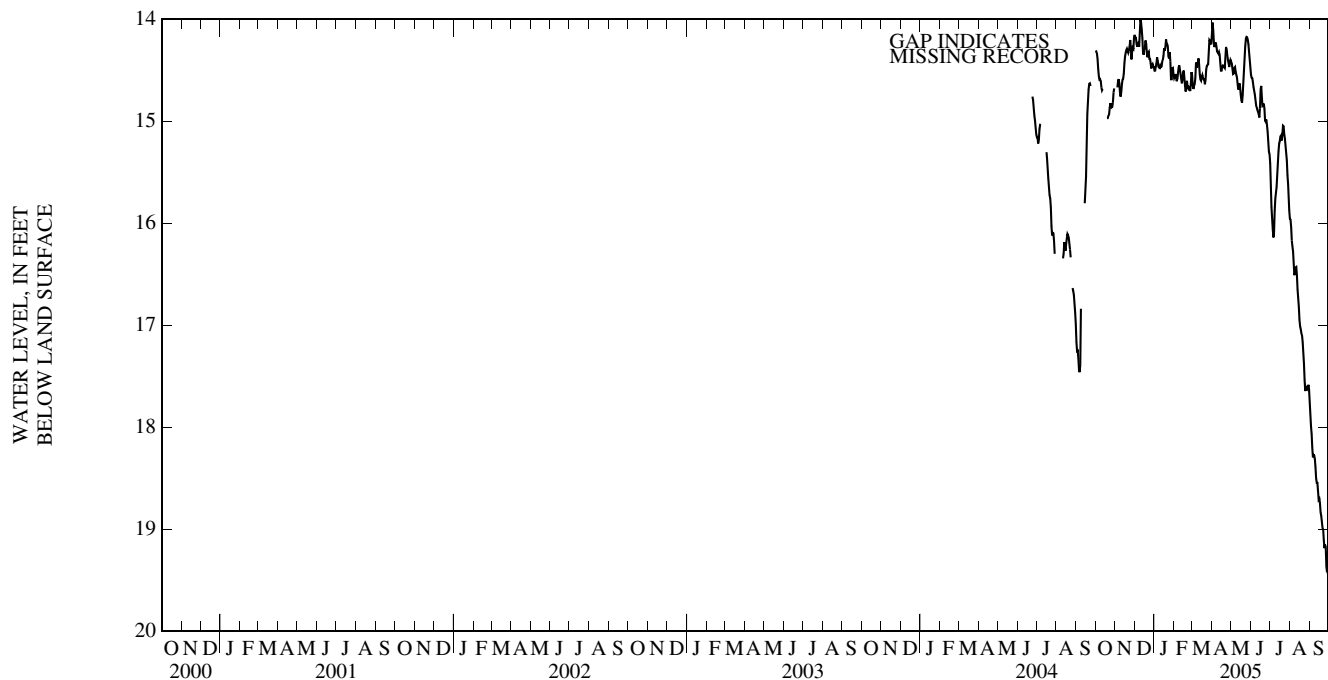
PERIOD OF RECORD.--June 2004 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 13.93 ft below land-surface datum, Dec. 11, 2004; lowest, 19.53 ft below land-surface datum, Sept. 28, 2005.

EXTREMES FOR CURRENT YEAR.--Highest water level, 13.93 ft below land-surface datum, Dec. 11; lowest, 19.53 ft below land-surface datum, Sept. 28.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY OBSERVATION AT 1200 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	14.45	14.62	14.27	14.42	14.60	14.64	14.28	14.56	14.65	16.05	16.23	18.08
10	14.63	14.76	14.03	14.44	14.45	14.46	14.32	14.55	14.86	15.74	16.44	18.34
15	---	14.48	14.37	14.42	14.58	14.62	14.48	14.63	14.98	15.23	16.75	18.71
20	14.99	14.28	14.32	14.20	14.72	14.57	14.46	14.66	14.86	15.22	17.09	18.87
25	14.83	14.16	14.39	14.36	14.67	14.45	14.32	14.18	14.96	15.15	17.66	19.18
EOM	14.69	14.26	14.46	14.53	14.55	14.23	14.39	14.43	15.31	15.80	17.54	19.47



JEFFERSON COUNTY

392104077554801. Local number, Jef-0526.

LOCATION.--Lat 39°21'04", long 77°55'48", NAD 27, Hydrologic Unit 02070004, at Leetown Fish Research Station, Leetown.

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 ft to 155 ft.

INSTRUMENTATION.--Digital water-level recorder--60-minute punch to Aug. 3, 2000. Electronic data logger at 60-minute interval, Aug. 3, 2000 to present. Satellite telemetry installed at this site on May 29, 2001.

DATUM.--Elevation of land-surface datum is about 480 ft above NGVD 29. Measuring point: Top edge of recorder shelter floor, 1.68 ft above land-surface datum. Prior to May 23, 2001, measuring point was top edge of recorder shelter, 2.20 ft above land surface datum.

REMARKS.--Water-quality and well log data available.

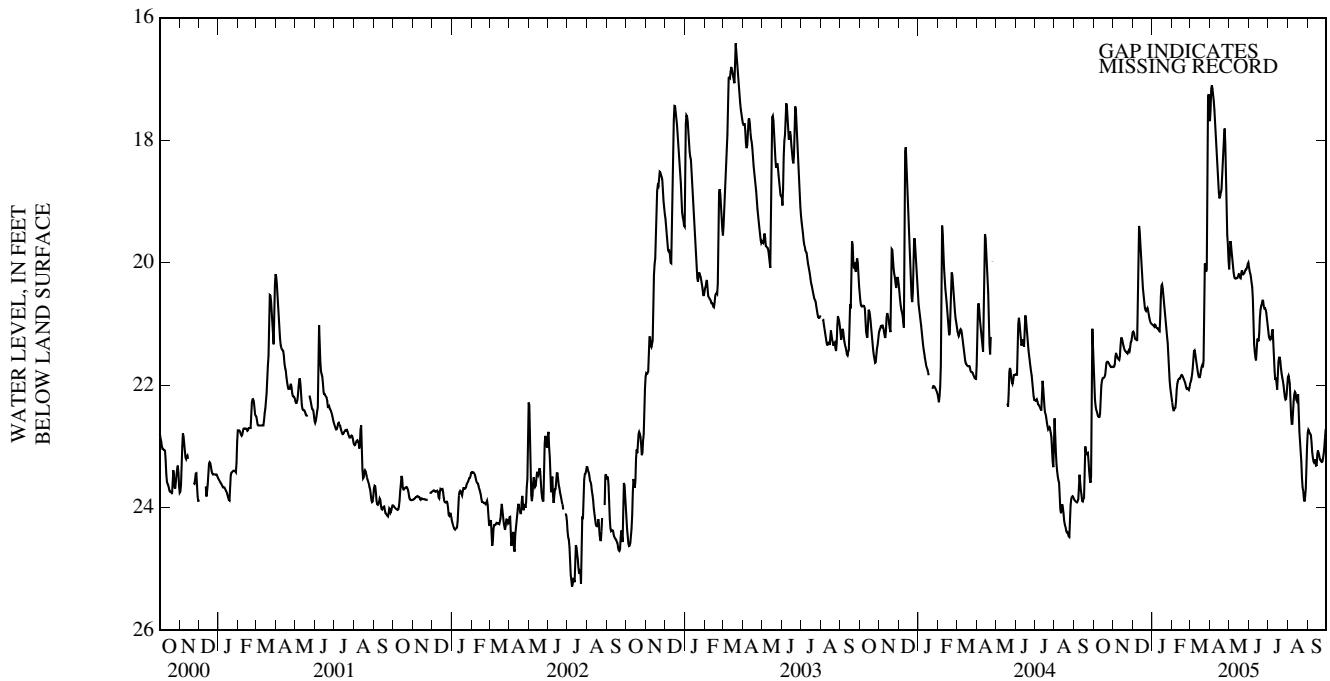
PERIOD OF RECORD.--March 1988 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 15.87 ft below land-surface datum, May 21, 1988; lowest, 25.39 ft below land-surface datum, July 23, 2002.

EXTREMES FOR CURRENT YEAR.--Highest water level, 17.08 ft below land-surface datum, Apr. 4; lowest, 23.90 ft below land-surface datum, Aug. 27, 28.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY OBSERVATION AT 1200 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	22.39	21.46	21.24	21.04	22.39	21.80	17.13	19.80	20.27	21.26	22.02	22.79
10	22.52	21.59	20.36	21.06	21.94	21.51	17.87	20.25	21.41	21.43	22.36	23.22
15	21.89	21.25	20.02	20.42	21.86	21.87	18.81	20.24	21.24	22.07	22.28	23.43
20	21.82	21.44	20.69	20.67	21.92	21.68	18.80	20.23	20.73	21.55	22.85	23.18
25	21.64	21.42	20.76	21.27	22.06	19.99	17.78	20.18	20.75	21.96	23.66	23.23
EOM	21.70	21.28	21.00	22.16	22.08	17.30	19.74	19.99	20.97	22.11	23.15	22.65



MINERAL COUNTY

392200078532001. Local number, Min-0173.

LOCATION.--Lat 39°22'00", long 78°53'20", NAD 83, Hydrologic Unit 02070002, at Larenim Park, about 3 miles north of Burlington.

AQUIFER.--Marcellus Formation of the Upper-Middle Devonian age.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 6 in., depth 240 ft, cased with steel to 20.0 ft.

INSTRUMENTATION.--Electronic data logger at 60-minute interval with satellite telemetry, Sept. 1, 2004 to present.

DATUM.--Elevation of land-surface datum is about 780 ft above NGVD 29. Measuring point: Top of casing, 2.33 ft above land-surface datum.

REMARKS.--Well log data available.

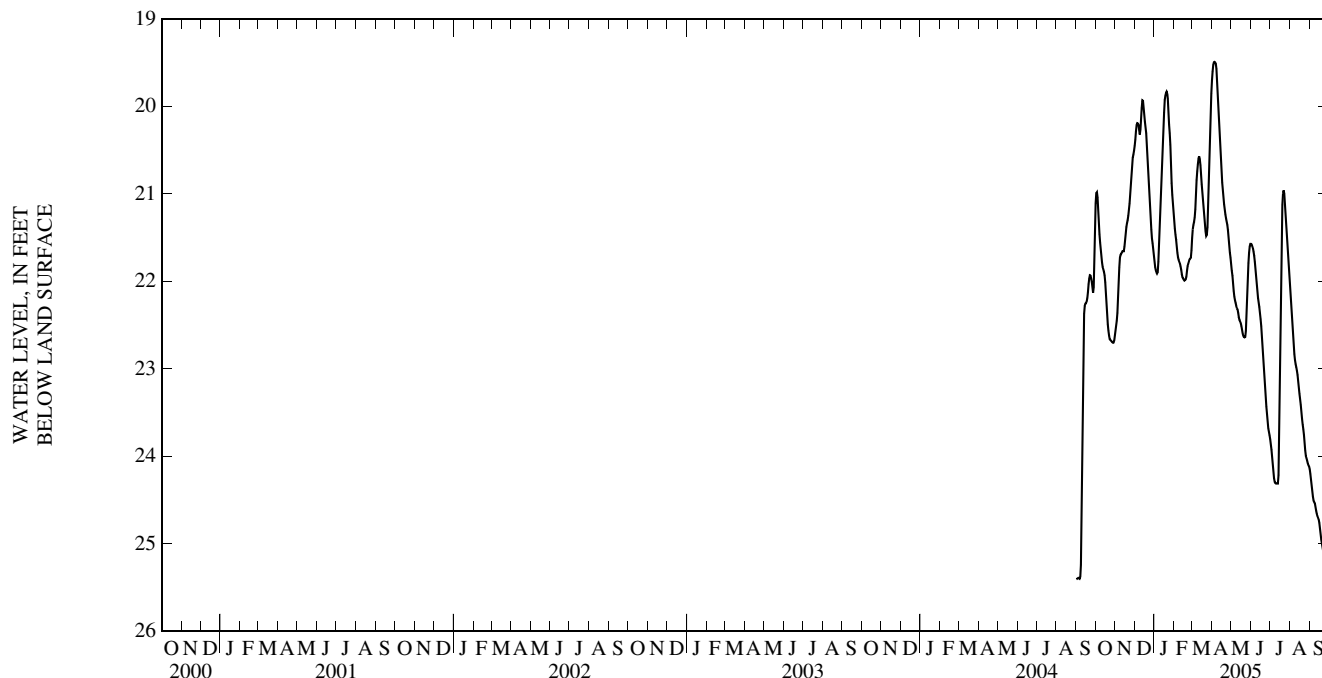
PERIOD OF RECORD.--September 2004 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 19.49 ft below land-surface datum, Apr. 4-7, 2005; lowest, 25.41 ft below land-surface datum, Sept. 1, 2004.

EXTREMES FOR CURRENT YEAR.--Highest water level, 19.49 ft below land-surface datum, Apr. 4-7; lowest, 25.33 ft below land-surface datum, Sept. 30.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY OBSERVATION AT 1200 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	21.09	22.30	20.19	21.91	21.56	21.30	19.49	22.07	21.63	24.07	22.48	24.37
10	21.66	21.69	20.32	21.20	21.78	20.70	19.75	22.30	21.99	24.31	22.93	24.55
15	21.91	21.65	19.96	20.42	21.96	20.71	20.48	22.45	22.33	24.12	23.18	24.71
20	22.44	21.32	20.35	19.83	21.97	21.18	21.09	22.61	22.86	21.21	23.53	24.97
25	22.67	20.94	21.03	20.26	21.76	21.45	21.33	22.50	23.38	21.12	23.89	25.19
EOM	22.66	20.54	21.68	21.14	21.72	19.94	21.71	21.57	23.74	21.91	24.11	25.31



NOTE.--The following data presented below is shown here in lieu of being published in last year's data report. Daily noon water levels for Sept. 1-30, 2004 are shown below:

Sept. 5	25.39
Sept. 10	24.38
Sept. 15	22.26
Sept. 20	22.07
Sept. 25	21.98
EOM	21.54

MINGO COUNTY

373554081493401. Local number, Mig-0131.

LOCATION.--Lat 37°35'54", long 81°49'34", NAD 27, Hydrologic Unit 05070101, downstream of toe of R. D. Bailey Dam northeast of Justice.

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 to Nov. 14, 2000. Electronic data logger at 60-minute interval Nov. 16, 2000 to present.

DATUM.--Elevation of land-surface datum is about 920 ft above NGVD 29. Measuring point: Top edge of recorder shelter floor, 1.57 ft above land-surface datum. Prior to Nov. 18, 1999, measuring point was top edge of recorder shelter floor, 1.06 ft above land-surface datum.

REMARKS.--At times, water level affected by Guyandotte River.

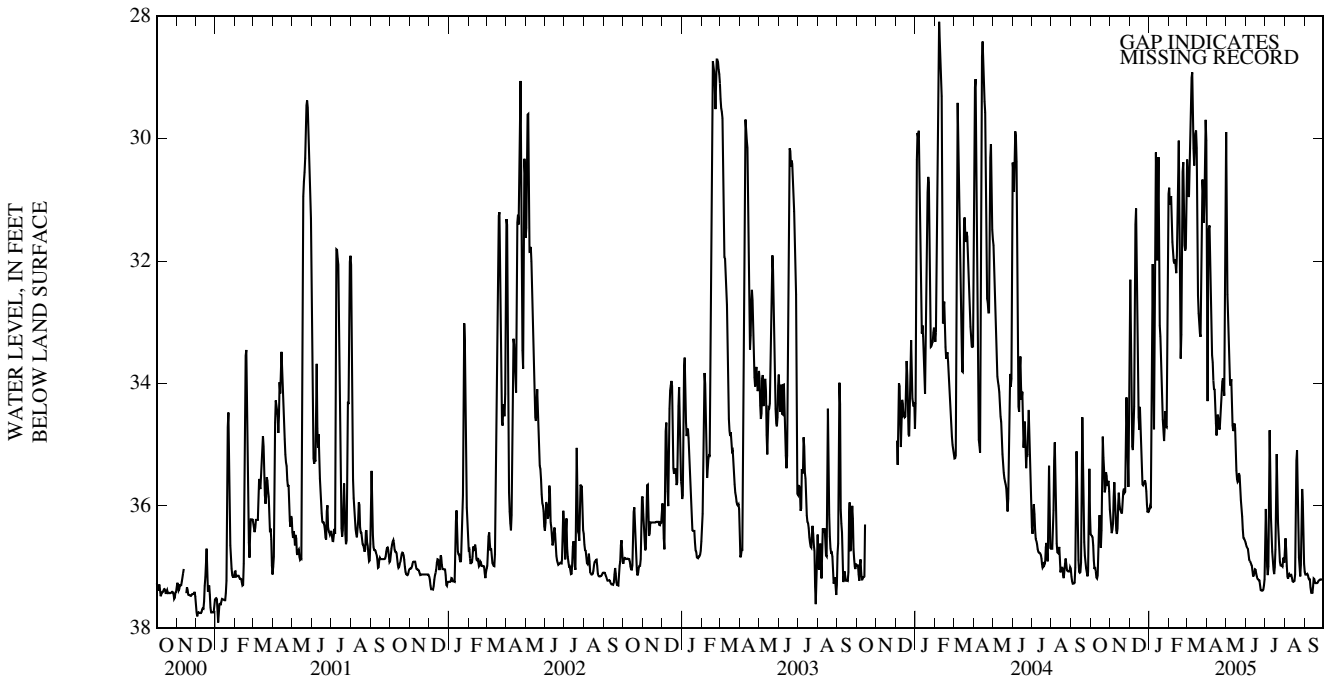
PERIOD OF RECORD.--March 1980 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 27.78 ft below land-surface datum, Feb. 7, 2004; lowest, 44.29 ft below land-surface datum, Oct. 6, 1982.

EXTREMES FOR CURRENT YEAR.--Highest water level, 28.60 ft below land-surface datum, Mar. 8; lowest, 37.46 ft below land-surface datum, Sept. 11, 12.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY OBSERVATION AT 1200 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	36.53	36.29	34.92	34.37	31.00	30.65	31.14	33.17	36.71	37.16	37.10	37.12
10	37.16	36.31	31.85	34.00	32.02	28.91	33.67	33.90	36.97	36.04	37.14	37.20
15	36.19	35.89	33.78	30.49	30.74	29.79	34.39	34.63	37.08	37.11	37.24	37.23
20	34.45	36.11	35.12	33.85	33.63	32.98	34.69	35.64	37.19	35.53	34.57	37.26
25	35.56	35.69	35.60	35.00	31.82	30.84	34.03	35.98	37.38	36.97	37.14	37.21
EOM	35.93	35.95	36.07	31.17	31.60	29.52	32.31	36.57	37.25	36.92	36.86	37.21



POCAHONTAS COUNTY

380653080155301. Local number, Poc-0256.

LOCATION.--Lat 38°06'53", long 80°15'53", NAD 27, Hydrologic Unit 05050003, on Droop Mountain State Park north of Droop on U.S. Route 219.

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 Sept. 11, 2000. Electronic data logger at 60-minute interval, Sept. 11, 2000 to present.

DATUM.--Elevation of land-surface datum is about 3,000 ft above NGVD 29. Measuring point: Top edge of recorder shelter floor, 1.92 ft above land-surface datum. July 7, 1983 to July 7, 2004, measuring point was top edge of casing at land-surface datum. May 28, 1980 to July 7, 1983, measuring point was top edge of recorder shelter floor 0.65 ft above land-surface datum. Prior to May 28, 1980, the measuring point was the top edge of casing at land-surface datum.

PERIOD OF RECORD.--December 1970 to January 1976, April 1978 to current year. Published as local well number 44-4-1, 1973-78.

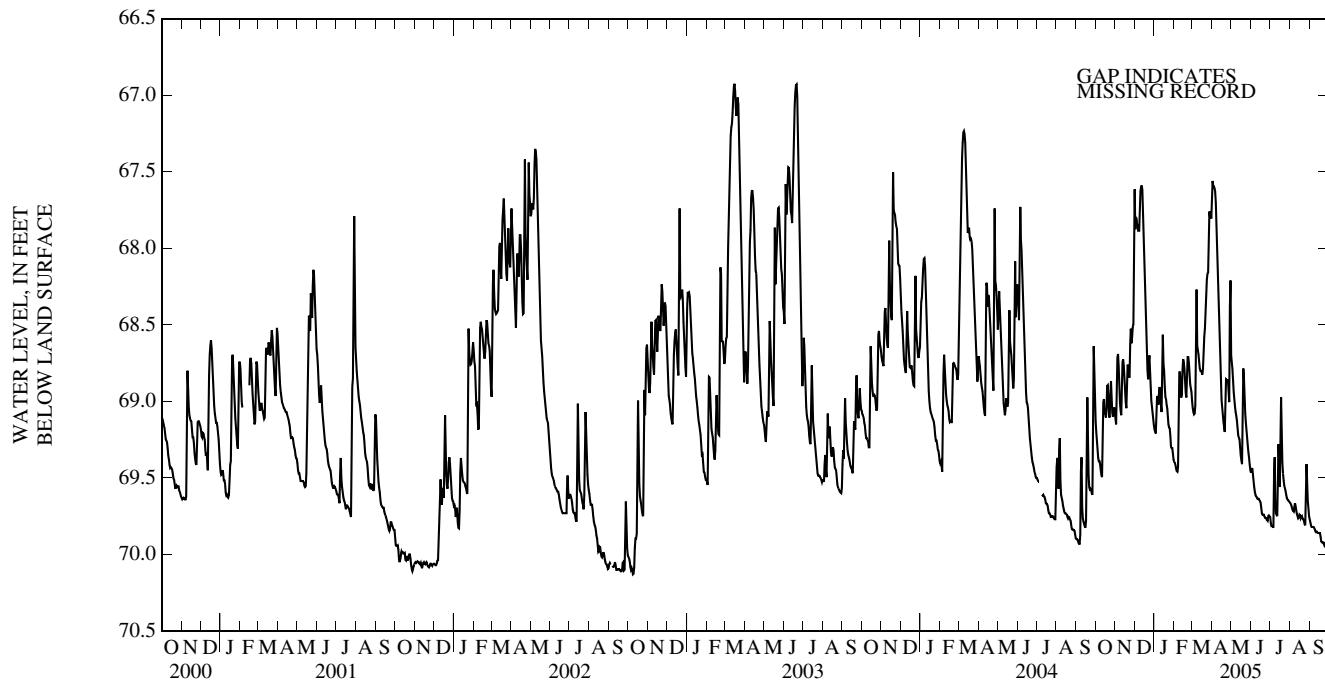
REVISED RECORDS.--WDR WV-79-1: Well location, well characteristics, and water levels. WDR WV-83-1: Station identification number and lowest water level.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 62.86 ft below land-surface datum, May 30, 1982; lowest, 70.37 ft below land-surface datum, July 22, 1997. (73.39 ft below land-surface datum, Oct. 25, 1984, due to pumping.)

EXTREMES FOR CURRENT YEAR.--Highest water level, 67.22 ft below land-surface datum, Mar. 28; lowest, 69.96 ft below land-surface datum, Sept. 27, 30.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY OBSERVATION AT 1200 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	69.35	68.65	67.83	69.00	69.45	69.09	67.60	68.92	69.50	69.81	69.70	69.82
10	69.47	69.08	67.65	68.93	68.78	68.66	68.02	69.11	69.62	69.72	69.67	69.84
15	69.07	68.80	67.74	68.74	68.72	68.80	68.84	69.26	69.65	69.24	69.77	69.86
20	68.84	68.76	68.52	69.00	68.97	68.61	69.15	68.77	69.74	69.35	69.74	69.92
25	68.82	68.44	68.74	69.18	68.78	68.17	68.89	69.16	69.76	69.57	69.81	69.94
EOM	69.05	68.50	69.13	69.37	68.91	67.78	67.74	69.44	69.77	69.65	69.74	69.96



WAYNE COUNTY

382205082304501. Local number, Way-0144.

LOCATION.--Lat 38°22'05", long 82°30'45", NAD 83, Hydrologic Unit 05090102, about 2.0 mi south of Huntington and 1.9 mi east of Tri-State Airport.

AQUIFER.--Conemaugh Group of Upper Pennsylvanian Age.

WELL CHARACTERISTICS.--Drilled unused water table well, diameter, 6 in, depth, 106 ft, cased with steel to 30 ft.

INSTRUMENTATION.--Electronic data logger at 60-minute interval May 20, 2001 to present.

DATUM.--Elevation of land-surface datum is about 618 ft above NGVD 29. Measuring point: Top of extended casing, 3.14 ft above land-surface datum.

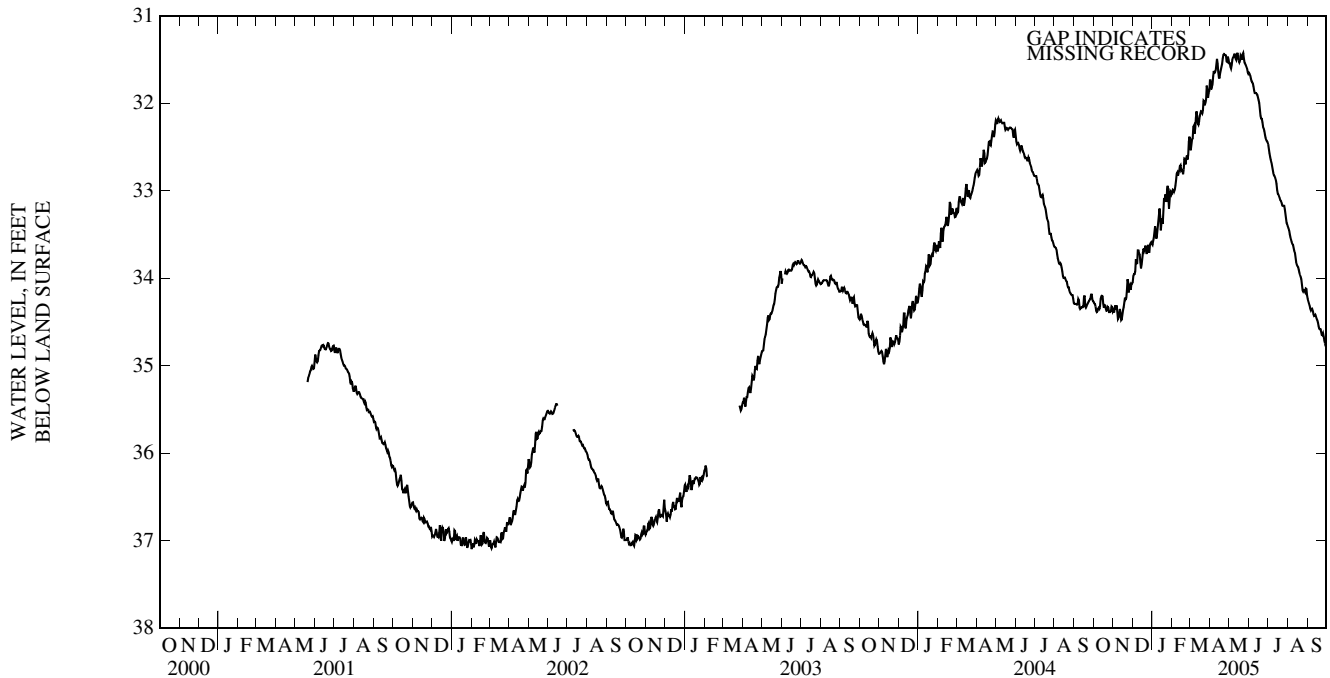
PERIOD OF RECORD.--May 2001 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 31.35 ft below land-surface datum, Apr. 22, 23, 26, 2005; lowest, 37.15 ft below land-surface datum, Mar. 9, 10, 2002.

EXTREMES FOR CURRENT YEAR.--Highest water level, 31.35 ft below land-surface datum, Apr. 22, 23, 26; lowest, 34.78 ft below land-surface datum, Sept. 29.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY OBSERVATION AT 1200 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	34.36	34.39	33.97	33.42	33.01	32.42	31.80	31.59	31.74	32.63	33.52	34.32
10	34.34	34.43	33.63	33.43	32.82	32.23	31.64	31.43	31.87	32.82	33.62	34.39
15	34.18	34.44	33.89	33.45	32.76	32.24	31.67	31.43	31.91	32.95	33.83	34.46
20	34.33	34.21	33.70	33.08	32.68	32.12	31.56	31.41	32.17	33.09	33.94	34.58
25	34.37	34.16	33.63	32.96	32.64	31.97	31.47	31.52	32.29	33.17	34.16	34.65
EOM	34.37	34.00	33.57	33.04	32.34	31.87	31.44	31.67	32.44	33.37	34.17	34.77



WEBSTER COUNTY

382008080292801. Local number, Web-0167.

LOCATION.--Lat 38°20'08", long 80°29'28", NAD 27, 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.

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 Nov. 1, 2000. Electronic data logger at 60-minute interval Nov. 1, 2000 to present.

DATUM.--Elevation of land-surface datum is about 3,100 ft above NGVD 29. Measuring point: Top of extended casing, 2.00 ft above land-surface datum.

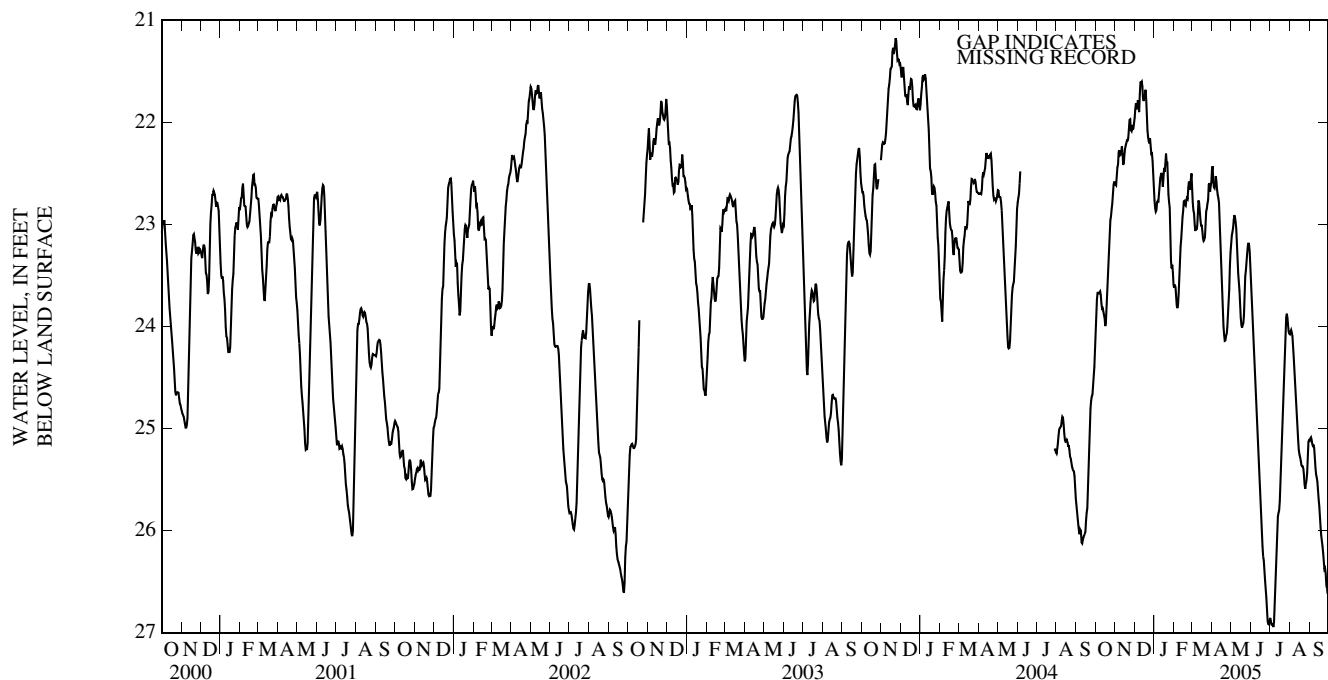
PERIOD OF RECORD.--March 1980 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 21.00 ft below land-surface datum, Dec. 5, 1996; lowest, 28.01 ft below land-surface datum, Oct. 17, 1995.

EXTREMES FOR CURRENT YEAR.--Highest water level, 21.54 ft below land-surface datum, Dec. 12, 13; lowest, 26.95 ft below land-surface datum, July 7.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY OBSERVATION AT 1200 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	23.67	22.47	21.91	22.83	23.76	22.90	22.65	23.00	24.05	26.90	24.08	25.13
10	23.72	22.31	21.62	22.58	23.37	22.94	22.69	23.09	24.84	26.43	24.53	25.33
15	23.88	22.36	21.81	22.65	22.94	23.02	23.28	23.70	25.46	25.83	25.19	25.66
20	23.58	22.16	21.87	22.33	22.80	23.16	24.04	23.96	26.23	25.15	25.37	26.07
25	22.95	22.00	22.18	22.82	22.62	22.80	24.07	23.43	26.61	24.09	25.60	26.41
EOM	22.58	22.02	22.53	23.57	22.47	22.59	23.29	23.32	26.93	24.06	25.10	26.67



WYOMING COUNTY

373839081255201. Local number, Wyo-0148.

LOCATION.--Lat 37°38'39", long 81°25'52", NAD 27, Hydrologic Unit 05070101, at Twin Falls State Park.

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 Jan. 25, 1977 to Sept. 27, 2000. Electronic data logger and satellite telemetry at 60-minute interval Oct. 2, 2000 to present.

DATUM.--Elevation of land-surface datum is about 2,015 ft above NGVD 29. Measuring point: Top edge of recorder shelter floor, 3.39 ft above land-surface datum. Prior to Sept. 27, 2000, measuring point was top edge 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. Missing data parts or all of July 19, 20, 21 due to instrument malfunction.

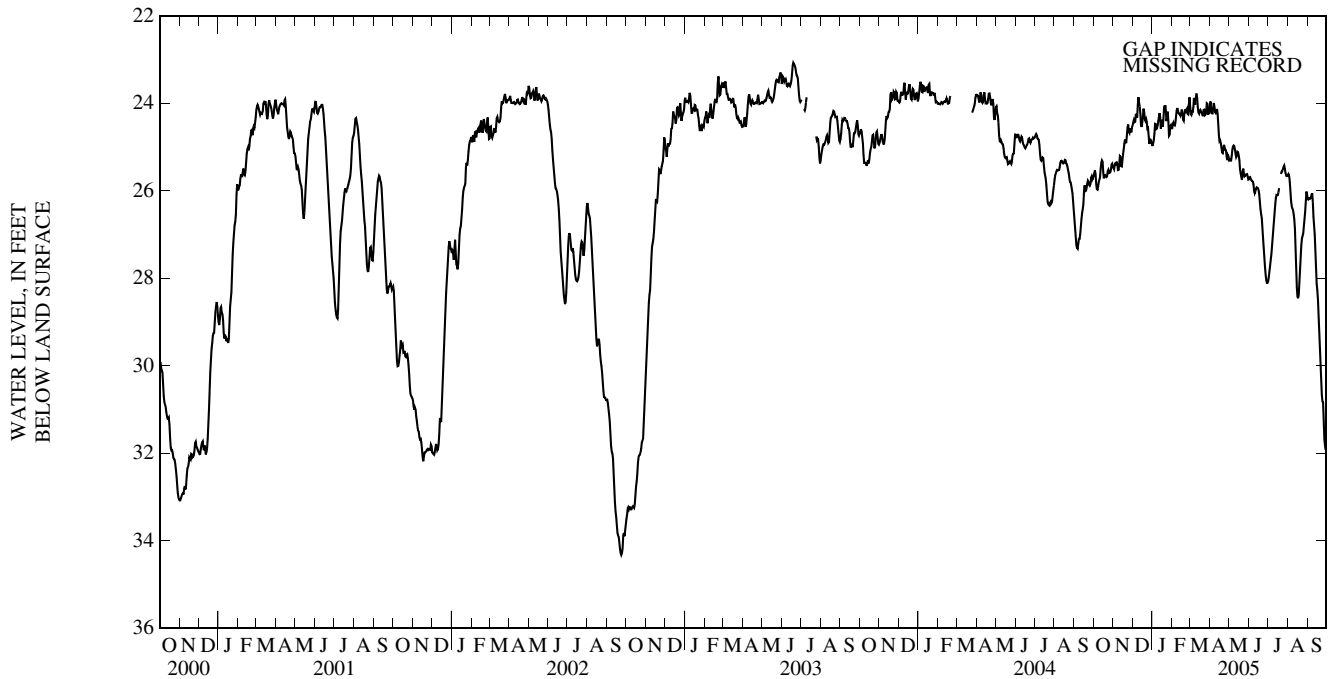
PERIOD OF RECORD.--December 1976 to current year.

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.

EXTREMES FOR CURRENT YEAR.--Highest water level, 23.59 ft below land-surface datum, Mar. 8; lowest, 31.99 ft below land-surface datum, Sept. 30.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY OBSERVATION AT 1200 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	25.74	25.46	24.48	24.58	24.50	24.13	24.23	25.28	25.76	27.61	25.89	26.17
10	25.77	25.47	23.84	24.46	24.09	23.96	24.22	25.00	26.07	26.81	26.46	26.44
15	25.25	25.38	24.58	24.66	24.36	24.27	24.58	25.07	25.94	26.08	28.05	28.05
20	25.66	24.81	24.37	24.10	24.37	24.22	25.06	25.56	26.51	---	27.98	29.36
25	25.57	24.51	24.57	24.24	24.19	24.25	25.07	25.67	27.34	25.47	27.02	30.84
EOM	25.41	24.57	24.85	24.56	23.83	24.21	25.11	25.73	28.11	25.66	25.98	31.99



ANALYSES OF SAMPLES COLLECTED AT PARTIAL-RECORD, SPECIAL, AND MISCELLANEOUS SITES
 WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
 AMBIENT GROUND-WATER QUALITY

Site Descriptions for Ambient Ground-Water-Quality Network
 Multiple Sites

REMARKS.--During 2005, 30 wells were sampled as part of an ongoing study of the ambient ground-water quality in West Virginia. Sample analyses included field determinations, major ions, nutrients, bacteria, metals, volatile organic compounds, and radon. At selected sites (indicated by an [*], or [**]), pesticides or semi-volatile organic compounds, respectively, were measured. Lists of compounds analyzed for, but not detected in any samples, are on pages # through ##. Pesticides were not detected at any of the 6 sites sampled. Semi-volatile organic compounds were detected at 2 of 6 sites sampled. Geologic unit determinations were made based on surface lithology and are referenced to the Geologic Map of West Virginia by Cardwell and others (1968).

<u>Station Number</u>	<u>Site Name</u>	<u>Latitude</u>	<u>Longitude</u>	<u>County</u>	<u>Geologic Unit</u>
373536081494101	Wyo-0271	37°35'36"	81°49'41"	Wyoming	New River Formation
375339082143501	Mig-0143	37°53'39"	82°14'35"	Mingo	Kanawha Formation
375336082134001	Mig-0144	37°53'36"	82°13'40"	Mingo	Kanawha Formation
385342078552801	Hrd-0303	38°53'42"	78°55'28"	Hardy	Hampshire Formation
385625078485701	Hrd-0304	38°56'25"	78°48'57"	Hardy	Upper-Middle Devonian Series
385701078435001	Hrd-0305	38°57'01"	78°43'50"	Hardy	Middle Silurian System
392732078281301*	Hmp-0384	39°27'32"	78°28'13"	Hampshire	Hampshire Formation
392008078272601	Hmp-0385	39°20'08"	78°20'26"	Hampshire	Middle Silurian System
393707078173501	Mrg-0180	39°37'07"	78°17'35"	Morgan	Helderberg Group
373304081472301	Wyo-0272	37°33'04"	81°47'23"	Wyoming	New River Formation
374257081245601	Wyo-0273	37°42'57"	81°24'25"	Wyoming	New River Formation
380743082223301	Way-0116	38°07'43"	82°22'33"	Wayne	Pottsville Group
380931082192001	Way-0147	38°09'31"	82°19'20"	Wayne	Kanawha Formation
394534080514901*,**	Mal-0409	39°45'34"	80°51'49"	Marshall	Quaternary Alluvium
394137080303001**	Wet-0133	39°41'37"	80°30'30"	Wetzel	Dunkard Formation
393956080254901	Wet-0134	39°39'56"	80°25'49"	Wetzel	Dunkard Formation
395643080453201*,**	Mal-0410	39°56'43"	80°45'32"	Marshall	Quaternary Alluvium
401640080364601*,**	Brk-0047	40°16'40"	80°36'46"	Brooke	Quaternary Alluvium
401544080370001**	Brk-0078	40°15'44"	80°37'00"	Brooke	Quaternary Alluvium
373543081301501	Wyo-0274	37°35'43"	81°31'15"	Wyoming	New River Formation
373316081472101	Wyo-0275	37°33'16"	81°47'21"	Wyoming	New River Formation
373001081220601	Wyo-0276	37°30'01"	81°22'06"	Wyoming	New River Formation
373128081352401**	Wyo-0277	37°31'28"	81°35'24"	Wyoming	New River Formation
375956082242501	Way-0148	37°59'56"	82°24'25"	Wayne	Kanawha Formation
385717080225901*	Lew-0221	38°57'17"	80°22'59"	Lewis	Conemaugh Group
391643080304301*	Har-0173	39°16'43"	80°30'43"	Harrison	Dunkard Formation
391713080300901	Har-0174	39°17'13"	80°30'09"	Harrison	Dunkard Formation
390628080182401	Har-0175	39°06'28"	80°18'24"	Harrison	Conemaugh Group
390733080182401	Har-0176	39°07'33"	80°18'24"	Harrison	Conemaugh Group
391131080113001	Bar-0149	39°11'31"	80°11'30"	Barbour	Conemaugh Group

ANALYSES OF SAMPLES COLLECTED AT PARTIAL-RECORD, SPECIAL, AND MISCELLANEOUS SITES
WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
AMBIENT GROUND-WATER QUALITY--Continued

MULTIPLE STATION ANALYSES--CONTINUED

Local identifier	Date	Dis-solved oxygen, mg/L (00300)	Dis-solved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conduc-tance, wat unfltrd uS/cm 25 degC (00095)	Temper-ature, water, deg C (00010)	Noncarb hard-ness, wat unfltrd lab, mg/L as CaCO3 (00903)	Calcium water unfltrd recover-able, mg/L (00916)	Magnes-ium, water, unfltrd recover-able, mg/L (00927)	Potas-sium, water, unfltrd recover-able, mg/L (00937)	Sodium, water, unfltrd recover-able, mg/L (00929)
Wyo-0271	06-22-05	1.6	16	7.1	523	14.4	--	26.9	5.76	1.4	67.6
Mig-0143	06-23-05	1.5	15	8.5	830	15.3	--	5.11	1.36	2.1	170
Mig-0144	06-23-05	1.3	14	7.2	707	16.2	45	69.1	16.2	4.2	49.0
Hrd-0303	06-27-05	1.3	13	7.3	165	12.3	--	14.4	6.22	.9	8.0
Hrd-0304	06-28-05	3.6	37	7.0	636	14.3	231	111	17.3	.7	11.2
Hrd-0305	06-28-05	7.9	80	6.0	66	12.3	--	2.15	5.40	.8	E.5
	06-28-05	--	--	6.0	66	--	--	2.12	5.33	.7	E.5
Hmp-0384	06-29-05	1.5	15	8.1	227	13.3	--	20.7	8.17	1.1	16.3
	06-29-05	--	--	--	--	--	--	--	--	--	--
Hmp-0385	06-29-05	6.0	59	7.1	417	13.0	146	78.3	11.0	.9	1.2
Mrg-0180	06-30-05	2.5	25	6.9	762	14.3	287	109	31.6	.6	13.7
Wyo-0272	07-06-05	1.3	14	6.8	819	15.7	218	78.8	24.9	2.1	47.4
Wyo-0273	07-18-05	1.0	10	6.8	310	14.4	--	21.8	6.02	1.5	35.9
Way-0116	07-20-05	1.0	10	7.6	323	14.6	--	28.5	5.67	3.1	28.4
Way-0147	07-20-05	1.1	11	7.0	638	14.9	--	47.4	11.3	3.7	68.7
Mal-0409	07-25-05	E.9	--	7.7	789	15.7	203	107	14.4	3.1	39.5
Wet-0133	07-26-05	3.5	35	9.7	596	13.0	--	1.93	.30	.4	139
Wet-0134	07-26-05	E.9	--	8.9	419	13.7	--	30.5	3.84	1.0	63.1
Mal-0410	07-27-05	4.7	48	6.8	724	14.5	175	103	13.3	2.0	32.8
Brk-0047	07-28-05	9.1	90	8.0	550	14.1	--	148	14.3	2.6	29.2
Brk-0078	07-28-05	1.0	10	6.6	1,260	13.3	533	195	39.9	2.6	40.1
	07-28-05	--	--	--	--	--	--	--	--	--	--
Wyo-0274	08-02-05	E.9	--	7.6	277	14.8	--	14.5	3.36	.9	40.2
Wyo-0275	08-02-05	E.8	--	7.7	684	16.4	113	66.0	18.6	1.7	46.7
Wyo-0276	08-03-05	E.7	--	8.0	1,270	15.4	--	17.2	2.90	2.6	291
Wyo-0277	08-03-05	E.7	--	6.9	369	16.6	--	26.6	4.67	1.2	43.0
Way-0148	08-04-05	E.7	--	8.2	2,610	15.3	--	42.2	8.79	5.6	428
Lew-0221	08-15-05	E.7	--	8.2	454	13.5	--	60.5	9.57	1.7	20.2
Har-0173	08-16-05	E.7	--	8.8	673	16.0	--	2.93	.51	.9	161
	08-16-05	--	--	8.8	673	--	--	2.81	.52	.8	155
Har-0174	08-16-05	E.8	--	7.3	373	13.3	--	45.7	8.64	2.1	13.2
Har-0175	08-17-05	E.6	--	8.4	549	15.8	--	29.3	4.72	1.0	91.6
Har-0176	08-17-05	E.7	--	9.7	627	13.9	--	1.25	.21	.3	141
Bar-0149	08-18-05	E.8	--	7.4	684	16.2	--	46.7	4.52	.9	107

ANALYSES OF SAMPLES COLLECTED AT PARTIAL-RECORD, SPECIAL, AND MISCELLANEOUS SITES
 WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
 AMBIENT GROUND-WATER QUALITY--Continued

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MULTIPLE STATION ANALYSES--CONTINUED

Local identifier	Date	ANC, wat unfix end pt, lab, mg/L as CaCO3 (90410)	Alkalinity, wat flt inc tit field, mg/L as CaCO3 (39086)	Bicarbonate, wat flt incrm. titr., field, mg/L (00453)	Carbonate, wat flt incrm. titr., field, mg/L (00452)	Bromide water, fltrd, mg/L (71870)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Sulfate water, fltrd, mg/L (00945)	Residue on evap. at 105degC wat unfix mg/L (00500)	Residue on evap. at 180degC wat flt mg/L (70300)
Wyo-0271	06-22-05	135	135	165	<1	.64	84.9	.2	<.2	282	286
Mig-0143	06-23-05	240	222	272	<1	.37	118	.9	.6	479	467
Mig-0144	06-23-05	196	190	232	<1	.47	100	.1	E.2	459	388
Hrd-0303	06-27-05	67	67	82	<1	.08	1.36	E.1	15.7	104	108
Hrd-0304	06-28-05	116	257	313	<1	.17	2.87	.1	70.4	339	353
Hrd-0305	06-28-05	30	29	35	<1	.04	.73	.1	4.0	40	38
	06-28-05	30	29	35	<1	.06	.71	.2	4.0	37	44
Hmp-0384	06-29-05	124	111	135	<1	.10	.83	E.1	4.7	130	142
	06-29-05	--	--	--	--	--	--	--	--	--	--
Hmp-0385	06-29-05	95	210	256	<1	.08	<.20	.1	10.3	240	221
Mrg-0180	06-30-05	114	287	350	<1	.14	44.1	.1	40.1	297	401
Wyo-0272	07-06-05	82	130	158	<1	.26	40.7	.1	238	559	552
Wyo-0273	07-18-05	E130	128	156	<1	.18	7.12	.2	23.9	174	192
Way-0116	07-20-05	--	131	160	<1	.20	21.1	.4	4.0	180	183
Way-0147	07-20-05	186	200	244	<1	.68	8.97	.2	102	389	392
Mal-0409	07-25-05	123	214	261	<1	.28	40.9	.2	162	522	514
Wet-0133	07-26-05	274	234	--	--	.24	19.9	.8	12.5	359	364
Wet-0134	07-26-05	208	214	--	--	.23	8.46	.4	8.8	253	239
Mal-0410	07-27-05	138	191	233	<1	.12	42.2	.1	86.6	454	449
Brk-0047	07-28-05	--	107	130	<1	.26	54.5	.3	73.8	566	316
Brk-0078	07-28-05	118	234	285	<1	.18	74.5	.3	313	906	835
	07-28-05	--	--	--	--	--	--	--	--	--	--
Wyo-0274	08-02-05	114	114	139	<1	.16	17.7	.1	E.2	169	162
Wyo-0275	08-02-05	129	151	184	<1	.48	44.1	.1	125	431	430
Wyo-0276	08-03-05	656	680	829	<1	.28	6.24	.3	20.6	774	795
Wyo-0277	08-03-05	101	106	129	<1	.22	27.6	E.1	32.1	211	205
Way-0148	08-04-05	232	234	285	<1	4.42	689	.8	<.9	1,370	1,380
Lew-0221	08-15-05	--	203	248	<1	.21	23.1	.2	<.2	254	254
Har-0173	08-16-05	326	317	386	<1	.27	29.3	.6	.3	416	413
	08-16-05	326	314	--	--	.27	28.8	.6	.3	415	415
Har-0174	08-16-05	152	163	199	<1	.35	15.6	.2	1.5	201	214
Har-0175	08-17-05	216	249	304	<1	.19	1.84	.3	38.7	335	335
Har-0176	08-17-05	328	324	395	<1	.26	5.39	1.0	4.4	378	378
Bar-0149	08-18-05	214	295	356	<1	.21	10.0	.8	60.1	412	417

ANALYSES OF SAMPLES COLLECTED AT PARTIAL-RECORD, SPECIAL, AND MISCELLANEOUS SITES
 WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
 AMBIENT GROUND-WATER QUALITY--Continued

MULTIPLE STATION ANALYSES--CONTINUED

Local identifier	Date	Ammonia water, fltrd, mg/L (71846)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Total nitrogen, wat unf by analysis, mg/L (62855)	Ortho-phosphate, water, fltrd, mg/L (00660)	Ortho-phosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)	Organic carbon, water, unfltrd mg/L (00680)	E coli, NA-MUG MF, water, col/100 mL (50278)
Wyo-0271	06-22-05	.32	.25	<.06	E.006	.25	.043	.014	.116	2.5	<1
Mig-0143	06-23-05	.63	.49	<.06	<.008	.50	.377	.123	.147	1.8	<1
Mig-0144	06-23-05	1.04	.81	<.06	<.008	.83	.138	.045	.178	2.7	<1
Hrd-0303	06-27-05	--	E.03	<.06	E.004	E.05	.064	.021	.053	E.3	<1
Hrd-0304	06-28-05	.29	.23	.10	<.008	.32	--	<.006	.052	4.3	<1
Hrd-0305	06-28-05	--	<.04	<.06	<.008	<.06	.159	.052	.085	.4	<1
	06-28-05	--	--	--	--	--	--	--	--	--	--
Hmp-0384	06-29-05	--	<.04	1.05	<.008	E.03	--	E.003	.036	.8	<1
	06-29-05	--	--	--	--	--	--	--	--	--	--
Hmp-0385	06-29-05	--	<.04	<.06	<.008	1.04	.095	.031	.027	5.8	50
Mrg-0180	06-30-05	--	<.04	.51	<.008	.51	--	<.006	<.004	.8	<1
Wyo-0272	07-06-05	.54	.42	<.06	E.004	.43	.049	.016	.170	1.6	<1
Wyo-0273	07-18-05	.46	.36	<.06	<.008	.43	--	<.006	.095	.8	9
Way-0116	07-20-05	1.10	.86	<.06	<.008	.92	.224	.073	.114	4.3	20
Way-0147	07-20-05	.64	.49	<.06	E.004	.54	--	E.004	.014	10.2	<1
Mal-0409	07-25-05	.54	.42	.43	E.004	.92	--	<.006	E.003	4.2	<1
Wet-0133	07-26-05	.10	.08	<.06	<.008	.15	.193	.063	.073	4.5	<1
Wet-0134	07-26-05	.26	.20	<.06	<.008	.24	.046	.015	.023	6.3	<1
Mal-0410	07-27-05	--	<.04	3.31	<.008	3.42	.040	.013	.016	.7	<1
Brk-0047	07-28-05	.29	.23	.47	E.004	.69	.040	.013	.085	.9	<1
Brk-0078	07-28-05	--	<.04	2.70	<.008	2.78	--	<.006	.008	.8	<1
	07-28-05	--	--	--	--	--	--	--	--	--	--
Wyo-0274	08-02-05	.18	.14	<.06	E.005	.16	.135	.044	.094	1.3	<1
Wyo-0275	08-02-05	.64	.50	<.06	E.006	.47	.028	.009	.156	.9	<1
Wyo-0276	08-03-05	.10	.08	<.06	<.008	.19	--	E.004	.012	14.2	<1
Wyo-0277	08-03-05	.26	.20	<.06	E.006	.26	.046	.015	.102	1.7	<1
Way-0148	08-04-05	1.47	1.14	<.06	<.008	1.19	.209	.068	.095	5.6	<1
Lew-0221	08-15-05	.25	.19	<.06	<.008	.22	.034	.011	.036	4.4	<1
Har-0173	08-16-05	.18	.14	<.06	<.008	.19	.261	.085	.096	5.8	<1
	08-16-05	.17	.13	<.06	<.008	.18	.258	.084	.097	8.8	--
Har-0174	08-16-05	1.56	1.22	<.06	.010	1.40	--	E.005	.20	E4.7	<1
Har-0175	08-17-05	.29	.23	<.06	<.008	.31	.205	.067	.096	E.3	<1
Har-0176	08-17-05	.18	.14	<.06	<.008	.20	.132	.043	.050	6.8	<1
Bar-0149	08-18-05	--	<.04	.15	E.007	.12	--	E.005	.012	1.1	<1

ANALYSES OF SAMPLES COLLECTED AT PARTIAL-RECORD, SPECIAL, AND MISCELLANEOUS SITES
 WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
 AMBIENT GROUND-WATER QUALITY--Continued

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MULTIPLE STATION ANALYSES--CONTINUED

Local identifier	Date	Fecal coli-form, M-FC 0.7u MF col/100 mL (31625)	Total coli-form, M-Endo, col/100 mL (31501)	Aluminum, water, unfltrd recover-able, ug/L (01105)	Antimony, water, unfltrd ug/L (01097)	Arsenic water unfltrd ug/L (01002)	Barium, water, unfltrd recover-able, ug/L (01007)	Beryllium, water, unfltrd recover-able, ug/L (01012)	Cadmium water, unfltrd ug/L (01027)	Chromium, water, unfltrd recover-able, ug/L (01034)	Iron, water, unfltrd recover-able, ug/L (01045)
Wyo-0271	06-22-05	<1	<1	<2	<.2	<2	515	E.06	<.04	<.8	2,800
Mig-0143	06-23-05	<1	E1	107	<.2	<2	353	<.06	<.04	E.7	2,020
Mig-0144	06-23-05	<1	400	682	<.2	<2	2,630	.17	.57	3.0	2,570
Hrd-0303	06-27-05	<1	<1	<2	<.2	9	201	<.06	<.04	<.8	1,020
Hrd-0304	06-28-05	<1	E3	170	.5	3	100	E.06	E.02	<.8	3,120
Hrd-0305	06-28-05	<1	<1	8	<.2	<2	2	<.06	<.04	<.8	2,320
	06-28-05	--	--	7	<.2	<2	1	<.06	<.04	<.8	2,230
Hmp-0384	06-29-05	<1	200	<2	<.2	15	200	<.06	<.04	<.8	<6
	06-29-05	--	--	--	--	--	--	--	--	--	--
Hmp-0385	06-29-05	E69	E1,600	1,800	<.2	<2	34	.10	<.04	<.8	780
Mrg-0180	06-30-05	<1	E52	E2	<.2	<2	67	<.06	<.04	<.8	40
Wyo-0272	07-06-05	<1	E8	5	<.2	E1	125	.09	<.04	<.8	24,100
Wyo-0273	07-18-05	E8	180	E2	<.2	<2	211	<.06	<.04	<.8	2,120
Way-0116	07-20-05	E2	120	5	<.2	<2	300	<.06	<.04	E.5	930
Way-0147	07-20-05	<1	E1	<2	<.2	<2	85	E.05	<.04	E.4	10,200
Mal-0409	07-25-05	<1	E3	E1	<.2	<2	83	<.06	<.04	<.8	10
Wet-0133	07-26-05	<1	E2	135	<.2	<2	83	<.06	<.04	<.8	120
Wet-0134	07-26-05	<1	E2	34	<.2	<4	344	<.06	.20	E.5	230
Mal-0410	07-27-05	<1	<1	<2	<.2	<4	67	<.06	<.04	E.5	M
Brk-0047	07-28-05	<1	<1	699	<.2	<2	111	<.06	.05	.9	730
Brk-0078	07-28-05	<1	<1	3	<.2	E1	34	<.06	<.04	<.8	1,260
	07-28-05	--	--	--	--	--	--	--	--	--	--
Wyo-0274	08-02-05	E14	103	3	<.2	<2	465	E.04	<.04	<.8	2,600
Wyo-0275	08-02-05	<1	<1	<2	<.2	<2	195	E.03	<.04	E.4	10,600
Wyo-0276	08-03-05	<1	<1	8	E.2	3	310	E.03	<.04	<.8	1,660
Wyo-0277	08-03-05	<1	<1	2	<.2	<2	732	.08	<.04	<.8	5,440
Way-0148	08-04-05	<1	<1	E2	<.2	<2	2,160	<.06	.11	<.8	480
Lew-0221	08-15-05	<1	80	<2	<.2	E1	1,110	<.06	<.04	<.8	600
Har-0173	08-16-05	<1	<1	E1	<.2	<2	412	<.06	<.04	<.8	30
	08-16-05	--	--	E1	<.2	<2	414	<.06	<.04	E.4	30
Har-0174	08-16-05	<1	<1	<2	<.2	4	927	.09	<.04	<.8	4,900
Har-0175	08-17-05	<1	26	<2	<.2	2	210	<.06	<.04	E.4	860
Har-0176	08-17-05	<1	1	16	<.2	<2	21	<.06	<.04	E.5	10
Bar-0149	08-18-05	<1	360	6	<.2	<2	66	<.06	<.04	E.5	10

ANALYSES OF SAMPLES COLLECTED AT PARTIAL-RECORD, SPECIAL, AND MISCELLANEOUS SITES
WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
AMBIENT GROUND-WATER QUALITY--Continued

MULTIPLE STATION ANALYSES--CONTINUED

Local identifier	Date	Lead, water, unfltrd recover-able, ug/L (01051)	Mangan-ese, water, unfltrd recover-able, ug/L (01055)	Mercury water, unfltrd recover-able, ug/L (71900)	Nickel, water, unfltrd recover-able, ug/L (01067)	Selen-ium, water, unfltrd ug/L (01147)	Thall-ium, water, unfltrd ug/L (01059)	Zinc, water, unfltrd recover-able, ug/L (01092)	Phenol, water, unfltrd ug/L (34694)	1,1-Di-chloro-ethane, water unfltrd ug/L (34496)	Benzene water unfltrd ug/L (34030)
Wyo-0271	06-22-05	<.06	218	<.01	.27	.7	<.2	6	--	<.1	<.1
Mig-0143	06-23-05	.18	46	<.01	1.38	.9	<.2	E2	--	<.1	<.1
Mig-0144	06-23-05	5.06	122	<.01	2.78	1.1	<.2	3,250	--	<.1	<.1
Hrd-0303	06-27-05	<.06	290	<.01	<.16	.4	<.2	11	--	<.1	<.1
Hrd-0304	06-28-05	1.06	73	<.01	1.59	.4	<.2	10	--	<.1	<.1
Hrd-0305	06-28-05	.10	747	<.01	.72	E.3	<.2	7	--	<.1	<.1
	06-28-05	E.06	755	--	.74	E.2	<.2	7	--	--	--
Hmp-0384	06-29-05	E.05	M	<.01	.20	1.0	<.2	<2	--	<.1	<.1
	06-29-05	--	--	--	--	--	--	--	--	<.1	<.1
Hmp-0385	06-29-05	1.75	39	.02	2.07	E.3	<.2	6	--	<.1	<.1
Mrg-0180	06-30-05	.70	2	<.01	.86	.7	<.2	8	--	<.1	<.1
Wyo-0272	07-06-05	.47	2,270	<.01	2.48	E.3	<.2	4	--	<.1	<.1
Wyo-0273	07-18-05	.16	322	<.01	.90	E.2	<.2	5	--	<.1	<.1
Way-0116	07-20-05	.40	138	<.01	.36	E.3	<.2	16	--	<.1	<.1
Way-0147	07-20-05	.12	990	<.01	.89	.5	<.2	321	--	<.1	<.1
Mal-0409	07-25-05	.23	262	<.01	4.76	.9	<.2	11	E.3	.6	<.1
Wet-0133	07-26-05	.13	17	<.01	.27	.6	<.2	<2	<1.6	<.1	<.1
Wet-0134	07-26-05	3.69	70	<.01	1.39	.5	<.2	502	--	<.1	<.1
Mal-0410	07-27-05	1.54	M	<.01	3.21	1.2	<.2	3	E.1	<.1	<.1
Brk-0047	07-28-05	.12	1,490	<.01	5.56	.4	<.2	3	--	<.1	<.1
Brk-0078	07-28-05	.31	234	<.01	9.13	E.3	<.2	2	<1.6	<.1	<.1
	07-28-05	--	--	--	--	--	--	--	--	<.1	<.1
Wyo-0274	08-02-05	.20	301	<.01	.66	<.4	<.2	6	--	<.1	<.1
Wyo-0275	08-02-05	.17	842	<.01	1.39	<.4	<.2	9	--	<.1	<.1
Wyo-0276	08-03-05	1.85	89	<.01	1.39	.5	<.2	20	--	<.1	<.1
Wyo-0277	08-03-05	E.04	475	<.01	3.21	E.2	<.2	28	<1.6	<.1	.1
Way-0148	08-04-05	.42	30	<.01	1.58	2.3	<.2	29	--	<.1	<.1
Lew-0221	08-15-05	.26	191	<.01	.93	.7	<.2	4	--	<.1	<.1
Har-0173	08-16-05	<.06	6	<.01	.19	.9	<.2	<2	--	<.1	<.1
	08-16-05	<.06	6	<.01	.20	.8	<.2	<2	--	--	--
Har-0174	08-16-05	E.03	800	<.01	.76	.8	<.2	11	--	<.1	<.1
Har-0175	08-17-05	E.04	106	<.01	.62	E.4	<.2	<2	--	<.1	<.1
Har-0176	08-17-05	<.06	3	<.01	<.16	E.4	<.2	<2	--	<.1	<.1
Bar-0149	08-18-05	.41	1	<.01	.84	.6	<.2	3	--	<.1	<.1

ANALYSES OF SAMPLES COLLECTED AT PARTIAL-RECORD, SPECIAL, AND MISCELLANEOUS SITES
 WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
 AMBIENT GROUND-WATER QUALITY--Continued

MULTIPLE STATION ANALYSES—CONTINUED

Local identifier	Date	Bromo-di-chloro-methane water unfltrd ug/L (32101)	Chloro-benzene water unfltrd ug/L (34301)	cis-1,2-Di-chloro-ethene, water, unfltrd ug/L (77093)	Di-bromo-chloro-methane water unfltrd ug/L (32105)	Di-chloro-di-fluoro-methane wat unfltrd ug/L (34668)	Methyl t-butyl ether, water, unfltrd ug/L (78032)	Tetra-chloro-ethene, water, unfltrd ug/L (34475)	Tetra-chloro-methane water unfltrd ug/L (32102)	Tri-bromo-methane water unfltrd ug/L (32104)	Tri-chloro-ethene, water, unfltrd ug/L (39180)
Wyo-0271	06-22-05	<.1	<.1	<.1	<.2	<.2	<.2	<.1	<.2	<.2	<.1
Mig-0143	06-23-05	<.1	<.1	<.1	<.2	<.2	<.2	<.1	<.2	<.2	<.1
Mig-0144	06-23-05	<.1	<.1	<.1	<.2	<.2	<.2	<.1	<.2	<.2	<.1
Hrd-0303	06-27-05	<.1	<.1	<.1	<.2	<.2	.3	<.1	<.2	<.2	<.1
Hrd-0304	06-28-05	<.1	<.1	<.1	<.2	<.2	<.2	<.1	<.2	<.2	<.1
Hrd-0305	06-28-05	<.1	<.1	<.1	<.2	<.2	<.2	<.1	<.2	<.2	<.1
	06-28-05	--	--	--	--	--	--	--	--	--	--
Hmp-0384	06-29-05	<.1	<.1	<.1	<.2	<.2	<.2	<.1	<.2	<.2	<.1
	06-29-05	<.1	<.1	<.1	<.2	<.2	<.2	<.1	<.2	<.2	<.1
Hmp-0385	06-29-05	<.1	<.1	<.1	<.2	<.2	<.2	<.1	<.2	<.2	<.1
Mrg-0180	06-30-05	<.1	<.1	<.1	<.2	<.2	<.2	<.1	<.2	<.2	<.1
Wyo-0272	07-06-05	<.1	<.1	<.1	<.2	<.2	<.2	<.1	<.2	<.2	<.1
Wyo-0273	07-18-05	<.1	<.1	<.1	<.2	<.2	<.2	<.1	<.2	<.2	<.1
Way-0116	07-20-05	<.1	<.1	<.1	<.2	<.2	<.2	<.1	<.2	<.2	<.1
Way-0147	07-20-05	<.1	<.1	<.1	<.2	<.2	<.2	<.1	<.2	<.2	<.1
Mal-0409	07-25-05	<.1	<.1	<.1	<.2	<.2	<.2	<.1	<.2	<.2	<.1
Wet-0133	07-26-05	<.1	<.1	<.1	<.2	<.2	<.2	<.1	<.2	<.2	<.1
Wet-0134	07-26-05	<.1	<.1	<.1	<.2	<.2	<.2	<.1	<.2	<.2	<.1
Mal-0410	07-27-05	<.1	<.1	<.1	<.2	<.2	<.2	<.1	<.2	<.2	1.2
Brk-0047	07-28-05	.1	<.1	.5	.2	<.2	<.2	1.1	<.2	.4	.1
Brk-0078	07-28-05	<.1	<.1	<.1	<.2	<.2	<.2	<.1	<.2	<.2	<.1
	07-28-05	<.1	<.1	<.1	<.2	<.2	<.2	<.1	<.2	<.2	<.1
Wyo-0274	08-02-05	<.1	<.1	<.1	<.2	<.2	<.2	<.1	<.2	<.2	<.1
Wyo-0275	08-02-05	<.1	<.1	<.1	<.2	<.2	.4	<.1	<.2	<.2	<.1
Wyo-0276	08-03-05	1.5	<.1	<.1	<.2	<.2	<.2	<.1	<.2	<.2	<.1
Wyo-0277	08-03-05	1.2	.2	<.1	.4	<.2	<.2	.2	7.0	<.2	.2
Way-0148	08-04-05	<.1	<.1	<.1	<.2	<.2	<.2	<.1	<.2	<.2	<.1
Lew-0221	08-15-05	<.1	<.1	<.1	<.2	<.2	<.2	<.1	<.2	<.2	<.1
Har-0173	08-16-05	<.1	<.1	<.1	<.2	<.2	<.2	<.1	<.2	<.2	<.1
	08-16-05	--	--	--	--	--	--	--	--	--	--
Har-0174	08-16-05	<.1	<.1	<.1	<.2	<.2	<.2	<.1	<.2	<.2	<.1
Har-0175	08-17-05	<.1	<.1	<.1	<.2	<.2	<.2	<.1	<.2	<.2	<.1
Har-0176	08-17-05	<.1	<.1	<.1	<.2	<.2	<.2	<.1	<.2	<.2	<.1
Bar-0149	08-18-05	<.1	<.1	<.1	<.2	E.6	.6	<.1	<.2	<.2	<.1

ANALYSES OF SAMPLES COLLECTED AT PARTIAL-RECORD, SPECIAL, AND MISCELLANEOUS SITES
 WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
 AMBIENT GROUND-WATER QUALITY--Continued

MULTIPLE STATION ANALYSES—CONTINUED

Local identifier	Date	Tri- chloro- methane water unfltrd ug/L (32106)	Rn-222, water, unfltrd pCi/L (82303)
Wyo-0271	06-22-05	<.1	160
Mig-0143	06-23-05	<.1	100
Mig-0144	06-23-05	<.1	70
Hrd-0303	06-27-05	<.1	190
Hrd-0304	06-28-05	<.1	50
Hrd-0305	06-28-05	<.1	800
	<i>06-28-05</i>	--	--
Hmp-0384	06-29-05	<.1	1,440
	<i>06-29-05</i>	<.1	--
Hmp-0385	06-29-05	<.1	660
Mrg-0180	06-30-05	<.1	230
Wyo-0272	07-06-05	<.1	250
Wyo-0273	07-18-05	<.1	40
Way-0116	07-20-05	<.1	160
Way-0147	07-20-05	<.1	160
Mal-0409	07-25-05	.6	480
Wet-0133	07-26-05	<.1	1,180
Wet-0134	07-26-05	<.1	1,500
Mal-0410	07-27-05	<.1	480
Brk-0047	07-28-05	.2	60
Brk-0078	07-28-05	<.1	3,240
	<i>07-28-05</i>	<.1	--
Wyo-0274	08-02-05	<.1	70
Wyo-0275	08-02-05	<.1	90
Wyo-0276	08-03-05	8.4	M
Wyo-0277	08-03-05	6.9	30
Way-0148	08-04-05	<.1	100
Lew-0221	08-15-05	<.1	820
Har-0173	08-16-05	<.1	390
	<i>08-16-05</i>	--	--
Har-0174	08-16-05	<.1	340
Har-0175	08-17-05	<.1	900
Har-0176	08-17-05	<.1	830
Bar-0149	08-18-05	<.1	770

Remark codes used in this table:

< -- Less than.

E -- Estimated.

M-- Presence verified but not quantified.

ORGANIC COMPOUNDS IN GROUND WATER

REMARKS.--Ground water was analyzed for all the compounds listed in the table below. Each of these compounds is identified by name and U.S. Geological Survey National Water Information System parameter code (WATSTORE Code). Method Reporting Limit (MRL) is also provided for each compound, as a concentration (mg/L). A measured or estimated concentration is shown in the preceding table for each compound detected in the samples; compounds not detected in any sample are not shown in the table.

The MRL provides an index to indicate where measurement uncertainty is increased. When an analyte is detected and all criteria for a positive result are met, the concentration is reported. If the analyte is detected at a concentration less than the MRL, an E code is reported with the value. An E code is also reported with the value if the analyte is qualitatively identified as present, but the quantitative determination is substantially more uncertain, even if the measured value is greater than the MRL. If a compound was not detected, it is recorded in U.S. Geological Survey files and in these tables as being in a concentration less than the MRL.

Samples from all wells in the network were analyzed for the compounds listed in the first table, volatile organic compounds. Samples from 6 selected wells, marked with an asterisk (*), were also analyzed for the pesticides listed in the second table. Samples from 6 selected wells, marked with a double asterisk (**), were also analyzed for the semi-volatile organic compounds listed in the third table.

Volatile organic compounds

WATSTORE Code	Compounds	MRL (µg/L)	WATSTORE Code	Compounds	MRL (µg/L)
77652	1,1,2-Trichloro-1,2,2-trifluoroethane (CFC-113)	<.1	81577	Diisopropyl ether	<.2
34506	1,1,1-Trichloroethane	<.1	34371	Ethylbenzene	<.1
34496	1,1-Dichloroethane	<.1	50005	Methyl tert-pentyl ether	<.2
34501	1,1-Dichloroethylene	<.1	78032	MTBE	<.2
34536	1,2-Dichlorobenzene	<.1	85795	m-Xylene plus p-xylene	<.2
32103	1,2-Dichloroethane	<.2	77135	o-Xylene	<.1
34541	1,2-Dichloropropane	<.1	77128	Styrene	<.1
34566	1,3-Dichlorobenzene	<.1	50004	tert-Butyl ethyl ether	<.1
34571	1,4-Dichlorobenzene	<.1	34475	Tetrachloroethene	<.1
34030	Benzene	<.1	34010	Toluene	<.1
32101	Bromodichloromethane	<.1	32102	Tetrachloromethane	<.2
34301	Chlorobenzene	<.1	34546	trans-1,2-Dichloroethene	<.1
77093	cis-1,2-Dichloroethene	<.1	32104	Tribromomethane	<.2
32105	Dibromochloromethane	<.2	39180	Trichloroethene	<.1
34668	Dichlorodifluoromethane	<.2	34488	Trichlorofluoromethane	<.2
34423	Dichloromethane	<.2	39175	Vinyl chloride	<.2
81576	Diethyl ether	<.2			

ANALYSES OF SAMPLES COLLECTED AT PARTIAL-RECORD, SPECIAL, AND MISCELLANEOUS SITES
WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
AMBIENT GROUND-WATER QUALITY--Continued

Pesticides

WATSTORE Code	Compounds	MRL (µg/L)	WATSTORE Code	Compounds	MRL (µg/L)
82660	2,6-Diethylaniline	<.006	04095	Fonofos	<.003
49260	Acetochlor	<.006	39341	Lindane	<.004
46342	Alachlor	<.005	82666	Linuron	<.035
34253	alpha-HCH	<.005	39532	Malathion	<.027
39632	Atrazine	<.007	82667	Methyl parathion	<.015
82686	Azinphos-methyl	<.050	39415	Metalochlor	<.006
82673	Benfluralin	<.010	82630	Metribuzin	<.006
04028	Butylate	<.004	82671	Molinate	<.003
82680	Carbaryl	<.041	82684	Napropamide	<.007
82674	Carbofuran	<.020	34653	p,p1-DDE	<.003
38933	Chlorpyrifos	<.005	39542	Parathion	<.010
04040	CIAT	<.006	82669	Pebulate	<.004
82687	cis-Permethrin	<.006	82683	Pendimethalin	<.022
04041	Cyanazine	<.018	82664	Phorate	<.011
82682	DCPA	<.003	04037	Prometon	<.01
62170	Desulfinyl fipronil	<.012	82676	Propyzamide	<.004
39572	Diazinon	<.005	04024	Propachlor	<.025
39381	Dieldrin	<.009	82679	Propanil	<.011
82677	Disulfoton	<.02	82685	Propargite	<.02
82668	EPTC	<.004	04035	Simazine	<.005
82663	Ethalfuralin	<.009	82670	Tebuthiuron	<.02
82672	Ethoprop	<.005	82665	Terbacil	<.034
62169	Desulfinylfipronil amide	<.029	82675	Terbufos	<.02
62167	Fipronil sulfide	<.013	82681	Thiobencarb	<.010
62168	Fipronil sulfone	<.024	82678	Triallate	<.002
62166	Fipronil	<.016	82661	Trifluralin	<.009

Semi-Volatile Organic Compounds

WATSTORE Code	Compounds	MRL (µg/L)	WATSTORE Code	Compounds	MRL (µg/L)
34556	Dibenz[a,h]anthracene	<2.2	34433	N-Nitrosodiphenylamine	<1.9
34320	Chrysene	<1.2	34396	Hexachloroethane	<1.6
34283	bis(2-chloroisopropyl) ether	<1	34376	Fluoranthene	<1.4
34606	2,4-Dimethylphenol	<2	82626	1,2-Diphenylhydrazine	<2.2
34657	4,6-Dinitro-2-methylphenol	<1.8	34403	Indeno[1,2,3-cd]pyrene	<1.8
34636	4-Bromophenylphenylether	<2.1	34408	Isophorone	<2.2
34641	4-Chlorophenyl phenyl ether	<1.2	34452	4-Chloro-3-methylphenol	<1.6
34381	Fluorene	<1.2	34278	bis(2-Chloroethoxy)methane	<1
34205	Acenaphthene	<1.9	34696	Naphthalene	<1.6
34200	Acenaphthylene	<1.8	34581	2-Chloronaphthalene	<1
34220	Anthracene	<2	34461	Phenanthrene	<1
34526	Benz[a]anthracene	<1.6	34694	Phenol	<1.6
34551	1,2,4-Trichlorobenzene	<1.2	34621	2,4,6-Trichlorophenol	<1.4
39700	Hexachlorobenzene	<1	34601	2,4-Dichlorophenol	<2.5
34566	1,3-Dichlorobenzene	<1.2	34616	2,4-Dinitrophenol	<3.3
34447	Nitrobenzene	<1.4	34586	2-Chlorophenol	<1.2
34536	1,2-Dichlorobenzene	<1.5	34591	2-Nitrophenol	<1.4
34571	1,4-Dichlorobenzene	<1.4	34646	4-Nitrophenol	<2.4
39120	Benzidine	<1000	39032	Pentachlorophenol	<1.8
34631	3,3'-Dichlorobenzidine	<0.9	39100	bis(2-Ethylhexyl) phthalate	<1.8
34247	Benzo[a]pyrene	<1.3	34292	Butylbenzyl phthalate	<1.8
34230	Benzo[b]fluoranthene	<1.9	39110	Di-n-butyl phthalate	<1.7
34521	Benzo[ghi]perylene	<1.6	34336	Diethyl phthalate	<1.6
34242	Benzo[k]fluoranthene	<1.4	34341	Dimethyl phthalate	<1
34273	bis(2-Chloroethyl)ether	<1	34596	Di-n-octyl phthalate	<2.3
39702	Hexachlorobutadiene	<1.2	34469	Pyrene	<1.6
34386	Hexachlorocyclopentadiene	<1.2	34611	2,4-Dinitrotoluene	<1.4
34428	N-Nitrosodi-n-propylamine	<1.6	34626	2,6-Dinitrotoluene	<2.3
34438	N-Nitrosodimethylamine	<1.6			

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WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
AMBIENT GROUND-WATER QUALITY--Continued

Site Descriptions for Wells Sampled for Dissolved Gases
Multiple Sites

REMARKS.--During 2005, 30 wells were sampled as part of a study to define the occurrence and distribution of methane gas dissolved in ground-water in West Virginia. Field determinations for these wells are tabled herein, and methane and other dissolved gas concentrations are published online in U.S. Geological Survey Data Series 156 (<http://pubs.usgs.gov/ds/2005/156/>).

<u>Station Number</u>	<u>Site Name</u>	<u>Latitude</u>	<u>Longitude</u>	<u>County</u>	<u>Geologic Unit</u>
385619079573801	Ran-0275	38°56'19"	79°57'38"	Randolph	Kanawha Formation
390128080034101	Ups-0181	39°01'28"	80°03'41"	Upshur	Pottsville Group
391927079325901	Pre-0166	39°19'27"	79°32'59"	Preston	Pocono Group
390217079272201	Tuc-0125	39°02'17"	79°27'22"	Tucker	Greenbrier Limestone Group
390235079240301	Tuc-0124	39°02'35"	79°24'03"	Tucker	Greenbrier Limestone Group
385507079313901	Ran-0260	38°55'07"	79°31'38"	Randolph	Upper-Middle Devonian Series
384825080284301	Lew-0217	38°48'24"	80°28'43"	Lewis	Conemaugh Group
391410081411701	Woo-0213	39°14'10"	81°41'17"	Wood	Quaternary Alluvium
401348080391601	Brk-0077	40°13'48"	80°39'16"	Brooke	Quaternary Alluvium
403038080332201	Hnc-0046	40°30'38"	80°33'21"	Hancock	Conemaugh Group
395641080453101	Mal-0407	39°56'41"	80°45'31"	Marshall	Quaternary Alluvium
394534080514901	Mal-0409	39°45'34"	80°51'49"	Marshall	Quaternary Alluvium
380410082304001	Way-0146	38°04'10"	82°30'40"	Wayne	Kanawha Formation
380137082260001	Way-0140	38°01'37"	82°26'00"	Wayne	Kanawha Formation
380736082274401	Way-0143	38°07'36"	82°27'44"	Wayne	Allegheny Formation
381746079554401	Poc-0266	38°17'46"	79°55'44"	Pocahontas	Upper-Middle Devonian Series
380658080065101	Poc-0234	38°06'58"	80°06'50"	Pocahontas	Upper-Middle Devonian Series
373721080211001	Mnr-0156	37°37'21"	80°21'10"	Monroe	MacCrary Shale Formation
374830080174401	Grb-0291	37°48'30"	80°17'44"	Greenbrier	Lower Devonian System
374126081122501	Ral-0196	37°41'26"	81°12'24"	Raleigh	New River Formation
384458082112601	Mas-0930	38°44'58"	82°11'26"	Mason	Quaternary Alluvium
384511081591701	Mas-0960	38°45'11"	81°59'17"	Mason	Quaternary Alluvium
385015081251201	Roa-0093	38°50'15"	81°25'11"	Roane	Dunkard Formation
385518080302201	Lew-0215	38°55'18"	80°30'24"	Lewis	Monongahela Group
390650080183701	Har-0170	39°06'50"	80°18'36"	Harrison	Conemaugh Group
392227080024901	Tay-0127	39°22'27"	80°02'49"	Taylor	Conemaugh Group
391946079492901	Pre-0171	39°19'46"	79°49'29"	Preston	Conemaugh Group
392604079310201	Pre-0164	39°26'04"	79°31'02"	Preston	Mauch Chunk Group
394137080303001	Wet-0133	39°41'37"	80°30'30"	Wetzel	Dunkard Formation
393550079293501	Pre-0163	39°35'50"	79°29'35"	Preston	Pottsville Group

ANALYSES OF SAMPLES COLLECTED AT PARTIAL-RECORD, SPECIAL, AND MISCELLANEOUS SITES
 WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
 AMBIENT GROUND-WATER QUALITY--Continued

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MULTIPLE STATION ANALYSES

Local identifier	Station number	Date	Time	Depth of well, feet below LSD (72008)	Altitude of land surface feet (72000)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf 25 degC (00095)	Temperature, water, deg C (00010)
Ran-0275	385619079573801	03-07-05	1030	500	1,870	710	3.0	6.9	232	12.1
Ups-0181	390128080034101	03-07-05	1215	200	1,960	708	2.5	6.0	78	12.1
Pre-0166	391927079325901	03-08-05	1220	100	2,630	685	3.0	7.0	128	11.3
Tuc-0125	390217079272201	03-09-05	0930	250	3,240	675	5.8	8.2	267	8.1
Tuc-0124	390235079240301	03-09-05	1045	100	3,270	675	7.2	7.3	273	9.3
Ran-0260	385507079313901	03-10-05	0915	222	2,380	698	2.4	8.0	446	11.1
Lew-0217	384825080284301	03-10-05	1245	380	1,250	730	2.2	9.2	651	14.1
Woo-0213	391410081411701	03-15-05	1230	60	590	755	3.6	7.0	434	14.3
Brk-0077	401348080391601	03-16-05	0915	72	670	753	2.5	7.0	1,210	12.9
Hnc-0046	403038080332201	03-16-05	1115	150	960	744	2.5	6.8	350	10.7
Mal-0407	395641080453101	03-16-05	1350	80	650	750	5.1	7.1	627	13.6
Mal-0409	394534080514901	03-17-05	1015	74	650	749	2.3	7.1	729	15.1
Way-0146	380410082304001	03-22-05	1015	102	640	752	2.2	7.9	438	14.4
Way-0140	380137082260001	03-22-05	1220	96	690	750	3.2	7.3	920	14.8
Way-0143	380736082274401	03-22-05	1350	56	670	750	2.1	7.7	801	14.7
Poc-0266	381746079554401	03-23-05	1300	325	2,680	691	2.2	6.7	286	10.6
Poc-0234	380658080065101	03-23-05	1515	175	2,630	690	2.1	7.5	201	10.7
Mnr-0156	373721080211001	03-24-05	1130	100	2,560	698	2.0	7.9	241	11.4
Grb-0291	374830080174401	03-24-05	1340	350	1,890	717	3.4	6.9	598	16.7
Ral-0196	374126081122501	03-25-05	1100	406	2,640	697	2.8	6.4	348	11.6
Mas-0930	384458082112601	04-01-05	1045	73	540	753	2.9	6.0	312	14.4
Mas-0960	384511081591701	04-01-05	1300	90	600	750	2.0	6.8	790	13.9
Roa-0093	385015081251201	04-11-05	1020	101	720	748	2.3	9.2	745	14.1
Lew-0215	385518080302201	04-11-05	1315	100	1,130	735	2.1	7.5	350	13.4
Har-0170	390650080183701	04-11-05	1445	75	1,124	735	1.9	7.5	410	13.4
Tay-0127	392227080024901	04-12-05	1030	240	1,000	739	2.0	6.9	229	12.7
Pre-0171	391946079492901	04-12-05	1220	58	1,370	728	2.0	6.9	1,280	15.9
Pre-0164	392604079310201	04-12-05	1405	207	2,480	698	4.6	7.2	248	9.9
Wet-0133	394137080303001	04-13-05	1130	126	940	738	4.1	9.4	607	12.4
Pre-0163	393550079293501	04-13-05	1500	179	2,660	693	7.8	4.6	43	10.7

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Conversion Factors

Multiply	By	To obtain
Length		
inch (in.)	2.54×10^1	millimeter (mm)
	2.54×10^{-2}	meter (m)
foot (ft)	3.048×10^{-1}	meter (m)
mile (mi)	1.609×10^0	kilometer (km)
Area		
acre	4.047×10^3	square meter (m ²)
	4.047×10^{-1}	square hectometer (hm ²)
	4.047×10^{-3}	square kilometer (km ²)
square mile (mi ²)	2.590×10^0	square kilometer (km ²)
Volume		
gallon (gal)	3.785×10^0	liter (L)
	3.785×10^{-3}	cubic meter (m ³)
	3.785×10^0	cubic decimeter (dm ³)
million gallons (Mgal)	3.785×10^3	cubic meter (m ³)
	3.785×10^{-3}	cubic hectometer (hm ³)
cubic foot (ft ³)	2.832×10^{-2}	cubic meter (m ³)
	2.832×10^1	cubic decimeter (dm ³)
cubic-foot-per-second day [(ft ³ /s) d]	2.447×10^3	cubic meter (m ³)
	2.447×10^{-3}	cubic hectometer (hm ³)
acre-foot (acre-ft)	1.233×10^3	cubic meter (m ³)
	1.233×10^{-3}	cubic hectometer (hm ³)
	1.233×10^{-6}	cubic kilometer (km ³)
Flow		
cubic foot per second (ft ³ /s)	2.832×10^1	liter per second (L/s)
	2.832×10^{-2}	cubic meter per second (m ³ /s)
	2.832×10^1	cubic decimeter per second (dm ³ /s)
gallon per minute (gal/min)	6.309×10^{-2}	liter per second (L/s)
	6.309×10^{-5}	cubic meter per second (m ³ /s)
	6.309×10^{-2}	cubic decimeter per second (dm ³ /s)
million gallons per day (Mgal/d)	4.381×10^{-2}	cubic meter per second (m ³ /s)
	4.381×10^1	cubic decimeter per second (dm ³ /s)
Mass		
ton (short)	9.072×10^{-1}	megagram (Mg) or metric ton

Temperature in degrees Celsius (°C) may be converted to degrees Fahrenheit (°F) as follows:

$$^{\circ}\text{F} = (1.8 \times ^{\circ}\text{C}) + 32$$

