

Water-Data Report 2010

03198000 KANAWHA RIVER AT CHARLESTON, WV

Kanawha Basin
Lower Kanawha Subbasin

LOCATION.--Lat 38°22'17", long 81°42'08" referenced to North American Datum of 1927, Kanawha County, WV, 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.

Auxiliary gage at lat 38°21'40", long 81°39'45", 0.3 mi upstream from Patrick Street Bridge at Charleston, 1.2 mi downstream from Elk River, 2.3 mile upstream from base gage at old lock 6, and at mile 56.8.

DRAINAGE AREA.--10,448 mi².

SURFACE-WATER RECORDS

PERIOD OF RECORD.--June 1939 to current year (daily discharge and annual maxima, 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 547.41 ft above NAVD 88 (GEOID09 refinement, levels by U.S. Army Corps of Engineers), 548.00 ft above NGVD 29. Auxiliary water-stage recorder 2.3 mi upstream from base gage at datum 546.32 ft above NAVD 88 (GEOID09 refinement, levels by Corps of Engineers). 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 May 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.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 145,000 ft³/s, Mar. 13, gage height, 36.37 ft.

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DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010
DAILY MEAN VALUES
[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	12,000	11,300	10,600	23,600	25,900	20,000	33,100	12,300	e9,720	e3,800	e4,020	e2,630
2	e8,730	18,900	11,200	22,500	21,000	22,200	24,600	e10,900	10,300	e3,470	e3,860	e2,310
3	e8,160	21,300	15,600	21,500	19,800	20,000	20,700	24,700	10,400	e3,250	e3,970	e2,200
4	e7,340	21,500	28,600	20,500	19,800	18,800	17,600	26,900	e9,190	e3,070	e4,440	e2,320
5	e7,120	15,700	32,000	15,800	20,200	17,900	14,900	20,900	e8,640	e3,050	e5,650	e2,370
6	e5,520	11,800	27,000	15,600	33,400	15,700	19,300	17,100	e7,830	e2,840	e4,460	e2,270
7	e4,970	10,400	21,900	11,900	37,400	18,000	18,800	11,900	e7,610	e2,700	e3,880	e2,190
8	e4,540	10,100	17,400	12,700	29,400	18,200	18,400	e9,810	e6,880	e2,580	e3,750	e2,240
9	e5,000	e9,220	39,200	e11,100	25,000	21,500	18,100	e9,080	e6,950	e2,490	e3,720	e2,300
10	e6,210	e8,960	77,400	14,200	26,800	32,200	16,800	e8,460	e6,750	e2,630	e3,450	e2,810
11	e6,430	e8,620	76,900	e8,510	23,900	e53,900	21,300	e8,020	e5,900	e2,550	e3,350	e3,190
12	e5,930	14,400	55,400	e9,560	21,800	e73,300	15,100	11,200	e6,050	e2,490	e3,800	e3,120
13	e5,380	37,400	40,900	e8,970	19,300	e142,000	14,900	32,300	19,500	e3,290	e3,880	e3,270
14	e5,100	39,200	32,200	e10,300	18,400	139,000	14,700	37,500	21,100	e5,920	e3,480	e2,720
15	e5,210	23,700	36,200	e9,480	16,500	112,000	13,000	31,800	16,800	e7,720	e3,820	e2,230
16	e6,390	19,800	35,300	12,400	16,100	93,500	e9,800	24,000	15,200	e6,840	e3,390	e2,330
17	e8,020	e12,200	28,800	20,900	14,300	79,400	11,300	25,700	11,500	e5,080	e3,060	e2,890
18	11,900	e11,300	24,400	52,600	13,900	64,800	10,200	48,200	e8,620	e4,560	e3,620	e3,400
19	10,700	e11,000	25,400	71,000	12,400	47,700	10,200	48,700	e7,730	e4,300	e5,900	e3,350
20	e7,400	10,400	22,600	68,500	10,200	37,100	10,300	36,600	e6,360	e6,150	e6,880	e3,030
21	e6,390	12,200	17,200	63,700	16,400	32,300	e8,970	27,400	e5,800	e15,600	e7,530	e2,830
22	e6,020	e12,600	17,000	61,300	14,900	30,800	10,400	21,300	e5,740	e15,600	e8,270	e2,390
23	e5,650	e9,300	16,500	52,200	25,200	41,900	e8,260	18,200	e5,390	e11,200	e5,930	e2,700
24	e6,950	e9,600	17,900	47,500	37,600	55,900	e7,930	e14,600	e5,180	e7,090	e4,610	e3,470
25	12,000	e9,750	22,700	59,400	38,200	48,300	e8,490	13,100	e4,540	e5,510	e3,920	e3,610
26	16,600	e9,050	38,100	86,300	35,900	45,700	11,500	e11,000	e4,510	e6,810	e4,850	e3,640
27	19,700	11,700	50,900	101,000	30,600	42,400	11,300	10,600	e4,120	e5,000	e5,410	e3,120
28	17,100	e9,210	52,200	79,100	25,000	38,500	11,600	e9,190	e4,650	e3,600	e4,950	e2,840
29	11,600	e9,660	42,800	59,200	---	35,900	13,000	e10,600	e5,120	e3,500	e4,410	e2,880
30	19,400	e8,730	31,800	46,400	---	39,200	e9,980	13,700	e4,390	e3,980	e3,510	e5,120
31	15,800	---	25,900	32,000	---	41,300	---	10,800	---	e3,960	e2,970	---
Total	279,260	429,000	992,000	1,129,720	649,300	1,499,400	434,530	616,560	252,470	160,630	138,740	85,770
Mean	9,008	14,300	32,000	36,440	23,190	48,370	14,480	19,890	8,416	5,182	4,475	2,859
Max	19,700	39,200	77,400	101,000	38,200	142,000	33,100	48,700	21,100	15,600	8,270	5,120
Min	4,540	8,620	10,600	8,510	10,200	15,700	7,930	8,020	4,120	2,490	2,970	2,190

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 2010, BY WATER YEAR (WY)

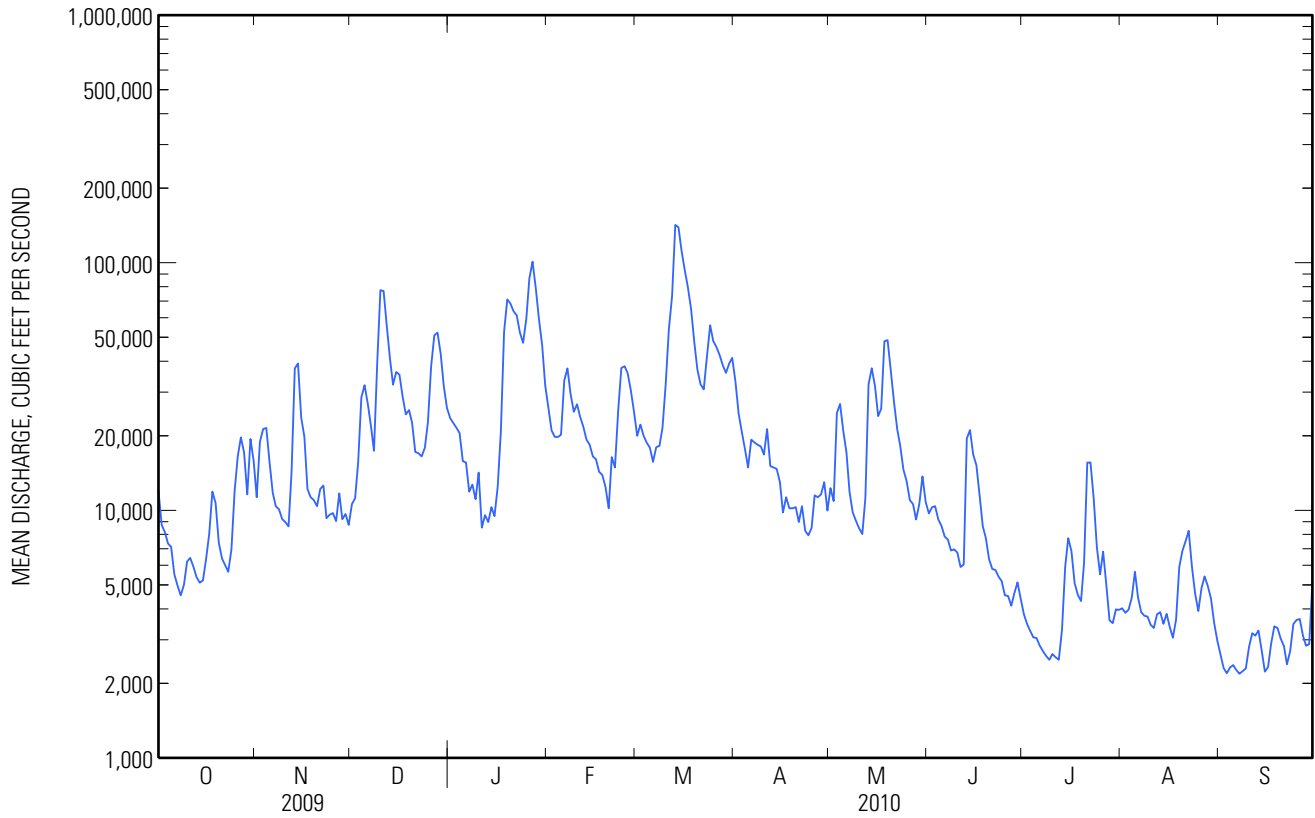
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	6,975	11,600	17,070	21,120	24,940	29,940	22,500	18,330	10,910	7,697	6,745	5,610
Max	30,780	45,580	40,920	46,440	52,020	62,900	59,000	38,550	33,350	19,030	19,030	20,820
(WY)	(1977)	(2004)	(1973)	(1996)	(1994)	(1963)	(1987)	(1989)	(2003)	(2001)	(1958)	(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)

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SUMMARY STATISTICS

	Calendar Year 2009		Water Year 2010		Water Years 1941 - 2010	
Annual total	6,350,030		6,667,380			
Annual mean	17,400		18,270		15,240	
Highest annual mean					22,790	2004
Lowest annual mean					8,649	1988
Highest daily mean	83,400	Jan 8	^e 142,000	Mar 13	160,000	Mar 7, 1967
Lowest daily mean	^e 2,880	Sep 17	^e 2,190	Sep 7	1,100	Jul 30, 1966
Annual seven-day minimum	3,190	Sep 3	2,270	Sep 3	1,250	Sep 26, 1953
Maximum peak flow			145,000	Mar 13	216,000	Aug 15, 1940
Maximum peak stage			36.37	Mar 13	39.72	Mar 7, 1955
10 percent exceeds	36,100		41,100		33,700	
50 percent exceeds	13,000		11,300		9,670	
90 percent exceeds	4,710		3,280		3,100	

^e Estimated.



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WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: March 1953 to August 1970, October 1971 to September 1985.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: Maximum, 35.0°C, Aug. 25, 26, 1959; minimum, 0.0°C, Jan. 22, 23, 1984, Jan. 22-28, 1985.