Water-Data Report 2007

06279500 BIGHORN RIVER AT KANE, WY

Big Horn Basin
Big Horn Lake Subbasin

LOCATION.--Lat 44°45′31″, long 108°10′51″ referenced to North American Datum of 1927, in NW ¼ NE ¼ SW ¼ sec.9, T.55 N., R.94 W., Big Horn County, WY, Hydrologic Unit 10080010, on right bank 180 ft upstream from Bighorn Canyon National Recreation Area boundary, 0.5 mi upstream from normal high-water line of Bighorn Lake at elevation 3,660 ft, 1.3 mi upstream from Five Springs Creek, and 5.9 mi south of Kane.

DRAINAGE AREA.--15,762 mi^2.

SURFACE-WATER RECORDS

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

REVISED RECORDS.--WSP 1309: 1929(M). WSP 1509: 1929. WSP 1709: Drainage area. WRD WY 2003: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 3,660 ft above NGVD of 1929, from topographic map. August 29, 1928 to April 25, 1932, nonrecording gage, and April 25, 1932 to May 16, 1956, water-stage recorder at site 12.5 mi downstream from station at different datum. U.S. Army Corps of Engineers data collection platform with satellite telemetry at station.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Some regulation by Boysen Reservoir since October 1951. Diversions for irrigation of about 376,000 acres upstream from station.

06279500 BIGHORN RIVER AT KANE, WY—Continued

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007
DAILY MEAN VALUES
[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	811	943	e700	e640	e760	889	1,040	1,360	1,700	850	804	706
2	781	929	e800	e660	e700	875	1,370	1,680	1,750	843	697	727
3	763	952	e700	e780	e660	e860	1,380	2,200	1,840	764	632	769
4	769	980	e820	e870	e780	829	1,230	2,890	2,200	713	644	754
5	787	984	e860	e950	e860	851	1,120	2,460	2,240	720	769	737
6	795	978	e900	e1,000	918	918	1,130	1,860	2,870	728	786	719
7	829	977	e1,000	e820	937	1,040	1,090	1,440	3,990	704	743	777
8	922	981	e950	e780	919	e1,200	1,010	1,200	4,700	639	920	796
9	1,010	970	e940	e780	924	e1,250	979	1,020	3,210	663	736	797
10	1,160	971	e930	e830	905	e1,250	996	1,150	2,610	628	587	847
11	1,150	980	e930	e950	896	e1,200	1,020	1,580	2,630	611	530	893
12	1,100	968	e900	e800	e900	e1,250	967	2,440	2,850	650	505	873
13	1,070	953	e910	e600	e890	e1,250	931	3,240	2,750	650	584	850
14	1,050	943	e910	e700	e840	e1,350	903	3,530	2,350	675	579	828
15	1,040	924	e920	e800	e820	e1,300	881	2,890	2,260	700	557	827
16	1,040	920	e930	e850	804	e1,250	873	2,310	2,420	726	562	824
17	1,020	933	e930	e960	e820	e1,050	727	2,180	2,790	706	564	805
18	997	937	e930	e900	846	e950	673	2,460	2,710	679	585	760
19	991	929	e830	e860	847	931	768	2,650	2,400	644	658	763
20	986	928	e770	e850	869	912	1,230	2,860	1,810	710	743	792
21	999	939	e700	e840	876	918	1,410	2,890	1,610	725	757	761
22	1,000	933	e840	e840	891	916	1,070	2,880	1,510	675	682	731
23	1,020	920	e860	e840	912	917	969	2,550	1,420	621	759	733
24	1,010	901	e860	e840	963	898	904	2,100	1,340	621	805	726
25	1,020	e860	e850	e850	1,020	869	968	1,820	1,320	570	1,070	749
26	1,060	e840	e840	e850	986	859	1,070	1,640	e1,200	618	905	783
27	1,110	e820	e840	e880	966	865	1,040	1,540	1,070	1,390	835	781
28	1,030	e700	e860	e850	919	883	1,100	1,580	981	1,730	776	769
29	1,010	e640	e870	e850	---	950	1,040	2,140	915	1,200	690	703
30	993	e560	e840	e860	---	1,050	1,120	2,270	897	1,110	690	671
31	967	---	e800	e800	---	1,000	---	1,810	---	959	706	---
Total	30,290	27,193	26,720	25,680	24,428	31,530	31,009	66,620	64,343	24,222	21,860	23,251
Mean	977	906	862	828	872	1,017	1,034	2,149	2,145	781	705	775
Max	1,160	984	1,000	1,000	1,020	1,350	1,410	3,530	4,700	1,730	1,070	893
Min	763	560	700	600	660	829	673	1,020	897	570	505	671
Ac-ft	60,080	53,940	53,000	50,940	48,450	62,540	61,510	132,100	127,600	48,040	43,360	46,120

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1930 - 2007, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	1,751	1,624	1,419	1,335	1,492	1,769	1,751	3,102	5,581	3,009	1,397	1,485
Max	3,994	2,871	2,506	2,871	3,164	3,171	3,454	7,505	14,680	11,650	6,388	3,673
(WY)	(1983)	(1984)	(1983)	(1972)	(1983)	(1972)	(1943)	(1947)	(1944)	(1967)	(1930)	(1973)
Min	524	680	627	580	550	740	677	744	1,032	501	305	386
(WY)	(1936)	(2004)	(1961)	(1937)	(1933)	(1989)	(2004)	(2002)	(1934)	(1961)	(1940)	(1935)

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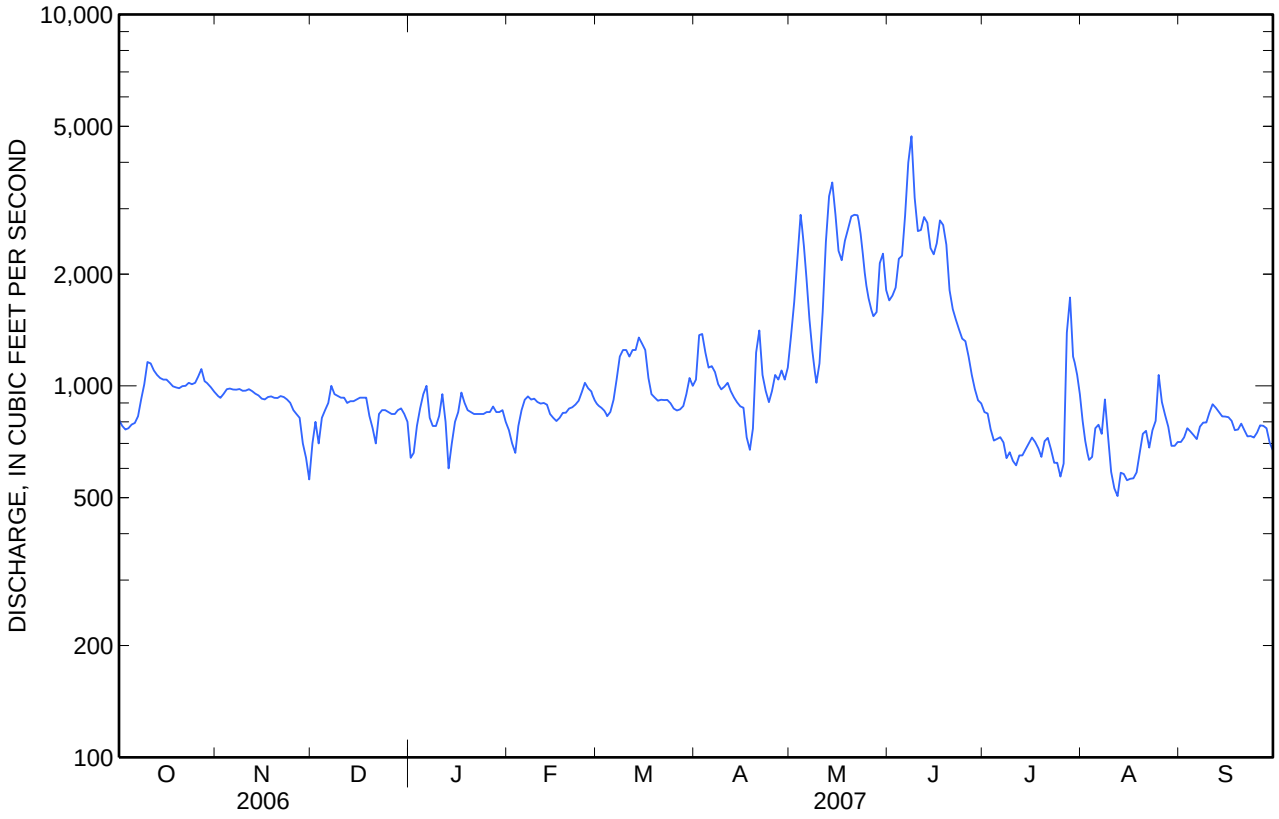
SUMMARY STATISTICS

	Calendar Year 2006		Water Year 2007		Water Years 1930 - 2007	
Annual total	389,141		397,146			
Annual mean	1,066		1,088		2,143	
Highest annual mean					3,524	1947
Lowest annual mean					781	2002
Highest daily mean	4,870	May 24	4,700	Jun 8	24,800	Jun 15, 1935
Lowest daily mean	473	Aug 12	505	Aug 12	179	Jul 22, 1934
Annual seven-day minimum	533	Aug 8	554	Aug 11	184	Jul 18, 1934
Maximum peak flow			[a]5,270	Jun 8	[b]25,200	Jun 16, 1935
Maximum peak stage			[c]8.53	Dec 2	11.10	Jun 16, 1935
Annual runoff (ac-ft)	771,900		787,700		1,552,000	
10 percent exceeds	1,480		1,830		3,860	
50 percent exceeds	973		910		1,580	
90 percent exceeds	625		690		735	

[a] Gage height 4.26
[b] Site and datum then in use.
[c] Backwater from ice



WATER-QUALITY RECORDS

PERIOD OF RECORD.--1947-1977, 1999 to current year.

WATER-QUALITY DATA
WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007

Part 1 of 2

[Remark codes: <, less than; E, estimated.]

Date	Time	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 unf µS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Ammonia water, fltrd, mg/L as N (00608)	Nitrate + nitrite water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Orthophosphate, water, fltrd, mg/L as P (00671)
Nov													
15...	1520	929	668	12.5	108	8.6	997	5.5	3.5	<.020	.26	E.002	<.006
Jan													
31...	0815	797	665	11.3	89	8.1	986	-12.0	.0	.051	.40	.003	E.004
May													
02...	1415	1,700	658	7.6	94	8.2	662	23.0	18.5	.021	.37	.007	.010
Aug													
14...	1450	557	--	8.6	--	8.7	1,110	34.0	23.0	<.020	.74	.005	.017

WATER-QUALITY DATA
WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007

Part 2 of 2

[Remark codes: <, less than; E, estimated.]

Date	E coli, modif. m-TEC, water, col/ 100 mL (90902)	Fecal coliform, M-FC 0.7u MF col/ 100 mL (31625)	Suspended sediment concentration mg/L (80154)	Suspended sediment discharge, tons/d (80155)
Nov				
15...	26	E17	45	113
Jan				
31...	45	52	99	213
May				
02...	820	1,100	1,390	6,400
Aug				
14...	120	E240	144	217