Water-Data Report 2010

03193000 KANAWHA RIVER AT KANAWHA FALLS, WV

Kanawha Basin
Upper Kanawha Subbasin

LOCATION.--Lat 38°08′17″, long 81°12′52″ referenced to North American Datum of 1927, Fayette County, WV, 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 mi^2.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--April 1877 to current year (daily discharge and annual maxima). October 1916 to September 1918 and October 1927 to October 1928, published as Kanawha River 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. WDR-US-2008: 1904, 1920, 1924, 1927.

GAGE.--Water-stage recorder with satellite telemeter. Datum of gage is 620.39 ft above NAVD 88 (621.20 ft above NGVD 29), GEOID09 refinement, levels by U.S. Army Corps of Engineers. Prior to Oct. 27, 1928, nonrecording gages at several sites within 9.0 mi of present site at various datums. Oct. 27, 1928, to Sept. 30, 1964, water-stage recorder at present site at datum 2.00 ft higher.

REMARKS.--Records good except those for period of estimated daily discharges (no gage-height record), which are fair. Flow regulated since May 1939 by Claytor Dam, since August 1949 by Bluestone Dam, and since May 1965 by Summersville Dam. Unregulated statistics of monthly mean data and summary statistics for water years 1877-1938 are also published.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 135,000 ft^3/s, Mar. 13, gage height, 20.90 ft; minimum discharge, 1,590 ft^3/s, Sept. 22, gage height, 1.97 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	8,610	11,000	7,400	18,000	21,100	15,700	23,900	8,060	8,430	3,050	3,450	2,160
2	7,680	17,300	8,160	17,300	16,000	14,900	18,200	8,420	9,030	2,990	2,830	1,880
3	6,600	20,300	12,800	16,300	15,400	12,800	15,500	10,700	8,500	2,830	2,990	1,860
4	6,020	19,300	27,400	14,300	15,600	12,400	13,300	13,000	7,440	2,640	3,650	2,010
5	5,970	13,300	28,500	10,400	15,500	12,300	10,800	12,300	6,870	2,640	4,730	2,050
6	4,230	10,700	22,500	11,300	20,900	11,400	13,200	9,590	6,780	2,410	3,580	1,960
7	3,870	10,500	18,300	9,250	19,100	11,900	13,900	8,100	6,650	2,290	3,050	1,890
8	3,570	8,740	13,500	9,700	17,100	12,600	11,700	7,100	5,790	2,180	2,790	1,970
9	3,970	7,580	34,900	8,590	14,900	17,300	11,500	6,640	5,480	2,090	2,810	2,020
10	4,570	7,450	77,600	10,400	14,800	31,400	12,300	6,350	5,130	2,130	2,660	2,550
11	4,570	7,180	65,300	6,520	13,200	47,500	16,200	6,160	4,710	2,050	2,630	2,900
12	4,250	17,800	45,400	7,680	13,100	66,200	10,700	e6,100	4,980	2,000	2,990	2,760
13	3,740	41,500	33,000	6,850	11,900	114,000	10,400	e9,240	13,800	2,640	3,050	2,940
14	3,500	37,200	27,700	8,440	11,000	112,000	9,990	e26,200	16,900	4,550	2,800	2,330
15	3,530	23,600	32,100	7,470	10,800	88,200	9,470	e19,100	11,700	5,940	2,770	1,830
16	4,290	19,000	30,400	8,540	10,700	76,200	7,980	e15,800	10,900	5,220	2,350	1,960
17	5,720	11,400	24,000	15,100	10,300	63,700	8,310	e24,500	8,980	3,760	2,140	2,460
18	7,450	10,800	19,400	46,800	10,200	49,700	8,080	e47,900	6,730	3,430	2,770	3,040
19	6,850	10,600	18,900	63,900	9,600	35,200	7,610	39,100	6,250	3,360	4,570	2,880
20	5,140	10,500	17,600	59,000	8,780	30,100	7,450	30,000	5,130	5,260	6,550	2,580
21	4,460	10,700	14,200	56,400	9,810	26,100	7,660	21,200	4,830	11,500	7,680	2,290
22	4,360	10,000	12,300	51,700	11,200	27,200	7,230	17,300	4,760	10,300	8,230	1,860
23	4,220	8,450	11,400	41,300	20,100	37,500	7,100	14,000	4,490	6,980	4,880	2,240
24	5,920	8,890	11,700	38,000	30,100	45,900	6,780	11,900	4,290	4,740	3,740	3,090
25	6,250	8,990	13,200	57,600	30,600	35,900	7,440	10,900	3,660	3,690	3,140	3,160
26	13,700	8,190	27,600	111,000	25,700	31,700	8,010	9,630	3,740	4,270	4,360	3,260
27	16,300	8,660	41,900	85,500	21,900	29,200	9,360	8,940	3,310	3,440	4,570	2,810
28	13,500	8,350	41,100	63,400	18,800	26,600	9,650	8,210	3,460	2,450	3,950	2,580
29	10,600	8,890	33,200	48,300	---	25,800	9,140	9,930	3,790	2,610	3,470	2,610
30	15,800	7,690	23,600	35,800	---	31,300	8,130	10,900	3,180	3,230	2,800	5,690
31	11,900	---	20,200	25,200	---	31,000	---	9,170	---	3,270	2,490	---
Total	211,140	404,560	815,260	970,040	448,190	1,183,700	320,990	446,440	199,690	119,940	114,470	75,620
Mean	6,811	13,490	26,300	31,290	16,010	38,180	10,700	14,400	6,656	3,869	3,693	2,521
Max	16,300	41,500	77,600	111,000	30,600	114,000	23,900	47,900	16,900	11,500	8,230	5,690
Min	3,500	7,180	7,400	6,520	8,780	11,400	6,780	6,100	3,180	2,000	2,140	1,830

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1877 - 1938, BY WATER YEAR (WY)

	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	23,470	23,460	34,030	38,890	52,880	52,620	46,930	38,140	35,870	20,210	22,440	21,070
(WY)	(1938)	(1878)	(1902)	(1882)	(1884)	(1899)	(1901)	(1901)	(1901)	(1916)	(1901)	(1888)
Min	1,133	1,514	2,691	5,600	3,181	10,160	8,151	4,797	2,546	1,290	1,394	1,308
(WY)	(1931)	(1923)	(1931)	(1931)	(1934)	(1925)	(1915)	(1930)	(1930)	(1930)	(1925)	(1930)

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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
Maximum peak flow	[a]320,000	Sep 14, 1878
Maximum peak stage	[b]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	

[a] From gage-height relationship and rating curve extended above 150,000 ft^3/s.
[b] Site then in use, 39.80 ft gage height at current datum.

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 2010, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	5,847	9,177	13,040	16,200	19,570	23,370	17,810	14,600	9,237	6,333	5,748	4,873
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	7,272	5,065	4,051	2,450	2,167	1,945	1,510
(WY)	(1954)	(1954)	(1966)	(1940)	(2002)	(2006)	(1986)	(1941)	(1999)	(1966)	(1944)	(1953)

SUMMARY STATISTICS

	Calendar Year 2009		Water Year 2010		Water Years 1939 - 2010	
Annual total	4,821,450		5,310,040			
Annual mean	13,210		14,550		12,110	
Highest annual mean					19,960	2003
Lowest annual mean					6,792	1988
Highest daily mean	77,600	Dec 10	114,000	Mar 13	163,000	Aug 15, 1940
Lowest daily mean	2,320	Sep 17	1,830	Sep 15	970	Sep 30, 1953
Annual seven-day minimum	2,450	Sep 3	1,950	Sep 2	1,230	Sep 23, 1963
Maximum peak flow			135,000	Mar 13	248,000	Aug 15, 1940
Maximum peak stage			20.90	Mar 13	[a]29.60	Aug 15, 1940
Instantaneous low flow			1,590	Sep 22	(b)	(b)
10 percent exceeds	27,500		33,100		26,700	
50 percent exceeds	9,840		8,980		7,640	
90 percent exceeds	3,920		2,650		2,590	

[a] 31.60 ft gage height at current datum.
[b] Not determined.

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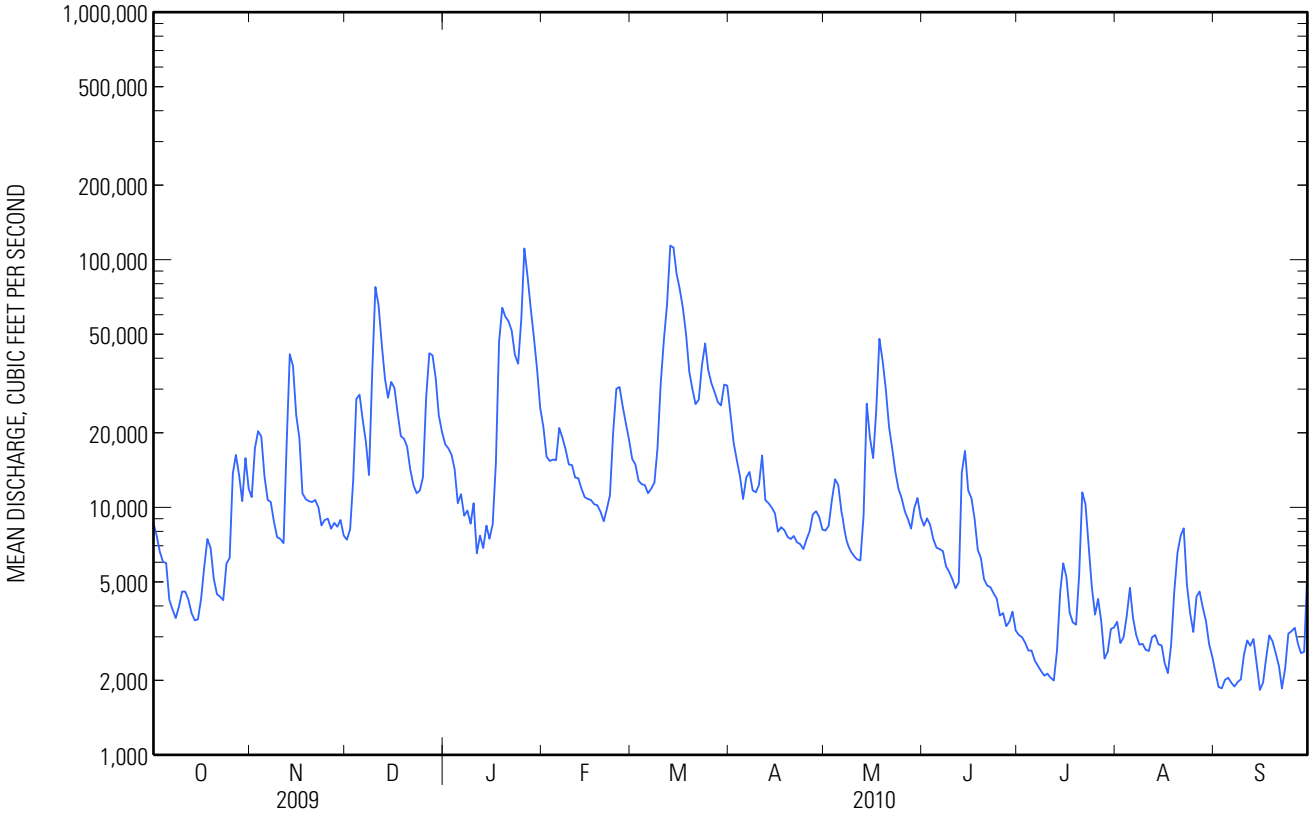

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WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: December 1957 to September 1966, July 1968 to May 1983.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: Maximum, 29.0°C, Aug. 1-7, 1975; minimum, 0.0°C, on several days during 1958-60, 1963, 1971, 1978.