

06186500 YELLOWSTONE RIVER AT YELLOWSTONE LAKE OUTLET, YELLOWSTONE NATIONAL PARK

LOCATION.--Lat 44° 34'03", long 110° 22'48", Yellowstone National Park, Hydrologic Unit 10070001, on left bank 450 ft downstream from Fishing Bridge, 0.3mi downstream from outlet of Yellowstone Lake, and at river mile 616.4.

DRAINAGE AREA.--1,006 mi².

PERIOD OF RECORD.--December 1922 to September 1982, October 1983 to September 1986, October 1988 to current year. Prior to October 1926, gage heights only. Monthly discharge only for winter periods in water years 1927-30, 1932-33, 1935-38, 1940, 1942-46 published in WSP 1309; figures of daily discharge for these months published in WSP 646, 666, 686, 701, 731, 746, 786, 806, 826, 856, 896, 956, 976, 1006, 1036, and 1056, have been found to be unreliable and should not be used.

REVISED RECORDS.--WSP 1309: See PERIOD OF RECORD. WSP 1729: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 7,729.58 ft above NGVD of 1929. Prior to October 2, 1928, nonrecording gage at site 450 ft upstream at datum 1.07 ft higher. U.S. Geological Survey data collection platform with satellite telemetry at station.

REMARKS.--Records good except those for estimated daily discharges, which are poor. No artificial regulation. Station operated and record provided by the Montana District.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	760	549	470	e380	e380	425	444	622	3,380	4,240	2,190	1,090
2	747	544	467	e380	e380	425	448	630	3,690	4,190	2,130	1,080
3	740	535	465	e380	e380	425	448	640	3,900	4,120	2,080	1,070
4	734	533	465	e380	e380	425	450	663	4,030	4,050	2,040	1,040
5	741	529	459	e380	e380	429	447	677	4,140	3,980	1,980	1,020
6	729	521	454	e370	e380	434	448	687	4,200	3,890	1,940	1,020
7	719	516	447	e370	e380	442	445	692	4,240	3,810	1,890	1,010
8	707	525	445	e370	e380	443	442	697	4,260	3,750	1,840	999
9	698	515	444	e370	e380	443	439	700	4,290	3,670	1,790	981
10	692	517	440	e370	e380	443	437	707	4,350	3,590	1,750	955
11	683	514	436	e370	e380	442	436	715	4,420	3,530	1,720	949
12	672	510	432	e370	e380	438	433	730	4,480	3,470	1,670	925
13	660	506	430	e370	e390	432	433	752	4,530	3,400	1,630	902
14	646	502	427	e370	e390	431	434	764	4,570	3,330	1,610	897
15	639	496	425	e370	e400	427	452	792	4,600	3,260	1,570	880
16	629	494	425	e370	e400	426	461	841	4,680	3,180	1,530	865
17	622	486	418	e370	e410	418	461	890	4,720	3,110	1,490	843
18	618	482	413	e370	e410	416	472	953	4,780	3,040	1,450	834
19	610	481	411	e370	e420	418	477	1,000	4,840	2,990	1,420	822
20	602	474	404	e370	e420	418	479	1,040	4,890	2,920	1,390	803
21	600	469	401	e370	e420	420	482	1,070	4,900	2,860	1,360	788
22	591	466	399	e370	e420	420	487	1,130	4,870	2,800	1,340	779
23	595	e460	397	e370	e420	431	500	1,200	4,800	2,720	1,320	767
24	602	e460	398	e370	e420	436	507	1,310	4,710	2,670	1,280	752
25	594	e460	e380	e380	e420	435	515	1,470	4,630	2,630	1,240	743
26	590	e460	e380	e380	e420	444	534	1,650	4,530	2,530	1,210	733
27	589	e470	e380	e380	428	453	550	1,850	4,430	2,480	1,190	720
28	578	480	e380	e380	427	452	562	2,080	4,360	2,430	1,160	714
29	567	475	e380	e380	---	450	581	2,350	4,310	2,360	1,120	703
30	566	468	e380	e380	---	449	590	2,690	4,270	2,290	1,120	692
31	555	---	e380	e380	---	446	---	3,040	---	2,230	1,120	---
TOTAL	20,075	14,897	13,032	11,590	11,175	13,436	14,294	35,032	132,800	99,520	48,570	26,376
MEAN	648	497	420	374	399	433	476	1,130	4,427	3,210	1,567	879
MAX	760	549	470	380	428	453	590	3,040	4,900	4,240	2,190	1,090
MIN	555	460	380	370	380	416	433	622	3,380	2,230	1,120	692
AC-FT	39,820	29,550	25,850	22,990	22,170	26,650	28,350	69,490	263,400	197,400	96,340	52,320

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1927 - 2003, BY WATER YEAR (WY)*

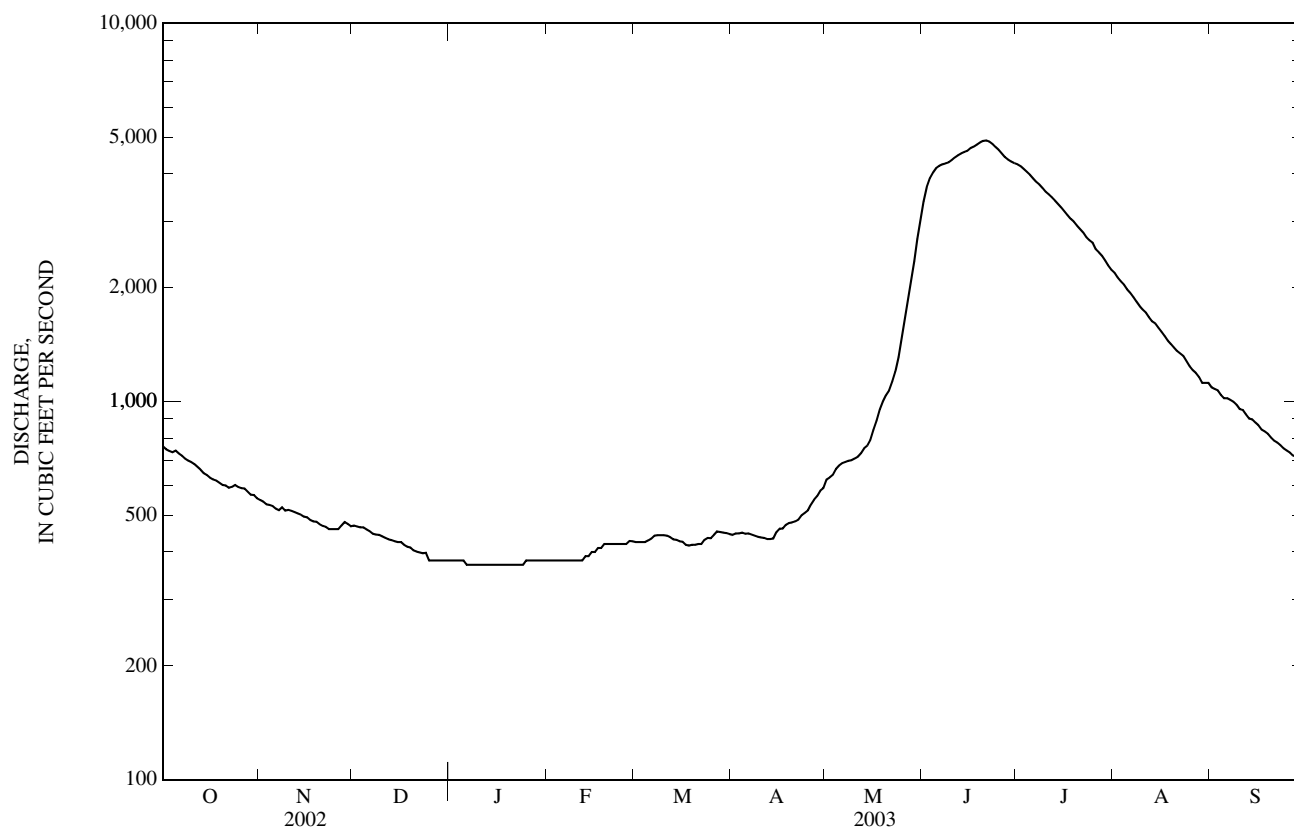
MEAN	798	604	474	398	388	445	542	1,161	3,706	4,034	2,205	1,207
MAX	1,259	984	775	699	637	717	801	2,214	8,574	7,160	4,031	1,954
(WY)	(1973)	(1951)	(1951)	(1998)	(1998)	(1962)	(1952)	(1997)	(1997)	(1982)	(1982)	(1982)
MIN	327	276	246	168	122	130	175	605	1,707	1,272	812	538
(WY)	(1989)	(1989)	(1932)	(1989)	(1989)	(1935)	(1937)	(1953)	(1934)	(1934)	(1934)	(1934)

06186500 YELLOWSTONE RIVER AT YELLOWSTONE LAKE OUTLET, YELLOWSTONE NATIONAL PARK—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1927 - 2003*	
ANNUAL TOTAL	413,239		440,797		--	
ANNUAL MEAN	1,132		1,208		1,335	
HIGHEST ANNUAL MEAN	--		--		2,253	1997
LOWEST ANNUAL MEAN	--		--		682	1934
HIGHEST DAILY MEAN	4,360	Jun 26-29	4,900	Jun 21	9,930	Jun 19, 1997
LOWEST DAILY MEAN	230	Jan 23-Feb 7	370	Jan 6-24	100	Feb 18, 1993
ANNUAL SEVEN-DAY MINIMUM	230	Jan 23	370	Jan 6	113	Feb 11, 1989
MAXIMUM PEAK FLOW	--		4,940	Jun 22	9,950	Jan 18, 1997
MAXIMUM PEAK STAGE	--		6.54	Jun 22	8.90	Jun 18, 1997
ANNUAL RUNOFF (AC-FT)	819,700		874,300		967,400	
10 PERCENT EXCEEDS	3,430		3,710		3,490	
50 PERCENT EXCEEDS	544		578		676	
90 PERCENT EXCEEDS	260		380		336	

* For period of operation.

e Estimated.



06187915 SODA BUTTE CREEK AT PARK BOUNDARY, AT SILVER GATE, MT

LOCATION.--Lat 45°00'11", long 110°00'04", in SW $\frac{1}{4}$ NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.33, T.9 S., R.14 E., Park County, Hydrologic Unit 10070001, at Yellowstone National park boundary, 0.25 mi downstream from Silver Creek, 0.75 mi southwest of Silver Gate, and at river mile 17.8.

DRAINAGE AREA.--31.2 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1998 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 7,340 ft above NGVD of 1929, from topographic map.

REMARKS.--Records good except for those discharges greater than 600 ft³/s, which are fair, and those for estimated daily discharges, which are poor. No known regulation or diversion upstream of station.

COOPERATION.--Records collected by the National Park Service and U.S. Department of Agriculture, Forest Service, under the general supervision of the U.S. Geological Survey. Record provided by the Montana District.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10	e3.5	e3.5	e3.0	e3.0	e1.5	e2.0	16	718	352	45	12
2	9.4	e4.0	e4.0	e3.5	e2.5	e1.2	e1.8	16	519	335	42	12
3	9.8	e4.0	e4.0	e3.5	e2.5	e1.0	e1.5	17	463	302	44	11
4	10	e4.5	e4.0	e3.0	e2.0	e1.0	e1.2	17	419	275	42	11
5	10	e4.5	e3.5	e3.0	e2.0	e0.90	e1.0	17	354	256	38	11
6	10	e5.0	e3.5	e2.5	e1.5	e1.0	e1.5	17	319	240	36	12
7	10	e5.0	e3.0	e2.5	e1.5	e1.2	e2.0	17	280	229	33	12
8	10	e5.0	e3.0	e2.0	e2.0	e1.2	2.3	16	311	199	32	12
9	9.7	e5.0	e3.0	e2.0	e2.0	e1.2	2.8	16	396	188	31	11
10	9.3	e4.5	e3.0	e2.0	e2.0	e1.2	4.1	17	457	180	29	11
11	9.7	e4.5	e3.0	e2.5	e2.0	e1.3	5.4	17	490	172	28	10
12	10	e4.5	e3.5	e2.5	e1.5	e1.5	7.3	18	479	166	27	14
13	10	e4.5	e4.0	e3.0	e2.0	e1.5	11	22	468	155	25	12
14	9.0	e4.5	e4.0	e3.0	e2.0	e1.3	12	27	475	142	24	10
15	8.9	e4.5	e4.0	e2.5	e2.0	e1.2	10	40	472	129	23	9.7
16	8.6	e4.5	e3.5	e2.0	e1.5	e1.0	9.7	55	511	122	22	9.8
17	8.4	e4.5	e3.5	e2.0	e1.5	e1.0	8.7	62	553	118	22	9.6
18	8.3	e4.5	e3.0	e2.0	e1.5	e1.0	7.6	62	638	116	21	9.2
19	8.6	e4.5	e3.0	e2.0	e1.5	e1.0	7.0	51	573	105	19	8.9
20	8.1	e4.5	e3.0	e2.5	e1.5	e1.0	7.5	51	555	101	18	8.7
21	8.3	e4.5	e3.5	e2.5	e2.0	e1.0	11	55	501	95	17	8.6
22	8.0	e4.5	e3.0	e2.5	e1.0	e1.2	15	82	376	88	18	8.3
23	e7.5	e4.0	e3.0	e2.5	e0.80	e1.0	20	134	277	83	18	8.2
24	7.8	e3.5	e3.0	e2.5	e0.80	e1.0	19	210	212	80	16	8.1
25	7.7	e3.5	e2.5	e3.0	e1.0	e1.0	22	338	176	80	15	7.8
26	e7.0	3.5	e3.0	e3.5	e1.2	e1.0	25	412	162	72	15	7.5
27	e7.0	4.0	e3.5	e3.0	e1.5	e1.0	21	523	185	75	15	7.6
28	7.4	4.0	e3.5	e3.0	e1.5	e0.90	18	606	246	63	14	7.6
29	e7.0	4.0	e3.5	e3.0	---	e1.0	17	639	301	57	14	7.5
30	e5.0	3.5	e3.5	e3.0	---	e1.2	17	635	348	52	13	7.3
31	e3.0	---	e3.5	e3.0	---	e1.5	---	730	---	49	13	---
TOTAL	263.5	129.0	104.5	82.5	47.80	35.00	291.4	4,935	12,234	4,676	769	295.4
MEAN	8.50	4.3	3.37	2.66	1.71	1.13	9.71	259	408	151	24.8	9.85
MAX	10	5.0	4.0	3.5	3.0	1.5	25	730	718	352	45	14
MIN	3.0	3.5	2.5	2.0	0.80	0.90	1.0	16	162	49	13	7.3
AC-FT	523	256	207	164	95	69	578	9,790	24,270	9,270	1,530	586
CFSM	0.27	0.14	0.11	0.09	0.05	0.04	0.31	5.10	13.1	4.83	0.80	0.32
IN.	0.31	0.15	0.12	0.10	0.06	0.04	0.35	5.88	14.59	5.58	0.92	0.35

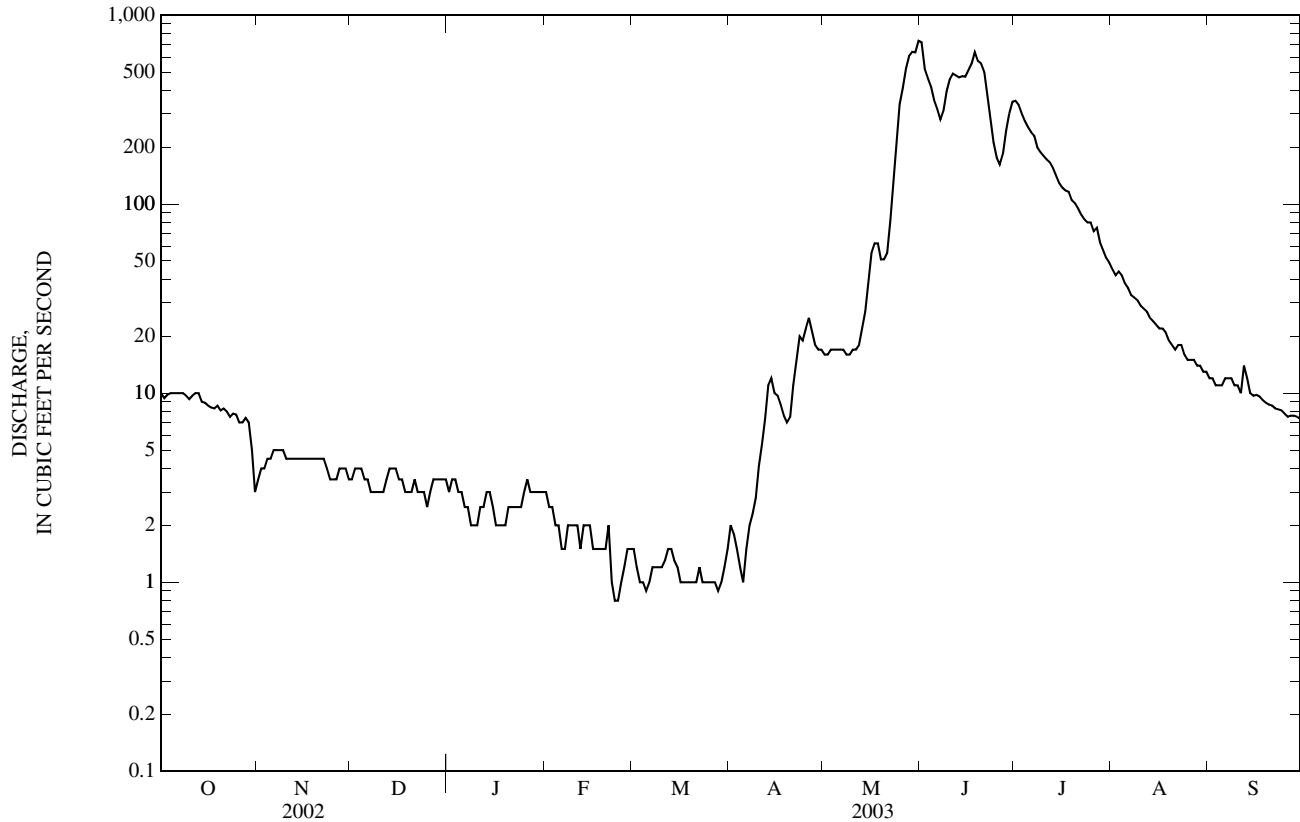
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1999 - 2003, BY WATER YEAR (WY)

	MEAN	8.94	5.40	3.54	2.46	1.97	1.59	8.32	140	328	130	27.3	13.5
MAX		11.9	6.84	4.70	3.36	2.31	1.90	14.3	167	408	212	45.0	22.4
(WY)		(1999)	(1999)	(2002)	(2002)	(2002)	(2000)	(2001)	(2001)	(2003)	(1999)	(1999)	(1999)
MIN		5.14	4.30	2.85	2.01	1.71	1.13	4.23	95.9	176	61.6	15.5	8.27
(WY)		(2002)	(2003)	(2001)	(2000)	(2003)	(2003)	(1999)	(2001)	(2001)	(2001)	(2001)	(2001)

06187915 SODA BUTTE CREEK AT PARK BOUNDARY, AT SILVER GATE, MT—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR	FOR 2003 WATER YEAR	WATER YEARS 1991 - 2003
ANNUAL TOTAL	20,614.8	23,863.10	--
ANNUAL MEAN	56.5	65.4	56.0
HIGHEST ANNUAL MEAN	--	--	65.4 2003
LOWEST ANNUAL MEAN	--	--	38.5 2001
HIGHEST DAILY MEAN	735 Jun 1	703 May 31	735 Jun 1, 2002
LOWEST DAILY MEAN	1.4 ^e Apr 2,3	0.80 ^e Feb 23,24	0.80 Feb 23, 2003
ANNUAL SEVEN-DAY MINIMUM	1.5 Mar 28	0.99 Mar 23	0.99 Mar 23, 2003
MAXIMUM PEAK FLOW	--	896 Jun 1	912 Jun 1, 2002
MAXIMUM PEAK STAGE	--	3.18 Jun 1	3.49 Jun 1, 2002
ANNUAL RUNOFF (AC-FT)	40,890	47,330	40,560
10 PERCENT EXCEEDS	202	264	205
50 PERCENT EXCEEDS	8.0	8.1	7.6
90 PERCENT EXCEEDS	1.9	1.5	1.8

e Estimated.



06187915 SODA BUTTE CREEK AT PARK BOUNDARY, SILVER GATE, MT--Continued

WATER QUALITY RECORDS

PERIOD OF RECORD.--January 1999 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: April 2003 to September 2003.

INSTRUMENTATION.--Temperature recorder installed April 23, 2003.

REMARKS.--Dail water temperature record goo. Unpublished records of instantaneous water temperature and specific conductance are available in files of the Montana District office.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: Maximum, 17.5° C, August 15, 2003; minimum during period of collection, 0.0° C, April 26, 27, and May 19, 20, 2003.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum, 17.5° C, August 15; minimum, 0.0° C, April 26, 27, and May 19, 20.

TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	---	---	---	---	---	---	---	---	---	5.0	1.0	2.5
2	---	---	---	---	---	---	---	---	---	5.5	0.5	2.5
3	---	---	---	---	---	---	---	---	---	4.5	1.5	2.5
4	---	---	---	---	---	---	---	---	---	5.5	1.5	3.0
5	---	---	---	---	---	---	---	---	---	5.5	1.0	3.0
6	---	---	---	---	---	---	---	---	---	6.0	0.5	3.0
7	---	---	---	---	---	---	---	---	---	7.0	1.0	3.5
8	---	---	---	---	---	---	---	---	---	6.0	1.0	3.0
9	---	---	---	---	---	---	---	---	---	8.5	1.0	4.0
10	---	---	---	---	---	---	---	---	---	6.5	1.5	3.5
11	---	---	---	---	---	---	---	---	---	6.0	0.5	3.0
12	---	---	---	---	---	---	---	---	---	6.0	1.5	3.5
13	---	---	---	---	---	---	---	---	---	8.0	1.0	4.0
14	---	---	---	---	---	---	---	---	---	10.5	0.5	4.5
15	---	---	---	---	---	---	---	---	---	7.5	1.0	3.5
16	---	---	---	---	---	---	---	---	---	7.0	1.0	3.0
17	---	---	---	---	---	---	---	---	---	7.5	0.5	3.0
18	---	---	---	---	---	---	---	---	---	3.0	0.5	2.0
19	---	---	---	---	---	---	---	---	---	6.5	0.0	2.5
20	---	---	---	---	---	---	---	---	---	9.0	0.0	3.5
21	---	---	---	---	---	---	---	---	---	7.0	1.0	3.5
22	---	---	---	---	---	---	---	---	---	8.5	1.5	3.5
23	---	---	---	---	---	---	---	---	---	6.5	1.0	3.0
24	---	---	---	---	---	---	5.0	1.5	2.5	6.5	1.0	3.0
25	---	---	---	---	---	---	5.5	0.5	2.5	6.0	1.0	2.5
26	---	---	---	---	---	---	2.5	0.0	1.5	4.5	1.0	2.5
27	---	---	---	---	---	---	5.5	0.0	2.0	6.5	1.0	3.0
28	---	---	---	---	---	---	3.5	0.5	1.5	6.5	1.5	3.0
29	---	---	---	---	---	---	5.5	0.5	2.5	6.0	1.5	3.0
30	---	---	---	---	---	---	5.5	1.0	3.0	5.0	1.5	3.0
31	---	---	---	---	---	---	---	---	---	4.0	2.0	3.0
MONTH	---	---	---	---	---	---	5.5	0.0	2.2	10.5	0.0	3.1

06187950 SODA BUTTE CREEK NEAR LAMAR RANGER STATION, YELLOWSTONE NATIONAL PARK

LOCATION.--Lat 44° 52'06", long 110° 09'53", Yellowstone National Park, Hydrologic Unit 10070001, on left bank, 4 mi southeast of Lamar Ranger Station and at river mile 1.5.

DRAINAGE AREA.--99.0 mi².

PERIOD OF RECORD.--October 1988 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 6,630 ft above NGVD of 1929, from topographic map. U.S. Geological Survey data collection platform with satellite telemetry at station.

REMARKS.--Records good except those for estimated daily discharges, which are poor. No regulation or diversion upstream of station. Station operated by National Park Service and record provided by the Montana District.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	44	e20	21	26	29	e25	26	82	1,340	537	90	51
2	43	e22	29	27	27	e20	28	78	950	509	85	49
3	42	e22	28	27	e25	e22	26	81	919	478	90	47
4	43	22	28	27	e25	e24	24	86	864	436	97	46
5	46	e22	28	27	e22	e20	e20	85	724	403	85	46
6	43	22	27	e24	e20	24	23	82	641	382	81	48
7	43	22	e25	e22	e20	e24	22	78	547	360	75	51
8	42	24	e24	e20	e23	e20	22	78	572	324	72	51
9	42	26	e23	e18	e24	21	26	72	683	294	75	49
10	41	27	e25	e16	22	22	29	72	821	289	72	48
11	44	27	e26	e20	e20	23	31	71	881	284	70	47
12	40	27	23	21	e18	22	34	74	889	279	67	48
13	38	27	24	23	e20	24	43	85	869	260	66	50
14	37	26	27	24	24	23	57	94	889	241	65	45
15	37	26	28	e24	24	24	65	139	899	225	60	43
16	36	23	28	e20	24	24	59	235	988	209	60	43
17	36	25	29	e20	e25	23	54	279	1,030	198	60	44
18	36	26	e27	e20	e24	21	50	271	1,120	197	63	42
19	35	27	e22	e20	e22	20	46	218	1,050	186	61	41
20	35	26	e23	22	e20	18	46	201	998	171	59	40
21	35	25	20	23	25	20	53	206	887	162	61	40
22	36	25	23	e21	e24	20	71	285	697	151	57	39
23	35	e22	e20	23	e20	23	97	511	562	141	58	39
24	35	e20	e19	e22	e15	18	89	753	461	137	56	38
25	35	e17	e18	24	e15	20	94	1,010	369	143	54	38
26	31	e17	e22	24	e16	22	107	1,140	326	138	52	37
27	29	18	22	25	e20	23	93	1,260	331	142	53	37
28	e26	22	24	24	23	e20	88	1,350	407	121	59	37
29	e25	24	26	25	---	e22	84	1,430	478	111	56	37
30	e22	26	26	25	---	22	82	1,320	521	101	54	37
31	e20	---	27	25	---	23	---	1,360	---	95	53	---
TOTAL	1,132	705	762	709	616	677	1,589	13,086	22,713	7,704	2,066	1,308
MEAN	36.5	23.5	24.6	22.9	22.0	21.8	53.0	422	757	249	66.6	43.6
MAX	46	27	29	27	29	25	107	1,430	1,340	537	97	51
MIN	20	17	18	16	15	18	20	71	326	95	52	37
AC-FT	2,250	1,400	1,510	1,410	1,220	1,340	3,150	25,960	45,050	15,280	4,100	2,590

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 2003, BY WATER YEAR (WY)

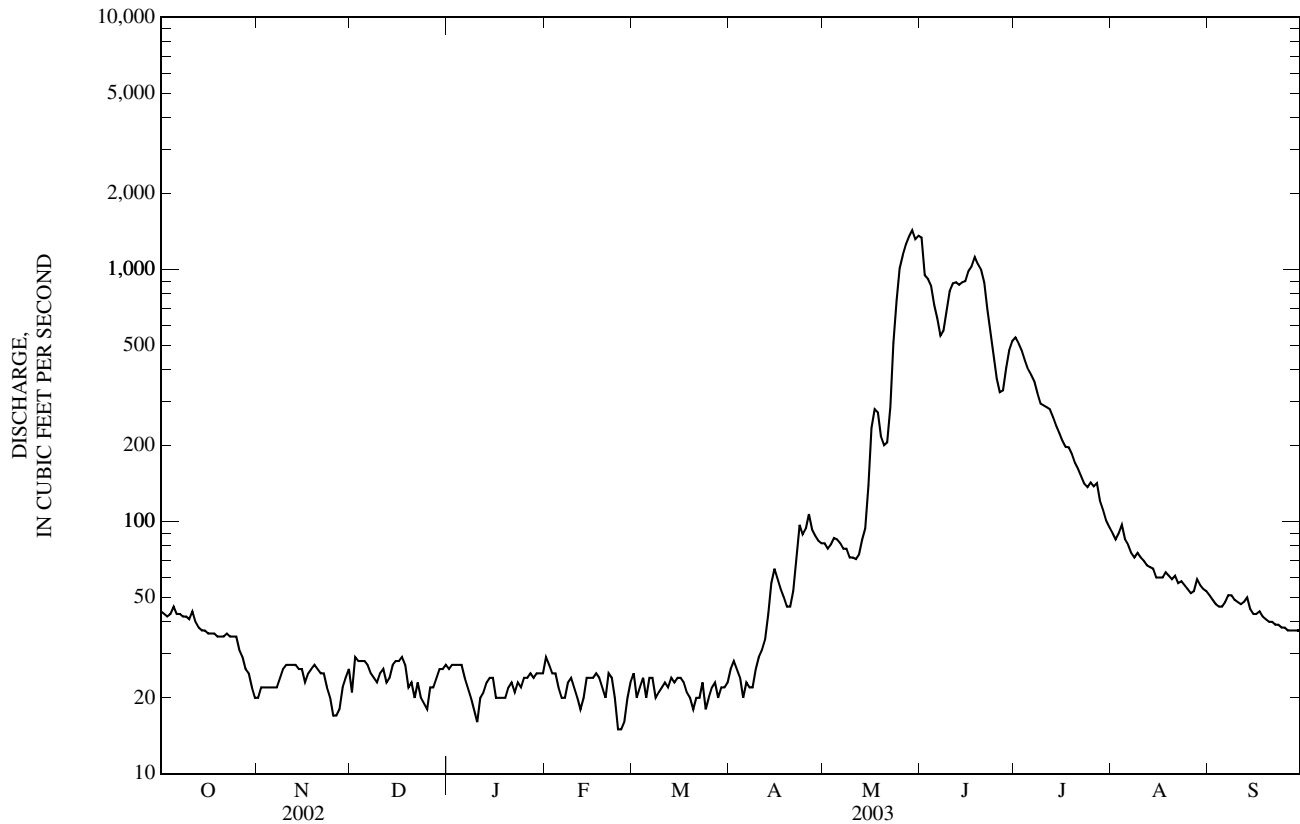
MEAN	43.5	31.6	25.1	25.3	23.4	23.5	61.5	407	695	288	93.8	56.7
MAX	68.8	40.3	31.2	33.3	32.0	32.0	127	580	1,251	447	162	92.0
(WY)	(1998)	(1997)	(1996)	(1997)	(2000)	(1997)	(1990)	(1993)	(1996)	(1998)	(1997)	(1997)
MIN	27.8	21.4	16.0	16.7	16.2	17.2	32.3	217	338	106	51.0	36.1
(WY)	(1989)	(1995)	(1989)	(1989)	(2002)	(2002)	(1993)	(1995)	(2001)	(1994)	(2001)	(2001)

06187950 SODA BUTTE CREEK NEAR LAMAR RANGER STATION, YELLOWSTONE NATIONAL PARK—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1989 - 2003	
ANNUAL TOTAL	45,107		53,067		--	
ANNUAL MEAN	124		145		148	
HIGHEST ANNUAL MEAN	--		--		204	1996
LOWEST ANNUAL MEAN	--		--		96.5	2001
HIGHEST DAILY MEAN	1,050	May 31	1,430	May 29	2,070	Jun 9, 1996
LOWEST DAILY MEAN	13 ^e	Feb 26	15 ^e	Feb 24, 25	12	Feb 4, 1989
ANNUAL SEVEN-DAY MINIMUM	14	Feb 24	19	Feb 22	13	Feb 2, 1989
MAXIMUM PEAK FLOW	--		1,790	May 28	2,450 ^a	Jun 8, 1996
MAXIMUM PEAK STAGE	--		7.20	May 28	7.20	May 28, 2003
ANNUAL RUNOFF (AC-FT)	89,470		105,300		107,300	
10 PERCENT EXCEEDS	448		478		482	
50 PERCENT EXCEEDS	36		37		42	
90 PERCENT EXCEEDS	17		20		21	

a Gage height, 5.61 ft.

e Estimated.



06188000 LAMAR RIVER NEAR TOWER FALLS RANGER STATION, YELLOWSTONE NATIONAL PARK

LOCATION.--Lat 44° 55'40", long 110° 23'35", Yellowstone National Park, Hydrologic Unit 10070001, on left bank 0.5 mi north of the Cooke City highway, 1.6 mi northeast of Tower Falls Ranger Station, 2.7 mi downstream from Slough Creek, and at river mile 0.5.

DRAINAGE AREA.--660 mi².

PERIOD OF RECORD.--September 1922, April 1923 to September 1969, May 1985 to September 1986 (seasonal records only), October 1988 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 6,000 ft above NGVD of 1929, from topographic map. Prior to September 16, 1925, nonrecording gage and September 16, 1925 to July 29, 1927, water-stage recorder at same site at datum 1.00 ft higher. July 29, 1927 to September 30, 1969, water-stage recorder at same site and datum. May 1985 to September 1986, nonrecording gage at same site and datum. U.S. Geological Survey data collection platform with satellite telemetry at station.

REMARKS.--Records good except those for estimated daily discharges, which are poor. No regulation or diversion upstream of station. Station operated and record provided by the Montana District.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	173	e110	e100	e100	e140	e75	e130	890	8,710	1,810	385	161
2	170	e120	e110	e100	e120	e80	e160	831	6,390	1,670	365	153
3	163	128	e110	e100	e110	e85	e140	864	5,050	1,560	354	148
4	169	126	e110	e100	e100	e85	e130	929	4,610	1,440	378	146
5	189	124	e110	e95	e90	e80	e120	989	4,150	1,320	407	142
6	190	125	e110	e90	e80	e80	e130	913	3,810	1,250	354	146
7	181	125	e100	e90	e80	e85	e150	851	3,320	1,170	330	171
8	187	134	e100	e85	e85	e90	156	876	3,500	1,120	315	179
9	184	140	e100	e85	e90	e95	187	814	3,970	1,020	331	185
10	174	139	e100	e90	e100	e100	283	798	4,590	970	330	172
11	185	139	e110	e100	e100	e100	414	791	4,600	919	313	181
12	187	135	e110	e110	e90	e110	574	837	4,200	884	303	176
13	164	141	e120	e120	e95	e120	763	1,000	3,950	836	293	187
14	168	139	e130	e110	e100	e120	1,040	1,300	3,930	787	286	174
15	168	137	e120	e100	e120	e120	1,140	2,050	3,870	740	280	160
16	165	127	e110	e90	e110	e110	946	2,870	3,980	698	275	154
17	160	132	e100	e90	e110	e100	800	3,360	3,780	665	301	162
18	154	133	e90	e95	e110	e95	712	3,280	3,820	641	323	161
19	148	142	e90	e100	e110	e95	632	2,230	3,600	626	300	154
20	146	136	e90	e110	e110	e90	604	1,910	3,350	591	284	150
21	149	137	e100	e110	e120	e95	787	2,120	3,070	565	e260	147
22	155	134	e100	e110	e110	e100	1,140	2,820	2,500	527	e250	143
23	151	132	e90	e110	e90	e95	1,450	4,440	2,140	500	e240	140
24	152	108	e80	e120	e70	e90	1,230	5,840	1,860	486	e220	137
25	150	e100	e90	e130	e75	e100	1,350	7,920	1,640	494	e200	134
26	134	e110	e100	e140	e75	e95	1,610	8,320	1,490	553	e180	132
27	126	e120	e110	e130	e80	e90	1,210	8,870	1,490	529	e170	130
28	147	e110	e120	e120	e80	e85	1,050	10,200	1,640	474	169	129
29	131	e110	e110	e120	---	e85	933	11,600	1,790	435	181	129
30	98	e110	e110	e120	---	e90	925	10,800	1,770	409	182	129
31	e100	---	e110	e130	---	e110	---	10,100	---	390	172	---
TOTAL	4,918	3,803	3,240	3,300	2,750	2,950	20,896	111,413	106,570	26,079	8,731	4,612
MEAN	159	127	105	106	98.2	95.2	697	3,594	3,552	841	282	154
MAX	190	142	130	140	140	120	1,610	11,600	8,710	1,810	407	187
MIN	98	100	80	85	70	75	120	791	1,490	390	169	129
AC-FT	9,750	7,540	6,430	6,550	5,450	5,850	41,450	221,000	211,400	51,730	17,320	9,150

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1923 - 2003, BY WATER YEAR (WY)*

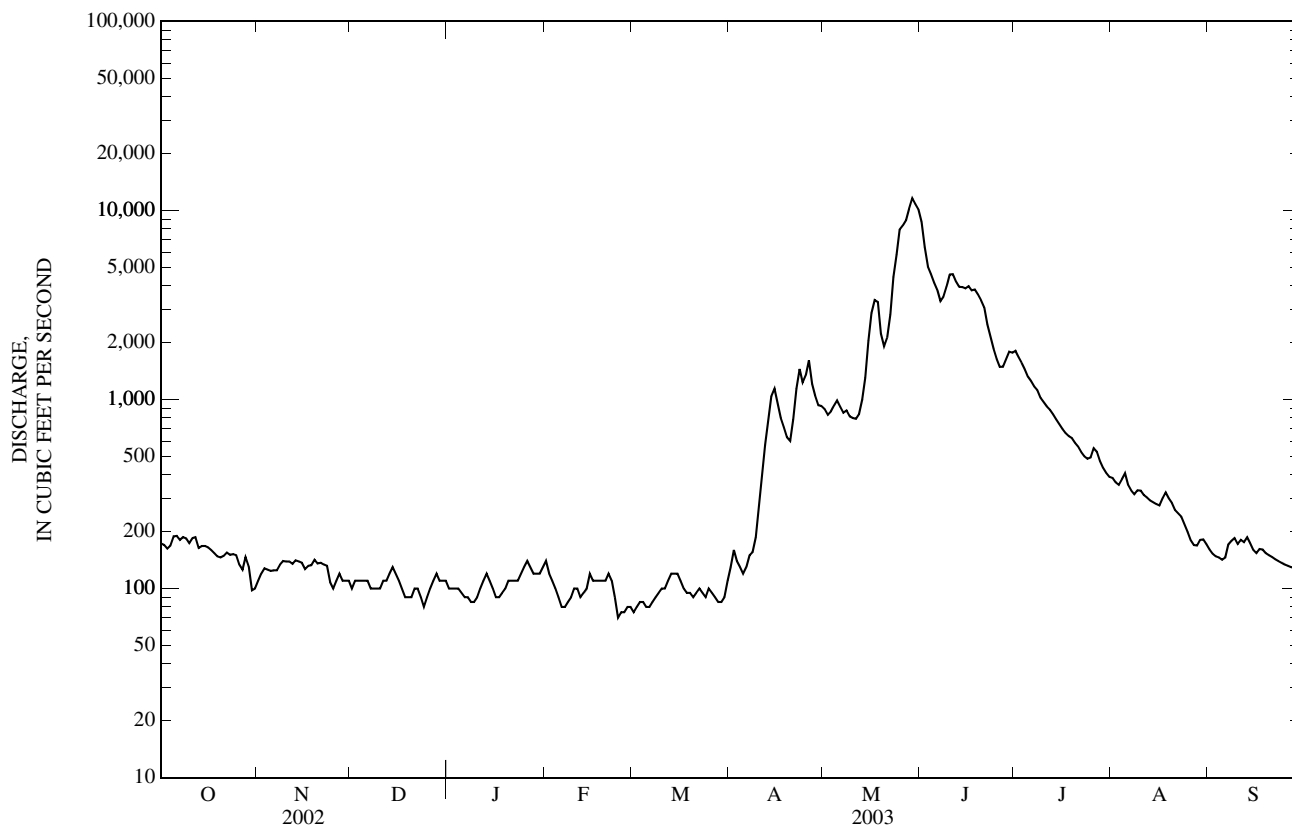
MEAN	212	156	120	106	102	113	469	2,866	4,248	1,346	351	228
MAX	485	330	202	200	171	204	1,684	6,885	9,044	3,256	886	518
(WY)	(1942)	(1928)	(1951)	(1969)	(1969)	(1999)	(1990)	(1928)	(1996)	(1943)	(1968)	(1968)
MIN	109	88.1	75.5	71.8	70.0	67.9	106	969	1,408	344	173	115
(WY)	(1989)	(1937)	(1953)	(1989)	(1942)	(1964)	(1945)	(1933)	(1934)	(1931)	(1940)	(1988)

06188000 LAMAR RIVER NEAR TOWER FALLS RANGER STATION, YELLOWSTONE NATIONAL PARK—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1923 - 2003*	
ANNUAL TOTAL	311,235		299,262		--	
ANNUAL MEAN	853		820		866	
HIGHEST ANNUAL MEAN	--		--		1,531	1997
LOWEST ANNUAL MEAN	--		--		525	1934
HIGHEST DAILY MEAN	10,700	Jun 1	11,600	May 29	15,600	Jun 10, 1996
LOWEST DAILY MEAN	70	Jan 15	70	Feb 24	45	Mar 23, 1964
ANNUAL SEVEN-DAY MINIMUM	81	Jan 10	76	Feb 24	57	Mar 5, 1964
MAXIMUM PEAK FLOW	--		14,200	May 29	19,500	Jun 10, 1996
MAXIMUM PEAK STAGE	--		10.48	May 29	12.15	Jun 10, 1996
ANNUAL RUNOFF (AC-FT)	617,300		593,600		627,500	
10 PERCENT EXCEEDS	3,170		2,180		2,930	
50 PERCENT EXCEEDS	168		151		181	
90 PERCENT EXCEEDS	85		90		90	

* For period of operation.

e Estimated.



YELLOWSTONE RIVER BASIN

06190540 BOILING RIVER AT MAMMOTH, YELLOWSTONE NATIONAL PARK

LOCATION.--Lat 44° 59'07", long 110° 41'18" (NAD 27), Yellowstone National Park, Hydrologic Unit 10070001, on left bank 50 ft downstream from outfall, 150 ft upstream of mouth, and 0.8 mi northeast of U.S. Post Office at Mammoth.

DRAINAGE AREA.--Indeterminate.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1988 to September 1995, October 2002 to September 2003. Published as "Hot River" at Mammoth from 1989-94.

GAGE.--Water-stage recorder. Datum of gage is 5,666.11 ft above NGVD of 1929. U.S. Geological Survey data collection platform with satellite telemetry at station.

REMARKS.--Records good. No regulation or diversion upstream from station, however, flow is added from sinkholes upstream from spring. Station operation by and record provided by the Montana District.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	30	28	28	28	30	30	31	31	33	28	25	21
2	30	29	29	28	30	30	31	31	33	28	24	21
3	30	29	29	29	29	30	31	31	33	27	24	21
4	30	29	29	29	28	30	31	31	33	27	24	21
5	30	29	29	30	29	30	31	32	32	27	24	21
6	30	29	29	30	30	31	31	32	32	26	25	22
7	30	30	29	29	29	30	31	32	31	26	25	22
8	30	30	26	29	30	31	31	32	31	26	25	22
9	30	30	27	31	30	30	31	32	31	26	26	22
10	30	30	28	31	30	31	31	32	31	25	26	22
11	30	30	29	32	30	31	31	32	31	25	e25	22
12	30	29	29	31	30	31	31	32	31	25	e24	22
13	30	29	29	31	30	31	32	32	31	24	e24	22
14	30	29	29	31	30	31	32	32	31	24	e24	22
15	30	29	29	30	30	31	32	32	31	24	e24	21
16	30	29	29	29	30	31	32	33	31	24	e24	21
17	30	29	29	28	30	31	32	33	31	24	e24	21
18	30	29	27	29	30	31	32	33	31	24	e25	21
19	30	29	28	30	30	31	32	33	31	23	e24	21
20	30	29	28	30	29	31	32	33	31	23	e24	21
21	30	29	28	30	30	31	32	33	31	23	e24	21
22	30	29	28	30	30	31	32	33	30	23	e24	21
23	30	29	28	30	30	31	32	33	30	24	e24	21
24	30	28	26	30	26	31	32	33	30	24	e24	21
25	30	28	28	30	28	31	32	33	30	25	e23	21
26	30	29	28	30	30	31	32	33	29	26	e23	21
27	29	29	29	30	30	31	32	33	29	25	22	21
28	30	29	28	30	30	31	32	33	29	25	22	21
29	30	29	28	30	---	31	31	33	29	25	22	21
30	28	29	28	30	---	31	31	33	28	25	22	21
31	27	---	28	30	---	31	---	33	---	24	21	---
TOTAL	924	872	876	925	828	954	946	1,004	925	775	741	639
MEAN	29.8	29.1	28.3	29.8	29.6	30.8	31.5	32.4	30.8	25.0	23.9	21.3
MAX	30	30	29	32	30	31	32	33	33	28	26	22
MIN	27	28	26	28	26	30	31	31	28	23	21	21
AC-FT	1,830	1,730	1,740	1,830	1,640	1,890	1,880	1,990	1,830	1,540	1,470	1,270

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 2003, BY WATER YEAR (WY)*

MEAN	27.4	26.1	25.9	26.5	25.5	25.7	27.1	29.8	29.3	27.6	26.8	26.1
MAX	29.9	29.1	28.3	29.8	29.6	30.8	31.5	33.1	33.0	31.2	29.1	28.6
(WY)	(1989)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(1995)	(1995)	(1995)	(1995)	(1995)
MIN	23.9	22.7	22.9	24.1	22.0	23.8	25.0	27.3	27.2	25.0	23.9	21.3
(WY)	(1990)	(1990)	(1994)	(1990)	(1994)	(1990)	(1991)	(1990)	(1990)	(2003)	(2003)	(2003)

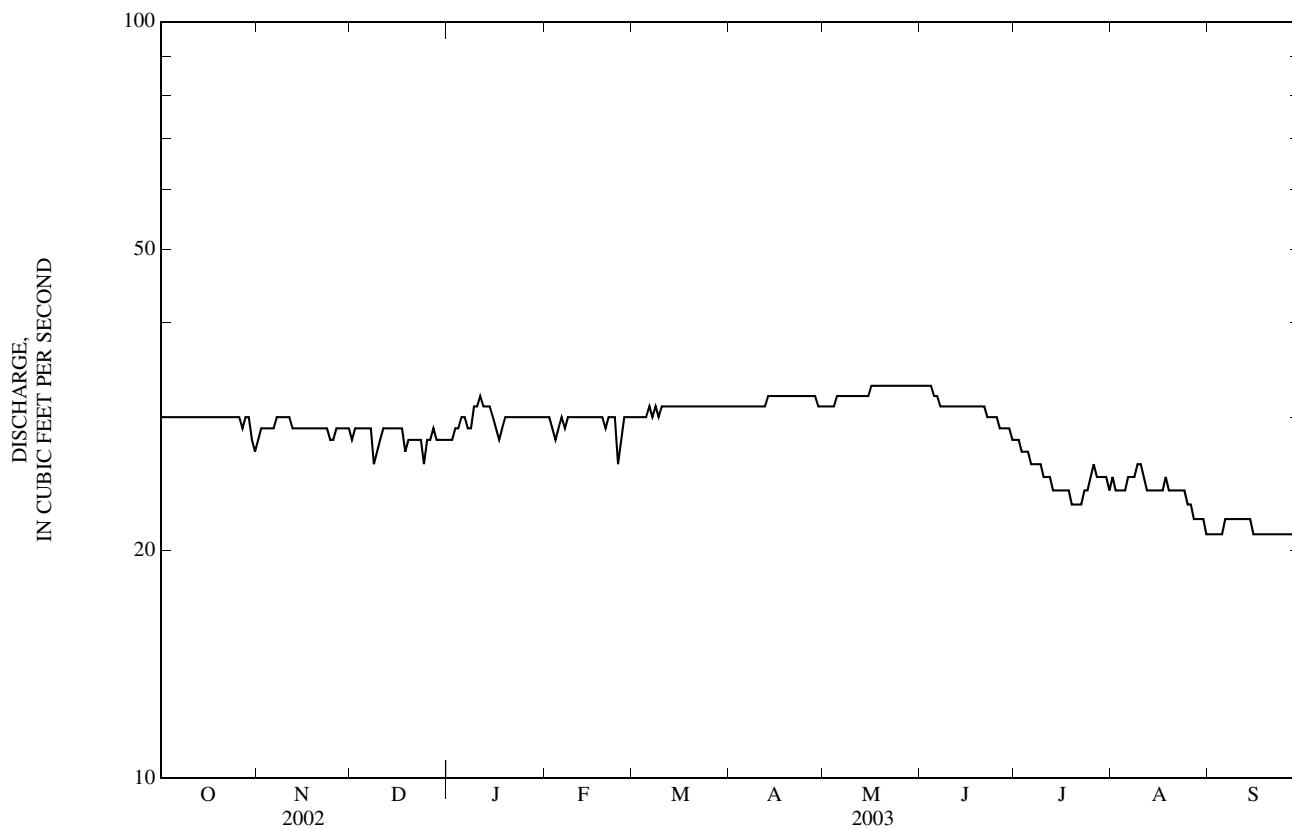
06190540 BOILING RIVER AT MAMMOTH, YELLOWSTONE NATIONAL PARK—Continued

SUMMARY STATISTICS	FOR 2003 WATER YEAR	WATER YEARS 1989 - 2003*
ANNUAL TOTAL	10,409	--
ANNUAL MEAN	28.5	27.0
HIGHEST ANNUAL MEAN	--	28.5 2003
LOWEST ANNUAL MEAN	--	25.5 1990
HIGHEST DAILY MEAN	33 May 16-Jun 4	36 May 20, 1995
LOWEST DAILY MEAN	21 Many days	19 Nov 23, 1993
ANNUAL SEVEN-DAY MINIMUM	21 Sep 15	21 Nov 23, 1993
MAXIMUM PEAK FLOW	34 May 18	36 ^a May 20, 1995
MAXIMUM PEAK STAGE	1.47 May 18	1.50 May 17, 1993
ANNUAL RUNOFF (AC-FT)	20,650	19,550
10 PERCENT EXCEEDS	32	30
50 PERCENT EXCEEDS	30	27
90 PERCENT EXCEEDS	23	24

* For period of operation.

a Gage height, 1.45 ft.

e Estimated.



06190540 BOILING RIVER AT MAMMOUTH, YELLOWSTONE NATIONAL PARK--Continued

WATER QUALITY RECORDS

PERIOD OF RECORD.--Water years 1988 to 1994, October 2002 to September 2003.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1988 to September 1990.

WATER TEMPERATURE: October 1988 to September 1994, October 2002 to September 2003.

INSTRUMENTATION.--Temperature recorder installed September 25, 2002.

REMARKS.--Daily temperature record good. Unpublished records of instantaneous water temperature and specific conductance are available in files of the Montana District office.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE (water years 1988-90): Maximum daily, 2,410 microsiemens/cm, January 29, 1990; minimum daily, 1,550 microsiemens/cm, July 17, 22, 23, 1990.

WATER TEMPERATURE (water years 1989-94, 2003): Maximum, 30° C, July 22-24, 2003; minimum, 38.0° C, June 16, 27, 1989, April 19, 1990.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum, 57.0° C, July 22-24; minimum, 39.5° C, May 17.

TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	44.5	44.0	44.5	48.0	45.0	46.5	52.0	44.0	45.5	44.0	43.5	44.0
2	45.0	43.5	44.0	45.5	45.0	45.5	45.0	44.0	44.5	44.0	43.5	44.0
3	44.5	43.5	44.0	45.5	45.0	45.0	44.5	44.0	44.5	44.0	44.0	44.0
4	45.0	44.0	44.5	45.0	45.0	45.0	45.0	44.0	44.5	44.0	44.0	44.0
5	45.0	44.5	45.0	45.5	45.0	45.0	44.5	44.5	44.5	44.5	44.0	44.0
6	45.5	44.5	45.0	45.0	44.5	45.0	44.5	44.0	44.5	47.0	43.5	44.0
7	45.5	44.5	45.0	45.0	44.5	45.0	49.5	44.0	44.5	51.0	44.0	47.0
8	45.5	44.5	45.0	45.0	45.0	45.0	51.5	45.5	48.5	51.5	43.5	48.0
9	45.5	44.5	45.0	45.5	45.0	45.5	50.5	44.5	47.0	46.5	43.5	45.0
10	45.0	44.5	45.0	45.5	45.0	45.0	49.0	43.5	45.5	49.5	44.5	46.5
11	45.0	44.0	44.5	45.5	45.0	45.0	47.0	43.5	44.5	44.5	43.0	43.5
12	44.5	43.5	44.0	45.5	45.0	45.5	46.5	44.0	44.5	43.5	43.0	43.5
13	45.0	43.5	44.0	46.0	45.0	45.5	44.5	44.0	44.0	44.0	43.5	43.5
14	45.0	43.5	44.5	45.0	45.0	45.0	44.5	44.0	44.0	44.5	44.0	44.0
15	45.0	43.5	44.5	45.0	44.5	45.0	44.5	44.0	44.0	45.0	43.5	44.0
16	45.0	44.0	44.5	45.0	44.5	44.5	44.0	44.0	44.0	52.0	44.0	46.0
17	45.0	44.0	44.5	45.0	44.5	45.0	44.0	43.5	44.0	51.5	44.0	47.0
18	45.0	44.0	44.5	45.0	44.5	44.5	50.0	43.5	46.5	50.5	44.0	46.0
19	45.0	43.5	44.5	45.0	44.5	45.0	45.5	44.5	45.0	44.0	43.5	44.0
20	45.0	44.0	44.5	45.5	45.0	45.0	46.0	43.5	45.0	44.5	44.0	44.0
21	45.0	44.5	44.5	45.5	45.0	45.5	44.0	43.5	43.5	44.5	44.0	44.0
22	45.0	44.0	44.5	45.5	45.0	45.5	45.5	43.5	44.0	44.5	44.0	44.0
23	44.5	43.5	44.0	45.5	44.5	44.5	48.0	44.0	45.0	44.5	44.0	44.5
24	44.5	44.0	44.0	50.0	44.5	47.0	50.0	45.5	48.0	44.5	44.0	44.0
25	44.5	44.0	44.0	48.5	44.5	45.5	45.5	43.5	44.5	44.5	44.0	44.5
26	45.5	43.5	44.0	46.5	44.0	45.0	43.5	43.0	43.5	44.5	44.0	44.5
27	47.0	43.5	44.5	44.0	44.0	44.0	43.0	42.5	43.0	44.5	44.5	44.5
28	45.0	44.0	44.5	44.5	44.0	44.0	43.5	43.0	43.0	44.5	44.0	44.0
29	44.5	43.5	44.0	45.0	44.5	44.5	44.0	43.5	43.5	44.5	44.0	44.0
30	51.0	44.5	47.0	44.5	44.5	44.5	44.0	43.5	43.5	45.0	44.0	44.5
31	53.0	46.0	48.5	---	---	---	44.0	43.5	44.0	45.0	44.0	44.5
MONTH	53.0	43.5	44.7	50.0	44.0	45.1	52.0	42.5	44.7	52.0	43.0	44.6

TEMPERATURE, WATER, DEGREES CELSIUS—Continued
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	44.5	44.0	44.5	43.5	43.0	43.5	44.5	44.0	44.5	44.5	43.0	43.5
2	44.0	44.0	44.0	44.5	43.5	43.5	45.0	43.5	44.0	44.5	43.0	43.5
3	48.5	44.0	46.0	43.5	43.5	43.5	44.0	43.0	43.5	44.0	43.0	43.5
4	50.5	44.5	46.5	44.0	43.5	43.5	44.5	43.0	43.5	44.5	43.0	43.5
5	50.0	44.0	45.0	44.0	43.5	44.0	44.5	43.0	44.0	43.0	42.0	42.5
6	48.0	43.5	44.5	43.5	43.5	43.5	44.5	43.5	44.0	43.5	42.0	42.5
7	46.0	44.0	44.5	44.0	43.5	43.5	45.0	43.5	44.5	44.0	42.5	43.0
8	44.0	43.5	43.5	44.0	43.5	43.5	45.5	43.5	44.5	43.5	42.5	43.0
9	44.0	43.5	44.0	44.0	43.5	44.0	46.0	44.0	45.0	43.0	42.5	43.0
10	44.0	44.0	44.0	44.5	43.0	44.0	46.0	44.0	45.0	43.5	42.5	43.0
11	44.5	44.0	44.0	44.0	44.0	44.0	45.5	44.0	44.5	43.5	42.0	43.0
12	44.5	44.0	44.5	44.5	44.0	44.0	45.5	43.5	44.5	43.5	42.5	43.0
13	45.0	44.0	44.5	45.0	44.0	44.5	45.0	43.5	44.0	43.5	42.0	42.5
14	44.5	44.0	44.5	44.5	43.5	44.0	44.0	43.0	43.5	43.5	41.0	42.0
15	45.0	44.5	44.5	44.5	43.5	44.0	43.0	42.5	43.0	42.5	40.5	41.0
16	44.5	44.5	44.5	45.0	44.0	44.5	44.0	42.5	43.0	41.5	40.0	40.5
17	44.5	44.0	44.5	44.5	43.5	44.0	44.0	43.0	43.5	41.5	39.5	40.5
18	45.5	44.0	44.5	44.0	43.5	44.0	44.0	43.0	43.5	41.0	40.5	40.5
19	47.5	44.0	45.0	44.5	43.5	44.0	44.5	43.0	44.0	42.5	40.5	41.5
20	49.0	43.5	45.0	44.5	43.5	44.0	45.0	43.0	44.0	43.5	41.5	42.5
21	44.5	44.0	44.0	44.5	43.5	44.0	44.5	43.0	43.5	43.5	42.5	43.0
22	44.0	43.5	44.0	45.0	44.0	44.5	44.0	43.0	43.5	44.5	42.5	43.5
23	46.5	43.5	44.0	44.5	43.5	44.0	43.5	42.5	43.0	44.0	42.0	43.0
24	55.5	44.0	51.0	44.5	43.0	44.0	43.5	42.5	43.0	44.0	42.0	43.0
25	50.5	46.5	48.5	44.0	43.5	44.0	43.5	42.0	42.5	44.0	41.5	43.0
26	46.5	43.5	44.5	44.0	43.5	44.0	42.5	41.5	42.0	43.5	42.0	42.5
27	43.5	43.0	43.0	44.5	43.5	43.5	43.5	41.5	42.5	44.5	42.0	43.0
28	43.5	43.0	43.5	44.5	43.0	43.5	43.0	42.5	43.0	44.5	42.0	43.0
29	---	---	---	44.5	43.0	44.0	44.0	43.0	43.5	44.5	42.5	43.0
30	---	---	---	45.0	44.0	44.5	44.0	43.0	43.5	43.5	41.5	42.5
31	---	---	---	45.5	44.0	44.5	---	---	---	43.0	41.5	42.5
MONTH	55.5	43.0	44.8	45.5	43.0	43.9	46.0	41.5	43.7	44.5	39.5	42.6
JUNE			JULY			AUGUST			SEPTEMBER			
1	43.0	41.0	42.0	50.0	47.5	49.0	55.5	54.5	55.0	56.5	55.5	56.0
2	44.0	42.0	43.0	50.5	48.0	49.5	55.5	54.5	55.0	56.5	56.0	56.0
3	44.0	42.5	43.0	51.0	49.0	50.0	55.5	55.0	55.5	56.5	56.0	56.0
4	44.0	42.5	43.5	52.0	49.5	50.5	55.5	55.0	55.0	56.5	56.0	56.0
5	44.5	43.0	43.5	52.5	50.5	51.5	55.5	54.5	55.0	56.5	56.0	56.0
6	44.0	43.0	43.5	52.5	51.0	52.0	55.5	55.0	55.0	56.0	55.5	55.5
7	44.5	43.0	44.0	53.0	51.5	52.5	56.0	55.0	55.5	56.0	55.0	55.5
8	45.0	43.0	44.0	53.0	52.0	52.5	55.5	55.0	55.5	56.0	55.0	55.0
9	45.0	43.5	44.5	54.0	52.0	53.0	55.0	54.5	55.0	55.5	55.0	55.5
10	45.0	43.5	44.5	54.5	53.0	53.5	55.5	55.0	55.0	55.5	55.0	55.0
11	45.0	43.5	44.5	54.5	53.5	54.0	56.0	55.5	55.5	55.5	55.0	55.0
12	45.0	43.5	44.5	55.0	53.5	54.5	56.0	55.5	55.5	55.5	55.0	55.5
13	45.5	43.5	44.5	55.5	54.0	54.5	56.0	55.5	56.0	55.5	55.0	55.5
14	45.5	43.5	44.5	55.5	54.5	55.0	56.0	55.5	56.0	56.0	55.0	55.5
15	45.0	44.0	44.5	55.5	54.5	55.0	56.0	55.5	56.0	56.0	55.5	56.0
16	45.5	44.0	45.0	56.0	55.0	55.5	56.0	55.0	55.5	56.0	55.5	55.5
17	46.0	44.0	45.0	56.0	55.5	55.5	56.0	55.0	55.5	55.5	55.0	55.5
18	45.5	44.0	45.0	56.5	55.5	56.0	55.5	54.5	55.0	55.5	55.5	55.5
19	45.5	44.0	45.0	56.5	55.5	56.0	56.0	55.0	55.5	56.0	55.5	55.5
20	45.5	44.5	45.0	56.5	56.0	56.0	56.0	55.5	56.0	56.0	55.5	56.0
21	45.5	44.0	44.5	56.5	56.0	56.5	56.0	55.5	56.0	56.0	55.5	56.0
22	45.0	43.5	44.0	57.0	56.0	56.5	56.0	55.5	56.0	56.0	55.5	56.0
23	44.5	43.5	44.0	57.0	56.5	56.5	56.0	55.5	56.0	56.5	56.0	56.0
24	45.0	44.0	44.5	57.0	55.0	56.5	56.5	55.5	56.0	56.0	56.0	56.0
25	46.0	44.0	45.0	55.0	52.5	54.0	56.5	56.0	56.0	56.5	56.0	56.0
26	47.5	45.5	46.5	53.5	51.5	52.5	56.5	56.0	56.0	56.5	56.0	56.0
27	48.5	46.5	47.5	54.0	52.5	53.5	56.5	56.0	56.0	56.0	56.0	56.0
28	48.5	47.0	47.5	54.5	53.5	54.0	56.0	55.5	56.0	56.0	55.5	56.0
29	49.0	46.5	48.0	55.0	54.0	54.5	56.0	55.5	55.5	56.0	55.5	56.0
30	50.0	47.5	48.5	55.0	54.5	54.5	56.0	55.5	55.5	56.0	55.5	56.0
31	---	---	---	55.0	54.5	55.0	56.0	55.5	56.0	---	---	---
MONTH	50.0	41.0	44.8	57.0	47.5	53.9	56.5	54.5	55.6	56.5	55.0	55.7
YEAR	57.0	39.5	47.0									

06191000 GARDNER RIVER NEAR MAMMOTH, YELLOWSTONE NATIONAL PARK

LOCATION.--Lat 44° 59'33", long 110° 41'26", Yellowstone National Park, Hydrologic Unit 10070001, on left bank at Wyoming-Montana state line, 400 ft upstream from highway bridge, 0.5 mi downstream from Hot River (formerly Boiling River), 1.5 mi north of Mammoth, and at river mile 2.9.

DRAINAGE AREA.--202 mi².

PERIOD OF RECORD.--October 1938 to September 1972, April 1984 to current year. Prior to October 1959, published as Gardiner River near Mammoth.

REVISED RECORDS.--WSP 1729: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 5,623.97 ft above NGVD of 1929 (levels by National Park Service).

REMARKS.--Records good. No regulation or diversion upstream of station. Station operated and record provided by the Montana District.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	122	89	88	84	101	82	95	189	1,520	254	133	105
2	121	95	90	84	92	77	97	183	1,190	245	129	105
3	122	93	88	84	83	83	92	192	942	236	127	106
4	124	102	88	86	83	82	89	212	825	228	129	105
5	130	100	87	86	80	76	86	228	701	220	127	104
6	124	100	87	82	64	79	87	199	654	215	124	112
7	120	98	85	77	71	81	85	188	594	209	118	115
8	117	100	76	75	93	79	85	190	584	205	117	119
9	117	98	80	74	85	82	89	183	618	197	126	114
10	115	98	80	68	86	85	98	178	642	190	120	118
11	119	98	91	93	85	86	110	177	633	185	116	116
12	115	96	88	90	81	88	129	198	603	181	114	113
13	114	96	88	86	82	93	155	252	565	175	112	112
14	115	95	88	84	85	97	172	287	574	172	111	110
15	114	94	87	84	83	94	181	343	552	168	111	107
16	114	92	85	79	82	95	165	416	522	164	117	108
17	113	92	87	75	81	91	155	444	502	158	117	110
18	112	89	74	77	81	88	143	450	496	154	121	108
19	111	91	76	90	81	88	133	369	477	153	113	107
20	110	91	77	84	81	86	136	329	457	153	111	107
21	109	92	90	84	82	87	157	333	428	149	109	105
22	110	93	89	82	84	88	182	375	391	146	109	104
23	108	95	78	83	73	96	216	504	366	143	108	103
24	112	84	59	83	55	87	230	636	337	143	106	103
25	107	72	71	84	76	86	244	826	305	155	105	103
26	103	78	84	84	87	90	261	900	284	180	105	102
27	103	100	89	84	89	88	202	919	270	161	106	101
28	106	98	93	84	82	85	190	1,010	268	147	109	102
29	101	93	88	84	---	84	183	1,100	262	140	109	102
30	84	90	85	81	---	87	181	1,200	257	136	109	101
31	88	---	85	89	---	91	---	1,280	---	133	108	---
TOTAL	3,480	2,802	2,601	2,564	2,288	2,681	4,428	14,290	16,819	5,495	3,576	3,227
MEAN	112	93.4	83.9	82.7	81.7	86.5	148	461	561	177	115	108
MAX	130	102	93	93	101	97	261	1,280	1,520	254	133	119
MIN	84	72	59	68	55	76	85	177	257	133	105	101
AC-FT	6,900	5,560	5,160	5,090	4,540	5,320	8,780	28,340	33,360	10,900	7,090	6,400

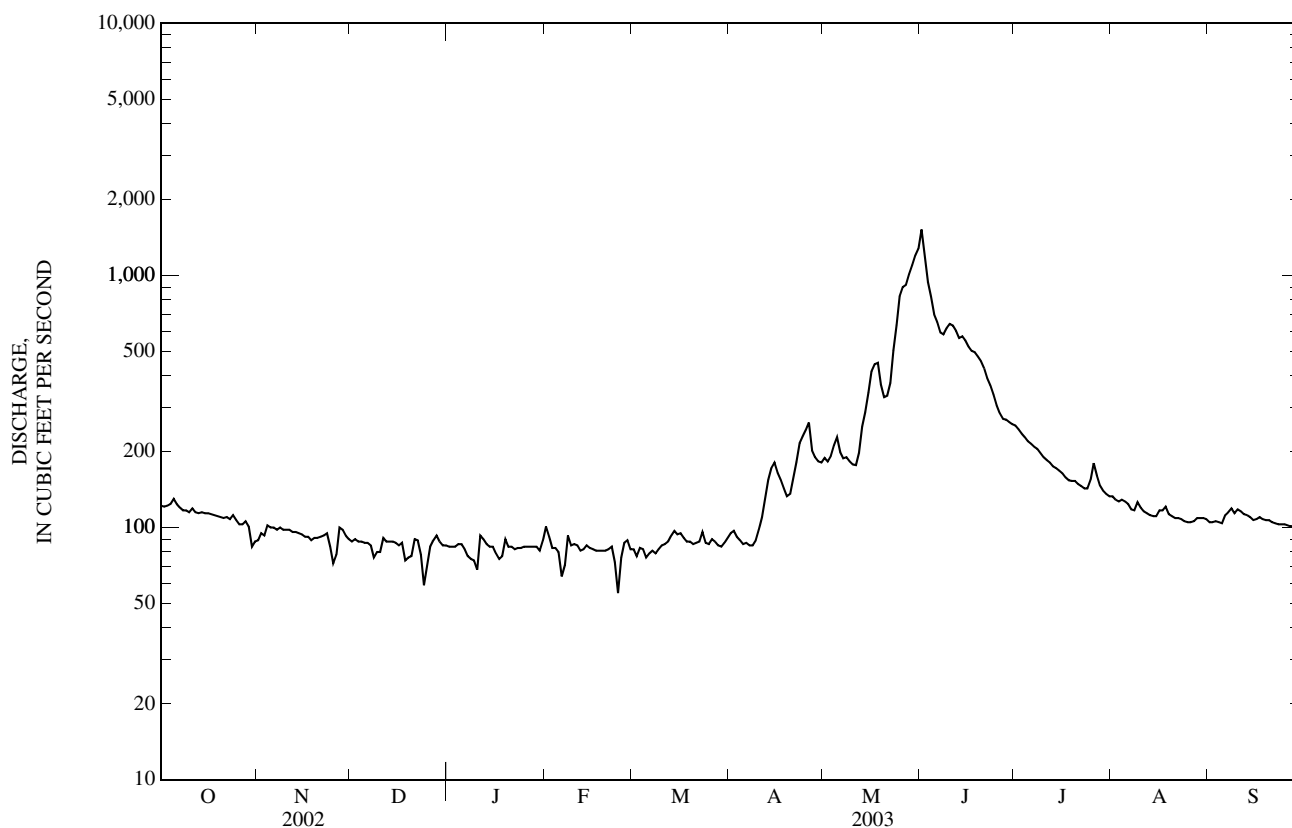
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 2003, BY WATER YEAR (WY)*

MEAN	127	112	102	97.0	93.1	93.8	141	509	712	301	162	136
MAX	175	151	135	134	128	128	304	1,067	1,354	662	236	190
(WY)	(1969)	(1998)	(1998)	(1998)	(1998)	(1998)	(1990)	(1997)	(1971)	(1943)	(1943)	(1968)
MIN	94.9	85.5	79.3	77.6	75.0	75.4	84.1	283	212	133	103	93.4
(WY)	(2002)	(1940)	(1941)	(1941)	(1940)	(1942)	(1945)	(1960)	(1987)	(1988)	(1988)	(1988)

06191000 GARDNER RIVER NEAR MAMMOTH, YELLOWSTONE NATIONAL PARK—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1939 - 2003*	
ANNUAL TOTAL	66,653		64,251		--	
ANNUAL MEAN	183		176		216	
HIGHEST ANNUAL MEAN	--		--		324	1997
LOWEST ANNUAL MEAN	--		--		138	1988
HIGHEST DAILY MEAN	1,240	Jun 2	1,520	Jun 1	1,830	May 29, 1956
LOWEST DAILY MEAN	59	Dec 24	55	Feb 24	53	Dec 15, 1988
ANNUAL SEVEN-DAY MINIMUM	77	Dec 19	76	Feb 19	61	Feb 1, 1989
MAXIMUM PEAK FLOW	--		1,730	Jun 1	2,080 ^a	Jun 4, 1956
MAXIMUM PEAK STAGE	--		4.70	Jun 1	5.03	Jun 2, 1997
ANNUAL RUNOFF (AC-FT)	132,200		127,400		156,400	
10 PERCENT EXCEEDS	453		367		510	
50 PERCENT EXCEEDS	115		106		121	
90 PERCENT EXCEEDS	83		82		87	

* For period of operation.

^a Gage height, 4.46 ft.

06191500 YELLOWSTONE RIVER AT CORWIN SPRINGS, MT

LOCATION.--Lat 45°06'43", long 110°47'37", in NW $\frac{1}{4}$ SE $\frac{1}{4}$ NW $\frac{1}{4}$ sec.30, T.8 S., R.8 E., Park County, Hydrologic Unit 10070002, on left bank 20 ft downstream from county road bridge at Corwin Springs, 1.3 mi upstream from Mol Heron Creek, 7 mi northwest of Gardiner, and at river mile 549.7.

DRAINAGE AREA.--2,623 mi².

PERIOD OF RECORD.--August 1889 to November 1893 (published as "at Horr"), September 1910 to current year. Monthly discharge only for some periods, published in WSP 1309.

REVISED RECORDS.--WSP 1309: 1912. WSP 1509: 1889-94, 1911, 1913, 1916-18, 1920-21, 1925, 1927. WSP 1559: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 5,079.09 ft above NGVD of 1929. August 12, 1889 to November 4, 1893, nonrecording gages at site 2 mi upstream at different datums. September 2, 1910 to April 19, 1935, nonrecording gages on bridge at present datum. U.S. Geological Survey data collection platform with satellite telemetry at station.

REMARKS.--Water-discharge records good. Natural storage in Yellowstone Lake. Diversions for irrigation of about 960 acres of which 40 acres lies downstream from station. Station operated and record provided by the Montana District.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,350	942	894	804	910	799	942	2,230	21,200	7,100	3,040	1,660
2	1,300	965	902	792	923	763	1,000	2,160	17,200	6,830	2,980	1,620
3	1,280	944	912	803	785	776	986	2,170	14,300	6,570	2,930	1,600
4	1,280	966	903	806	803	788	946	2,340	13,100	6,320	2,920	1,580
5	1,330	965	899	824	779	771	883	2,480	11,600	6,090	2,890	1,550
6	1,340	971	889	786	737	768	857	2,380	11,000	5,960	2,750	1,560
7	1,290	969	872	747	727	787	879	2,270	10,100	5,810	2,660	1,590
8	1,280	979	806	732	797	806	884	2,270	10,300	5,660	2,580	1,590
9	1,260	1,010	778	728	795	824	914	2,210	11,200	5,450	2,550	1,590
10	1,240	992	793	706	805	843	1,030	2,150	12,400	5,240	2,490	1,550
11	1,270	990	860	757	810	852	1,210	2,130	12,500	5,060	2,430	1,540
12	1,260	976	837	791	794	872	1,440	2,220	11,900	4,940	2,370	1,530
13	1,200	984	892	788	780	893	1,730	2,480	11,500	4,810	2,300	1,500
14	1,200	974	872	788	814	956	2,120	2,980	11,400	4,690	2,240	1,460
15	1,190	970	875	796	821	927	2,350	4,310	11,400	4,540	2,210	1,440
16	1,170	940	858	748	809	936	2,160	5,770	11,500	4,390	2,170	1,420
17	1,150	947	868	752	805	932	1,900	7,090	11,300	4,280	2,150	1,430
18	1,140	923	785	725	810	873	1,760	7,140	11,500	4,170	2,130	1,370
19	1,120	948	741	751	790	838	1,630	5,180	11,100	4,070	2,080	1,360
20	1,120	936	822	770	788	860	1,560	4,440	10,600	3,970	2,020	1,340
21	1,120	932	818	775	810	860	1,750	4,760	10,100	3,870	1,970	1,300
22	1,120	930	830	777	822	857	2,220	5,520	9,090	3,760	1,930	1,280
23	1,100	963	796	785	781	919	2,760	8,880	8,490	3,670	1,920	1,280
24	1,120	864	656	769	699	856	2,640	11,300	7,930	3,590	1,880	1,260
25	1,110	828	798	787	700	865	2,710	14,400	7,480	3,640	1,830	1,240
26	1,070	837	772	786	754	894	3,200	15,500	7,140	3,680	1,780	1,220
27	1,050	954	823	810	794	854	2,670	16,100	6,980	3,540	1,760	1,200
28	1,090	968	820	823	804	835	2,400	17,900	7,040	3,390	1,760	1,180
29	1,050	946	833	807	---	860	2,250	20,300	7,210	3,270	1,740	1,180
30	963	927	823	811	---	862	2,210	20,500	7,100	3,160	1,720	1,160
31	927	---	794	818	---	875	---	20,400	---	3,080	1,690	---
TOTAL	36,490	28,440	25,821	24,142	22,246	26,401	51,991	221,960	325,660	144,600	69,870	42,580
MEAN	1,177	948	833	779	794	852	1,733	7,160	10,860	4,665	2,254	1,419
MAX	1,350	1,010	912	824	923	956	3,200	20,500	21,200	7,100	3,040	1,660
MIN	927	828	656	706	699	763	857	2,130	6,980	3,080	1,690	1,160
AC-FT	72,380	56,410	51,220	47,890	44,120	52,370	103,100	440,300	645,900	286,800	138,600	84,460

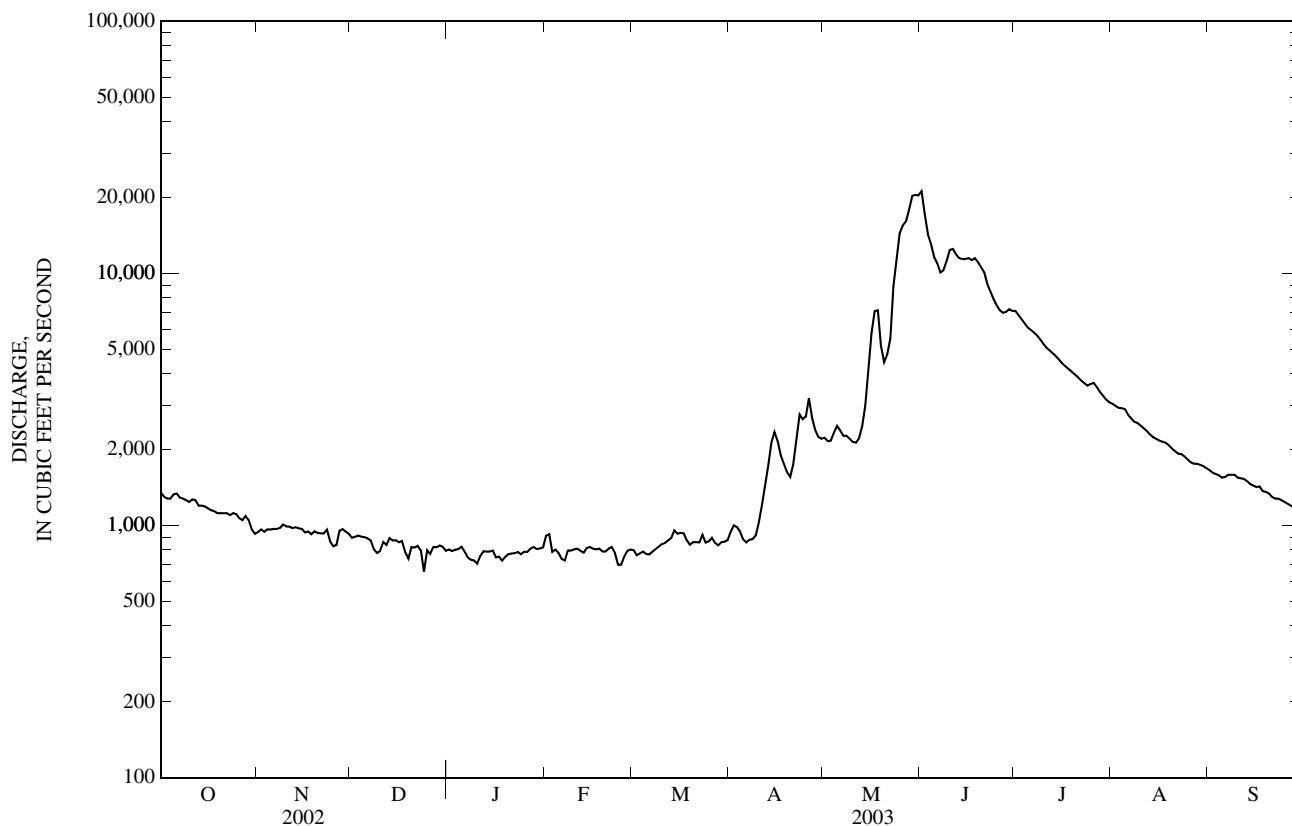
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1889 - 2003, BY WATER YEAR (WY)*

	MEAN	1,518	1,187	963	850	838	919	1,547	6,105	11,470	6,782	3,175	1,946
MAX	2,429	2,058	1,424	1,361	1,340	1,376	3,542	13,590	22,540	13,260	5,688	3,207	
(WY)	(1973)	(1928)	(1984)	(1997)	(1997)	(1997)	(1990)	(1928)	(1997)	(1982)	(1982)	(1968)	
MIN	781	702	551	448	411	412	576	2,575	4,245	2,025	1,319	938	
(WY)	(1989)	(1989)	(1937)	(1937)	(1937)	(1937)	(1937)	(1975)	(1934)	(1919)	(1919)	(1988)	

06191500 YELLOWSTONE RIVER AT CORWIN SPRINGS, MT—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1889 - 2003*	
ANNUAL TOTAL	997,550		1,020,201		--	
ANNUAL MEAN	2,733		2,795		3,117	
HIGHEST ANNUAL MEAN	--		--		5,158	1997
LOWEST ANNUAL MEAN	--		--		1,903	1934
HIGHEST DAILY MEAN	18,900	Jun 1	21,200	Jun 1	32,000	Jun 14, 1918
LOWEST DAILY MEAN	599	Jan 2	656	Dec 24	380	Feb 5, 1989
ANNUAL SEVEN-DAY MINIMUM	619	Jan 1	750	Jan 6	393	Feb 4, 1937
MAXIMUM PEAK FLOW	--		23,800	Jun 1	32,200 ^a	Jun 10, 1996
MAXIMUM PEAK STAGE	--		9.39	Jun 1	11.50	Jun 14, 1918
ANNUAL RUNOFF (AC-FT)	1,979,000		2,024,000		2,258,000	
10 PERCENT EXCEEDS	8,590		7,140		8,490	
50 PERCENT EXCEEDS	1,200		1,200		1,400	
90 PERCENT EXCEEDS	646		788		760	

* For period of operation.

^a Gage height, 10.92 ft.

06205450 CLARKS FORK YELLOWSTONE RIVER NEAR MONTANA-WYOMING STATE LINE, NEAR COOKE CITY, MT

LOCATION.--Lat 44° 57' 28", long 109° 48' 21", Park County, WY, Hydrologic Unit 10070006, Shoshone National Forest, at bridge on U.S. Highway 212, 300 ft upstream from Pilot Creek, 0.9 mi downstream from Rock Creek, 1.8 mi northwest of Crazy Creek Campground, and 7.5 mi southeast of Cooke City, MT.

PERIOD OF RECORD.--August 1975 to October 1977, November 1990 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

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)	Specif. conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, unfltrd mg/L as CaCO3 (00900)	Calcium, water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	
OCT 31...	0900	6.9	590	11.0	99	8.2	138	-15.0	0.5	68	22.1	3.15	0.41	
FEB 05...	0900	21	587	11.0	98	8.0	102	-15.0	0.0	49	15.6	2.29	0.40	
MAY 28...	1330	1,150	597	10.3	103	7.4	42	30.0	5.0	18	5.54	1.03	0.31	
AUG 06...	0850	85	596	7.8	95	8.4	69	15.0	13.0	33	10.6	1.57	0.21	
Date		Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Alkalinity, wat flt fxd end lab, mg/L as CaCO3 (29801)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate, water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/ acre-ft (70303)	Residue water, fltrd, tons/d (70302)	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)
OCT 31...	0.1	1.56	68	E.17	<0.17	5.6	6.0	--	--	--	<0.04	E.03	<0.008	
FEB 05...	0.1	1.20	47	E.10	0.01	4.8	4.9	--	--	--	<0.04	0.08	<0.008	
MAY 28...	0.1	0.84	18	0.35	<0.2	4.3	2.6	26	0.04	81.3	<0.04	E.04	<0.008	
AUG 06...	0.1	0.90	31	E.19	<0.2	3.3	4.0	--	--	--	<0.04	<0.06	<0.008	
Date		Orthophosphate, water, fltrd, mg/L as P (00671)	Aluminum, water, fltrd, ug/L (01106)	Antimony, water, fltrd, ug/L (01095)	Arsenic, water, fltrd, ug/L (01000)	Barium, water, fltrd, ug/L (01005)	Beryllium, water, fltrd, ug/L (01010)	Boron, water, fltrd, ug/L (01020)	Cadmium, water, fltrd, ug/L (01025)	Chromium, water, fltrd, ug/L (01030)	Cobalt, water, fltrd, ug/L (01035)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)
OCT 31...	<0.02	3	<0.30	E.2	20	<0.06	<13	0.12	<0.8	0.050	0.7	<10	<0.08	
FEB 05...	<0.02	4	<0.30	E.2	15	<0.06	<13	0.04	E.4	0.039	0.9	17	<0.08	
MAY 28...	<0.02	33	<0.30	E.2	10	<0.06	<7.0	<0.04	<0.8	0.046	2.8	26	<0.08	
AUG 06...	<0.02	8	<0.30	E.2	11	<0.06	E3.7	<0.04	<0.8	0.028	0.9	14	<0.08	
Date		Lithium, water, fltrd, ug/L (01130)	Manganese, water, fltrd, ug/L (01056)	Mercury, water, fltrd, ug/L (71890)	Molybdenum, water, fltrd, ug/L (01060)	Nickel, water, fltrd, ug/L (01065)	Selenium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Strontium, water, fltrd, ug/L (01080)	Vanadium, water, fltrd, ug/L (01085)	Zinc, water, fltrd, ug/L (01090)	Uranium natural water, fltrd, ug/L (22703)		
OCT 31...	<4	1.4	<0.02	E.2	1.19	<0.5	<0.2	55.8	<8	2	0.14			
FEB 05...	<4	1.4	<0.02	E.3	0.56	<0.5	<0.2	41.7	<8	4	0.19			
MAY 28...	<3	4.1	E.01	<0.3	0.40	<0.5	<0.2	21.5	<6	7	0.07			
AUG 06...	<3	1.1	E.01	E.2	0.36	<0.5	<0.2	28.4	<6	M	0.07			

E -- Estimated value

M-- Presence verified, not quantified

06207500 CLARKS FORK YELLOWSTONE RIVER NEAR BELFRY, MT

LOCATION.--Lat 45° 00' 37", long 109° 03' 53", in NW $\frac{1}{4}$ SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 32, T. 9 S., R. 22 E., Carbon County, Hydrologic Unit 10070006, on left bank 0.2 mi upstream from county road bridge and Big Sand Coulee, 0.8 mi north of Wyoming-Montana State line, 9.5 mi southwest of Belfry, and at river mile 71.2.

DRAINAGE AREA.--1,154 mi².

PERIOD OF RECORD.--July 1921 to current year. Monthly discharge only for some periods, published in WSP 1309. Published as Clarks Fork at Chance prior to October 1956 and as Clarks Fork Yellowstone River at Chance October 1956 to September 1968.

REVISED RECORDS.--WSP 1309: 1922 (M). WSP 1729: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 3,986.24 ft above NGVD of 1929 (levels by U.S. Army Corps of Engineers). Prior to November 15, 1934, nonrecording gage, and November 15, 1934 to July 26, 1951, water-stage recorder at bridge 0.4 mi downstream of different datum. July 27, 1951 to September 30, 1953, water-stage recorder at present site at datum 0.98 ft higher. U.S. Geological Survey data collection platform with satellite telemetry at station.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Diversions for irrigation of about 11,100 acres upstream from station. Station operated and record provided by the Montana District.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	101	e180	258	230	279	e180	310	680	10,000	3,210	604	129
2	101	e200	263	220	313	e180	348	633	8,420	3,190	534	122
3	102	e220	263	239	280	e180	342	588	5,860	3,070	487	117
4	103	e240	244	242	255	e170	331	564	4,800	2,880	475	116
5	104	e260	245	237	241	e160	294	539	3,910	2,670	462	113
6	103	e280	242	231	e230	e170	272	489	3,380	2,560	431	113
7	104	e300	237	220	e200	e160	272	456	2,840	2,470	401	118
8	103	e290	205	218	e220	e160	257	448	2,720	2,380	365	124
9	103	e280	200	e180	e250	e170	261	453	3,190	2,190	346	119
10	106	e270	225	e140	e270	e190	316	434	4,120	2,050	330	120
11	e110	e260	245	e150	e270	e260	439	409	4,960	1,990	301	124
12	e130	e250	225	e170	e260	e290	561	409	4,790	1,950	280	122
13	e150	e240	250	e240	e250	e320	645	451	4,580	1,940	262	122
14	e120	e240	251	235	e240	e350	807	538	4,420	1,870	251	125
15	e120	e240	238	218	245	e340	804	795	4,720	1,770	242	114
16	e120	e240	230	e200	242	340	724	1,360	5,360	1,630	239	110
17	e110	e230	228	e160	231	335	621	1,790	5,540	1,480	237	111
18	e110	e230	228	e170	231	312	570	1,950	5,740	1,390	233	108
19	e110	e230	189	e180	221	287	521	1,540	5,690	1,340	225	105
20	e110	e230	e130	e190	216	276	482	1,250	5,300	1,290	204	103
21	e110	e230	e120	e160	224	269	507	1,220	4,870	1,230	187	102
22	e120	e230	e110	e140	e170	275	694	1,290	3,850	1,130	178	101
23	e110	e220	e100	e160	e130	280	833	2,230	2,950	1,060	171	97
24	e100	e200	e90	e180	e90	290	837	3,120	2,300	1,010	166	94
25	e120	e180	e90	e170	e120	262	861	4,770	1,880	1,030	159	96
26	e140	e210	e110	e160	e160	268	1,020	5,810	1,560	1,090	149	94
27	e160	e250	e130	e190	e190	275	924	6,390	1,470	1,110	142	99
28	e180	e290	285	e210	e200	258	784	7,120	1,780	1,020	138	92
29	e200	284	250	e230	---	251	692	8,480	2,290	909	140	86
30	e180	267	221	240	---	256	618	9,950	2,840	786	143	88
31	e160	---	224	242	---	271	---	9,750	---	677	138	---
TOTAL	3,800	7,271	6,326	6,152	6,228	7,785	16,947	75,906	126,130	54,372	8,620	3,284
MEAN	123	242	204	198	222	251	565	2,449	4,204	1,754	278	109
MAX	200	300	285	242	313	350	1,020	9,950	10,000	3,210	604	129
MIN	100	180	90	140	90	160	257	409	1,470	677	138	86
AC-FT	7,540	14,420	12,550	12,200	12,350	15,440	33,610	150,600	250,200	107,800	17,100	6,510

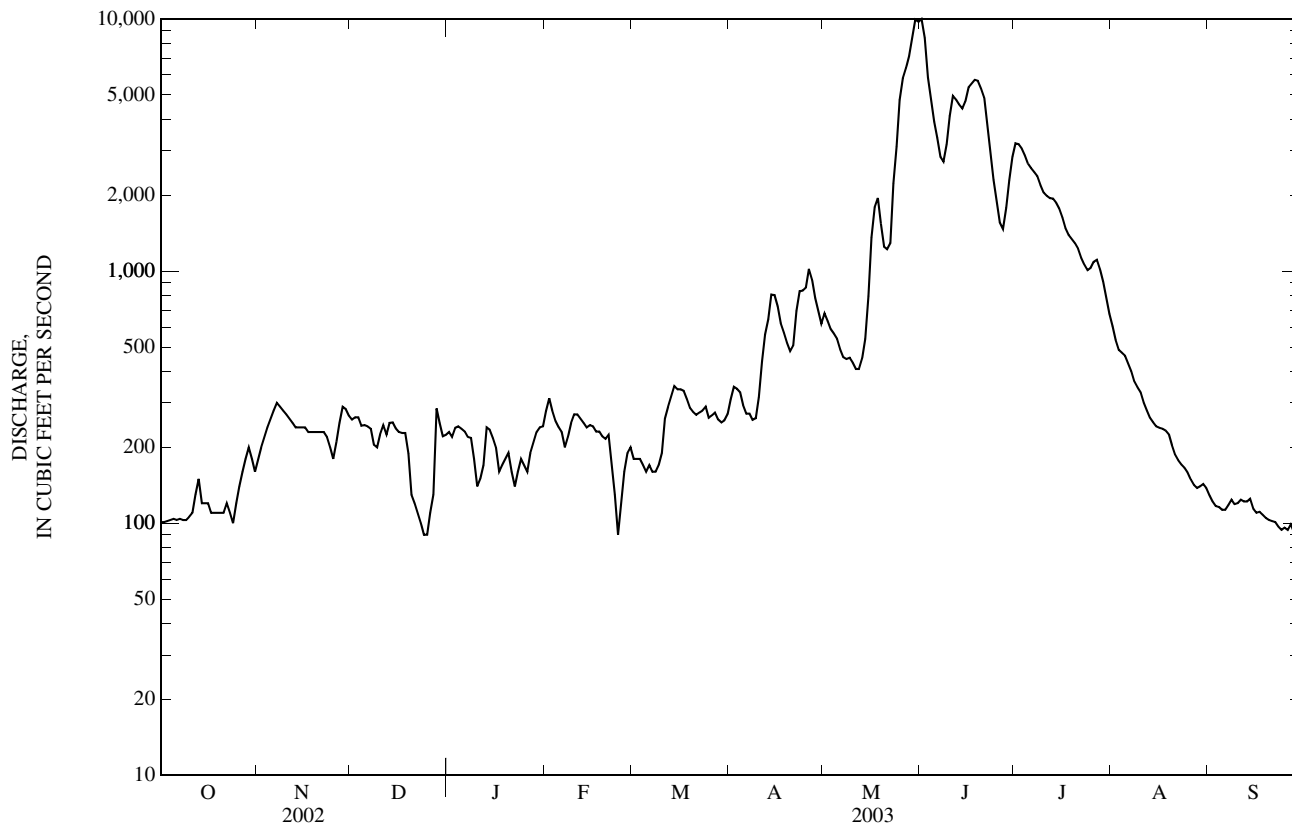
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1921 - 2003, BY WATER YEAR (WY)

	MEAN	278	294	262	231	223	222	426	2,047	4,108	2,188	612	312
MAX		725	648	379	359	329	364	1,167	5,704	7,225	5,744	1,453	834
(WY)		(1931)	(1928)	(1951)	(1997)	(1963)	(1972)	(1943)	(1928)	(1997)	(1975)	(1951)	(1941)
MIN		45.5	115	110	110	100	96.3	110	839	1,607	349	66.5	50.1
(WY)		(1989)	(1989)	(1922)	(1922)	(1922)	(1922)	(1961)	(1968)	(1987)	(1988)	(1988)	(1988)

06207500 CLARKS FORK YELLOWSTONE RIVER NEAR BELFRY, MT—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1921 - 2003	
ANNUAL TOTAL	339,434		322,821		--	
ANNUAL MEAN	930		884		935	
HIGHEST ANNUAL MEAN	--		--		1,485	1997
LOWEST ANNUAL MEAN	--		--		547	1977
HIGHEST DAILY MEAN	10,600	Jun 2	10,000	Jun 1	12,300	Jun 9, 1981
LOWEST DAILY MEAN	90 ^e	Dec 24,25	86	Sep 29	33	Apr 26, 1961
ANNUAL SEVEN-DAY MINIMUM	98	Sep 17	93	Sep 24	37	Oct 8, 1988
MAXIMUM PEAK FLOW	--		11,100	May 30	14,800	Jun 9, 1981
MAXIMUM PEAK STAGE	--		8.19	May 30	9.97	Jun 9, 1981
ANNUAL RUNOFF (AC-FT)	673,300		640,300		677,500	
10 PERCENT EXCEEDS	2,940		2,690		2,870	
50 PERCENT EXCEEDS	230		250		300	
90 PERCENT EXCEEDS	106		110		170	

e Estimated.



06218500 WIND RIVER NEAR DUBOIS, WY

LOCATION.--Lat 43° 34'43", long 109° 45'33", in NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 25. T.42N., R.108 W., Fremont County, Hydrologic Unit 10080001, on left bank 2.5 mi upstream from Warm Springs Creek and 6.7 mi northwest of Dubois.

DRAINAGE AREA.--232 mi².

PERIOD OF RECORD.--October 1945 to September 1992, May 2001 to current year.

REVISED RECORDS.--WSP 1709: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 7,188.71 ft above NGVD of 1929 (levels by Bureau of Reclamation). U.S Geological Survey data collection platform with satellite telemetry at station.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Diversions upstream from station for irrigation of about 2,300 acres.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	55	e42	e62	e48	e54	e49	79	82	1,040	262	99	106
2	58	e46	64	e47	e52	e49	68	81	817	247	98	94
3	57	e47	66	e49	e44	e52	52	88	639	229	94	103
4	61	e48	65	e49	e45	e49	50	90	544	217	99	100
5	58	e50	e62	e49	e47	e48	44	88	481	209	97	94
6	57	e54	59	e46	e49	49	47	78	457	203	98	113
7	57	e56	e58	e45	e48	48	44	83	383	196	92	120
8	55	e60	e53	e45	e49	47	50	90	365	190	88	103
9	54	64	e54	e44	e52	47	63	83	402	178	90	102
10	55	64	e54	e43	e58	49	75	75	436	167	91	110
11	55	72	e54	44	e50	51	80	74	455	155	96	113
12	52	69	e56	46	e49	57	82	77	419	149	95	106
13	49	69	e60	48	e48	66	89	93	391	147	96	107
14	53	67	e62	49	e49	74	91	106	362	145	90	99
15	52	e66	e62	e48	51	68	89	140	372	142	93	93
16	53	e64	e58	e46	e50	74	75	161	378	143	92	92
17	51	70	e60	e43	e52	66	74	210	383	144	85	84
18	51	e68	e56	e44	e52	55	75	207	399	143	85	84
19	49	e64	e46	e45	e48	51	68	172	388	133	84	83
20	50	66	e45	e46	e49	56	66	173	338	131	82	80
21	51	65	e45	e47	e50	53	71	194	319	129	85	77
22	52	64	e46	e46	50	64	84	251	280	123	87	75
23	e50	68	e48	e47	e50	68	87	400	253	119	87	75
24	e52	64	e47	e46	e52	56	93	590	238	116	82	71
25	e52	e54	e49	e46	e54	56	103	492	240	122	83	73
26	51	e52	e47	e47	e58	61	98	551	225	120	82	73
27	e50	e56	e49	e48	e52	51	81	675	212	117	78	68
28	53	e60	e48	e48	e50	42	83	830	225	113	82	65
29	53	e64	e47	e45	---	48	83	968	245	107	77	64
30	47	65	e46	e48	---	56	83	1,060	245	103	127	63
31	e45	---	e47	e49	---	64	---	1,180	---	102	135	---
TOTAL	1,638	1,818	1,675	1,441	1,412	1,724	2,227	9,442	11,931	4,801	2,849	2,690
MEAN	52.8	60.6	54.0	46.5	50.4	55.6	74.2	305	398	155	91.9	89.7
MAX	61	72	66	49	58	74	103	1,180	1,040	262	135	120
MIN	45	42	45	43	44	42	44	74	212	102	77	63
AC-FT	3,250	3,610	3,320	2,860	2,800	3,420	4,420	18,730	23,670	9,520	5,650	5,340

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1946 - 2003, BY WATER YEAR (WY)

	MEAN	86.7	70.7	61.3	56.2	55.2	61.0	104	360	641	307	135	98.6
MAX		158	103	88.3	88.4	77.6	105	192	628	1,181	796	290	171
(WY)		(1987)	(1951)	(1951)	(1965)	(1972)	(1972)	(1946)	(1951)	(1972)	(1975)	(1951)	(1986)
MIN		43.8	39.8	36.1	36.2	35.3	39.8	56.4	160	143	66.0	52.7	51.5
(WY)		(2002)	(2002)	(2002)	(1989)	(2002)	(2002)	(1961)	(1953)	(2001)	(1977)	(2001)	(1977)

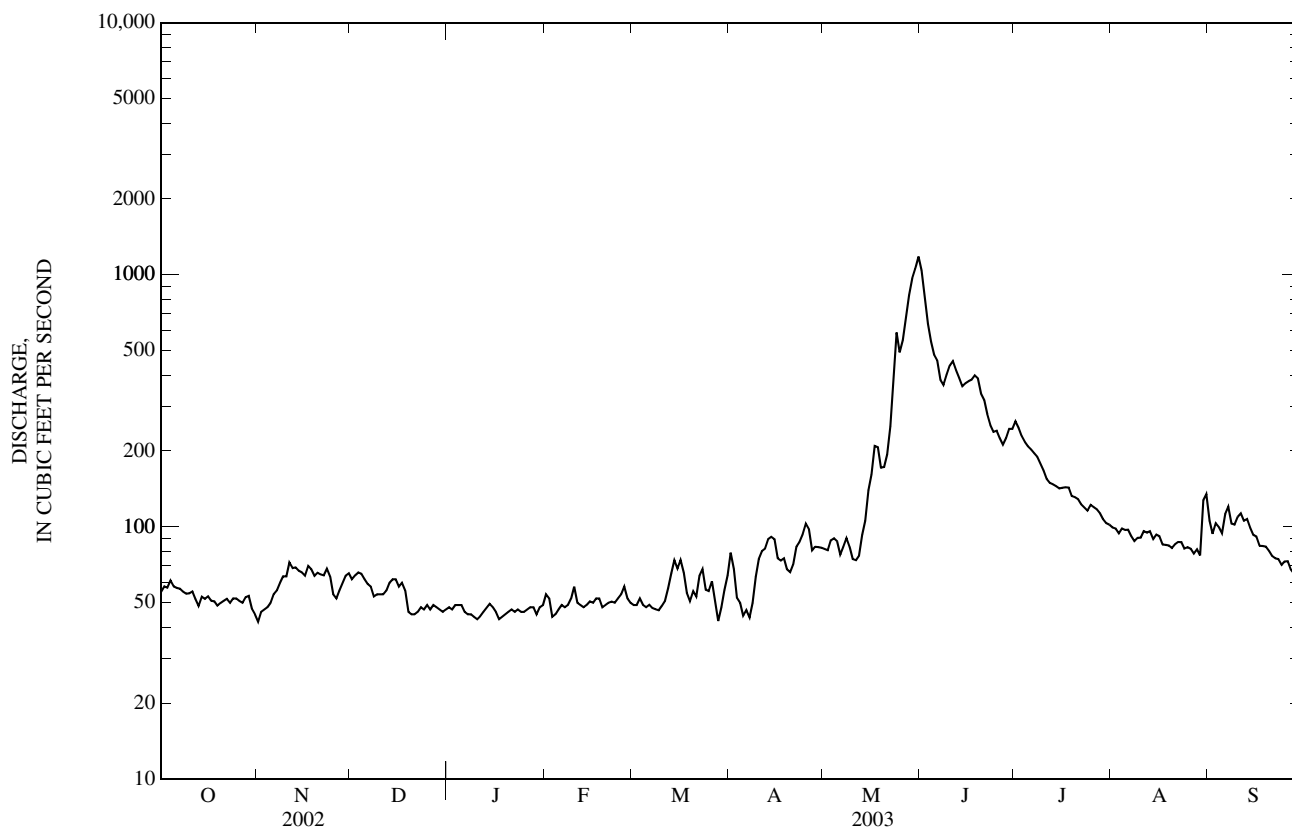
YELLOWSTONE RIVER BASIN

06218500 WIND RIVER NEAR DUBOIS, WY—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1946 - 2003	
ANNUAL TOTAL	40,278		43,648		--	
ANNUAL MEAN	110		120		171	
HIGHEST ANNUAL MEAN	--		--		280	
LOWEST ANNUAL MEAN	--		--		90.0	
HIGHEST DAILY MEAN	896	Jun 1	1,180	May 31	1,870	Jun 8, 1972
LOWEST DAILY MEAN	31 ^c	Feb 3	42	Nov 1, Mar 28	26	Feb 5, 1982
ANNUAL SEVEN-DAY MINIMUM	32	Jan 31	45	Jan 6	28	Feb 3, 1982
MAXIMUM PEAK FLOW	--		1,300	May 31	1,940 ^a	Jun 8, 1972
MAXIMUM PEAK STAGE	--		4.79	May 31	5.66	Jun 2, 1956
ANNUAL RUNOFF (AC-FT)	79,890		86,580		124,100	
10 PERCENT EXCEEDS	301		245		440	
50 PERCENT EXCEEDS	60		67		82	
90 PERCENT EXCEEDS	36		47		50	

a Gage height, 5.48 ft.

c Estimated.



06220800 WIND RIVER ABOVE RED CREEK, NEAR DUBOIS, WY

LOCATION.--Lat 43° 26' 30", long 109° 27' 29", in NW $\frac{1}{4}$ SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 3, T. 5 N., R. 6 W., Fremont County, Hydrologic Unit 10080001, Wind River Indian Reservation, 400 ft downstream from East Fork Wind River and 12.1 mi southeast of Dubois.

DRAINAGE AREA.--1,073 mi².

PERIOD OF RECORD.--October 1990 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 6,400 ft above NGVD of 1929, from topographic map. U.S. Geological Survey data collection platform with satellite telemetry at station.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Diversions for irrigation of about 15,000 acres upstream from station.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	283	189	218	162	185	163	226	303	4,270	1,420	468	473
2	308	205	220	158	176	166	230	282	3,290	1,350	441	430
3	311	209	226	167	134	181	196	291	2,680	1,270	432	449
4	316	214	221	166	144	166	175	289	2,380	1,180	462	407
5	311	226	206	167	e145	160	168	287	2,040	1,140	438	383
6	304	238	182	154	e145	165	174	267	1,900	1,100	431	418
7	301	236	180	152	150	165	164	262	1,600	1,080	412	496
8	294	241	167	153	e145	167	172	310	1,550	1,050	404	456
9	289	245	170	150	e140	171	206	297	1,860	1,010	422	466
10	280	239	169	145	e150	174	268	280	2,070	948	435	597
11	276	239	170	152	e155	183	374	263	2,190	911	430	581
12	272	229	174	152	159	204	407	254	1,970	878	412	540
13	252	249	186	158	158	240	503	281	1,870	861	393	513
14	261	235	200	163	163	252	491	328	1,740	827	383	467
15	256	231	201	163	165	236	453	558	1,900	783	404	434
16	259	213	182	148	157	234	355	731	1,830	749	400	412
17	258	230	187	143	164	220	316	983	1,810	737	414	419
18	258	221	178	146	166	196	288	823	1,880	714	421	414
19	254	223	148	152	155	188	280	650	1,950	790	407	383
20	248	238	147	157	162	189	276	601	1,760	722	385	363
21	252	230	147	161	171	187	349	673	1,690	712	371	346
22	262	229	154	159	172	199	415	896	1,450	686	365	330
23	244	248	162	161	159	203	388	1,640	1,250	642	380	315
24	271	220	160	155	e140	179	484	2,250	1,150	623	377	308
25	266	186	180	155	e115	175	437	2,160	1,040	640	374	301
26	246	180	159	160	e135	192	439	2,410	944	640	367	290
27	243	211	169	163	e145	173	343	2,940	913	680	366	286
28	247	231	164	161	e155	161	341	3,500	1,170	725	366	289
29	257	233	161	142	---	164	312	4,080	1,280	606	357	284
30	212	231	152	163	---	178	319	4,470	1,340	558	515	280
31	199	---	160	167	---	196	---	5,130	---	510	633	---
TOTAL	8,290	6,749	5,500	4,855	4,310	5,827	9,549	38,489	54,767	26,542	12,865	12,130
MEAN	267	225	177	157	154	188	318	1,242	1,826	856	415	404
MAX	316	249	226	167	185	252	503	5,130	4,270	1,420	633	597
MIN	199	180	147	142	115	160	164	254	913	510	357	280
AC-FT	16,440	13,390	10,910	9,630	8,550	11,560	18,940	76,340	108,600	52,650	25,520	24,060

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1991 - 2003, BY WATER YEAR (WY)

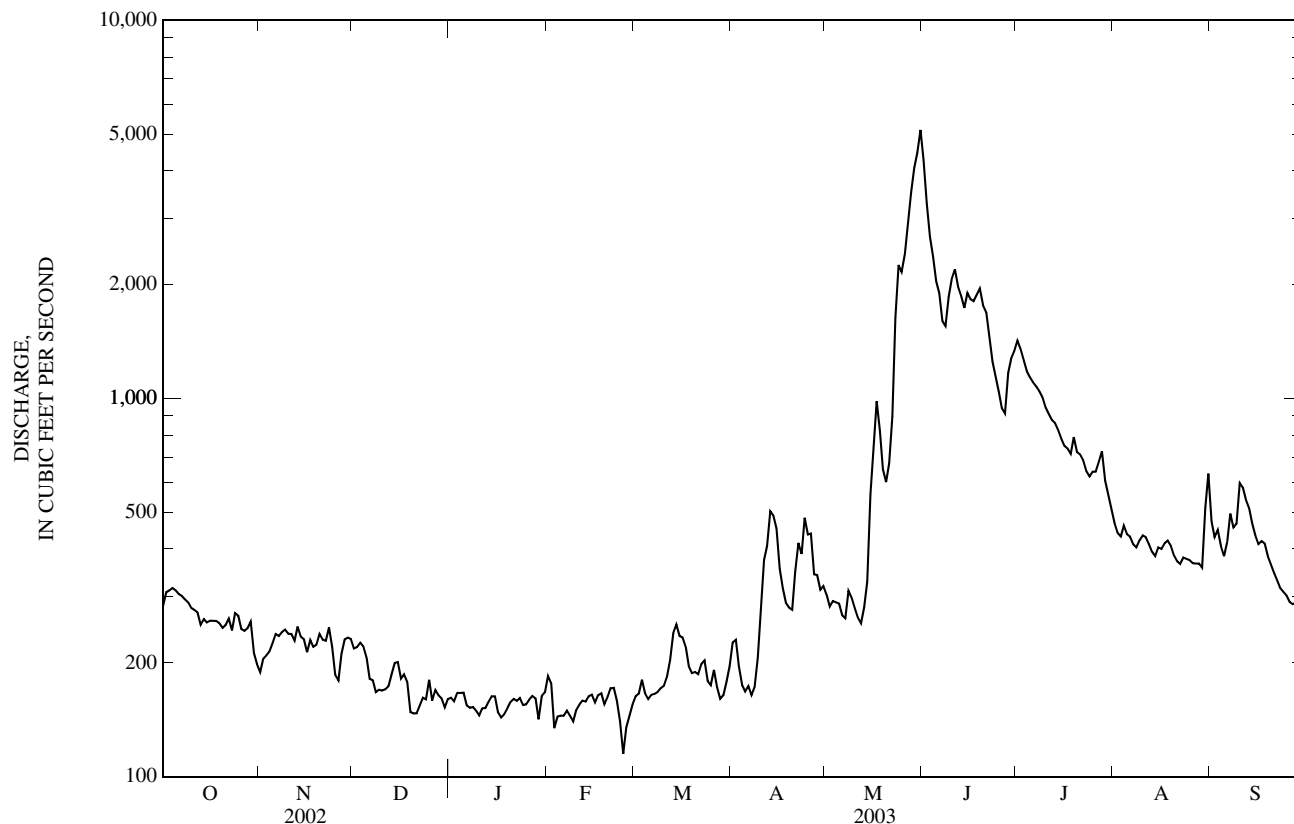
MEAN	304	235	191	180	177	201	320	1,312	2,457	1,307	561	386
MAX	421	303	242	222	218	246	429	2,121	4,559	2,473	1,020	663
(WY)	(1998)	(1999)	(1998)	(1998)	(1999)	(1999)	(1994)	(1997)	(1997)	(1995)	(1997)	(1997)
MIN	214	171	146	122	142	155	213	621	698	386	261	197
(WY)	(2002)	(1993)	(1993)	(1993)	(2002)	(2002)	(1995)	(1995)	(2001)	(1994)	(2001)	(2001)

YELLOWSTONE RIVER BASIN

06220800 WIND RIVER ABOVE RED CREEK, NEAR DUBOIS, WY—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1991 - 2003	
ANNUAL TOTAL	180,097		189,873		--	
ANNUAL MEAN	493		520		637	
HIGHEST ANNUAL MEAN	--		--		982	1997
LOWEST ANNUAL MEAN	--		--		345	2001
HIGHEST DAILY MEAN	4,060	Jun 1	5,130	May 31	8,770	Jun 9, 1997
LOWEST DAILY MEAN	128	Mar 9	115 ^e	Feb 25	90	Jan 13, 1993
ANNUAL SEVEN-DAY MINIMUM	137	Feb 15	143	Feb 3	96	Jan 9, 1993
MAXIMUM PEAK FLOW	--		5,670	May 31	11,300	Jun 9, 1997
MAXIMUM PEAK STAGE	--		7.66	May 31	9.97	Jun 9, 1997
ANNUAL RUNOFF (AC-FT)	357,200		376,600		461,500	
10 PERCENT EXCEEDS	1,290		1,260		1,670	
50 PERCENT EXCEEDS	259		268		276	
90 PERCENT EXCEEDS	144		158		163	

e Estimated.



06221400 DINWOODY CREEK ABOVE LAKES, NEAR BURRIS, WY

LOCATION.--Lat 43°20'44", long 109°24'34", in SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.1, T.4 N., R.6 W., Fremont County, Hydrologic Unit 10080001, Wind River Indian Reservation, on left bank 0.5 mi upstream from Upper Dinwoody Lake, 7.0 mi west of Burris, and 17 mi southeast of Dubois.

DRAINAGE AREA.--88.2 mi².

PERIOD OF RECORD.--October 1957 to September 1978, October 1988 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 6,500 ft above NGVD of 1929, from topographic map. U.S. Geological Survey data collection platform with satellite telemetry at station.

REMARKS.--Records good except those for estimated daily discharges, which are poor. No diversion upstream from station.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	53	e17	13	5.6	9.5	10	14	35	748	485	396	208
2	53	e18	13	5.6	8.2	10	14	33	629	505	389	191
3	52	e19	13	5.9	e7.0	10	13	35	529	501	381	183
4	58	e18	13	6.6	e7.4	10	12	34	450	491	394	205
5	50	17	12	6.8	e7.4	10	12	35	395	478	365	209
6	47	18	e11	6.7	e7.6	10	12	33	368	472	353	236
7	49	17	e10	6.6	e8.0	10	11	33	329	477	366	439
8	48	17	e8.8	6.6	e7.8	10	11	43	300	479	354	730
9	44	16	e8.8	6.9	e8.4	10	12	43	329	470	333	925
10	42	16	e9.0	e6.6	9.3	12	13	39	386	460	345	470
11	43	17	e9.2	6.6	9.5	12	16	43	431	462	337	295
12	32	17	9.4	6.6	9.6	13	20	46	423	469	356	203
13	34	18	9.7	6.7	10	13	26	56	410	482	371	175
14	35	17	9.9	6.7	11	13	31	62	408	497	371	193
15	34	16	9.9	6.9	11	13	37	88	450	481	448	163
16	34	16	9.8	7.0	e10	13	38	123	468	465	469	123
17	30	15	9.7	7.0	e10	13	39	152	473	477	401	112
18	29	15	9.4	6.9	11	12	35	121	483	477	305	110
19	26	14	e8.2	7.0	e10	13	34	106	530	499	281	109
20	25	15	e8.2	7.1	11	13	31	92	567	488	314	104
21	26	14	8.7	7.4	11	14	34	98	514	496	326	92
22	26	14	9.2	7.3	11	15	41	125	442	500	370	84
23	25	14	8.7	7.3	11	15	41	242	353	478	393	77
24	24	15	e7.0	7.4	e8.4	14	47	382	289	465	349	72
25	23	e13	e6.0	7.2	e7.4	14	54	507	254	470	294	70
26	19	e12	e6.2	7.3	e8.4	13	66	556	233	519	288	68
27	22	e13	e6.0	7.8	e9.0	12	54	579	222	523	291	70
28	19	e14	5.6	7.5	e9.6	13	46	659	273	482	254	78
29	21	14	6.0	7.9	---	12	40	742	358	454	257	85
30	e20	13	5.8	7.8	---	13	38	790	434	432	263	83
31	e18	---	5.6	8.8	---	13	---	751	---	408	255	---
TOTAL	1,061	469	279.8	216.1	259.5	378	892	6,683	12,478	14,842	10,669	6,162
MEAN	34.2	15.6	9.03	6.97	9.27	12.2	29.7	216	416	479	344	205
MAX	58	19	13	8.8	11	15	66	790	748	523	469	925
MIN	18	12	5.6	5.6	7.0	10	11	33	222	408	254	68
AC-FT	2,100	930	555	429	515	750	1,770	13,260	24,750	29,440	21,160	12,220

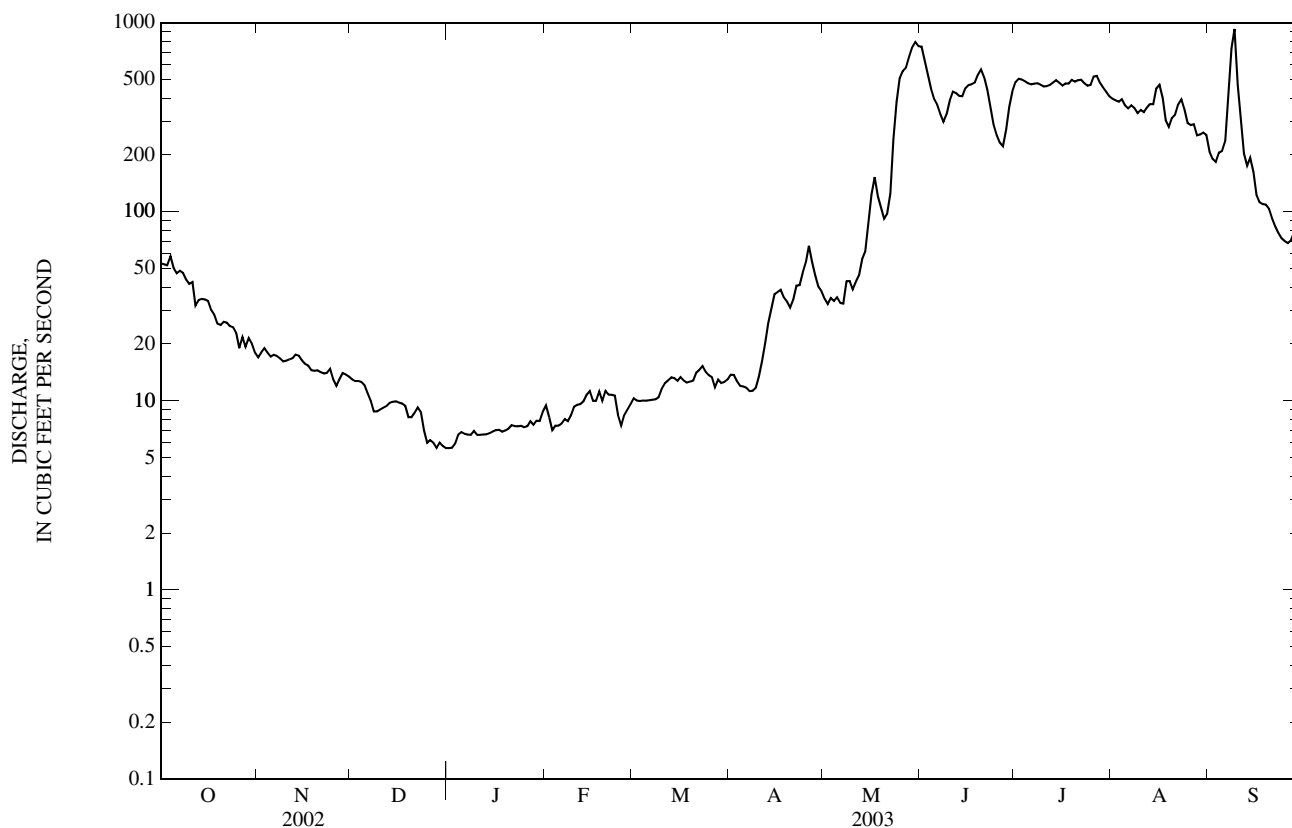
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1958 - 2003, BY WATER YEAR (WY)

MEAN	42.0	20.0	12.3	8.42	7.48	8.47	20.0	165	450	477	317	139
MAX	72.5	40.6	22.8	19.2	12.5	13.6	60.3	299	739	794	406	250
(WY)	(1968)	(1974)	(1974)	(1962)	(1962)	(1972)	(1962)	(1958)	(1971)	(1975)	(1971)	(1973)
MIN	22.8	9.74	3.79	1.53	2.12	2.31	8.48	71.1	251	280	224	59.2
(WY)	(1989)	(1977)	(1977)	(1977)	(1977)	(1977)	(1970)	(1959)	(2001)	(1992)	(2002)	(1964)

06221400 DINWOODY CREEK ABOVE LAKES, NEAR BURRIS, WY—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1958 - 2003	
ANNUAL TOTAL	43,997.0		54,389.4		--	
ANNUAL MEAN	121		149		140	
HIGHEST ANNUAL MEAN	--		--		179	
LOWEST ANNUAL MEAN	--		--		95.2	
HIGHEST DAILY MEAN	601	Jun 1	925	Sep 9	1,250	Jun 15, 1995
LOWEST DAILY MEAN	3.4	Jan 24, Mar 5	5.6	Dec 28,31, Jan 1, 2	1.0	Jan 9, 1977
ANNUAL SEVEN-DAY MINIMUM	3.5	Feb 2	5.7	Dec 28	1.3	Jan 4, 1977
MAXIMUM PEAK FLOW	--		1,260		1,510	
MAXIMUM PEAK STAGE	--		4.10		4.50	
ANNUAL RUNOFF (AC-FT)	87,270		107,900		101,200	
10 PERCENT EXCEEDS	437		475		438	
50 PERCENT EXCEEDS	20		33		28	
90 PERCENT EXCEEDS	3.8		7.4		6.8	

e Estimated.



06222100 UPPER WIND RIVER A CANAL AT HEADWORKS, NEAR BURRIS, WY

LOCATION.--Lat 43° 24' 59", long 109° 19' 40", in NE 1/4 NW 1/4 NW 1/4 sec. 14, T. 5 N., R. 5 W., Fremont County, Hydrologic Unit 10080001, Wind River Indian Reservation, on left bank 30 ft downstream from headworks, 2 mi southeast of Wilderness, and 4 mi northwest of Burris.

PERIOD OF RECORD.--May 1997 to September 1999, April 2001 to current year (no winter records).

GAGE.--Water-stage recorder. Elevation of gage is 6,150 ft above NGVD of 1929, from topographic map. Miscellaneous measurements (July 1988 to September 1996) published at equivalent site previously identified as 432609109205001 at different datum.

REMARKS.--Records good. Flow completely regulated by headworks.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	59	56	32	69	33
2	---	---	---	---	---	---	---	74	57	30	71	54
3	---	---	---	---	---	---	---	86	59	28	72	77
4	---	---	---	---	---	---	---	87	71	28	71	67
5	---	---	---	---	---	---	---	99	77	27	87	53
6	---	---	---	---	---	---	---	103	77	26	94	49
7	---	---	---	---	---	---	---	101	76	29	93	41
8	---	---	---	---	---	---	---	100	66	32	85	42
9	---	---	---	---	---	---	---	95	67	32	77	46
10	---	---	---	---	---	---	---	92	66	32	77	47
11	---	---	---	---	---	---	---	91	64	32	77	30
12	---	---	---	---	---	---	---	89	64	32	77	17
13	---	---	---	---	---	---	---	90	64	32	77	16
14	---	---	---	---	---	---	---	95	65	32	77	16
15	---	---	---	---	---	---	---	96	73	e57	77	21
16	---	---	---	---	---	---	---	99	79	e81	77	35
17	---	---	---	---	---	---	---	79	74	e81	50	34
18	---	---	---	---	---	---	---	80	53	e89	34	34
19	---	---	---	---	---	---	---	72	46	100	33	33
20	---	---	---	---	---	---	---	74	45	101	32	33
21	---	---	---	---	---	---	---	78	46	102	32	33
22	---	---	---	---	---	---	0.68	91	46	103	32	32
23	---	---	---	---	---	---	0.68	80	44	103	32	32
24	---	---	---	---	---	---	0.47	60	44	104	32	32
25	---	---	---	---	---	---	0.31	70	43	91	32	32
26	---	---	---	---	---	---	0.27	58	41	75	32	32
27	---	---	---	---	---	---	3.3	53	34	73	32	32
28	---	---	---	---	---	---	2.0	48	33	74	32	32
29	---	---	---	---	---	---	30	53	31	72	32	32
30	---	---	---	---	---	---	60	50	31	70	33	12
31	---	---	---	---	---	---	---	49	---	70	34	---
TOTAL	---	---	---	---	---	---	---	2,451	1,692	1,870	1,762	1,079
MEAN	---	---	---	---	---	---	---	79.1	56.4	60.3	56.8	36.0
MAX	---	---	---	---	---	---	---	103	79	104	94	77
MIN	---	---	---	---	---	---	---	48	31	26	32	12
AC-FT	---	---	---	---	---	---	---	4,860	3,360	3,710	3,490	2,140

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1997 - 2003, BY WATER YEAR (WY)*

MEAN	---	---	---	---	---	---	---	68.2	64.8	55.6	57.8	44.8
MAX	---	---	---	---	---	---	---	79.1	76.7	65.4	60.1	62.2
(WY)	---	---	---	---	---	---	---	(2003)	(2001)	(1997)	(1997)	(1998)
MIN	---	---	---	---	---	---	---	59.7	54.5	45.5	53.3	26.0
(WY)	---	---	---	---	---	---	---	(1998)	(1999)	(2001)	(1999)	(2002)

06222100 UPPER WIND RIVER A CANAL AT HEADWORKS, NEAR BURRIS, WY—Continued

SUMMARY STATISTICS

FOR 2003 WATER YEAR*

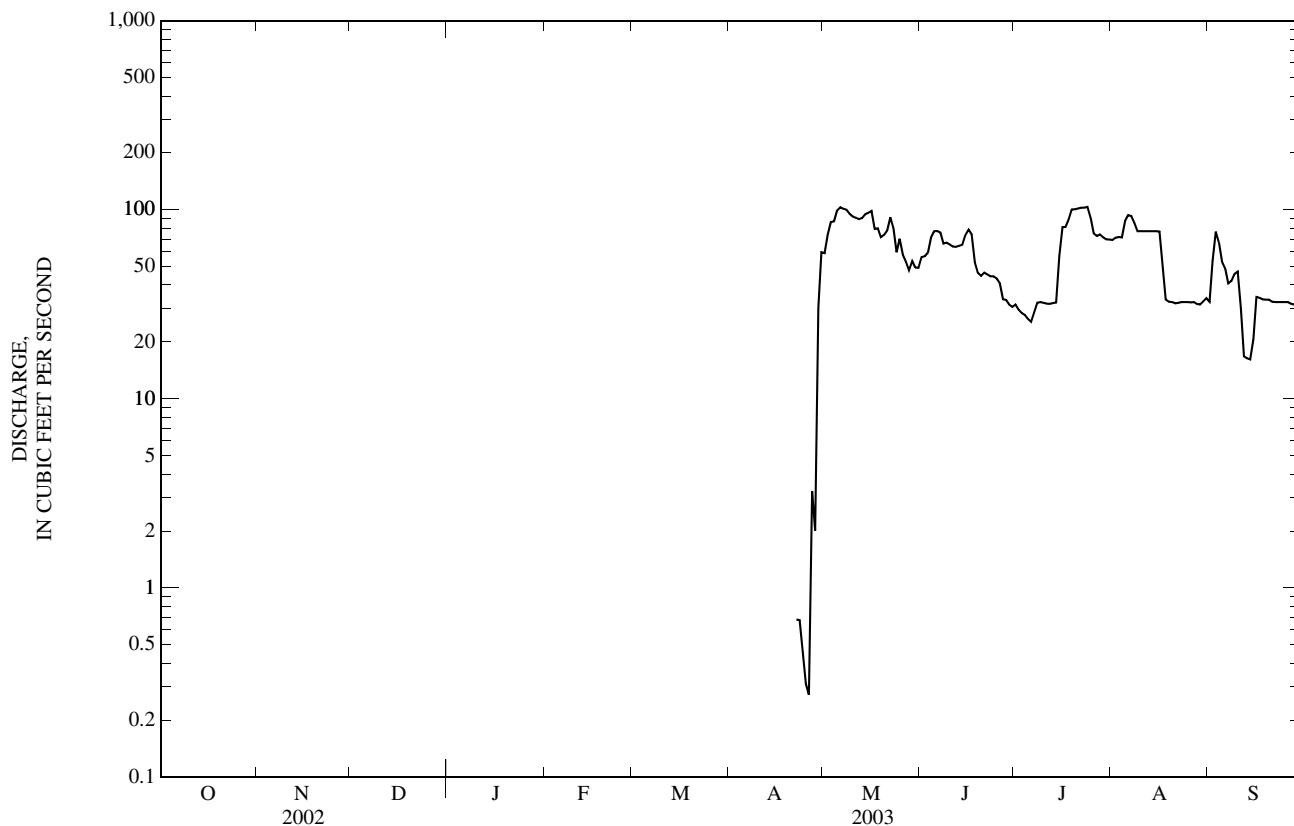
WATER YEARS 1997 - 2002*

HIGHEST DAILY MEAN
 LOWEST DAILY MEAN
 MAXIMUM PEAK FLOW
 MAXIMUM PEAK STAGE

104 Jul 24
 0.27 Apr 26
 123 May 29
 2.22 May 29

105 Jun 3, 1998
 0.54 Apr 21, 2002
 250 May 1, 1998
 2.52 May 1, 1998

* For period of operation.
 e Estimated.



06222500 DRY CREEK NEAR BURRIS, WY

LOCATION.--Lat 43° 20'11", long 109° 17'55", in NW¹/₄ NE¹/₄ SW¹/₄ sec. 12, T.4 N., R.5 W., Fremont County, Hydrologic Unit 10080001, Wind River Indian Reservation, on left bank 0.9 mi upstream from Dry Creek Canal headgate and 2.4 mi southwest of Burris.

DRAINAGE AREA.--57 mi².

PERIOD OF RECORD.--June 1921 to September 1940, October 1988 to current year (no winter records since 1995). Published as "near Lenore" 1921 to 1924.

GAGE.--Water-stage recorder. Elevation of gage is 6,430 ft above NGVD of 1929, from topographic map. Prior to November 5, 1934, at site 50 ft downstream at datum 4.07 ft higher. November 5, 1934 to September 1940, at site 5 ft downstream at datum 3.00 ft higher. U.S. Geological Survey data collection platform with satellite telemetry at station.

REMARKS.-- Records good. Adjudicated diversion upstream for irrigation of 267 acres. Result of discharge measurement, in cubic feet per second, made during the period when the station was not in operation, is given below:

Oct. 7 . . . 14.8

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	2.5	13	375	141	36	29
2	---	---	---	---	---	---	2.5	12	276	142	34	27
3	---	---	---	---	---	---	2.3	12	206	147	34	26
4	---	---	---	---	---	---	2.1	13	160	137	31	24
5	---	---	---	---	---	---	2.2	14	128	125	26	23
6	---	---	---	---	---	---	2.2	13	109	115	26	24
7	---	---	---	---	---	---	1.8	12	96	111	25	24
8	---	---	---	---	---	---	1.9	15	85	107	24	24
9	---	---	---	---	---	---	2.0	14	94	97	24	25
10	---	---	---	---	---	---	2.3	13	107	88	24	28
11	---	---	---	---	---	---	2.8	13	141	84	24	29
12	---	---	---	---	---	---	3.5	13	128	77	24	29
13	---	---	---	---	---	---	4.5	16	117	75	24	28
14	---	---	---	---	---	---	5.5	19	112	73	23	26
15	---	---	---	---	---	---	6.5	24	123	69	27	24
16	---	---	---	---	---	---	7.6	31	121	67	27	22
17	---	---	---	---	---	---	8.1	38	133	64	27	23
18	---	---	---	---	---	---	8.9	34	133	64	26	26
19	---	---	---	---	---	---	8.9	29	139	65	25	25
20	---	---	---	---	---	---	8.6	24	153	67	23	24
21	---	---	---	---	---	---	9.4	23	144	61	23	23
22	---	---	---	---	---	---	10	28	138	53	23	21
23	---	---	---	---	---	---	11	49	109	51	22	19
24	---	---	---	---	---	---	14	97	97	48	22	17
25	---	---	---	---	---	---	16	145	78	46	21	16
26	---	---	---	---	---	---	18	183	76	48	19	15
27	---	---	---	---	---	---	17	220	71	49	16	14
28	---	---	---	---	---	---	17	301	72	47	17	14
29	---	---	---	---	---	---	15	356	105	44	17	13
30	---	---	---	---	---	---	15	423	134	41	22	13
31	---	---	---	---	---	---	---	407	---	38	28	---
TOTAL	---	---	---	---	---	---	229.1	2,604	3,960	2,441	764	675
MEAN	---	---	---	---	---	---	7.64	84.0	132	78.7	24.6	22.5
MAX	---	---	---	---	---	---	18	423	375	147	36	29
MIN	---	---	---	---	---	---	1.8	12	71	38	16	13
AC-FT	---	---	---	---	---	---	454	5,170	7,850	4,840	1,520	1,340

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1921 - 2003, BY WATER YEAR (WY)*

MEAN	17.3	10.3	5.97	4.10	2.71	2.91	8.69	85.4	196	120	55.6	30.6
MAX	50.0	25.4	15.0	10.0	7.00	10.0	25.7	162	525	328	164	64.6
(WY)	(1924)	(1928)	(1926)	(1926)	(1923)	(1923)	(1926)	(1924)	(1921)	(1995)	(1930)	(1927)
MIN	5.16	1.76	0.55	0.30	0.20	0.000	0.88	29.5	51.4	33.8	18.0	12.2
(WY)	(1934)	(1934)	(1934)	(1934)	(1934)	(1934)	(1940)	(1935)	(1934)	(1940)	(2002)	(1934)

YELLOWSTONE RIVER BASIN

06222500 DRY CREEK NEAR BURRIS, WY—Continued

SUMMARY STATISTICS

FOR 2003 WATER YEAR*

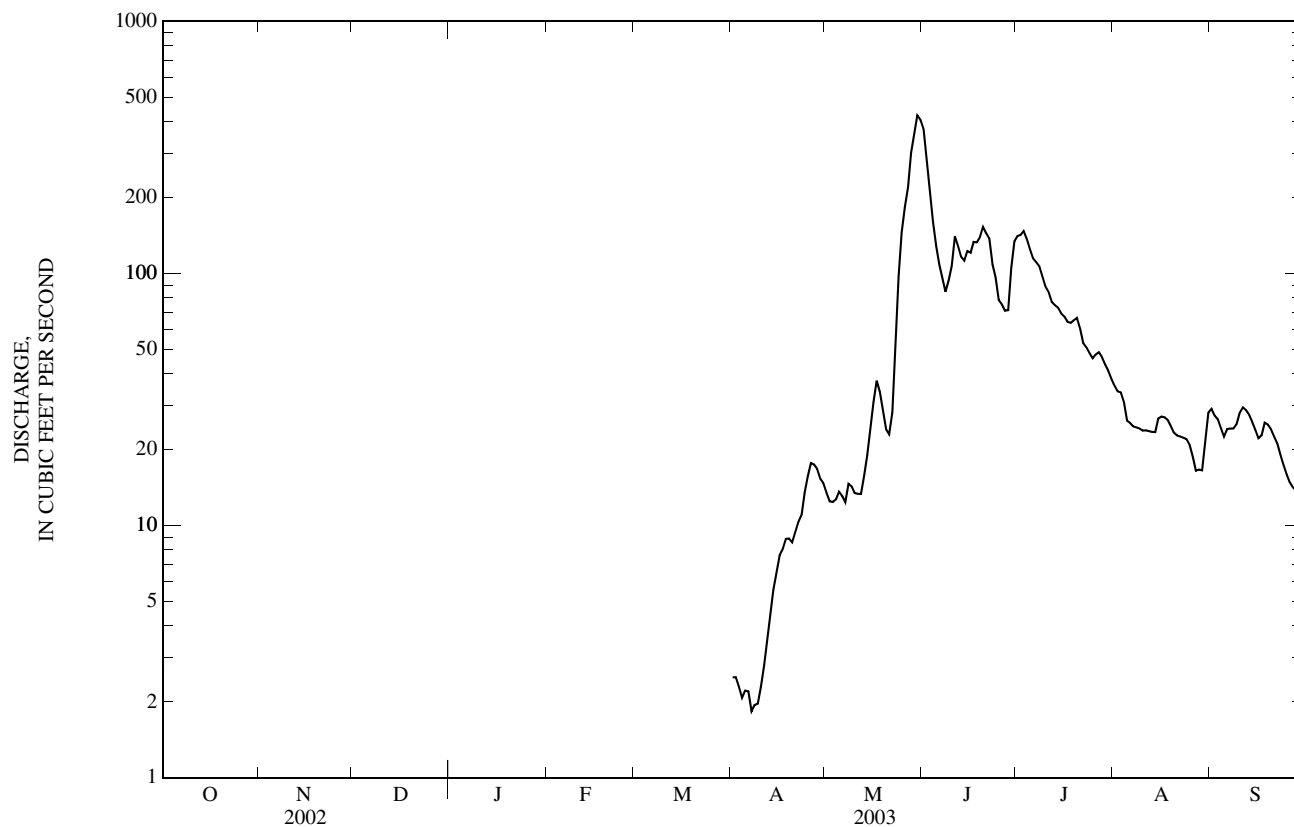
WATER YEARS 1921 - 2003*

ANNUAL MEAN	--		44.6	
HIGHEST ANNUAL MEAN	--		73.0	1995
LOWEST ANNUAL MEAN	--		20.1	1940
HIGHEST DAILY MEAN	423	May 30	1240	Jun 7, 1920
LOWEST DAILY MEAN	1.8	Apr 7	0.00	Mar 1 to Apr 11, 1934
MAXIMUM PEAK FLOW	497	May 30	1400 ^a	Jun 12, 1921
MAXIMUM PEAK STAGE	4.90	May 30	5.95 ^b	Jun 17, 1999
ANNUAL RUNOFF (AC-FT)	--		32,290	

* For period of record.

a Gage height, 3.9 ft, from floodmarks, site and datum then in use, from rating curve extended above 580 ft³/s.

b From floodmarks.



06222510 DRY CREEK CANAL AT HEADGATE, NEAR BURRIS, WY

LOCATION.--Lat 43° 20' 38", long 109° 17' 25", in NW $\frac{1}{4}$ NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 12, T. 4 S., R. 5 W., Fremont County, Hydrologic Unit 10080001, Wind River Indian Reservation, on left bank 200 ft downstream from headgate and 1.7 miles southwest of Burris.

PERIOD OF RECORD.--April 1989 to September 1999, April to September 2003 (no winter records).

GAGE.--Water-stage recorder. Elevation of the gage is 6,360 ft above NGVD of 1929, from topographic map. Prior to April 1, 1990, at datum 1.00 ft higher.

REMARKS.--Records good. Flow is diverted from Dry Creek and Dinwoody Canal for irrigation.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	0.0	46	167	224	220	205
2	---	---	---	---	---	---	0.0	52	164	232	215	199
3	---	---	---	---	---	---	0.0	49	184	236	215	194
4	---	---	---	---	---	---	0.0	46	224	236	211	190
5	---	---	---	---	---	---	0.0	44	239	234	207	191
6	---	---	---	---	---	---	0.0	45	248	231	205	198
7	---	---	---	---	---	---	0.0	54	249	234	203	200
8	---	---	---	---	---	---	0.0	55	248	247	202	220
9	---	---	---	---	---	---	0.0	50	246	249	201	198
10	---	---	---	---	---	---	0.0	46	243	246	200	205
11	---	---	---	---	---	---	0.0	43	248	249	201	180
12	---	---	---	---	---	---	0.0	42	236	248	201	152
13	---	---	---	---	---	---	0.0	45	245	242	202	148
14	---	---	---	---	---	---	0.0	49	254	241	203	145
15	---	---	---	---	---	---	0.0	60	256	242	207	139
16	---	---	---	---	---	---	0.0	80	253	239	208	130
17	---	---	---	---	---	---	0.0	94	252	242	204	124
18	---	---	---	---	---	---	0.0	102	248	242	199	98
19	---	---	---	---	---	---	0.0	111	248	253	194	87
20	---	---	---	---	---	---	0.0	103	250	257	194	85
21	---	---	---	---	---	---	0.0	97	247	250	195	83
22	---	---	---	---	---	---	0.0	104	245	239	196	82
23	---	---	---	---	---	---	0.0	142	242	244	199	76
24	---	---	---	---	---	---	0.0	181	244	239	202	65
25	---	---	---	---	---	---	0.0	195	238	237	197	63
26	---	---	---	---	---	---	0.0	184	145	240	183	62
27	---	---	---	---	---	---	0.0	170	27	242	136	61
28	---	---	---	---	---	---	0.0	183	51	239	182	60
29	---	---	---	---	---	---	33	185	97	235	191	35
30	---	---	---	---	---	---	36	172	194	230	202	0.0
31	---	---	---	---	---	---	---	167	---	225	207	---
TOTAL	---	---	---	---	---	---	69.0	2,996	6,432	7,444	6,182	3,875.0
MEAN	---	---	---	---	---	---	2.30	96.6	214	240	199	129
MAX	---	---	---	---	---	---	36	195	256	257	220	220
MIN	---	---	---	---	---	---	0.00	42	27	224	136	0.00
AC-FT	---	---	---	---	---	---	137	5,940	12,760	14,770	12,260	7,690

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1988 - 2003, BY WATER YEAR (WY)*

MEAN	1.44	---	---	---	---	---	2.87	99.2	193	207	191	132
MAX	2.29	---	---	---	---	---	6.24	154	247	240	217	188
(WY)	(1993)	(---	(---	(---	(---	(---	(1989)	(1994)	(1994)	(2003)	(1994)	(1990)
MIN	0.60	---	---	---	---	---	0.000	53.8	116	155	169	90.2
(WY)	(1994)	(---	(---	(---	(---	(---	(1991)	(1991)	(1995)	(1989)	(1998)	(1992)

06222510 DRY CREEK CANAL AT HEADGATE, NEAR BURRIS, WY—Continued

SUMMARY STATISTICS

FOR 2003 WATER YEAR*

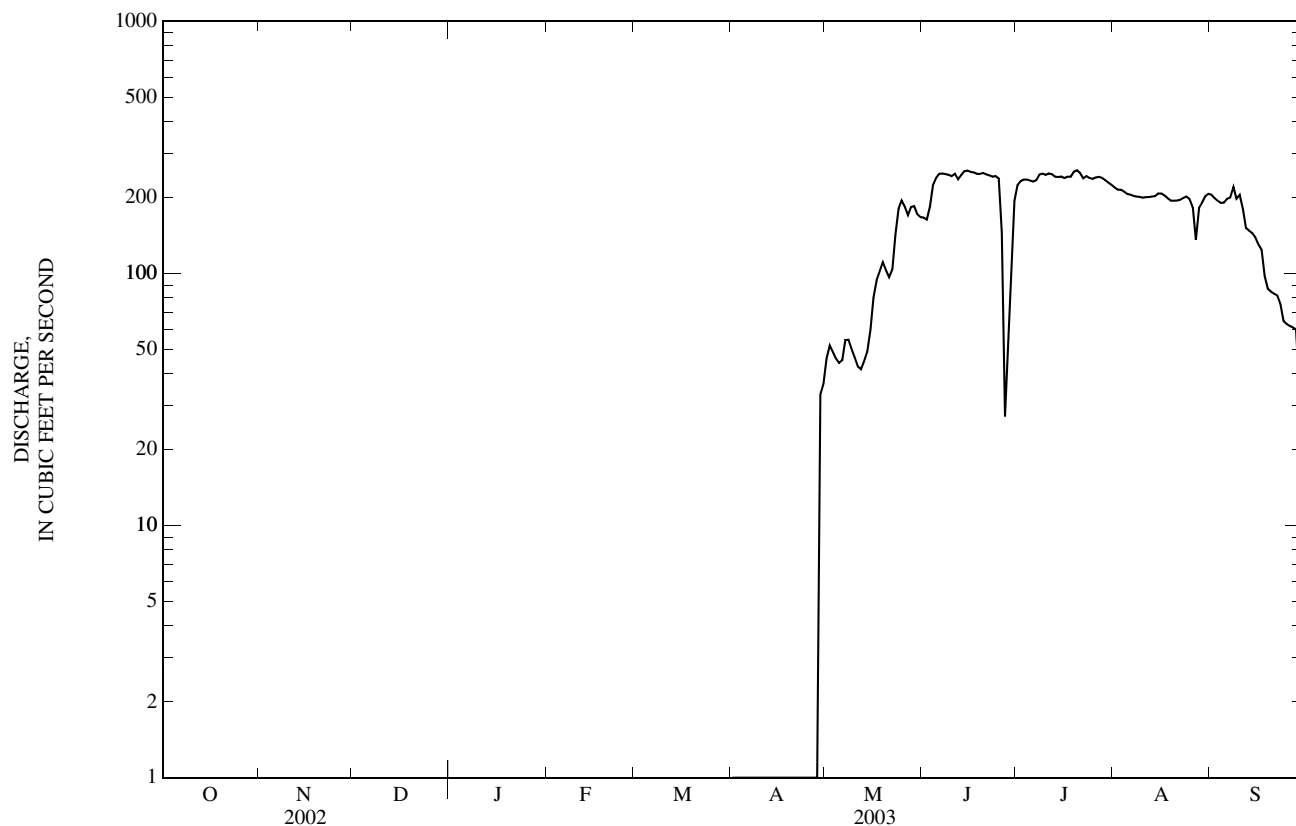
WATER YEARS 1988 - 2003*

HIGHEST DAILY MEAN
 LOWEST DAILY MEAN
 MAXIMUM PEAK FLOW
 MAXIMUM PEAK STAGE

257 Jul 20
 0.00 Apr 1-28,
 Sep 30
 260 Jul 20
 3.11 Jul 20

285 Jun 23, 1994
 0.00 Many days,
 most years
 301 Jun 23, 1994
 3.88 Jun 23, 1994

* For period of operation.



06223500 WILLOW CREEK NEAR CROWHEART, WY

LOCATION.--Lat 43° 17'00", long 109° 11'08", in SE $\frac{1}{4}$ NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec.36, T.4N., R.4W., Fremont County, Hydrologic Unit 10080002, Wind River Indian Reservation, on left bank 1000 ft upstream from Willow Creek Canal diversion and 2.0 mi south of Crowheart.

DRAINAGE AREA.--55.4 mi².

PERIOD OF RECORD.--June to October 1909 (published as "J. K. Ranch Post Office"), June 1921 to September 1922 (published as "near Lenore"), May and June 1923, May 1925 to September 1940, October 1988 to current year (no winter record since 1995).

REVISED RECORDS.--WSP 1309: 1939 (M).

GAGE.--Water-stage recorder. Elevation of gage is 6,080 ft above NGVD of 1929, from topographic map. May 17 to October 31, 1909, nonrecording gage 1.9 mi downstream at different datum, May 16, 1921 to August 24, 1923, nonrecording gage 200 ft upstream at different datum, and May 1925 to September 1940, water-stage recorder 600 ft downstream at different datum.

REMARKS.--Records good. Diversions for irrigation of 60.1 acres upstream from station. Result of discharge measurement, in cubic feet per second, made during the period station was not in operation, is given below:

Oct. 7 . . . 6.33

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	5.0	6.1	64	20	8.5	6.0
2	---	---	---	---	---	---	5.0	6.0	43	18	8.3	5.8
3	---	---	---	---	---	---	4.9	5.9	36	16	8.6	5.8
4	---	---	---	---	---	---	4.8	5.9	29	14	8.3	5.7
5	---	---	---	---	---	---	4.8	6.0	24	14	8.1	5.6
6	---	---	---	---	---	---	5.0	7.0	22	13	7.8	5.7
7	---	---	---	---	---	---	5.0	7.2	22	13	7.5	5.8
8	---	---	---	---	---	---	5.0	8.6	20	12	7.5	6.0
9	---	---	---	---	---	---	5.1	8.4	25	11	7.6	6.1
10	---	---	---	---	---	---	5.1	8.0	24	11	7.8	6.9
11	---	---	---	---	---	---	5.2	8.2	32	11	7.8	6.4
12	---	---	---	---	---	---	5.3	8.0	24	10	7.5	6.2
13	---	---	---	---	---	---	5.5	8.1	22	10	7.1	6.3
14	---	---	---	---	---	---	5.7	8.1	20	10	6.3	6.2
15	---	---	---	---	---	---	5.9	8.5	22	9.9	6.5	6.1
16	---	---	---	---	---	---	5.9	9.5	20	9.8	6.1	6.0
17	---	---	---	---	---	---	5.9	9.5	20	9.8	6.1	6.6
18	---	---	---	---	---	---	6.0	10	19	9.9	6.2	6.9
19	---	---	---	---	---	---	6.0	10	17	10	5.8	6.6
20	---	---	---	---	---	---	6.0	11	21	11	5.7	6.3
21	---	---	---	---	---	---	5.8	11	17	9.9	5.7	6.2
22	---	---	---	---	---	---	5.9	11	15	9.2	5.7	6.2
23	---	---	---	---	---	---	6.1	11	14	8.9	5.8	6.1
24	---	---	---	---	---	---	6.0	13	17	9.0	5.8	6.2
25	---	---	---	---	---	---	6.5	29	15	9.3	5.7	6.3
26	---	---	---	---	---	---	6.4	49	19	9.5	5.6	6.4
27	---	---	---	---	---	---	6.0	61	17	9.2	5.6	6.6
28	---	---	---	---	---	---	6.5	81	16	9.0	5.5	6.6
29	---	---	---	---	---	---	6.6	112	26	8.7	5.7	6.6
30	---	---	---	---	---	---	6.3	107	22	8.5	7.9	6.5
31	---	---	---	---	---	---	---	77	---	8.5	6.3	---
TOTAL	---	---	---	---	---	---	169.2	722.0	704	343.1	210.4	186.7
MEAN	---	---	---	---	---	---	5.64	23.3	23.5	11.1	6.79	6.22
MAX	---	---	---	---	---	---	6.6	112	64	20	8.6	6.9
MIN	---	---	---	---	---	---	4.8	5.9	14	8.5	5.5	5.6
AC-FT	---	---	---	---	---	---	336	1,430	1,400	681	417	370

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1922 - 2003, BY WATER YEAR (WY)*

MEAN	9.03	7.53	6.15	5.25	4.76	4.96	6.41	29.8	78.2	29.3	12.2	8.92
MAX	17.6	13.3	10.0	8.00	7.00	8.00	9.40	79.6	242	112	45.4	21.9
(WY)	(1931)	(1927)	(1927)	(1927)	(1922)	(1922)	(1999)	(1999)	(1999)	(1995)	(1930)	(1930)
MIN	5.15	2.50	2.00	2.00	2.00	2.50	3.97	6.85	8.94	5.68	3.50	4.60
(WY)	(1989)	(1940)	(1940)	(1940)	(1940)	(1940)	(1940)	(1935)	(2001)	(1940)	(1940)	(2001)

YELLOWSTONE RIVER BASIN

06223500 WILLOW CREEK NEAR CROWHEART, WY—Continued

SUMMARY STATISTICS

FOR 2003 WATER YEAR*

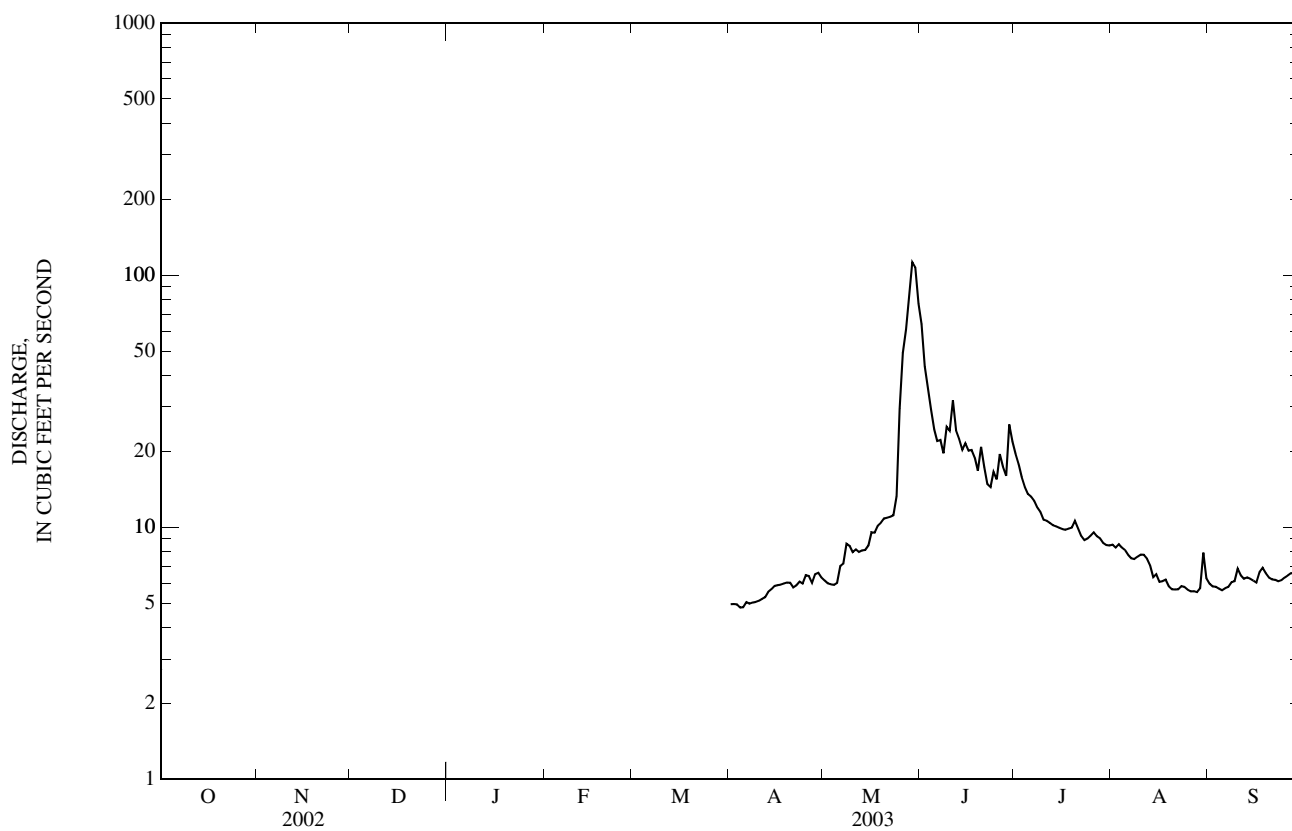
WATER YEARS 1922 - 2003*

ANNUAL MEAN	--	16.5
HIGHEST ANNUAL MEAN	--	31.0 1995
LOWEST ANNUAL MEAN	--	4.60 1940
HIGHEST DAILY MEAN	112 May 29	468 Jun 12, 1991
LOWEST DAILY MEAN	4.80 Apr 4,5	2.0 Dec 1, 1939
MAXIMUM PEAK FLOW	189 May 29	1,100 ^a May 31, 1939
MAXIMUM PEAK STAGE	3.50 May 29	5.40 ^b May 31, 1939
ANNUAL RUNOFF (AC-FT)	--	11,930

* For period of operation.

a On basis of flow-over-dam measurement of peak flow.

b Site and datum then in use.



06224000 BULL LAKE CREEK ABOVE BULL LAKE, WY

LOCATION.--Lat 43° 10'37", long 109° 12'08", in NE $\frac{1}{4}$ SW $\frac{1}{4}$ sec.2, T.2 N., R.4 W., Fremont County, Hydrologic Unit 10080001, Wind River Indian Reservation, on right bank 1.2 mi upstream from high-water line of Bull Lake and 9.0 mi south of Crowheart.

DRAINAGE AREA.--187 mi².

PERIOD OF RECORD.--June 1941 to December 1953, October 1966 to current year. Monthly discharge only for some periods, published in WSP 1309. Prior to October 1950, published as "above Bull Lake Reservoir."

GAGE.--Water-stage recorder. Elevation of gage is 5,874 ft above NGVD of 1929, from topographic map. U.S. Geological Survey data collection platform with satellite telemetry at station.

REMARKS.--Records good except those for estimated daily discharges, which are poor. No diversions upstream from station.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	80	35	35	20	23	20	33	96	1,770	728	407	230
2	87	35	34	19	25	19	33	91	1,530	783	396	206
3	86	35	34	19	23	20	29	90	1,320	794	388	191
4	87	44	33	20	24	19	26	90	1,140	766	373	180
5	85	44	27	20	24	19	26	94	983	725	365	174
6	81	46	25	19	e24	19	29	94	891	689	347	179
7	78	41	29	19	e23	20	25	92	796	673	327	182
8	76	41	24	19	e23	23	28	111	708	666	322	189
9	75	43	27	19	e25	28	26	119	721	642	310	192
10	74	43	27	16	26	33	28	117	786	610	302	184
11	74	41	25	19	25	33	34	119	923	590	299	177
12	72	39	24	19	24	34	42	123	941	581	298	168
13	68	47	25	19	24	33	47	157	895	580	303	157
14	66	42	26	19	24	35	54	161	853	586	310	145
15	63	41	25	18	24	35	67	194	881	583	334	133
16	62	41	25	17	23	33	74	255	896	563	381	123
17	60	40	24	17	23	35	74	312	895	557	359	119
18	58	39	23	17	22	35	73	287	885	561	311	119
19	57	39	15	18	21	35	70	267	911	588	271	114
20	55	38	21	18	22	34	67	242	949	603	252	109
21	53	36	24	18	22	33	69	238	929	586	255	104
22	52	36	21	18	22	32	76	287	802	577	261	99
23	55	e35	18	18	20	32	81	436	658	562	281	93
24	55	37	16	17	18	28	85	678	583	536	289	87
25	55	23	15	18	22	28	95	967	509	524	258	84
26	53	36	16	18	22	31	111	1,160	468	549	233	80
27	50	42	19	20	21	30	108	1,310	442	591	226	77
28	50	41	23	20	21	30	106	1,540	456	566	217	74
29	52	40	21	19	---	27	103	1,800	536	526	207	73
30	42	37	20	19	---	32	98	1,910	632	482	232	75
31	29	---	20	20	---	32	---	1,820	---	439	241	---
TOTAL	1,990	1,177	741	576	640	897	1,817	15,257	25,689	18,806	9,355	4,117
MEAN	64.2	39.2	23.9	18.6	22.9	28.9	60.6	492	856	607	302	137
MAX	87	47	35	20	26	35	111	1,910	1,770	794	407	230
MIN	29	23	15	16	18	19	25	90	442	439	207	73
AC-FT	3,950	2,330	1,470	1,140	1,270	1,780	3,600	30,260	50,950	37,300	18,560	8,170

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1942 - 2003, BY WATER YEAR (WY)

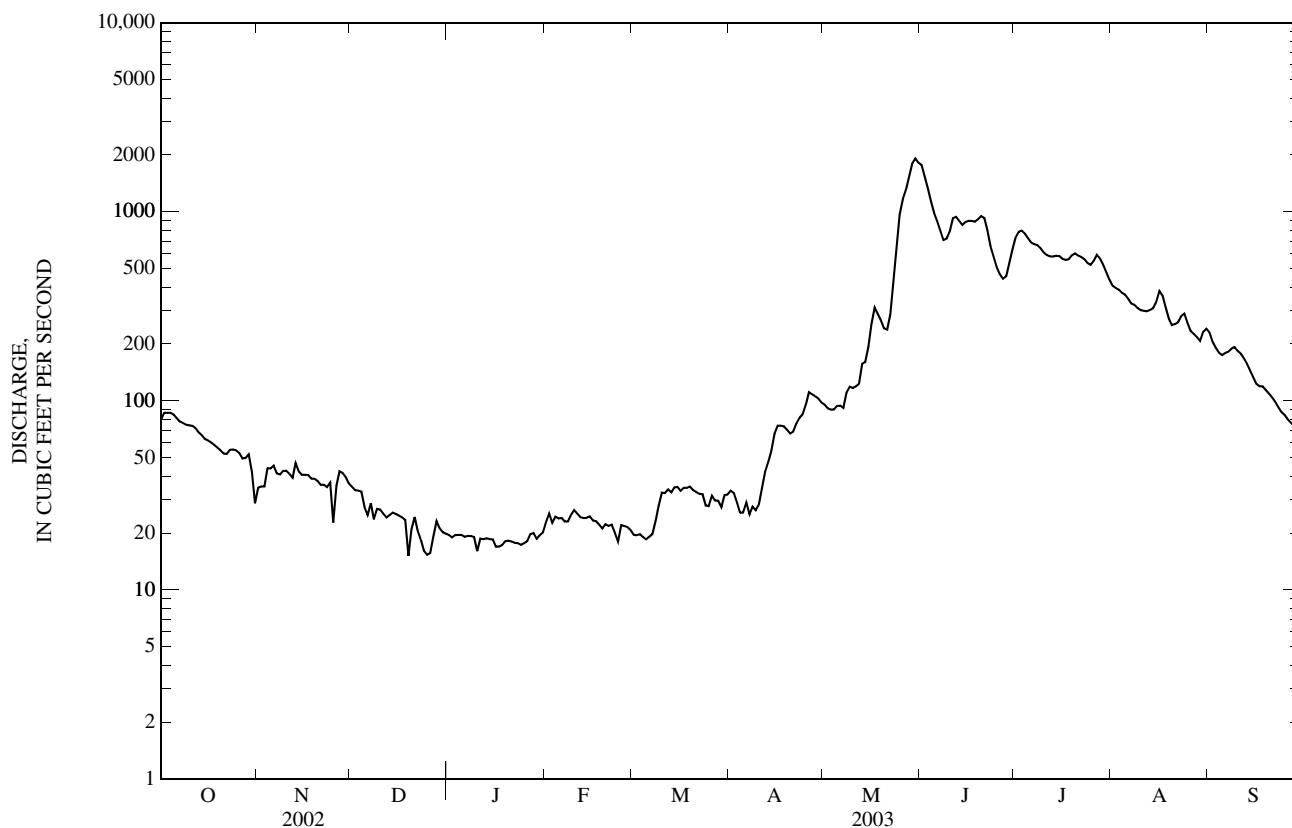
MEAN	97.3	54.4	36.9	28.3	24.8	26.5	65.5	469	1,140	896	422	203
MAX	222	109	62.2	57.1	41.4	57.4	199	777	2,104	1,581	655	533
(WY)	(1983)	(1951)	(1951)	(1997)	(1943)	(1986)	(1943)	(1969)	(1986)	(1975)	(1982)	(1973)
MIN	32.9	29.5	14.6	7.29	6.88	6.69	24.9	170	544	337	145	109
(WY)	(1989)	(1977)	(1977)	(1977)	(1977)	(1977)	(1970)	(1975)	(2001)	(1994)	(1985)	(1988)

YELLOWSTONE RIVER BASIN

06224000 BULL LAKE CREEK ABOVE BULL LAKE, WY—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1942 - 2003	
ANNUAL TOTAL	68,597		81,062		--	
ANNUAL MEAN	188		222		290	
HIGHEST ANNUAL MEAN	--		--		415	
LOWEST ANNUAL MEAN	--		--		174	
HIGHEST DAILY MEAN	1,480	Jun 1	1,910	May 30	3,560	Jun 9, 1981
LOWEST DAILY MEAN	13	Feb 26, Mar 9	15	Dec 19	6.2	Jan 9, 1977
		Apr 3				
ANNUAL SEVEN-DAY MINIMUM	14	Mar 3	18	Jan 15	6.5	Mar 10, 1977
MAXIMUM PEAK FLOW	--		2,030	May 30	4,470	Jun 9, 1981
MAXIMUM PEAK STAGE	--		5.58	May 30	7.98	Jun 9, 1981
ANNUAL RUNOFF (AC-FT)	136,100		160,800		209,900	
10 PERCENT EXCEEDS	621		675		894	
50 PERCENT EXCEEDS	50		66		74	
90 PERCENT EXCEEDS	16		20		22	

e Estimated.



06225000 BULL LAKE CREEK NEAR LENORE, WY

LOCATION.--Lat 43° 14'33", long 109° 01'20", in NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec.17, T.3 N., R.2 W., Fremont County, Hydrologic Unit 10080001, Wind River Indian Reservation, on left bank 700 ft upstream from mouth, 2.8 mi downstream from Bull Lake, and 8.5 mi southeast of Lenore.

DRAINAGE AREA.--213 mi², of which 12 mi² probably is noncontributing.

PERIOD OF RECORD.--May 1918 to current year.

REVISED RECORDS.--WSP 1309: 1921 (M, date only), 1925(M), 1926(M), 1930(M). WSP 1709: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 5,654 ft above NGVD of 1929, from topographic map. May 18, 1918 to March 25, 1922, at site 10 ft upstream at datum 0.86 ft higher, March 26, 1922 to October 3, 1934, at present site at datum 2.00 ft lower. Bureau of Reclamation data collection platform with satellite telemetry at station.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Flow completely regulated by Bull Lake 2.8 mi upstream since April, 1938. Diversions upstream from station for irrigation of about 730 acres downstream.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24	28	27	27	27	31	30	322	20	21	772	902
2	25	28	27	27	e28	e31	30	321	20	21	826	828
3	28	28	26	27	e27	31	29	317	21	22	852	699
4	35	28	27	28	27	31	29	317	21	26	890	660
5	35	27	28	28	e27	e31	29	403	22	25	892	632
6	35	27	28	27	e29	31	30	438	22	27	889	629
7	35	27	29	27	e30	31	30	522	27	30	891	625
8	35	27	28	e27	30	31	29	525	35	26	878	621
9	36	26	28	e27	e29	31	30	437	34	26	856	570
10	35	26	27	e26	e29	31	30	396	35	29	856	370
11	36	26	27	e26	e29	31	30	399	23	164	850	133
12	36	26	28	26	29	31	30	475	24	207	839	161
13	36	26	28	26	30	31	30	500	23	278	872	182
14	37	26	28	27	30	31	29	531	21	406	889	242
15	36	26	27	27	29	30	30	501	22	411	962	316
16	37	26	27	26	29	30	30	404	23	472	969	341
17	37	26	27	e26	e29	31	30	333	23	586	961	298
18	37	25	27	27	30	30	30	282	22	701	936	141
19	38	25	e27	27	30	30	30	322	22	744	895	20
20	38	25	e27	28	31	30	30	432	20	739	891	18
21	37	25	27	28	31	30	67	456	20	738	913	18
22	30	25	e27	28	31	30	208	418	20	735	958	18
23	28	26	27	e27	e31	29	319	261	20	743	981	18
24	28	e26	e27	27	e31	29	317	41	24	769	982	18
25	28	e26	e27	28	e31	29	316	29	21	790	968	18
26	28	e26	e27	28	e31	30	316	29	21	819	964	18
27	28	26	e27	28	e31	30	326	30	21	832	960	18
28	28	26	28	27	31	30	438	30	20	833	951	18
29	29	26	28	27	---	29	432	32	21	775	964	18
30	28	27	28	27	---	29	451	29	20	697	952	18
31	28	---	27	27	---	29	---	20	---	714	911	---
TOTAL	1,011	788	848	839	827	939	3,785	9,552	688	13,406	28,170	8,568
MEAN	32.6	26.3	27.4	27.1	29.5	30.3	126	308	22.9	432	909	286
MAX	38	28	29	28	31	31	451	531	35	833	982	902
MIN	24	25	26	26	27	29	29	20	20	21	772	18
AC-FT	2,010	1,560	1,680	1,660	1,640	1,860	7,510	18,950	1,360	26,590	55,880	16,990

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1918 - 2003, BY WATER YEAR (WY)

MEAN	136	68.8	69.4	85.5	72.4	59.5	94.6	236	543	805	670	431
MAX	782	467	241	267	219	197	601	831	2,265	1,645	1,027	982
(WY)	(1952)	(1969)	(1972)	(1954)	(1951)	(1951)	(1965)	(1928)	(1918)	(1923)	(1969)	(1976)
MIN	4.16	8.34	13.8	11.0	12.0	0.000	3.59	6.01	10.6	85.6	193	46.3
(WY)	(1941)	(1965)	(1978)	(1931)	(1931)	(1937)	(1941)	(1940)	(1941)	(1941)	(1977)	(2001)

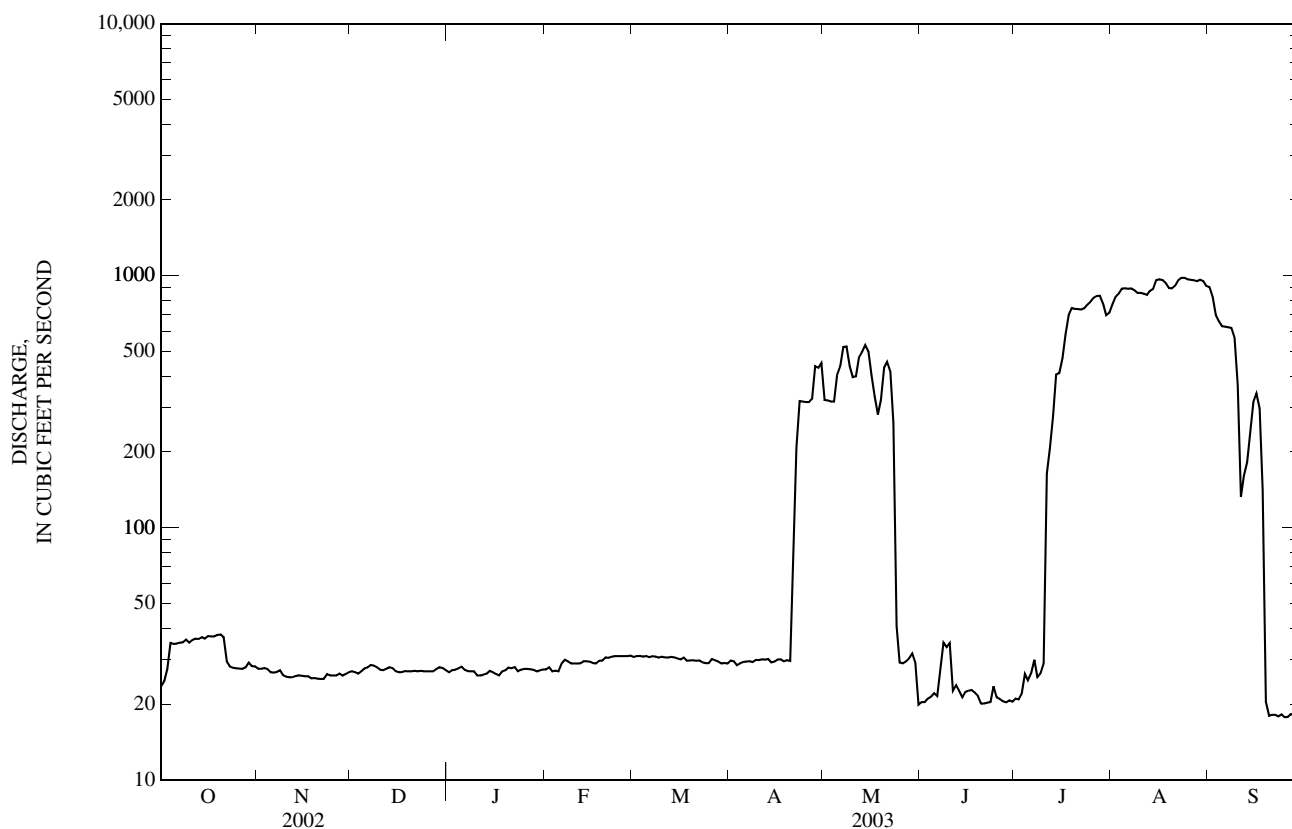
06225000 BULL LAKE CREEK NEAR LENORE, WY—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1918 - 2003	
ANNUAL TOTAL	59,674		69,421		--	
ANNUAL MEAN	163		190		273	
HIGHEST ANNUAL MEAN	--		--		427	
LOWEST ANNUAL MEAN	--		--		100	
HIGHEST DAILY MEAN	953	Aug 16	982	Aug 24	3,900	Jun 16, 1918
LOWEST DAILY MEAN	21	Jan 30	18	Sep 20-30	0.00 ^a	Feb 28 to Apr 7, 1937
ANNUAL SEVEN-DAY MINIMUM	22	Sep 18	18	Sep 20	0.00 ^a	Feb 28, 1937
MAXIMUM PEAK FLOW	--		1,020		6,200 ^b	Aug 8, 1951
MAXIMUM PEAK STAGE	--		3.41		7.09 ^b	Aug 8, 1951
ANNUAL RUNOFF (AC-FT)	118,400		137,700		197,600	
10 PERCENT EXCEEDS	753		781		802	
50 PERCENT EXCEEDS	29		30		103	
90 PERCENT EXCEEDS	22		23		20	

a Result of regulation.

b From rating curve extended above 2,000 ft³/s on basis of slope-area measurement of peak flow. Result of automatic spillway gates releasing at Bull Lake Dam.

c Estimated.



06225500 WIND RIVER NEAR CROWHEART, WY

LOCATION.--Lat 43° 14'33", long 109° 00'35", in NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec.16, T.3 N., R.2 W., Fremont County, Hydrologic Unit 10080001, Wind River Indian Reservation, on right bank 0.9 mi downstream from Bull Lake Creek and 9.0 mi southeast of Crowheart.

DRAINAGE AREA.--1,891 mi².

PERIOD OF RECORD.--October 1945 to current year.

REVISED RECORDS.--WSP 1116: 1946-47. WSP 1709: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 5,635 ft above NGVD of 1929, from topographic map. U.S. Geological Survey data collection platform with satellite telemetry at station.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Some regulation by Bull Lake on Bull Lake Creek. Diversions for irrigation of about 25,000 acres upstream from station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 29, 1927, reached a discharge of 13,000 ft³/s; discharge measurement made by Bureau of Reclamation at site 1.0 mi downstream.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	423	332	353	e310	e300	e250	291	688	5,890	1,720	1,530	1,570
2	538	342	356	e305	e280	e260	324	629	4,400	1,700	1,530	1,410
3	547	347	361	e320	e250	e270	311	597	3,380	1,660	1,510	1,210
4	527	365	361	e320	e255	e260	278	600	2,760	1,560	1,570	1,140
5	513	367	e340	e320	e260	e250	266	665	2,330	1,510	1,560	1,090
6	493	358	e310	e310	e265	e255	257	693	2,050	1,450	1,510	1,100
7	474	356	e305	e310	e270	e260	259	781	1,780	1,410	1,470	1,200
8	476	351	e295	e310	e270	e265	253	839	1,580	1,360	1,440	1,220
9	485	361	e300	e303	e290	266	264	776	1,800	1,320	1,450	1,600
10	483	347	e300	e300	e310	268	316	671	2,040	1,260	1,450	1,810
11	469	344	e300	e300	e290	276	406	651	2,320	1,310	1,460	1,290
12	465	337	e300	e310	e270	289	483	731	2,190	1,320	1,420	1,070
13	435	356	e310	e320	e270	328	549	759	2,060	1,330	1,440	995
14	419	346	e330	e320	e280	355	583	858	1,910	1,430	1,480	970
15	424	328	e340	e310	e285	342	553	964	2,010	1,420	1,550	1,010
16	417	336	e330	e300	e280	328	491	1,060	2,000	1,430	1,630	998
17	420	329	e330	e290	273	331	422	1,250	2,070	1,500	1,690	971
18	406	328	e310	e295	289	312	403	1,180	2,130	1,600	1,640	850
19	406	321	e280	e300	290	285	380	1,100	2,240	1,710	1,510	653
20	396	353	e280	e310	262	278	372	1,110	2,200	1,730	1,440	605
21	397	346	e280	e310	267	276	425	1,140	2,140	1,750	1,450	576
22	400	342	e290	e310	278	272	639	1,230	1,860	1,720	1,510	550
23	405	e360	e300	e305	269	282	801	1,620	1,590	1,690	1,550	521
24	395	e330	e300	e300	218	286	843	2,060	1,460	1,690	1,590	503
25	405	e290	e320	e300	e250	266	860	2,140	1,280	1,730	1,560	494
26	393	e280	e310	e310	e290	271	859	2,380	1,130	1,810	1,510	472
27	371	e310	e300	e300	e270	277	841	2,920	1,140	1,880	1,490	465
28	378	e340	e290	e285	e260	264	925	4,370	1,370	1,910	1,490	464
29	388	e350	e280	e265	---	247	901	5,210	1,590	1,760	1,480	469
30	373	e350	e290	e270	---	249	860	5,740	1,640	1,580	1,610	486
31	332	---	e300	e280	---	268	---	6,210	---	1,530	1,720	---
TOTAL	13,453	10,202	9,651	9,398	7,641	8,686	15,415	51,622	64,340	48,780	47,240	27,762
MEAN	434	340	311	303	273	280	514	1,665	2,145	1,574	1,524	925
MAX	547	367	361	320	310	355	925	6,210	5,890	1,910	1,720	1,810
MIN	332	280	280	265	218	247	253	597	1,130	1,260	1,420	464
AC-FT	26,680	20,240	19,140	18,640	15,160	17,230	30,580	102,400	127,600	96,760	93,700	55,070

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1946 - 2003, BY WATER YEAR (WY)

MEAN	678	475	382	363	351	360	551	1,763	3,697	2,857	1,657	1,140
MAX	1,415	932	625	560	538	616	1,284	2,938	7,259	5,694	2,483	1,774
(WY)	(1952)	(1969)	(1972)	(1954)	(1951)	(1972)	(1952)	(1956)	(1971)	(1967)	(1951)	(1997)
MIN	371	298	215	179	202	226	309	729	1,466	1,362	853	380
(WY)	(1989)	(1978)	(1982)	(1982)	(1989)	(1977)	(1993)	(1977)	(2001)	(1992)	(1977)	(2001)

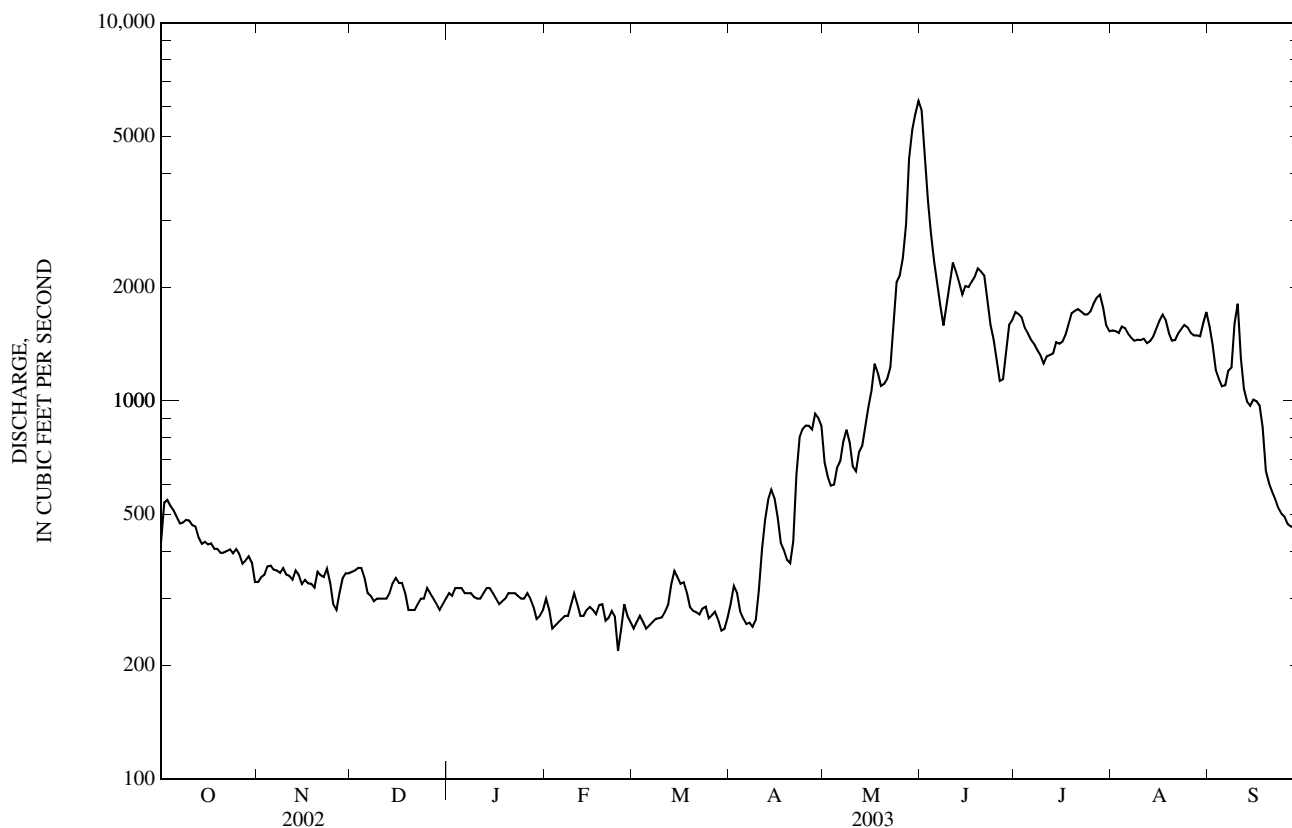
YELLOWSTONE RIVER BASIN

06225500 WIND RIVER NEAR CROWHEART, WY—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1946 - 2003	
ANNUAL TOTAL	274,790		314,190		--	
ANNUAL MEAN	753		861		1,193	
HIGHEST ANNUAL MEAN	--		--		1,657	
LOWEST ANNUAL MEAN	--		--		658	
HIGHEST DAILY MEAN	4,900	Jun 1	6,210	May 31	11,400	Jun 18,19,1999
LOWEST DAILY MEAN	190 ^e	Jan 3-5	218	Feb 24	130	Feb 5, 1982
ANNUAL SEVEN-DAY MINIMUM	195	Jan 2	257	Feb 24	143	Dec 30, 1981
MAXIMUM PEAK FLOW	--		6,980	May 31	14,300 ^a	Jun 13, 1991
MAXIMUM PEAK STAGE	--		9.53	May 31	11.23	Jun 19, 1999
ANNUAL RUNOFF (AC-FT)	545,000		623,200		864,100	
10 PERCENT EXCEEDS	1,710		1,730		2,730	
50 PERCENT EXCEEDS	371		422		574	
90 PERCENT EXCEEDS	220		270		292	

a Gage height, 11.04 ft, from floodmarks.

e Estimated.



06226000 WYOMING CANAL NEAR LENORE, WY

LOCATION.--Lat 43° 13'45", long 108° 53'40", in SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.17, T.3 N., R.1 W., Fremont County, Hydrologic Unit 10080001, on right bank 3.3 mi downstream from diversion dam on Wind River and 15 mi southeast of Lenore.

PERIOD OF RECORD.--May 1941 to September 1945 (irrigation season only), May 1949 to September 1982, April 1988 to current year. No winter record 1977-1978, and 1988 to current year. Monthly discharge only from some periods, published in WSP 1309.

GAGE.--Water-stage recorder. Datum of gage is 5,560.85 ft above NGVD of 1929. May 1, 1941 to September 30, 1945, nonrecording gage at site 3.2 mi upstream at different datum. May 3, 1949 to October 2, 1952, and April 12 to May 15, 1971, water-stage recorder at site 3.0 mi upstream at different datum. U.S. Geological Survey data collection platform with satellite telemetry at station.

REMARKS.--Records fair except those for estimated daily discharges, which are poor.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	552	1,750	613	1,080	1,050
2	---	---	---	---	---	---	---	544	1,670	649	1,060	928
3	---	---	---	---	---	---	---	509	1,700	679	1,040	762
4	---	---	---	---	---	---	---	512	1,660	710	1,110	707
5	---	---	---	---	---	---	25	535	1,640	735	1,100	668
6	---	---	---	---	---	---	147	543	1,510	761	1,060	658
7	---	---	---	---	---	---	186	572	1,290	815	1,010	743
8	---	---	---	---	---	---	196	606	1,060	918	976	742
9	---	---	---	---	---	---	201	616	1,220	907	983	753
10	177	---	---	---	---	---	231	536	1,450	848	972	1,290
11	270	302	---	---	---	---	330	503	1,590	889	996	1,070
12	370	285	---	---	---	---	408	561	1,600	920	957	801
13	384	308	---	---	---	---	450	589	1,510	922	958	738
14	371	308	---	---	---	---	519	607	1,360	1,000	998	700
15	381	276	---	---	---	---	491	660	1,400	1,020	1,070	738
16	373	271	---	---	---	---	428	720	1,360	1,030	1,160	751
17	382	276	---	---	---	---	366	856	1,470	1,050	1,220	732
18	371	273	---	---	---	---	344	799	1,540	1,120	1,190	667
19	373	277	---	---	---	---	318	700	1,440	1,200	1,060	e20
20	368	296	---	---	---	---	305	653	1,230	1,250	960	---
21	367	291	---	---	---	---	275	676	887	1,250	929	---
22	366	283	---	---	---	---	347	747	841	1,220	960	---
23	375	e246	---	---	---	---	373	1,050	832	1,200	962	---
24	358	211	---	---	---	---	413	1,330	818	1,200	994	---
25	370	20	---	---	---	---	450	1,550	757	1,230	994	---
26	356	---	---	---	---	---	451	1,640	655	1,310	954	---
27	323	---	---	---	---	---	436	1,690	611	1,390	971	---
28	325	---	---	---	---	---	484	1,710	605	1,440	993	---
29	329	---	---	---	---	---	491	1,750	615	1,370	960	---
30	319	---	---	---	---	---	513	1,760	594	1,210	1,090	---
31	148	---	---	---	---	---	---	1,760	---	1,110	1,210	---
TOTAL	---	---	---	---	---	---	---	27,836	36,665	31,966	31,977	---
MEAN	---	---	---	---	---	---	---	898	1,222	1,031	1,032	---
MAX	---	---	---	---	---	---	---	1,760	1,750	1,440	1,220	---
MIN	---	---	---	---	---	---	---	503	594	613	929	---
AC-FT	---	---	---	---	---	---	---	55,210	72,730	63,400	63,430	---

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 2003, BY WATER YEAR (WY)*

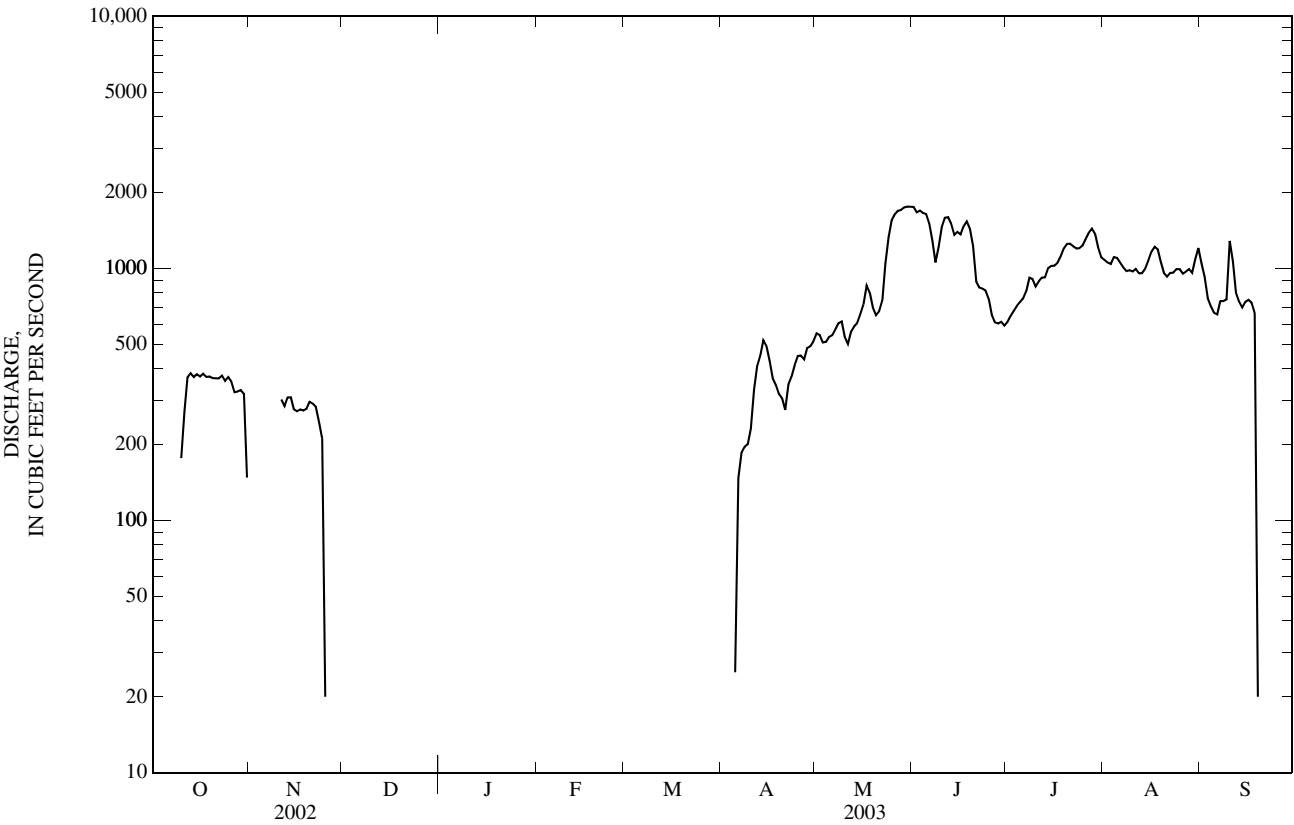
MEAN	195	184	199	199	201	224	298	719	1,127	1,249	985	699
MAX	430	436	383	345	357	422	440	1,201	1,668	1,736	1,402	1,168
(WY)	(1994)	(1972)	(1958)	(1958)	(1954)	(1972)	(1980)	(2000)	(1990)	(1976)	(1995)	(1997)
MIN	0.000	0.000	0.000	0.000	0.000	0.000	91.2	339	321	587	423	277
(WY)	(1951)	(1951)	(1971)	(1971)	(1971)	(1971)	(1971)	(1942)	(1944)	(1941)	(1941)	(1994)

YELLOWSTONE RIVER BASIN

06226000 WYOMING CANAL NEAR LENORE, WY—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR*	FOR 2003 WATER YEAR*	WATER YEARS 1941 - 2003*
ANNUAL MEAN	--	--	539.7 ^a
HIGHEST ANNUAL MEAN	--	--	669 ^a 1972
LOWEST ANNUAL MEAN	--	--	461 ^a 1975
HIGHEST DAILY MEAN	1,790 Jun 1	1,760 May 30-31	1,860 Jun 11, 12, 1990
LOWEST DAILY MEAN	0.00 Many days	0.00 Many days	0.00 Many days, most years
MAXIMUM PEAK FLOW	--	--	2,060 Jun 5, 1990
MAXIMUM PEAK STAGE	--	--	13.79 Jun 5, 1990

* For period of operation.
a Water years 1977, 1978, and 1988 to current year not included.
e Estimated.



06227596 JOHNSTOWN DITCH AT HEADWORKS, NEAR KINNENAR, WY

LOCATION.--Lat 43° 09' 02", long 108° 43' 41", in SW $\frac{1}{4}$ SE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 14, T. 2 N., R. 1 E., Fremont County, Hydrologic Unit 10080001, Wind River Indian Reservation, on left bank, 450 ft downstream from headgate, 1.6 mi upstream from bridge on State Highway 132, and 2.5 mi west of Kinnear.

PERIOD OF RECORD.--May 1991 to September 1999, May 2002 to current year (no winter records).

GAGE.--Water-stage recorder. Elevation of gage is 5,310 ft above NGVD of 1929, from topographic map. U.S. Geological Survey data collection platform with satellite telemetry at station.

REMARKS.--Records good. Flow is diverted from the Wind River for irrigation.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	14	28	20	22	23
2	---	---	---	---	---	---	---	12	26	20	22	23
3	---	---	---	---	---	---	---	11	24	20	22	21
4	---	---	---	---	---	---	---	11	31	20	23	20
5	---	---	---	---	---	---	---	12	33	19	23	19
6	---	---	---	---	---	---	---	13	28	20	24	19
7	---	---	---	---	---	---	---	14	28	20	25	19
8	---	---	---	---	---	---	---	15	28	21	25	19
9	---	---	---	---	---	---	---	14	28	22	26	20
10	---	---	---	---	---	---	---	13	29	21	26	20
11	---	---	---	---	---	---	---	13	35	22	26	19
12	---	---	---	---	---	---	---	13	33	22	26	18
13	---	---	---	---	---	---	---	13	31	22	26	18
14	---	---	---	---	---	---	---	14	30	22	26	17
15	---	---	---	---	---	---	---	15	30	22	26	17
16	---	---	---	---	---	---	5.9	15	31	22	26	16
17	---	---	---	---	---	---	12	16	29	22	26	16
18	---	---	---	---	---	---	12	16	29	24	26	16
19	---	---	---	---	---	---	12	16	33	24	26	28
20	---	---	---	---	---	---	11	17	37	23	27	26
21	---	---	---	---	---	---	12	17	41	23	27	25
22	---	---	---	---	---	---	16	17	38	22	29	25
23	---	---	---	---	---	---	19	19	35	21	30	20
24	---	---	---	---	---	---	19	21	33	22	31	14
25	---	---	---	---	---	---	19	22	30	23	30	14
26	---	---	---	---	---	---	18	22	28	23	30	13
27	---	---	---	---	---	---	19	25	28	23	26	13
28	---	---	---	---	---	---	19	25	31	23	22	13
29	---	---	---	---	---	---	19	30	37	22	23	6.7
30	---	---	---	---	---	---	19	41	29	20	24	1.3
31	---	---	---	---	---	---	---	25	---	21	23	---
TOTAL	---	---	---	---	---	---	---	541	931	671	794	539.0
MEAN	---	---	---	---	---	---	---	17.5	31.0	21.6	25.6	18.0
MAX	---	---	---	---	---	---	---	41	41	24	31	28
MIN	---	---	---	---	---	---	---	11	24	19	22	1.3
AC-FT	---	---	---	---	---	---	---	1,070	1,850	1,330	1,570	1,070

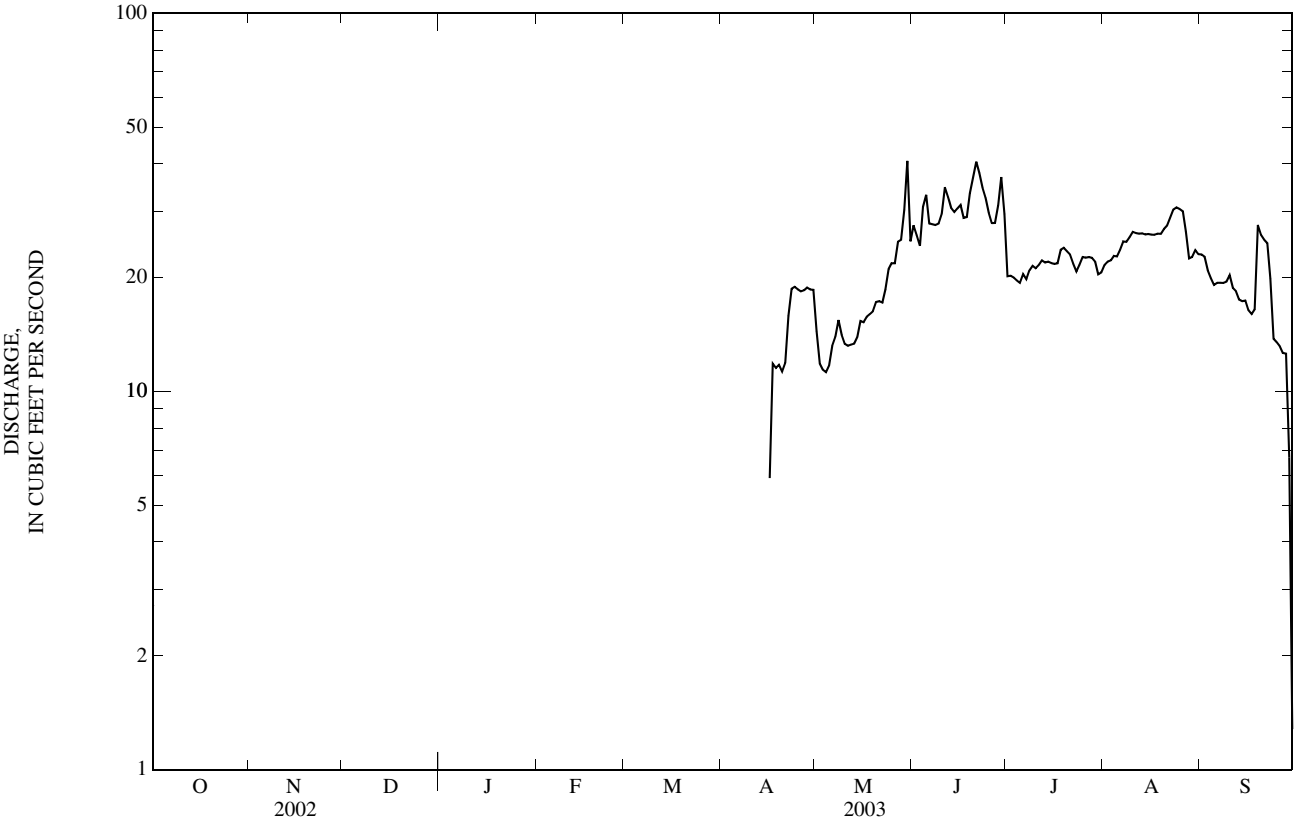
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1991 - 2003, BY WATER YEAR (WY)*

MEAN	1.25	---	---	---	---	---	---	15.6	23.5	25.1	24.7	19.7
MAX	1.73	---	---	---	---	---	---	26.1	33.6	32.6	33.5	29.5
(WY)	(1993)	(---)	(---)	(---)	(---)	(---)	(---)	(1994)	(1999)	(1999)	(1999)	(2001)
MIN	0.76	---	---	---	---	---	---	6.98	11.5	12.7	17.7	10.9
(WY)	(1994)	(---)	(---)	(---)	(---)	(---)	(---)	(1999)	(1995)	(1992)	(2002)	(1993)

06227596 JOHNSTOWN DITCH AT HEADWORKS, NEAR KINNEAR, WY—Continued

SUMMARY STATISTICS	FOR 2003 WATER YEAR*		WATER YEARS 1991 - 2003*	
HIGHEST DAILY MEAN	41	May 30, Jun 21	48	Jun 25, 1991
LOWEST DAILY MEAN	1.3	Sep 30	0.00	Many days, most years
MAXIMUM PEAK FLOW	58	May 30	58	May 30, 2003
MAXIMUM PEAK STAGE	2.50	May 30	2.50	May 30, 2003

* For period of operation.



06227600 WIND RIVER NEAR KINNEAR, WY

LOCATION.--Lat 43° 08'38", long 108° 42'26", in SE $\frac{1}{4}$ SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec.13, T.2 N., R.1 E., Fremont County, Hydrologic Unit 10080001, Wind River Indian Reservation, on left bank, downstream side of bridge on Wyoming State Secondary Highway 132 and 1.6 mi southwest of Kinnear.

DRAINAGE AREA.--2,194 mi².

PERIOD OF RECORD.--April 1974 to September 1979 (no winter records), April 1991 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 5,280 ft above NGVD of 1929, from topographic map. April 1974 to September 1979 and March 28, 1991 to June 8, 1997, at site 300 ft upstream on right bank at same datum. June 9, 1997 to April 21, 1998, at present site on right bank at same datum. U.S. Geological Survey data collection platform with satellite telemetry at station.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Some regulation by Bull Lake beginning in 1938 and Pilot-Butte Reservoir beginning in 1926, combined capacity, 182,000 acre-ft. Diversions upstream from station for irrigation of about 102,100 acres lying both upstream and downstream from station. The Wyoming Canal of the Riverton Project is the major diversion. This diversion began in 1926 and part of it can be returned to the river upstream from station through Pilot Wasteway. Additional wastewater returns to river downstream from station through Fivemile Creek and Muddy Creek.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	443	357	e350	e290	e310	e260	241	154	5,920	1,230	368	441
2	568	336	e360	e300	e320	e260	269	103	3,880	1,190	379	427
3	600	359	e350	e310	e330	e260	272	94	2,330	1,090	383	349
4	597	387	352	e320	e300	e280	244	91	1,350	909	378	296
5	576	385	336	e320	e260	e280	193	96	708	786	367	266
6	553	378	303	e310	e240	e270	103	119	462	677	362	271
7	528	284	280	e310	e220	e270	95	132	415	592	360	269
8	525	108	292	e300	e250	e290	88	180	425	446	361	269
9	529	98	269	e300	e280	e310	83	143	441	374	364	274
10	444	88	273	e300	e270	e330	85	128	461	362	359	301
11	155	82	287	e300	e270	326	78	123	639	356	361	255
12	107	79	277	e290	e270	253	81	131	549	350	357	242
13	100	89	297	e300	e280	271	86	125	463	346	356	221
14	97	78	e310	e310	e290	302	80	131	446	347	354	219
15	94	79	e330	e310	e280	297	80	177	468	345	358	213
16	94	76	e330	e270	e270	285	90	180	516	347	354	188
17	93	85	e330	e270	e270	293	85	204	447	351	356	188
18	86	79	e310	e270	e270	281	84	208	474	421	357	200
19	84	83	281	e290	e270	257	84	215	641	435	355	648
20	81	86	233	e300	e300	248	86	261	835	428	373	593
21	78	87	276	e310	e310	244	95	265	1,330	420	388	555
22	84	86	250	e310	e260	238	200	262	1,060	414	420	521
23	82	86	302	e310	e250	245	334	350	773	411	469	496
24	78	92	287	e300	e220	251	347	579	643	409	480	478
25	78	297	258	e300	e240	233	332	596	529	410	473	462
26	74	286	229	e300	e260	232	325	782	460	412	466	441
27	78	e290	331	e310	e260	246	322	1,660	461	416	451	421
28	87	e300	e300	e300	e260	228	328	2,780	628	411	427	421
29	94	e320	e300	e280	---	220	320	3,720	1,020	388	429	432
30	92	e340	e290	e260	---	218	316	4,760	1,160	325	473	452
31	170	---	e290	e270	---	227	---	5,530	---	333	449	---
TOTAL	7,349	5,780	9,263	9,220	7,610	8,205	5,426	24,279	29,934	15,731	12,187	10,809
MEAN	237	193	299	297	272	265	181	783	998	507	393	360
MAX	600	387	360	320	330	330	347	5,530	5,920	1,230	480	648
MIN	74	76	229	260	220	218	78	91	415	325	354	188
AC-FT	14,580	11,460	18,370	18,290	15,090	16,270	10,760	48,160	59,370	31,200	24,170	21,440

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1974 - 2003, BY WATER YEAR (WY)*

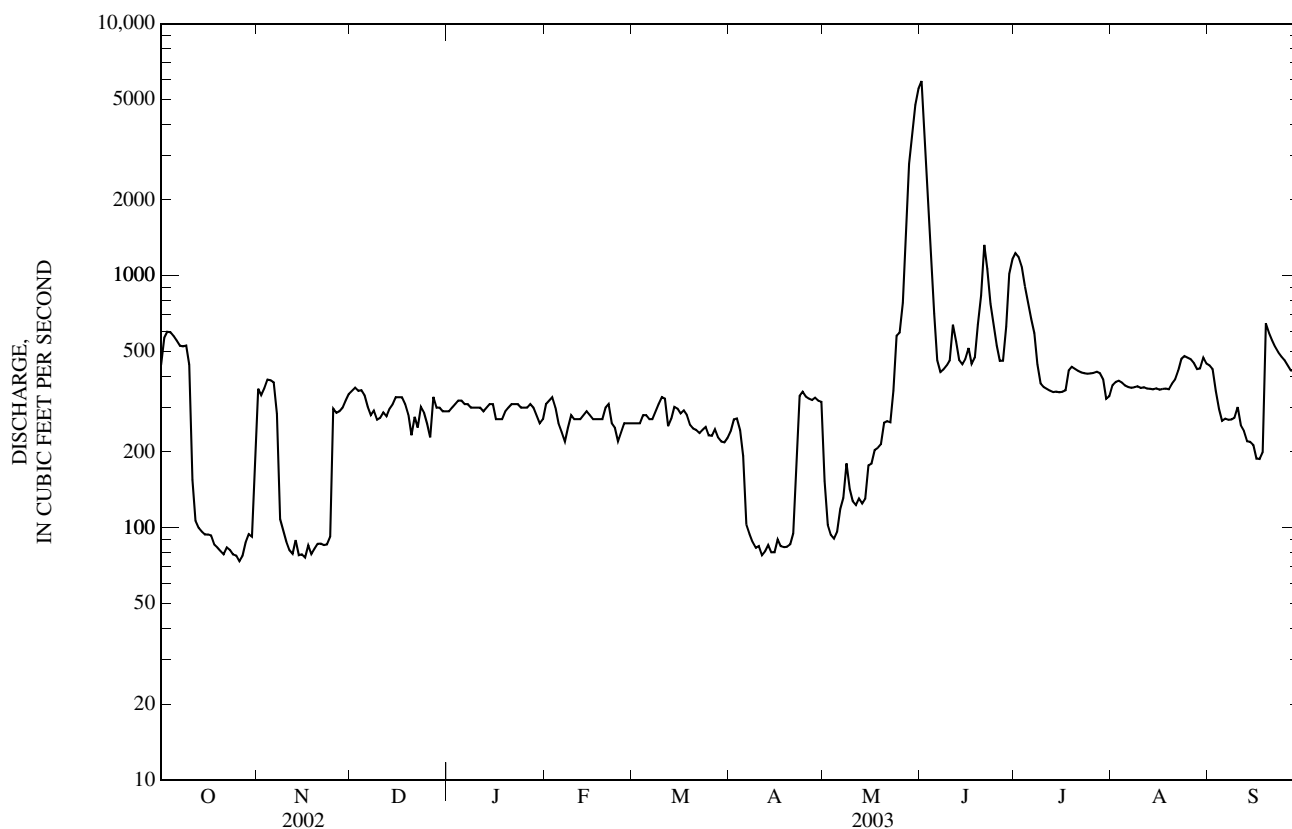
	MEAN	MAX	(WY)	MIN	(WY)
	351	850	(1998)	164	(2001)
	394	625	(1998)	119	(2002)
	310	380	(1996)	228	(2002)
	286	360	(1996)	193	(1993)
	290	378	(1998)	196	(2002)
	317	418	(1996)	194	(1992)
	256	758	(1974)	72.9	(1978)
	967	2,356	(1999)	283	(2002)
	2,576	6,611	(1999)	373	(2001)
	1,634	4,802	(1995)	346	(2001)
	564	1,230	(1976)	325	(2001)
	399	564	(1976)	216	(1977)

YELLOWSTONE RIVER BASIN

06227600 WIND RIVER NEAR KINNEAR, WY—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1974 - 2003*	
ANNUAL TOTAL	128,083		145,793		--	
ANNUAL MEAN	351		399		665	
HIGHEST ANNUAL MEAN	--		--		1,272	1999
LOWEST ANNUAL MEAN	--		--		277	2001
HIGHEST DAILY MEAN	3,040	Jun 1	5,920	Jun 1	11,100	Jun 20, 1999
LOWEST DAILY MEAN	74	Oct 26	74	Oct 26	28	Apr 24, 1978
ANNUAL SEVEN-DAY MINIMUM	79	Oct 21	79	Oct 21	35	Apr 19, 1978
MAXIMUM PEAK FLOW	--		6,850	May 31	13,900 ^a	Jun 13, 1991
MAXIMUM PEAK STAGE	--		7.24	May 31	8.79 ^b	Jun 10, 1997
INSTANTANEOUS LOW FLOW	--		32	Nov 12	--	
ANNUAL RUNOFF (AC-FT)	254,100		289,200		482,000	
10 PERCENT EXCEEDS	594		560		1,060	
50 PERCENT EXCEEDS	283		300		354	
90 PERCENT EXCEEDS	94		89		178	

* For period of operation.

^a Gage height, 8.03 ft, from floodmarks.₃^b From floodmarks, discharge, 11,600 ft³/s.^c Estimated.

06227810 LEFTHAND DITCH AT HEADWORKS, NEAR RIVERTON, WY

LOCATION.--Lat 43° 01' 34", long 108° 31' 12", in NE $\frac{1}{4}$ NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 33, T.1 N., R.3 E., Fremont County, Hydrologic Unit 10080001, Wind River Indian Reservation, on left bank 0.6 mi downstream from headgates and 6.9 mi west of Riverton.

PERIOD OF RECORD.--May 1991 to September 1999, May 2001 to current year (no winter records).

GAGE.--Water-stage recorder. Elevation of gage is 5,060 ft above NGVD of 1929, from topographic map. U.S. Geological Survey data collection platform with satellite telemetry at station.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Flow is diverted from Wind River for irrigation.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	4.5	41	25	27	45
2	---	---	---	---	---	---	---	4.3	41	23	31	44
3	---	---	---	---	---	---	---	4.1	43	21	31	38
4	---	---	---	---	---	---	---	4.1	42	20	28	31
5	---	---	---	---	---	---	---	4.0	29	19	26	27
6	---	---	---	---	---	---	---	3.9	22	19	25	27
7	---	---	---	---	---	---	---	3.9	25	18	25	28
8	---	---	---	---	---	---	---	3.9	24	19	25	27
9	---	---	---	---	---	---	---	3.8	26	20	25	24
10	---	---	---	---	---	---	---	3.8	31	20	25	26
11	---	---	---	---	---	---	---	3.8	36	22	26	27
12	---	---	---	---	---	---	---	3.8	39	23	26	25
13	---	---	---	---	---	---	---	3.6	36	22	27	23
14	---	---	---	---	---	---	---	3.6	34	17	28	23
15	---	---	---	---	---	---	---	6.5	34	16	28	23
16	---	---	---	---	---	---	---	8.0	33	20	28	21
17	---	---	---	---	---	---	---	6.2	31	20	30	20
18	---	---	---	---	---	---	---	4.3	29	29	32	22
19	---	---	---	---	---	---	---	11	26	35	32	36
20	---	---	---	---	---	---	---	25	29	35	34	38
21	---	---	---	---	---	---	e3.5	27	33	34	36	37
22	---	---	---	---	---	---	e18	27	32	33	39	37
23	---	---	---	---	---	---	e16	29	30	33	43	33
24	---	---	---	---	---	---	e14	34	29	32	46	30
25	---	---	---	---	---	---	e12	35	25	32	45	30
26	---	---	---	---	---	---	e10	35	22	32	44	29
27	---	---	---	---	---	---	e8.0	40	22	33	41	28
28	---	---	---	---	---	---	e6.0	38	23	32	39	28
29	---	---	---	---	---	---	5.4	19	26	32	38	19
30	---	---	---	---	---	---	5.1	27	25	21	46	e3.0
31	---	---	---	---	---	---	---	40	---	21	46	---
TOTAL	---	---	---	---	---	---	---	467.1	918	778	1,022	849.0
MEAN	---	---	---	---	---	---	---	15.1	30.6	25.1	33.0	28.3
MAX	---	---	---	---	---	---	---	40	43	35	46	45
MIN	---	---	---	---	---	---	---	3.6	22	16	25	3.0
AC-FT	---	---	---	---	---	---	---	926	1,820	1,540	2,030	1,680

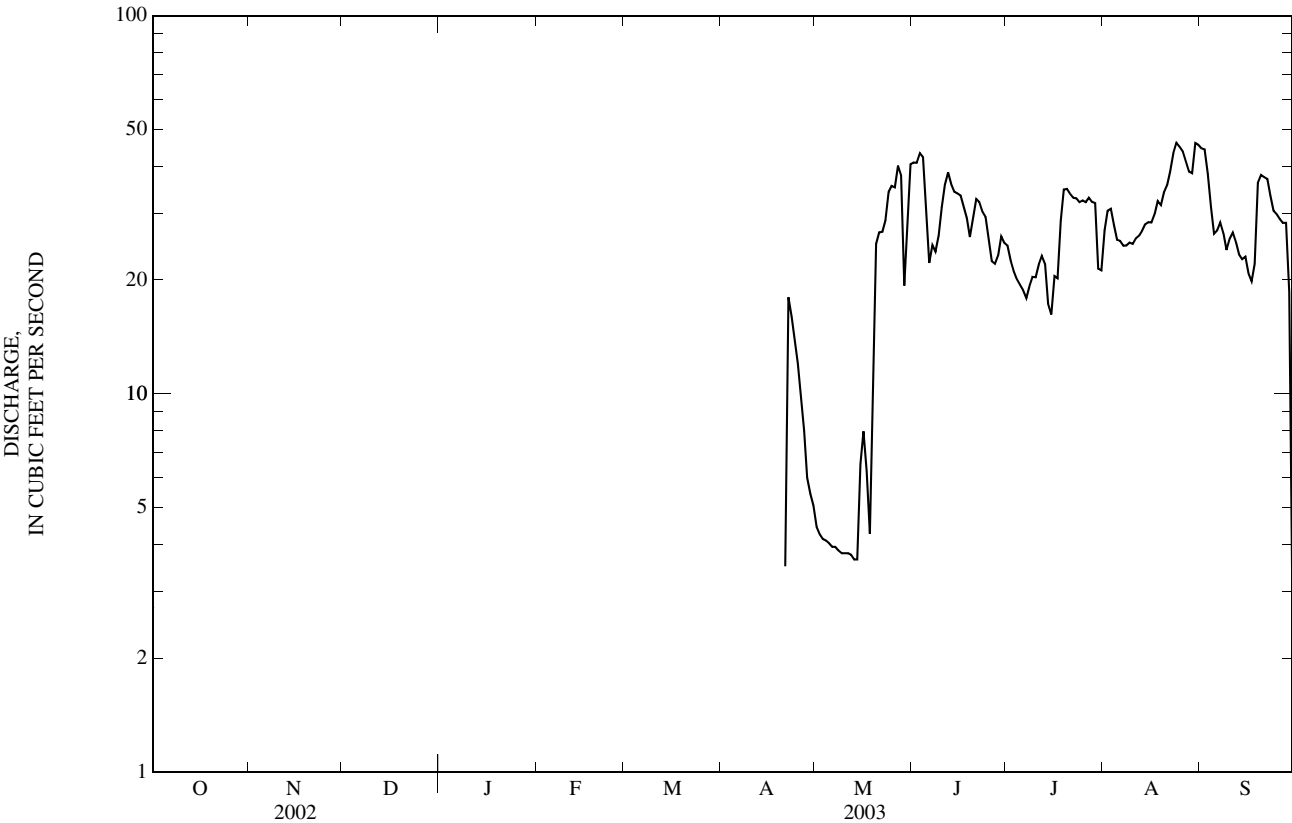
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1991 - 2003, BY WATER YEAR (WY)*

MEAN	0.60	---	---	---	---	---	0.60	22.6	26.7	28.5	26.7	26.4
MAX	0.87	---	---	---	---	---	0.60	35.3	41.6	44.6	47.7	42.9
(WY)	(1994)	(---	(---	(---	(---	(---	(1992)	(1992)	(2001)	(1994)	(1994)	(1994)
MIN	0.33	---	---	---	---	---	0.60	15.1	12.8	19.4	8.74	10.3
(WY)	(1993)	(---	(---	(---	(---	(---	(1992)	(2003)	(1995)	(1993)	(1998)	(1999)

06227810 LETHAND DITCH AT HEADWORKS, NEAR RIVERTON, WY—Continued

SUMMARY STATISTICS	FOR 2003 WATER YEAR*		WATER YEARS 1991 - 2003*	
HIGHEST DAILY MEAN	46	Aug 30, 31	66	May 25, 1997
LOWEST DAILY MEAN	3.5 ^e	Apr 21	0.00	Many days, most years
MAXIMUM PEAK FLOW	51	Aug 30	74 ^a	Jun 13, 1991, May 24, 1997
MAXIMUM PEAK STAGE	2.57	Aug 30	3.19	Sep 9, 1997

* For period of operation.
a Gage height, 2.73 ft in 1991, 3.09 ft in 1997.
e Estimated.



06228000 WIND RIVER AT RIVERTON, WY

LOCATION.--Lat 43° 00'38", long 108° 22'34", in NE $\frac{1}{4}$ NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec.2, T.1 S., R.4 E., Fremont County, Hydrologic Unit 10080001, Wind River Indian Reservation, on left bank 20 ft downstream from bridge on State Highway 789, 1.1 mi southeast of post office in Riverton, and 1.5 mi upstream from Little Wind River.

DRAINAGE AREA.--2,309 mi².

PERIOD OF RECORD.--May to August 1906, August to December 1907, May to October 1908, May 1911 to current year. Monthly discharge only for some periods, published in WSP 1309. Published as Big Wind River near Arapahoe Agency 1906 and as Big Wind River near Riverton 1907-08.

REVISED RECORDS.--WSP 1509: 1935. WSP 1709: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 4,901.56 ft above NGVD of 1929. See WSP 1729 for history of changes prior to October 13, 1930. October 13, 1930 to April 15, 1968, water-stage recorder at site 280 ft upstream at datum 2.00 ft higher. April 16 to November 17, 1968, water-stage recorder at site 155 ft upstream at datum 2.00 ft higher. November 18, 1968 to July 28, 1970, water-stage recorder at site 20 ft downstream at datum 2.00 ft higher. July 29, 1970 to September 30, 1977, water-stage recorder at site 245 ft downstream at datum 2.00 ft higher. October 1, 1977 to October 23, 1997 at site 245 ft downstream at same datum. Bureau of Reclamation data collection platform with satellite telemetry at station.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Some regulation by Bull Lake beginning in 1938 and Pilot Butte Reservoir beginning in 1926, combined capacity, 182,000 acre-ft. Diversions upstream from station for irrigation of about 128,000 acres upstream and downstream from station. The Wyoming Canal of the Riverton project is the major diversion. This diversion began in 1926 and part of it can be returned to the river upstream from station through Pilot wasteway. Additional wastewater returns to river downstream from station through Fivemile Creek and Muddy Creek.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	473	393	e450	e340	e390	e320	389	236	3,940	1,070	25	138
2	611	e480	e460	e350	e360	e340	e430	80	2,720	1,100	27	149
3	602	e520	e450	e330	e330	e380	e370	42	1,610	946	30	101
4	604	e530	e440	e340	e270	e317	310	23	968	809	36	55
5	580	e540	e440	e330	e290	e310	274	19	434	639	29	37
6	574	e550	e420	e327	e310	e320	122	20	112	514	28	23
7	559	e580	e400	e315	e290	e325	102	15	96	397	30	29
8	554	234	e380	e300	e270	e330	101	51	72	238	25	25
9	565	147	e370	e300	e260	e340	90	59	87	89	29	30
10	566	130	e350	e280	e250	e370	72	39	185	36	26	63
11	277	117	e340	e270	e270	e400	65	28	223	16	26	112
12	159	102	e340	e270	e280	e500	61	26	377	17	28	78
13	126	123	e350	e290	e300	e580	65	29	290	19	32	75
14	119	110	e370	e320	e320	e620	65	22	209	19	31	67
15	113	104	e380	e310	e330	e600	61	29	193	19	29	62
16	111	105	e350	e300	e310	e560	68	30	232	21	27	50
17	109	104	e340	e290	e330	e450	72	29	274	21	29	36
18	103	99	e320	e280	e340	375	81	24	229	24	36	60
19	97	95	e280	e300	e320	327	79	25	287	37	38	375
20	95	e90	e220	e320	e300	309	78	24	582	45	40	567
21	93	109	e250	e320	e290	297	81	30	933	42	48	529
22	93	111	e280	e310	e290	279	143	21	950	35	65	528
23	101	e110	e290	e320	e270	281	284	17	693	31	97	563
24	98	112	e300	e300	e250	287	349	86	613	28	131	534
25	97	e300	e320	e290	e220	265	341	309	511	28	128	520
26	97	427	e300	e310	e240	250	330	294	380	25	109	496
27	94	422	e320	e330	e260	280	318	902	314	29	85	474
28	103	417	e340	e300	e290	388	359	1,740	391	30	63	475
29	118	e410	e330	e260	---	374	365	2,460	841	25	57	489
30	112	e430	e310	e280	---	361	374	2,970	1,050	23	130	523
31	111	---	e330	e330	---	359	---	3,350	---	24	157	---
TOTAL	8,114	8,001	10,820	9,512	8,230	11,494	5,899	13,029	19,796	6,396	1,671	7,263
MEAN	262	267	349	307	294	371	197	420	660	206	53.9	242
MAX	611	580	460	350	390	620	430	3,350	3,940	1,100	157	567
MIN	93	90	220	260	220	250	61	15	72	16	25	23
AC-FT	16,090	15,870	21,460	18,870	16,320	22,800	11,700	25,840	39,270	12,690	3,310	14,410

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1912 - 2003, BY WATER YEAR (WY)

MEAN	588	446	348	329	332	350	404	1,193	2,781	1,695	662	474
MAX	1,500	895	559	539	531	650	1,234	4,618	7,194	5,802	3,052	1,794
(WY)	(1952)	(1969)	(1972)	(1972)	(1948)	(1916)	(1943)	(1928)	(1921)	(1917)	(1930)	(1927)
MIN	149	161	200	151	196	74.9	53.8	59.9	28.0	20.3	26.2	35.7
(WY)	(2001)	(2002)	(1932)	(1938)	(1981)	(1981)	(1989)	(2001)	(2001)	(1994)	(2001)	(1988)

YELLOWSTONE RIVER BASIN

06228000 WIND RIVER AT RIVERTON, WY—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1912 - 2003	
ANNUAL TOTAL	88,767		110,225		--	
ANNUAL MEAN	243		302		791	
HIGHEST ANNUAL MEAN	--		--		1,626	
LOWEST ANNUAL MEAN	--		--		156	
HIGHEST DAILY MEAN	2,020	Jun 2	3,940	Jun 1	11,400	Jun 14, 1935
LOWEST DAILY MEAN	11	May 8	15	May 7	9.8	May 28, 1977
ANNUAL SEVEN-DAY MINIMUM	14	May 4	19	Jul 11	12	Jul 13, 1977
MAXIMUM PEAK FLOW	--		4,360 ^a		13,300 ^b	
MAXIMUM PEAK STAGE	--		8.08 ^c		10.86 ^d	
ANNUAL RUNOFF (AC-FT)	176,100		218,600		573,100	
10 PERCENT EXCEEDS	428		556		1,960	
50 PERCENT EXCEEDS	246		280		392	
90 PERCENT EXCEEDS	27		29		151	

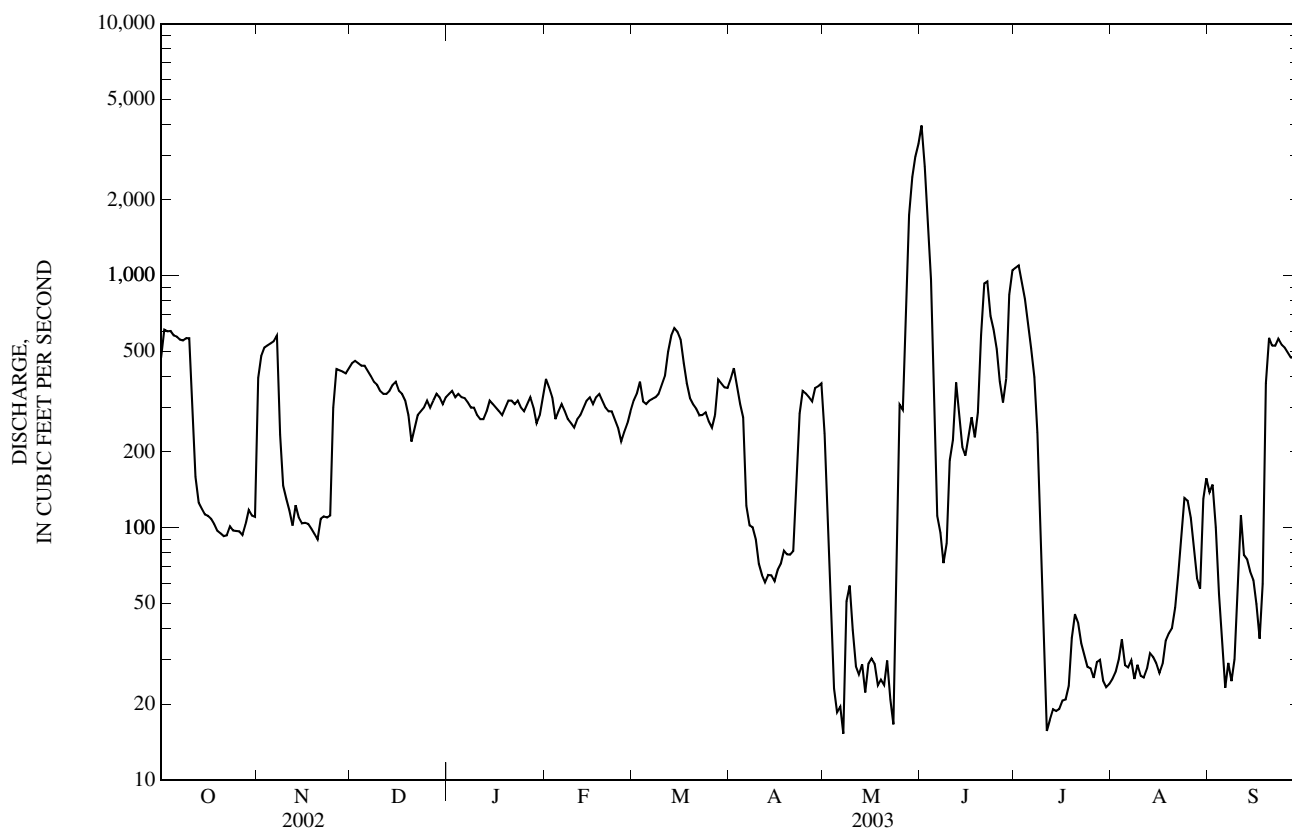
a Gage height, 8.00 ft.

b Gage height, 10.15 ft, site and datum then in use.

c Backwater from ice.

d Discharge 10,100 ft³/s, present datum.

e Estimated.



06228350 SOUTH FORK LITTLE WIND RIVER ABOVE WASHAKIE RESERVOIR, NEAR FORT WASHAKIE, WY

LOCATION.--Lat 42° 58'06", long 109° 02'13", in SE $\frac{1}{4}$ SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec.18, T.1 S., R.2 W., Fremont County, Hydrologic Unit 10080002, Wind River Indian Reservation, on right bank 1.9 mi upstream from Washakie Dam and 8.0 mi southwest of Fort Washakie.

DRAINAGE AREA.--90.3 mi².

PERIOD OF RECORD.--October 1976 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 6,440 ft above NGVD of 1929, from topographic map. U.S. Geological Survey data collection platform with satellite telemetry at station.

REMARKS.--Records good except those for estimated daily discharges, which are poor.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	27	13	12	9.7	11	9.2	38	41	842	326	69	43
2	32	13	12	9.6	11	8.7	43	37	692	318	65	40
3	36	13	12	9.8	11	8.7	e33	39	569	292	61	39
4	36	13	12	10	11	8.5	e28	39	474	266	60	38
5	35	14	11	10	11	8.4	e28	46	413	242	56	37
6	34	13	10	10	12	8.4	e29	42	367	224	53	36
7	33	13	11	11	12	8.5	e30	39	317	211	49	36
8	32	e14	10	12	13	8.9	32	50	293	199	46	35
9	31	e14	10	12	13	9.6	38	53	329	188	48	36
10	30	e15	10	11	13	11	41	52	344	177	48	36
11	29	e15	9.8	11	12	12	39	53	399	167	47	39
12	27	15	9.4	11	12	14	43	60	381	159	45	38
13	26	14	9.6	11	12	15	49	75	343	151	43	36
14	25	13	9.9	11	12	18	58	75	318	147	42	35
15	24	13	11	11	12	19	61	102	327	140	44	34
16	23	12	11	10	12	20	59	124	326	133	41	33
17	22	12	12	9.9	12	19	56	149	333	127	39	34
18	21	11	12	10	12	17	49	133	325	125	36	37
19	20	11	12	10	12	16	42	123	321	124	34	37
20	19	11	12	10	12	16	38	101	321	124	33	37
21	19	11	11	10	12	17	39	107	309	121	31	35
22	18	11	11	10	11	18	46	153	280	115	31	33
23	16	11	11	9.9	9.7	20	48	233	241	108	31	32
24	19	12	10	9.3	10	17	51	438	254	100	30	30
25	16	12	9.4	8.8	11	16	58	564	243	95	30	29
26	16	12	8.2	9.0	11	18	69	649	253	96	28	28
27	17	12	8.3	9.4	10	16	52	731	279	95	27	27
28	16	12	8.3	9.8	9.7	19	48	812	284	91	26	26
29	14	13	9.1	9.2	---	19	42	922	299	85	26	26
30	12	12	9.3	9.5	---	23	40	949	313	81	38	25
31	10	---	9.6	9.7	---	32	---	951	---	74	45	---
TOTAL	735	380	323.9	314.6	322.4	470.9	1,327	7,942	10,789	4,901	1,302	1,027
MEAN	23.7	12.7	10.4	10.1	11.5	15.2	44.2	256	360	158	42.0	34.2
MAX	36	15	12	12	13	32	69	951	842	326	69	43
MIN	10	11	8.2	8.8	9.7	8.4	28	37	241	74	26	25
AC-FT	1,460	754	642	624	639	934	2,630	15,750	21,400	9,720	2,580	2,040

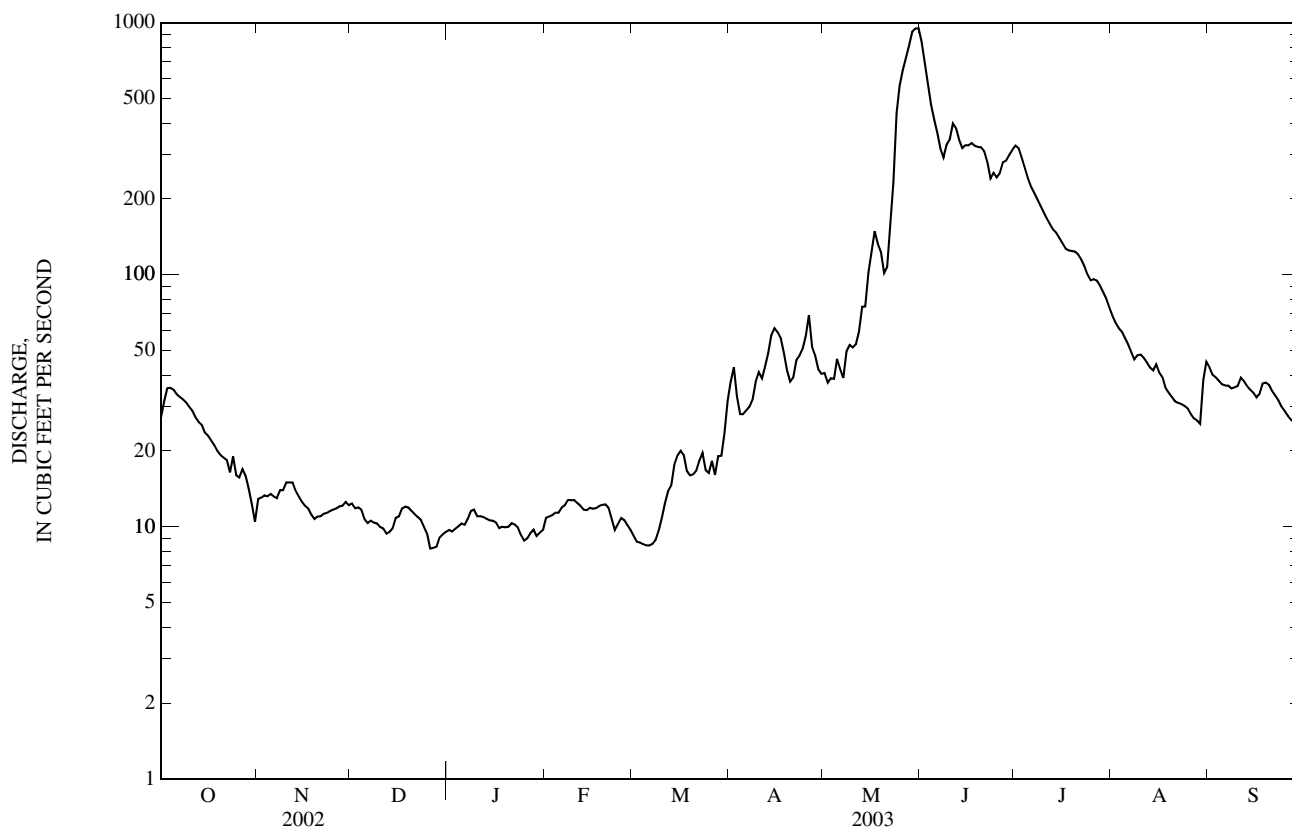
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1977 - 2003, BY WATER YEAR (WY)

	MEAN	41.0	28.1	22.5	16.7	14.5	17.3	47.9	255	569	317	104	54.9
MAX		94.3	48.4	34.6	30.9	26.1	34.1	94.6	403	1,067	791	197	96.2
(WY)		(1983)	(1991)	(1996)	(1997)	(1986)	(1986)	(1987)	(1987)	(1986)	(1995)	(1982)	(1997)
MIN		12.7	12.7	10.4	6.05	6.72	9.60	25.3	111	187	80.5	30.7	20.0
(WY)		(2002)	(2003)	(2003)	(1977)	(1977)	(1977)	(2002)	(1995)	(2001)	(2001)	(1988)	(1988)

06228350 SOUTH FORK LITTLE WIND RIVER ABOVE WASHAKIE RESERVOIR, NEAR FORT WASHAKIE, WY—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1977 - 2003	
ANNUAL TOTAL	27,642.8		29,834.8		--	
ANNUAL MEAN	75.7		81.7		124	
HIGHEST ANNUAL MEAN	--		--		188 1986	
LOWEST ANNUAL MEAN	--		--		60.5 2001	
HIGHEST DAILY MEAN	828	Jun 1	951	May 31	1,960	Jun 13, 1991
LOWEST DAILY MEAN	6.0	Jan 24	8.2	Dec 26	4.5	Feb 1, 1977
ANNUAL SEVEN-DAY MINIMUM	6.4	Jan 20	8.6	Mar 2	4.5	Feb 1, 1977
MAXIMUM PEAK FLOW	--		1,090	May 30	2,230	Jun 13, 1991
MAXIMUM PEAK STAGE	--		6.40	May 30	8.48	Jun 13, 1991
INSTANTANEOUS LOW FLOW	--		--		5.8	Jan 24, 2002
ANNUAL RUNOFF (AC-FT)	54,830		59,180		89,970	
10 PERCENT EXCEEDS	271		279		368	
50 PERCENT EXCEEDS	20		29		36	
90 PERCENT EXCEEDS	9.3		10		14	

e Estimated.



06228450 SOUTH FORK LITTLE WIND RIVER BELOW WASHAKIE RESERVOIR, NEAR FORT WASHAKIE, WY

LOCATION.--Lat 42° 59'04", long 108° 59'57", in SW $\frac{1}{4}$ SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec.9, T.1 S., R.2 W., Fremont County, Hydrologic Unit 10080002, Wind River Indian Reservation, on right bank 0.7 mi downstream from Washakie Reservoir, 2.3 mi upstream from Timmoco Creek, and 6.2 mi west of Fort Washakie.

DRAINAGE AREA.--93.5 mi².

PERIOD OF RECORD.--October 1988 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 6,280 ft above NGVD of 1929, from topographic map.

REMARKS.--Records fair. Flow regulated by Washakie Reservoir.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

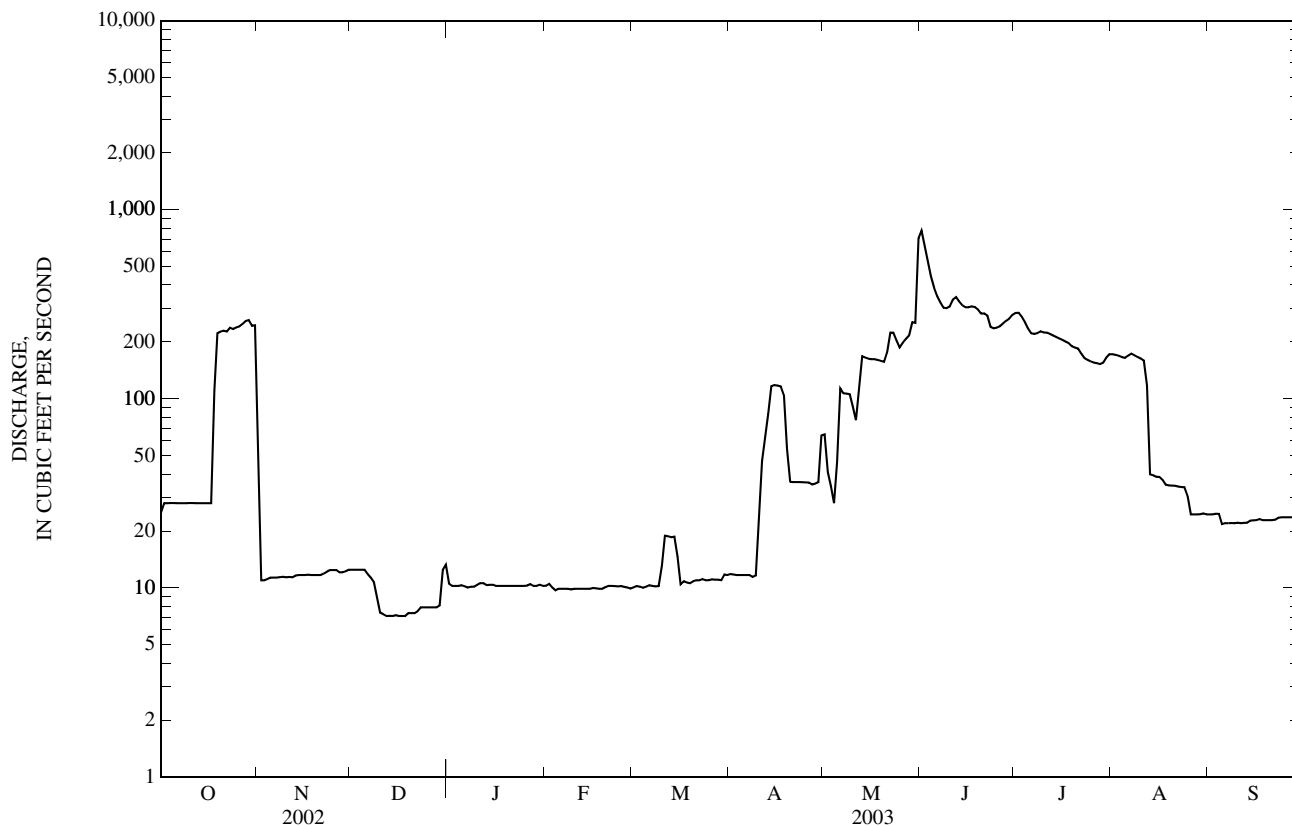
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25	65	12	11	10	10	12	65	775	285	172	24
2	28	11	12	10	11	10	12	41	645	285	171	24
3	28	11	12	10	10	10	12	35	529	272	169	25
4	28	11	12	10	9.7	10	12	28	443	255	166	25
5	28	11	12	10	9.9	10	12	46	386	236	165	22
6	28	11	12	10	9.9	10	12	114	349	222	169	22
7	28	11	11	10	9.9	10	12	107	323	220	174	22
8	28	11	11	10	9.9	10	11	107	303	223	170	22
9	28	11	8.8	10	9.8	10	12	106	302	227	167	22
10	28	11	7.4	10	9.9	13	21	91	308	224	164	22
11	28	11	7.3	11	9.9	19	47	77	335	224	160	22
12	28	11	7.1	11	9.9	19	63	109	345	220	118	22
13	28	12	7.1	10	9.9	19	84	168	327	216	40	22
14	28	12	7.1	10	9.9	19	117	165	313	212	39	23
15	28	12	7.2	10	9.9	15	118	163	305	209	39	23
16	28	12	7.1	10	10	10	118	162	305	205	39	23
17	28	12	7.1	10	9.9	11	116	162	309	201	37	23
18	110	12	7.1	10	9.9	11	104	161	306	197	35	23
19	222	12	7.4	10	9.9	11	54	159	297	190	35	23
20	227	12	7.4	10	10	11	36	157	283	186	35	23
21	229	12	7.4	10	10	11	36	176	283	185	35	23
22	227	12	7.5	10	10	11	36	224	276	174	34	23
23	238	12	7.9	10	10	11	36	224	240	164	34	23
24	234	12	7.9	10	10	11	36	204	236	161	34	24
25	239	12	7.9	10	10	11	36	187	238	158	31	24
26	241	12	7.9	10	10	11	36	198	242	156	24	24
27	249	12	7.9	10	10	11	35	208	250	154	24	24
28	258	12	7.9	10	9.9	11	36	216	259	153	24	24
29	261	12	8.1	10	---	11	36	254	266	155	25	24
30	243	12	12	10	---	12	64	252	278	165	25	24
31	245	---	13	10	---	12	---	706	---	172	24	---
TOTAL	3,696	402	277.5	313	279.1	371	1,372	5,072	10,056	6,306	2,578	694
MEAN	119	13.4	8.95	10.1	9.97	12.0	45.7	164	335	203	83.2	23.1
MAX	261	65	13	11	11	19	118	706	775	285	174	25
MIN	25	11	7.1	10	9.7	10	11	28	236	153	24	22
AC-FT	7,330	797	550	621	554	736	2,720	10,060	19,950	12,510	5,110	1,380

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 2003, BY WATER YEAR (WY)

MEAN	43.8	26.9	22.8	18.7	15.3	14.9	30.4	186	513	327	142	78.2
MAX	119	46.0	36.7	34.5	29.0	21.8	71.4	298	897	774	264	146
(WY)	(2003)	(1998)	(1991)	(1997)	(1997)	(1994)	(1994)	(1999)	(1991)	(1995)	(1993)	(1993)
MIN	11.1	4.68	5.19	6.18	7.19	6.65	5.07	65.6	244	126	26.7	17.1
(WY)	(2002)	(1989)	(1989)	(1989)	(1989)	(1991)	(1991)	(2002)	(1992)	(2001)	(2001)	(2001)

06228450 SOUTH FORK LITTLE WIND RIVER BELOW WASHAKIE RESERVOIR, NEAR FORT WASHAKIE, WY—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1989 - 2003	
ANNUAL TOTAL	28,010.5		31,416.6		--	
ANNUAL MEAN	76.7		86.1		119	
HIGHEST ANNUAL MEAN	--		--		189	
LOWEST ANNUAL MEAN	--		--		58.5	
HIGHEST DAILY MEAN	619	Jun 7	775	Jun 1	1,930	Jun 13, 1991
LOWEST DAILY MEAN	7.1	Some days	7.1	Some days	3.5	Mar 17, 1991
ANNUAL SEVEN-DAY MINIMUM	7.1	Dec 12	7.1	Dec 12	3.6	Mar 16, 1991
MAXIMUM PEAK FLOW	--		911		2,120	Jun 13, 1991
MAXIMUM PEAK STAGE	--		4.59		6.43	Jun 13, 1991
INSTANTANEOUS LOW FLOW	--		7.4		5.0	Oct 2, 2001
ANNUAL RUNOFF (AC-FT)	55,560		62,310		85,900	
10 PERCENT EXCEEDS	254		247		312	
50 PERCENT EXCEEDS	19		24		33	
90 PERCENT EXCEEDS	12		9.9		11	



06228510 RAY CANAL AT HEADWORKS, NEAR FORT WASHAKIE, WY

LOCATION.--Lat 43° 00'02", long 108° 55'56", in NW $\frac{1}{4}$ SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.6, T.1 S., R.1 W., Fremont County, Hydrologic Unit 10080002, Wind River Indian Reservation, on right bank 160 ft downstream from headgate, 300 ft upstream from culvert on County Road 43, 2.0 mi upstream from Crooked Creek, and 2.4 mi west of Fort Washakie.

PERIOD OF RECORD.--April 1989 to September 1999, April 2001 to current year (no winter records).

GAGE.--Water-stage recorder. Elevation of gage is 5,710 ft above NGVD of 1929, from topographic map.

REMARKS.--Records good to fair. Flow is diverted from the South Fork Little Wind River for irrigation.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	10	44	260	283	197	47
2	---	---	---	---	---	---	10	41	258	282	193	47
3	---	---	---	---	---	---	9.8	40	273	279	190	47
4	---	---	---	---	---	---	9.3	37	283	273	187	47
5	---	---	---	---	---	---	9.3	37	297	267	184	44
6	---	---	---	---	---	---	10	74	295	261	181	44
7	---	---	---	---	---	---	9.5	88	285	266	179	44
8	---	---	---	---	---	---	9.4	82	279	270	175	44
9	---	---	---	---	---	---	9.5	66	285	263	171	44
10	---	---	---	---	---	---	12	60	292	258	167	45
11	---	---	---	---	---	---	33	58	299	255	163	45
12	---	---	---	---	---	---	57	64	301	253	144	43
13	---	---	---	---	---	---	59	91	292	249	62	42
14	---	---	---	---	---	---	64	96	284	247	60	42
15	---	---	---	---	---	---	64	96	281	244	60	41
16	---	---	---	---	---	---	64	97	291	241	61	39
17	---	---	---	---	---	---	56	96	300	238	59	41
18	---	---	---	---	---	---	45	96	302	234	56	42
19	---	---	---	---	---	---	50	96	304	221	56	42
20	---	---	---	---	---	---	46	96	298	219	55	41
21	---	---	---	---	---	---	46	96	303	217	55	40
22	---	---	---	---	---	---	46	133	302	210	55	40
23	---	---	---	---	---	---	47	173	292	200	54	39
24	---	---	---	---	---	---	47	181	286	197	53	38
25	---	---	---	---	---	---	47	179	267	194	52	38
26	---	---	---	---	---	---	48	202	273	193	44	37
27	---	---	---	---	---	---	30	209	271	190	43	37
28	---	---	---	---	---	---	27	206	273	188	43	37
29	---	---	---	---	---	---	40	225	276	188	43	37
30	---	---	---	---	---	---	41	237	280	195	50	37
31	---	---	---	---	---	---	---	240	---	201	48	---
TOTAL	---	---	---	---	---	---	1,055.8	3,536	8,582	7,276	3,140	1,251
MEAN	---	---	---	---	---	---	35.2	114	286	235	101	41.7
MAX	---	---	---	---	---	---	64	240	304	283	197	47
MIN	---	---	---	---	---	---	9.3	37	258	188	43	37
AC-FT	---	---	---	---	---	---	2,090	7,010	17,020	14,430	6,230	2,480

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 2003, BY WATER YEAR (WY)*

MEAN	33.4	21.6	---	---	---	---	18.2	108	216	224	153	91.7
MAX	73.2	28.9	---	---	---	---	47.5	199	320	287	241	167
(WY)	(1998)	(1995)	---	---	---	---	(1989)	(1992)	(1990)	(1996)	(1995)	(1997)
MIN	0.81	14.2	---	---	---	---	0.97	21.3	29.5	100	38.5	21.4
(WY)	(1994)	(1993)	---	---	---	---	(1992)	(1991)	(1995)	(1992)	(2001)	(2001)

06228510 RAY CANAL AT HEADWORKS, NEAR FORT WASHAKIE, WY—Continued

SUMMARY STATISTICS

FOR 2003 WATER YEAR*

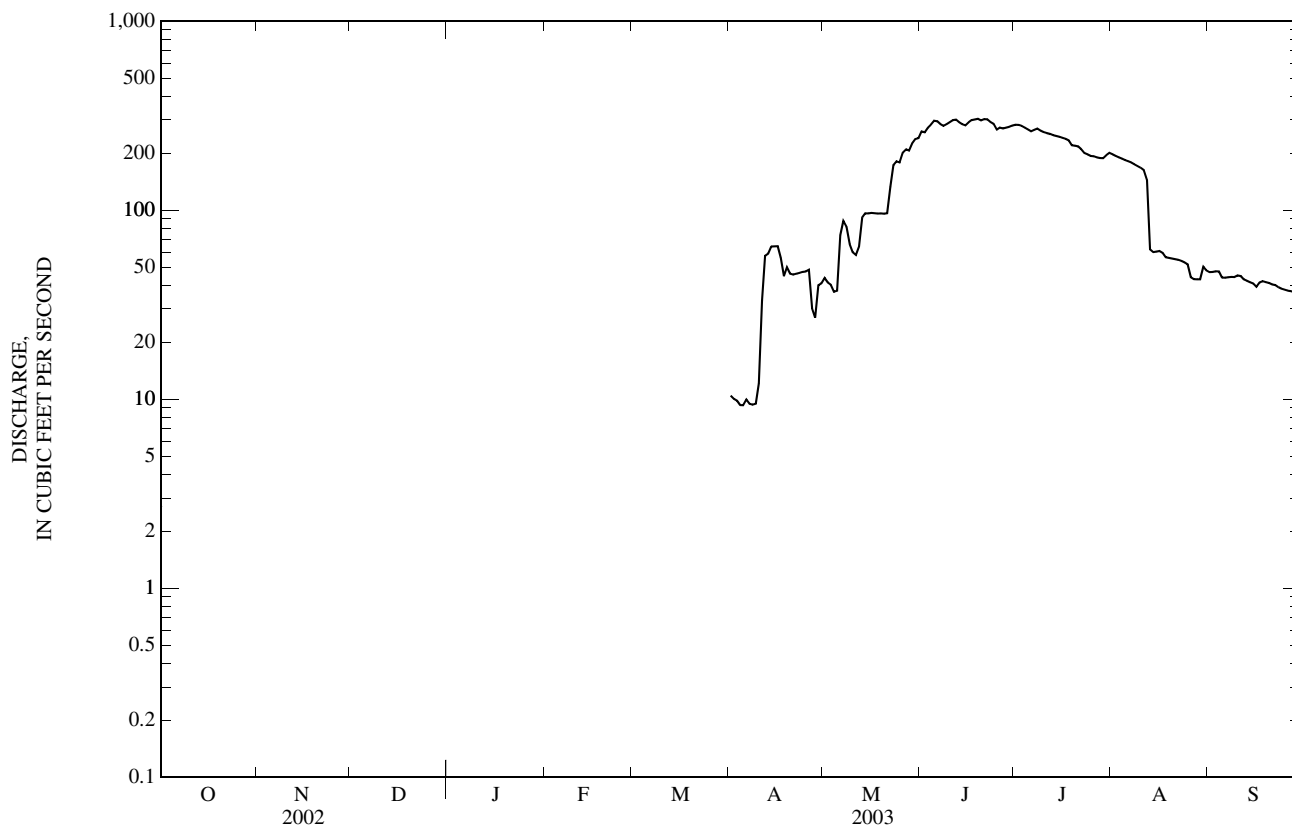
WATER YEARS 1989 - 2003*

HIGHEST DAILY MEAN
 LOWEST DAILY MEAN
 MAXIMUM PEAK FLOW
 MAXIMUM PEAK STAGE

304 Jun 19
 9.3 Apr 4,5
 333 Jun 21
 3.85 Jun 21

390 Jun 2, 1996
 0.00 Apr 1, 1991
 446 Jun 12, 1996
 4.11 Jun 24, 1999

* For period of operation.



06228800 NORTH FORK LITTLE WIND RIVER NEAR FORT WASHAKIE, WY

LOCATION.--Lat 43° 01' 43", long 109° 00' 02", in NW $\frac{1}{4}$ SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 28, T. 1 N., R. 2 W., Fremont County, Hydrologic Unit 10080002, Wind River Indian Reservation, on left bank 0.2 mi upstream from North Fork Diversion Canal and 5.9 mi northeast of Fort Washakie.

DRAINAGE AREA.--112 mi².

PERIOD OF RECORD.--October 1988 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 6,120 ft above NGVD of 1929, from topographic map. Prior to October 21, 1993, at site 2,000 ft upstream at different datum. U.S. Geological Survey data collection platform with satellite telemetry at station.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Diversions for irrigation of 80 acres upstream from station.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	31	e17	e14	e11	12	e12	25	41	783	235	75	41
2	36	e17	e14	e11	11	e12	26	39	682	233	72	42
3	36	e17	e15	e11	14	e12	23	38	581	230	70	43
4	38	e18	e14	11	e14	e12	20	37	504	220	68	42
5	38	e18	e14	11	e14	e12	19	39	427	206	65	42
6	38	e19	e14	11	e13	e12	20	38	382	193	62	42
7	36	22	e14	12	e13	13	18	38	336	183	60	43
8	35	19	e14	13	e13	14	18	48	293	171	57	42
9	34	20	e13	12	e13	14	20	53	279	155	55	42
10	33	20	e13	e11	e13	18	24	53	289	146	52	42
11	32	19	e14	e11	e13	21	34	55	304	138	50	43
12	31	18	e14	e10	e13	21	47	63	309	132	47	42
13	29	19	e15	e10	e13	20	54	82	306	125	45	40
14	28	18	e15	10	e13	22	56	71	292	119	42	39
15	28	17	e15	10	e13	24	54	79	281	113	42	36
16	26	17	e15	e10	e13	24	52	97	273	107	40	34
17	26	17	e15	e10	e14	25	47	114	264	105	38	36
18	25	16	e14	e10	e14	26	41	105	259	104	36	38
19	24	16	e13	10	e14	25	34	103	262	103	36	38
20	23	15	e12	9.6	e14	24	32	92	265	103	35	37
21	23	15	e12	9.4	14	24	32	90	270	101	35	36
22	25	e15	e12	8.8	14	24	36	110	273	99	34	33
23	25	e15	e12	10	13	24	38	177	269	96	33	31
24	25	e14	e11	9.5	e11	21	41	286	289	92	32	30
25	25	e14	e10	9.1	e11	21	43	432	276	90	32	29
26	24	e14	e10	8.9	e11	21	51	581	273	89	31	27
27	23	e14	e11	9.8	e11	20	44	683	269	86	31	26
28	e22	e15	e11	9.8	e12	22	43	762	253	85	30	25
29	e20	e15	e11	9.9	---	20	42	859	246	83	29	25
30	e18	e14	e11	9.9	---	23	41	877	242	81	40	25
31	e17	---	e11	10	---	23	---	831	---	78	42	---
TOTAL	874	504	403	319.7	361	606	1,075	6,973	10,031	4,101	1,416	1,091
MEAN	28.2	16.8	13.0	10.3	12.9	19.5	35.8	225	334	132	45.7	36.4
MAX	38	22	15	13	14	26	56	877	783	235	75	43
MIN	17	14	10	8.8	11	12	18	37	242	78	29	25
AC-FT	1,730	1,000	799	634	716	1,200	2,130	13,830	19,900	8,130	2,810	2,160

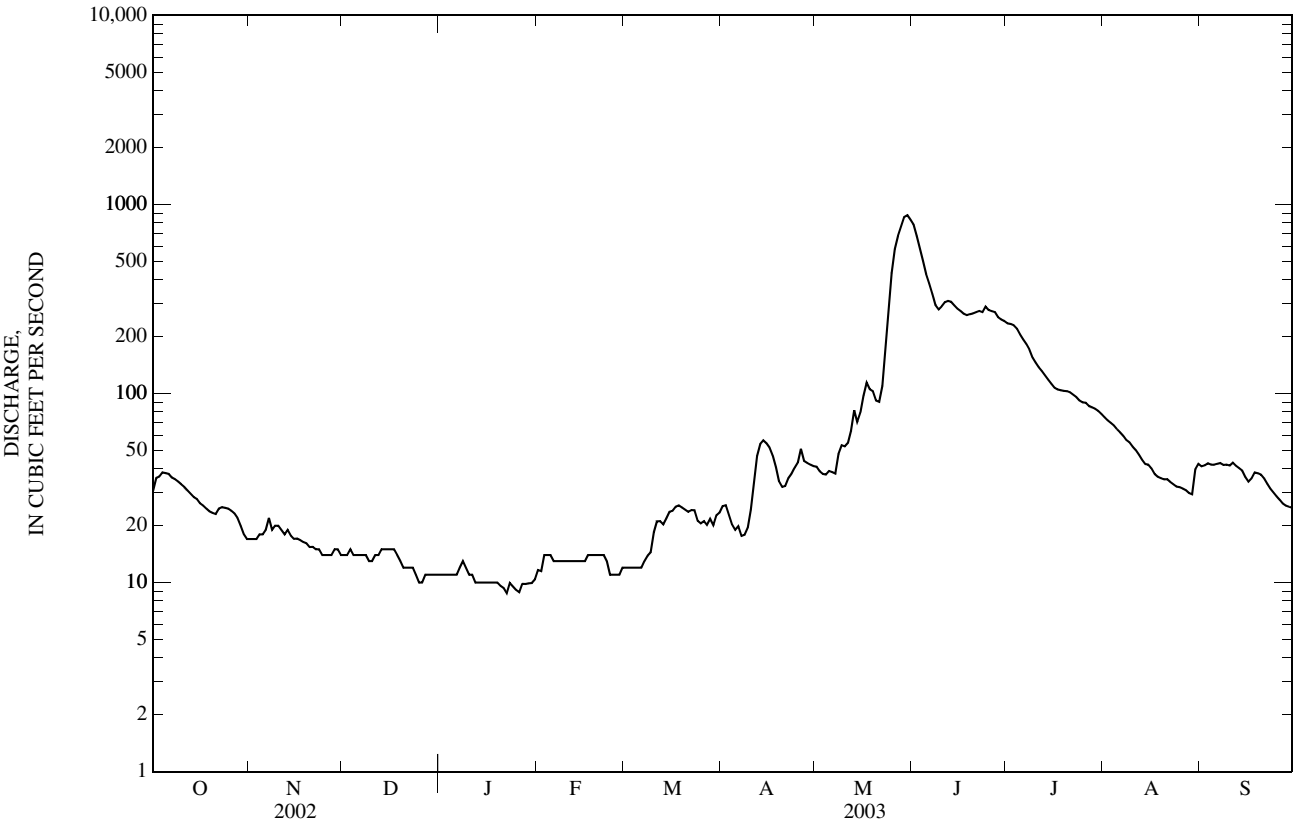
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 2003, BY WATER YEAR (WY)

MEAN	46.5	32.3	24.0	18.8	17.8	25.0	51.0	269	593	310	113	62.6
MAX	76.1	57.3	50.1	31.9	29.5	38.8	84.5	420	1,091	758	227	118
(WY)	(1999)	(1999)	(1996)	(1996)	(1999)	(1995)	(1994)	(2000)	(1999)	(1995)	(1997)	(1997)
MIN	13.5	14.7	13.0	8.95	8.53	13.1	27.5	141	176	74.9	34.3	24.5
(WY)	(1989)	(1989)	(2003)	(1989)	(1989)	(2001)	(1993)	(2002)	(2001)	(1994)	(2002)	(2001)

06228800 NORTH FORK LITTLE WIND RIVER NEAR FORT WASHAKIE, WY—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1989 - 2003	
ANNUAL TOTAL	27,738		27,754.7		--	
ANNUAL MEAN	76.0		76.0		130	
HIGHEST ANNUAL MEAN	--		--		208	
LOWEST ANNUAL MEAN	--		--		61.7	
HIGHEST DAILY MEAN	855	Jun 1	877	May 30	2,070	Jun 13, 1991
LOWEST DAILY MEAN	10 ^e	Jan 30, Dec 25, 26	8.8	Jan 22	6.5	Feb 3, 1989
ANNUAL SEVEN-DAY MINIMUM	11	Dec 24	9.3	Jan 20	7.4	Feb 2, 1989
MAXIMUM PEAK FLOW	--		927	May 30	2,360 ^a	Jun 13, 1991
MAXIMUM PEAK STAGE	--		6.06	May 30	7.19	Jun 17, 1999
INSTANTANEOUS LOW FLOW	--		--		10	Jan 30, 2002
ANNUAL RUNOFF (AC-FT)	55,020		55,050		94,530	
10 PERCENT EXCEEDS	230		249		362	
50 PERCENT EXCEEDS	24		28		42	
90 PERCENT EXCEEDS	13		11		15	

a Gage height, 6.20 ft, site and datum then in use.
e Estimated.



06229900 TROUT CREEK NEAR FORT WASHAKIE, WY

LOCATION.--Lat 42° 57' 04", long 108° 56' 54", in SE 1/4 NW 1/4 NW 1/4 sec. 25, T. 1 S., R. 2 W., Fremont County, Hydrologic Unit 10080002, Wind River Indian Reservation, 50 ft upstream of Blue Trail Crossing and 5.0 miles southwest of Fort Washakie.

DRAINAGE AREA.--16.1 mi².

PERIOD OF RECORD.--Annual maximum, water years 1961-68, 1970-84. May 1990 to September 1999, April 2002 to current year (no winter records since 1997).

GAGE.--Water-stage recorder. Elevation of gage is 5,935 ft above NGVD of 1929, from topographic map. October 1, 1961 to September 30, 1968, crest-stage gage at site 100 ft downstream at datum 1.05 ft lower. October 1, 1969 to September 30, 1984, crest-stage gage at present site at datum 1.05 ft lower.

REMARKS.--Records good except those for estimated period, which are poor. Results of discharge measurements, in cubic feet per second, made during the period station was not in operation, are given below:

Oct. 1 . . . 3.65

Mar. 24 . . . 3.72

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

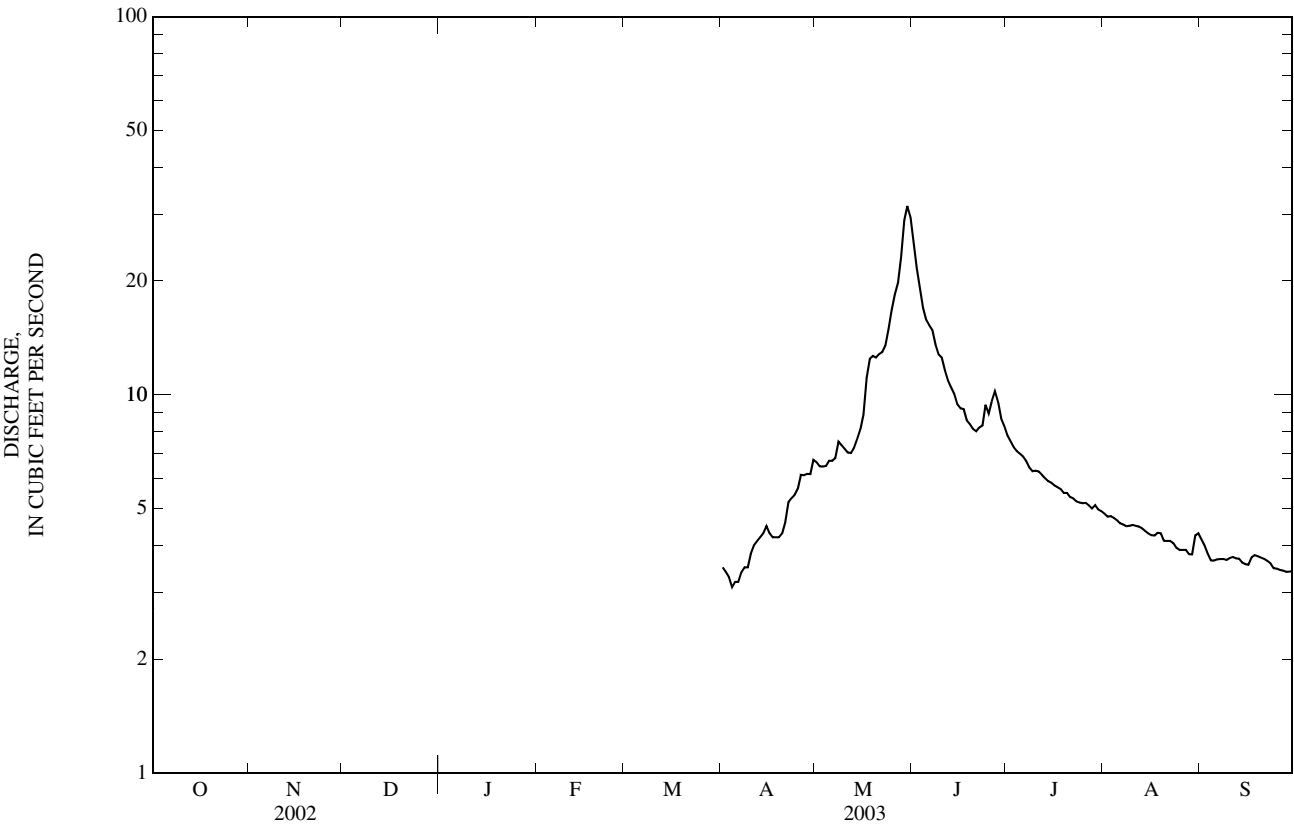
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	e3.5	6.6	25	7.8	4.8	4.1
2	---	---	---	---	---	---	e3.4	6.5	22	7.5	4.8	4.0
3	---	---	---	---	---	---	e3.3	6.5	19	7.3	4.8	3.8
4	---	---	---	---	---	---	e3.1	6.5	17	7.1	4.7	3.6
5	---	---	---	---	---	---	e3.2	6.7	16	7.0	4.7	3.6
6	---	---	---	---	---	---	e3.2	6.7	15	6.9	4.6	3.7
7	---	---	---	---	---	---	e3.4	6.8	15	6.7	4.5	3.7
8	---	---	---	---	---	---	e3.5	7.5	14	6.4	4.5	3.7
9	---	---	---	---	---	---	e3.5	7.4	13	6.3	4.5	3.7
10	---	---	---	---	---	---	e3.8	7.2	13	6.3	4.5	3.7
11	---	---	---	---	---	---	e4.0	7.0	12	6.3	4.5	3.7
12	---	---	---	---	---	---	e4.1	7.0	11	6.1	4.5	3.7
13	---	---	---	---	---	---	e4.2	7.3	10	6.0	4.4	3.7
14	---	---	---	---	---	---	e4.3	7.6	10	5.9	4.4	3.6
15	---	---	---	---	---	---	e4.5	8.1	9.4	5.9	4.3	3.6
16	---	---	---	---	---	---	e4.3	8.9	9.2	5.8	4.3	3.6
17	---	---	---	---	---	---	e4.2	11	9.2	5.7	4.2	3.7
18	---	---	---	---	---	---	e4.2	12	8.6	5.6	4.3	3.8
19	---	---	---	---	---	---	e4.2	13	8.4	5.5	4.3	3.7
20	---	---	---	---	---	---	e4.3	13	8.1	5.5	4.1	3.7
21	---	---	---	---	---	---	e4.6	13	8.0	5.4	4.1	3.7
22	---	---	---	---	---	---	e5.2	13	8.2	5.3	4.1	3.6
23	---	---	---	---	---	---	5.3	13	8.3	5.2	4.1	3.6
24	---	---	---	---	---	---	5.4	15	9.4	5.2	3.9	3.5
25	---	---	---	---	---	---	5.6	17	8.9	5.2	3.9	3.5
26	---	---	---	---	---	---	6.1	18	9.6	5.2	3.9	3.4
27	---	---	---	---	---	---	6.1	20	10	5.1	3.9	3.4
28	---	---	---	---	---	---	6.2	23	9.6	5.0	3.8	3.4
29	---	---	---	---	---	---	6.2	29	8.7	5.1	3.8	3.4
30	---	---	---	---	---	---	6.7	32	8.3	5.0	4.3	3.4
31	---	---	---	---	---	---	---	30	---	4.9	4.3	---
TOTAL	---	---	---	---	---	---	133.6	386.3	353.9	184.2	133.8	109.3
MEAN	---	---	---	---	---	---	4.45	12.5	11.8	5.94	4.32	3.64
MAX	---	---	---	---	---	---	6.7	32	25	7.8	4.8	4.1
MIN	---	---	---	---	---	---	3.1	6.5	8.0	4.9	3.8	3.4
AC-FT	---	---	---	---	---	---	265	766	702	365	265	217

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 1996, BY WATER YEAR (WY)*

MEAN	5.79	5.28	4.79	4.57	4.38	4.54	5.55	18.4	39.7	13.4	6.91	5.89
MAX	8.45	7.37	6.26	5.97	5.15	5.52	7.47	32.4	105	37.1	11.3	9.37
(WY)	(1996)	(1996)	(1996)	(1996)	(1996)	(1996)	(1996)	(1991)	(1995)	(1995)	(1995)	(1995)
MIN	3.77	4.12	3.78	3.71	3.44	3.78	4.05	12.3	7.71	4.43	3.65	3.65
(WY)	(1991)	(1991)	(1995)	(1991)	(1991)	(1991)	(1991)	(1992)	(1994)	(1994)	(1994)	(1994)

SUMMARY STATISTICS	FOR 2003 WATER YEAR*		WATER YEARS 1990 - 2003*	
ANNUAL MEAN	--		10.4	
HIGHEST ANNUAL MEAN	--		17.3	1995
LOWEST ANNUAL MEAN	--		5.95	1994
HIGHEST DAILY MEAN	32	May 30	316	Jun 2, 1991
LOWEST DAILY MEAN	3.1 ^e	Apr 4	3.0	Dec 22, 1990
ANNUAL SEVEN-DAY MINIMUM	--		3.3	Feb 14, 1991
MAXIMUM PEAK FLOW	35	May 31	500 ^a	Jun 2, 1991
MAXIMUM PEAK STAGE	5.17	May 31	7.49	Jun 2, 1992
ANNUAL RUNOFF (AC-FT)	--		7,550	

* For period of operation.
a From rating curve extended above 160 ft³/s on basis of slope-conveyance computation of peak flow.
e Estimated.



06232600 POPO AGIE RIVER AT HUDSON SIDING, NEAR LANDER, WY

LOCATION.--Lat 42° 51' 59", long 108° 41' 04", in NW¹/₄ NE¹/₄ sec.30, T.2 S., R.2 E., Fremont County, Hydrologic Unit 10080003, Wind River Indian Reservation, on left bank at bridge on private road, 1.2 mi downstream from North Popo Agie River, and 3.2 mi northeast of Lander.

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

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

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 unfltrd, uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	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)	Orthophosphate, water, fltrd, mg/L as P (00671)
NOV 15...	1050	75	633	16.3	152	8.5	579	13.0	4.5	<0.04	E.05	E.004	E.01
MAR 20...	1120	75	633	13.9	132	8.2	831	8.0	5.0	0.12	0.30	0.008	0.03
JUN 27...	1340	345	635	10.3	126	7.7	349	22.0	16.0	E.02	<0.06	<0.008	E.01
SEP 03...	1105	80	635	11.2	137	8.5	785	20.0	16.0	<0.04	<0.06	E.005	0.05

Date	E coli, m-TEC MF, water, col/ 100 mL (31633)	Fecal coliform, M-FC 0.7u MF col/ 100 mL (31625)
NOV 15...	E10k	E17k
MAR 20...	<1	E2k
JUN 27...	E87k	138
SEP 03...	E98k	140

E -- Estimated value

k -- Counts outside acceptable range (Non-ideal colony count)

06233000 LITTLE POPO AGIE RIVER NEAR LANDER, WY

LOCATION.--Lat 42° 43'00", long 108° 38'34", in NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.27, T.32 N., R.99 W., Fremont County, Hydrologic Unit 10080003, on left bank 700 ft downstream from bridge on State Highway 28, 2.5 mi downstream from Red Canyon Creek, and 9.5 mi southeast of post office in Lander.

DRAINAGE AREA.--125 mi².

PERIOD OF RECORD.--March 1946 to current year (no winter records since 1971).

REVISED RECORDS.--WSP 1709: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 5,436.49 ft above NGVD of 1929.

REMARKS.--Records good. Diversions for irrigation of about 540 acres upstream from station. Slight regulation by Christina Lake, capacity, about 3,860 acre-ft. Results of discharge measurements, in cubic feet per second, made during period when station was not in operation, is given below:

Oct. 3 . . . 22.8

COOPERATION.--Station operated and record provided by the Wyoming State Engineer's Office; record reviewed by U.S. Geological Survey.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	22	44	301	108	37	49
2	---	---	---	---	---	---	24	43	262	104	33	46
3	---	---	---	---	---	---	22	43	222	97	31	48
4	---	---	---	---	---	---	20	45	201	91	30	45
5	---	---	---	---	---	---	19	48	174	85	27	42
6	---	---	---	---	---	---	19	49	164	81	34	41
7	---	---	---	---	---	---	18	46	159	78	51	40
8	---	---	---	---	---	---	18	51	143	74	53	37
9	---	---	---	---	---	---	19	54	143	66	53	36
10	---	---	---	---	---	---	23	52	147	58	52	34
11	---	---	---	---	---	---	28	50	158	55	51	36
12	---	---	---	---	---	---	33	53	161	53	51	34
13	---	---	---	---	---	---	36	64	150	51	51	33
14	---	---	---	---	---	---	40	66	142	49	51	31
15	---	---	---	---	---	---	42	79	139	49	49	29
16	---	---	---	---	---	---	42	85	139	47	47	27
17	---	---	---	---	---	---	41	104	145	45	46	28
18	---	---	---	---	---	---	39	114	135	47	46	33
19	---	---	---	---	---	---	37	116	128	49	45	34
20	---	---	---	---	---	---	34	96	129	62	45	33
21	---	---	---	---	---	---	34	95	131	73	44	30
22	---	---	---	---	---	---	36	111	131	68	45	28
23	---	---	---	---	---	---	38	134	122	59	44	28
24	---	---	---	---	---	20	42	183	142	53	42	26
25	---	---	---	---	---	20	43	198	132	49	42	25
26	---	---	---	---	---	20	48	217	136	47	41	24
27	---	---	---	---	---	21	46	234	132	46	41	23
28	---	---	---	---	---	21	45	275	119	44	41	23
29	---	---	---	---	---	21	43	331	114	43	41	22
30	---	---	---	---	---	21	43	329	112	41	52	22
31	---	---	---	---	---	22	---	303	---	40	54	---
TOTAL	---	---	---	---	---	---	994	3,712	4,613	1,912	1,370	987
MEAN	---	---	---	---	---	---	33.1	120	154	61.7	44.2	32.9
MAX	---	---	---	---	---	---	48	331	301	108	54	49
MIN	---	---	---	---	---	---	18	43	112	40	27	22
AC-FT	---	---	---	---	---	---	1,970	7,360	9,150	3,790	2,720	1,960

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1946 - 2003, BY WATER YEAR (WY)*

MEAN	35.6	29.7	25.6	23.4	23.7	24.6	47.9	199	331	133	55.2	46.1
MAX	50.7	41.8	35.8	32.9	42.5	33.9	109	398	856	404	98.6	114
(WY)	(1972)	(1951)	(1951)	(1948)	(1962)	(1948)	(1987)	(1980)	(1986)	(1995)	(1950)	(1973)
MIN	22.5	21.4	17.5	13.9	17.4	18.8	24.4	73.5	73.4	32.2	21.9	19.7
(WY)	(1961)	(1963)	(1960)	(1963)	(1960)	(1957)	(2002)	(2002)	(1977)	(2001)	(1960)	(2002)

06233000 LITTLE POPO AGIE RIVER NEAR LANDER, WY—Continued

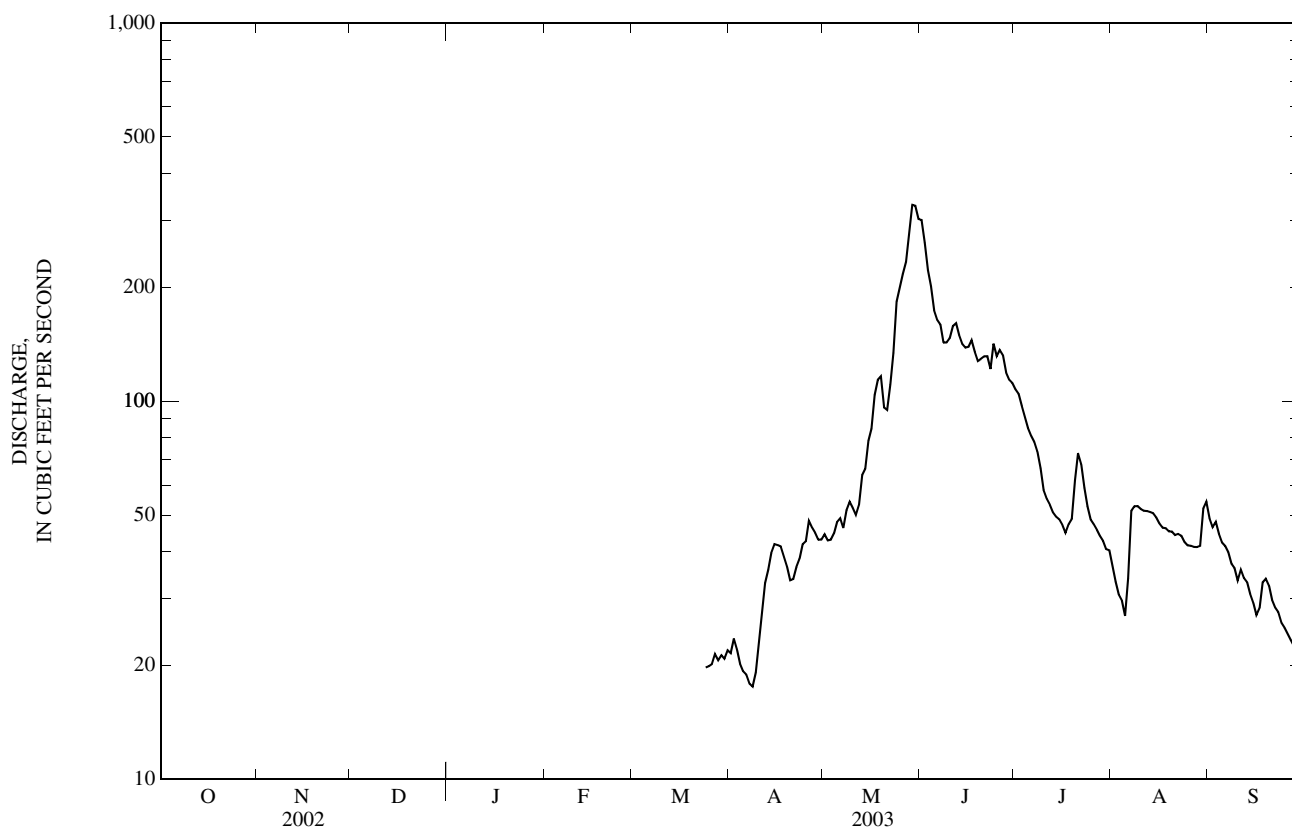
SUMMARY STATISTICS

FOR 2003 WATER YEAR*

WATER YEARS 1946 - 2003*

ANNUAL MEAN	--		80.4
HIGHEST ANNUAL MEAN	--		131 1965
LOWEST ANNUAL MEAN	--		37 1960
HIGHEST DAILY MEAN	331	May 29	1,590 Jun 16, 1963
LOWEST DAILY MEAN	18	Apr 7,8	12 Several days, 1960, 1963
MAXIMUM PEAK FLOW	384	May 29	2,010 Jun 16, 1963
MAXIMUM PEAK STAGE	3.86	May 29	6.64 Jun 16, 1963
ANNUAL RUNOFF (AC-FT)	--		58,230

* For period of operation.



06235500 LITTLE WIND RIVER NEAR RIVERTON, WY

LOCATION.--Lat 42° 59'51", long 108° 22'29", in NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec.11, T.1 S., R.4 E., Fremont County, Hydrologic Unit 10080002, Wind River Indian Reservation, on right bank 1.8 mi upstream from mouth and 1.9 mi southeast of Riverton.

DRAINAGE AREA.--1,904 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1941 to current year. Prior to October 1958, published as Popo Agie River near Riverton.

REVISED RECORDS.--WSP 1729: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 4,901.84 ft above NGVD of 1929. Prior to September 19, 1956, at site 600 ft downstream at same datum. Bureau of Reclamation data collection platform with satellite telemetry at station.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Diversions for irrigation of about 62,900 acres upstream from station.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	61	130	e180	e160	e180	e130	290	248	2,390	826	52	136
2	122	107	e180	e160	e190	e130	262	254	2,100	785	47	137
3	147	162	e180	e170	e180	e130	250	235	1,690	712	46	124
4	154	163	e190	e180	e170	e140	245	217	1,310	617	46	115
5	170	e170	e180	e180	e160	e140	231	212	1,040	556	46	111
6	161	e180	e180	e170	e150	e130	222	198	808	501	44	109
7	152	e190	e170	e160	e140	e140	218	195	787	441	39	105
8	146	e200	e160	e150	e140	e150	208	210	646	396	40	101
9	142	211	e150	e140	e140	e160	199	256	562	343	44	100
10	137	205	e150	e140	e140	e170	199	315	603	311	48	e110
11	127	196	e150	e140	e150	e180	208	315	638	261	49	e120
12	122	185	e150	e140	e160	e190	228	273	667	212	53	e130
13	120	184	e150	e150	e150	e200	247	249	650	186	78	e130
14	125	188	e150	e160	e150	e220	266	275	591	160	61	e120
15	143	190	e160	e140	e160	e240	313	304	532	143	49	e100
16	147	185	e170	e140	e160	e260	319	329	559	128	44	99
17	135	181	e160	e140	e160	e280	335	351	626	124	45	96
18	120	178	e160	e140	e150	e300	320	398	617	105	48	125
19	121	176	e150	e140	e150	303	313	398	554	94	52	168
20	121	182	e140	e140	e150	283	278	385	556	91	53	170
21	121	179	e140	e160	e160	296	238	314	557	94	53	163
22	125	178	e140	e150	e160	313	221	266	552	97	53	153
23	128	e180	e130	e140	e150	299	220	278	546	101	53	146
24	136	192	e130	e140	e130	288	228	441	795	88	54	137
25	136	137	e130	e150	e120	253	233	700	1,140	74	55	132
26	135	e140	e130	e160	e120	233	236	974	929	68	53	128
27	131	e150	e130	e160	e130	240	245	1,260	845	87	52	123
28	134	e160	e140	e170	e130	246	239	1,610	815	65	49	118
29	154	e170	e150	e170	---	242	241	1,910	862	57	50	115
30	162	e180	e160	e170	---	246	240	2,140	884	64	52	122
31	130	---	e160	e170	---	289	---	2,150	---	59	93	---
TOTAL	4,165	5,229	4,800	4,780	4,230	6,821	7,492	17,660	25,851	7,846	1,601	3,743
MEAN	134	174	155	154	151	220	250	570	862	253	51.6	125
MAX	170	211	190	180	190	313	335	2,150	2,390	826	93	170
MIN	61	107	130	140	120	130	199	195	532	57	39	96
AC-FT	8,260	10,370	9,520	9,480	8,390	13,530	14,860	35,030	51,280	15,560	3,180	7,420

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 2003, BY WATER YEAR (WY)

	320	280	212	186	209	267	366	1,096	2,347	974	261	253
MEAN	728	501	351	302	728	579	1,044	2,351	5,109	3,345	699	1,323
(WY)	(1983)	(1974)	(1974)	(1974)	(1962)	(1998)	(1973)	(1958)	(1983)	(1995)	(1965)	(1973)
MIN	73.5	122	129	95.0	123	177	148	203	233	84.4	22.1	33.0
(WY)	(2002)	(2002)	(1959)	(1961)	(1959)	(2001)	(1989)	(2002)	(2001)	(2001)	(2001)	(2001)

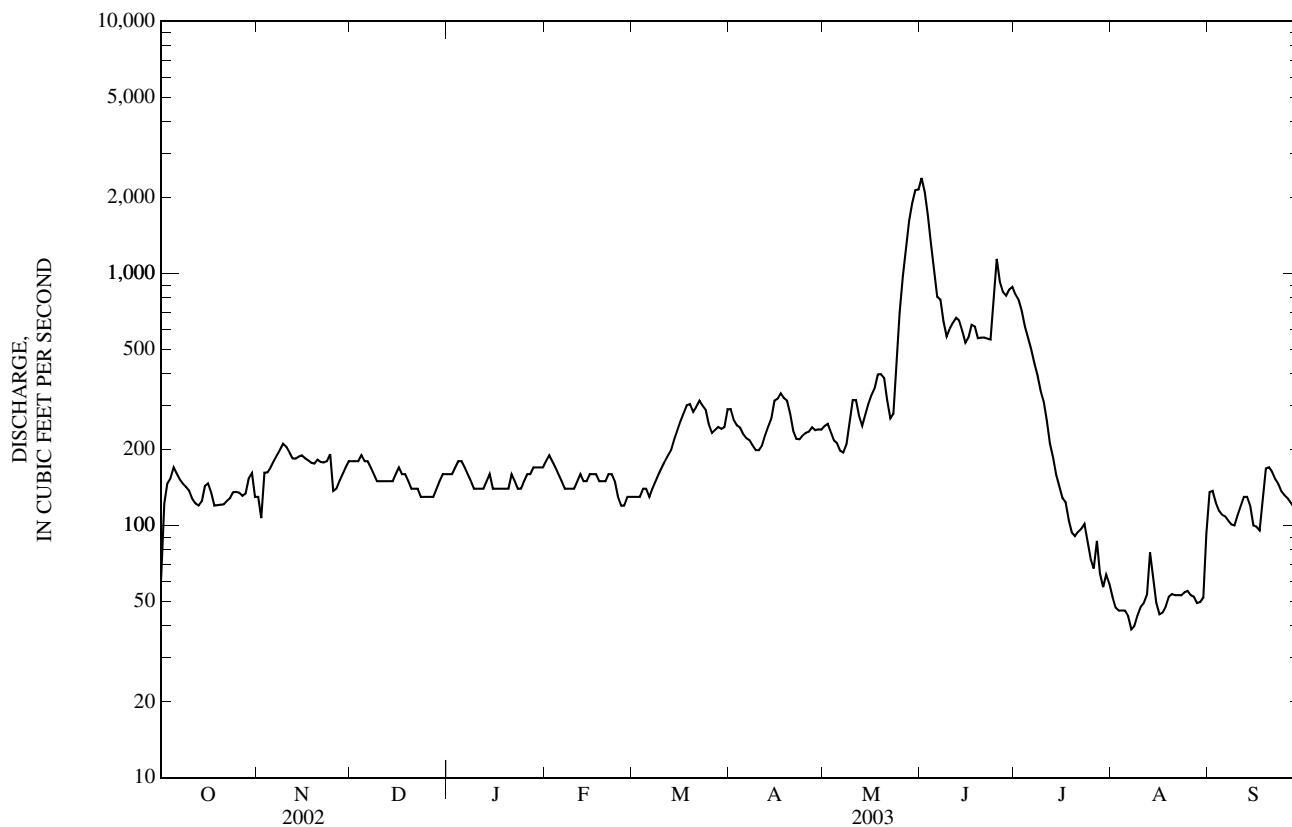
06235500 LITTLE WIND RIVER NEAR RIVERTON, WY—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1941 - 2003	
ANNUAL TOTAL	69,461		94,218		--	
ANNUAL MEAN	190		258		565	
HIGHEST ANNUAL MEAN	--		--		1,021	1983
LOWEST ANNUAL MEAN	--		--		175	2001
HIGHEST DAILY MEAN	1,840	Jun 3	2,390	Jun 1	12,800	Jun 17, 1963
LOWEST DAILY MEAN	18	Sep 8,9	39	Aug 7	17	Aug 30, 2001
ANNUAL SEVEN-DAY MINIMUM	20	Sep 4	44	Aug 3	18	Aug 27, 2001
MAXIMUM PEAK FLOW	--		2,490 ^a	Jun 1	14,700	Jun 17, 1963
MAXIMUM PEAK STAGE	--		6.04 ^b	Mar 12	10.85	Jun 17, 1963
INSTANTANEOUS LOW FLOW	--		39	Aug 7	39	Aug 7, 2003
ANNUAL RUNOFF (AC-FT)	137,800		186,900		409,400	
10 PERCENT EXCEEDS	270		556		1,400	
50 PERCENT EXCEEDS	150		160		260	
90 PERCENT EXCEEDS	46		76		140	

a Gage height, 5.47 ft.

b Backwater from ice.

c Estimated.



06235500 LITTLE WIND RIVER NEAR RIVERTON, WY—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1949-58, 1960-64, 1966 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

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 unfltrd uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	E coli, m-TEC MF, water, col/100 mL (31633)	Fecal coliform, M-FC 0.7u MF col/100 mL (31625)
NOV 15...	1215	189	633	13.4	124	8.5	866	14.0	4.0	E5k	E14k
MAR 20...	1250	265	633	10.5	100	7.9	1,180	8.0	5.0	E9k	29
JUN 30...	1315	860	635	7.6	105	7.9	584	25.0	22.0	100	198
SEP 03...	1320	122	635	7.8	107	8.4	1,000	24.0	21.0	110	153

E -- Estimated value

k -- Counts outside acceptable range (Non-ideal colony count)

06236100 WIND RIVER ABOVE BOYSEN RESERVOIR, NEAR SHOSHONI, WY

LOCATION.--Lat 43° 07'45", long 108° 13'24", in SE $\frac{1}{4}$ SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.24, T.2 N., R.5 E., Fremont County, Hydrologic Unit 10080001, on left bank 5.3 mi upstream from Boysen Reservoir and 9.4 mi southwest of Shoshoni.

DRAINAGE AREA.--4,390 mi².

PERIOD OF RECORD.--May 1990 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 4,775 ft above NGVD of 1929, from topographic map. U.S. Geological Survey data collection platform with satellite telemetry at station.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Natural flow affected by Bull Lake, Pilot Butte Reservoir, and several small reservoirs, combined capacity, 190,000 acre-ft, and diversions for irrigation of about 191,000 acres upstream from station.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	513	384	e600	e500	e560	e440	593	577	5,940	1,730	164	398
2	743	476	e600	e520	e550	e450	572	463	5,230	1,750	170	398
3	805	516	e610	e500	e540	e470	579	385	3,700	1,570	179	361
4	808	583	e600	e520	e480	e500	570	331	2,450	1,390	194	288
5	788	639	e620	e520	e470	e470	538	312	1,760	1,180	182	257
6	767	701	e620	e500	e460	e450	442	299	1,200	1,040	177	241
7	732	667	e600	e480	e440	e460	375	285	1,020	887	180	242
8	705	509	e580	e460	e420	e480	359	338	891	713	180	244
9	702	418	e540	e460	e420	e500	331	440	773	543	191	246
10	702	399	e530	e450	e430	e520	314	452	996	451	199	281
11	513	376	e530	e460	e430	e580	305	445	915	377	207	352
12	355	350	e500	e470	e450	e680	318	402	1,120	315	206	316
13	307	353	e500	e490	e460	e800	352	362	1,020	286	220	339
14	298	359	e500	e480	e470	e860	379	349	889	250	201	324
15	308	352	e520	e473	e500	e860	396	394	791	231	183	310
16	311	344	e540	e470	e490	e900	422	418	815	214	180	292
17	307	335	e520	e460	e500	e780	446	432	982	206	179	275
18	292	334	e500	e470	e500	e720	446	469	944	197	219	326
19	278	321	e480	e480	e480	713	437	492	850	195	218	498
20	275	344	e420	e490	e480	656	420	474	1,040	221	210	744
21	273	340	e400	e480	e470	650	380	431	1,240	214	212	698
22	270	340	e420	e470	e470	664	371	366	1,420	206	228	671
23	278	e325	e430	e470	e470	647	492	352	1,220	210	247	659
24	287	336	e440	e460	e460	632	596	476	1,390	199	287	619
25	284	359	e450	e480	e440	614	608	917	1,770	187	299	605
26	282	e400	e450	e490	e400	560	596	1,190	1,450	184	279	580
27	278	e580	e460	e500	e420	569	597	1,830	1,240	201	258	563
28	282	e580	e480	e480	e410	580	594	2,860	1,250	213	237	554
29	314	e580	e490	e480	---	551	591	3,860	1,530	178	213	554
30	327	e580	e490	e500	---	537	612	4,730	1,700	186	275	576
31	298	---	e500	e550	---	564	---	5,220	---	172	386	---
TOTAL	13,682	13,180	15,920	15,013	13,070	18,857	14,031	30,351	47,536	15,896	6,760	12,811
MEAN	441	439	514	484	467	608	468	979	1,585	513	218	427
MAX	808	701	620	550	560	900	612	5,220	5,940	1,750	386	744
MIN	270	321	400	450	400	440	305	285	773	172	164	241
AC-FT	27,140	26,140	31,580	29,780	25,920	37,400	27,830	60,200	94,290	31,530	13,410	25,410

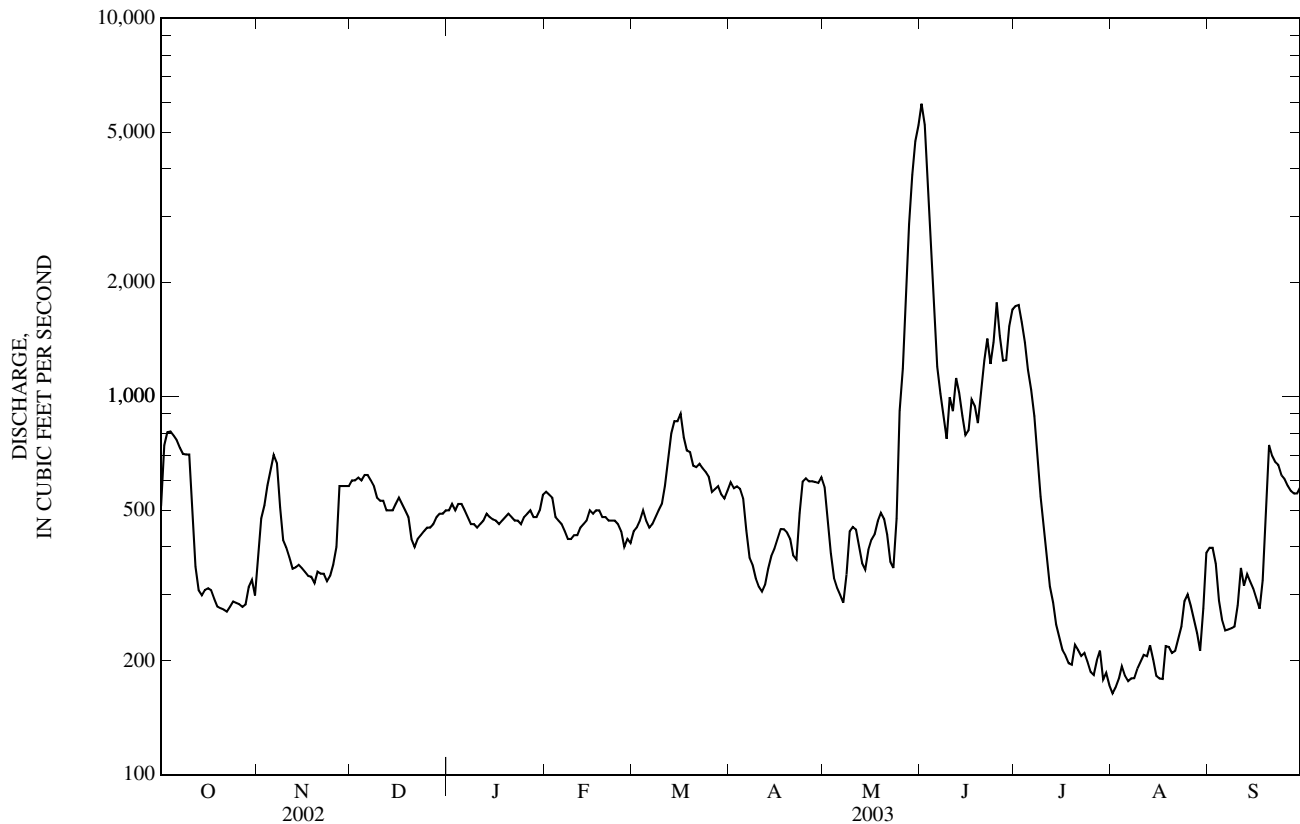
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 2003, BY WATER YEAR (WY)

MEAN	718	744	556	529	536	675	601	1,624	4,292	1,839	589	529
MAX	1,455	1,212	719	665	755	1,096	1,074	4,175	9,432	6,650	1,696	860
(WY)	(1999)	(1999)	(1996)	(1996)	(1996)	(1998)	(1999)	(1999)	(1999)	(1995)	(1997)	(1997)
MIN	309	300	427	356	324	472	347	325	342	163	130	252
(WY)	(2002)	(2002)	(2001)	(1993)	(2002)	(2002)	(2002)	(2002)	(2001)	(2001)	(2001)	(2001)

06236100 WIND RIVER ABOVE BOYSEN RESERVOIR, NEAR SHOSHONI, WY—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1990 - 2003	
ANNUAL TOTAL	170,174		217,107		--	
ANNUAL MEAN	466		595		1,129	
HIGHEST ANNUAL MEAN	--		--		2,063	1999
LOWEST ANNUAL MEAN	--		--		372	2001
HIGHEST DAILY MEAN	3,830	Jun 2	5,940	Jun 1	17,900	Jun 14, 1991
LOWEST DAILY MEAN	148	May 9,10	164	Aug 1	113	Aug 29,30, 2001
ANNUAL SEVEN-DAY MINIMUM	164	May 6	177	Jul 31	121	Aug 27, 2001
MAXIMUM PEAK FLOW	--		6,360	Jun 1	18,700	Jun 14, 1991
MAXIMUM PEAK STAGE	--		5.55	Jun 1	9.31	Jun 14, 1991
ANNUAL RUNOFF (AC-FT)	337,500		430,600		818,000	
10 PERCENT EXCEEDS	701		916		2,110	
50 PERCENT EXCEEDS	380		470		596	
90 PERCENT EXCEEDS	247		220		300	

e Estimated.



06244500 FIVEMILE CREEK ABOVE WYOMING CANAL, NEAR PAVILLION, WY

LOCATION.--Lat 43° 18'05", long 108° 42'08", in SE $\frac{1}{4}$ SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec.24, T.4 N., R.1 E., Fremont County, Hydrologic Unit 10080005, on left bank 1,700 ft upstream from Wyoming Canal siphon and 4.0 mi north of Pavillion.

DRAINAGE AREA.--118 mi².

PERIOD OF RECORD.--October 1949 to September 1975, October 1988 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 5,500 ft above NGVD of 1929, from topographic map. August 27, 1948 to March 28, 1950, at site 0.2 mi downstream at different datum. March 29, 1950 to April 23, 1974, at site 325 ft downstream at present datum. April 24, 1974 to September 30, 1975, at site 25 ft downstream at present datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Flow regulated by reservoir system about 10.5 mi upstream. Diversion for irrigation of about 320 acres upstream from station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in September 1948 reached a stage of about 6.1 ft, discharge, 2,600 ft³/s, on basis of slope-area measurement of peak flow.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.3	e7.3	e8.0	e5.7	e10	e6.0	7.5	9.0	3.2	3.5	3.6	12
2	6.7	e7.6	e7.6	e5.8	e9.7	e6.5	7.1	8.7	2.9	2.7	2.6	5.4
3	8.0	e8.0	e7.5	e6.0	e9.5	e7.0	6.2	7.9	2.8	1.9	1.9	3.8
4	9.1	e8.8	e7.4	e6.6	e9.4	e7.1	5.7	6.8	3.0	1.3	1.5	3.2
5	8.7	e8.9	e7.2	e7.0	e9.0	e6.7	6.3	6.2	3.2	0.99	0.90	2.9
6	7.1	e8.7	e7.0	e6.6	e8.5	e7.0	6.9	5.9	3.7	0.80	0.69	2.9
7	6.4	e8.4	e7.0	e6.4	e7.7	e7.1	7.5	5.9	5.7	0.75	0.54	3.5
8	e6.0	7.7	e7.0	e6.1	e7.1	e6.0	6.9	9.0	6.5	0.67	0.33	5.0
9	e6.1	8.6	e7.0	e6.5	e7.4	e5.4	6.7	9.8	5.5	0.51	0.26	4.3
10	e6.5	7.8	e6.5	e6.4	e7.8	e6.1	6.6	9.2	4.6	0.41	0.27	5.4
11	e6.1	6.6	e6.0	e6.1	e7.6	e6.8	6.7	7.3	4.0	0.25	0.35	6.1
12	e5.8	6.0	e5.8	e6.6	e7.7	e8.0	6.7	6.9	3.5	0.18	0.29	6.2
13	e6.0	6.6	e6.0	e7.0	e7.3	e9.0	6.7	6.4	2.9	0.09	0.24	5.8
14	e6.0	7.8	e6.5	e7.8	e7.1	e9.4	6.5	5.7	2.5	0.05	0.15	4.8
15	e6.4	6.7	e6.8	e7.5	e7.0	e9.7	6.3	5.5	2.2	0.05	0.14	4.5
16	e6.0	6.1	e6.4	e7.1	e7.0	e9.0	6.1	5.3	2.4	0.05	0.14	5.3
17	e6.4	6.2	e6.0	e6.8	e7.0	e8.7	6.2	4.9	3.2	0.05	0.14	5.8
18	e6.9	5.1	e5.6	e7.0	e6.7	e8.0	6.3	4.8	3.4	0.05	0.15	7.2
19	e7.0	4.3	e5.4	e7.6	e6.7	e7.0	6.4	4.8	5.8	0.05	0.15	6.9
20	e7.0	6.6	e5.1	e8.2	e6.7	e8.0	6.4	4.9	6.1	0.05	0.14	6.0
21	e7.0	7.8	e4.7	e8.7	e6.8	e9.1	6.3	5.1	4.8	0.04	0.15	5.5
22	e6.9	7.4	e4.5	e9.0	e6.9	8.9	6.3	4.7	4.5	7.3	0.15	4.9
23	e6.4	7.6	e4.4	e9.6	e6.0	8.4	6.4	4.4	4.4	2.6	0.15	5.1
24	e6.3	7.6	e4.2	e10	e5.5	8.1	6.6	4.2	9.1	0.80	0.14	4.6
25	e6.0	7.9	e4.1	e10	e5.4	7.5	6.5	4.3	11	0.49	0.14	3.7
26	e6.4	e7.4	e4.0	e11	e5.7	7.5	6.2	4.7	11	0.53	0.15	5.6
27	e7.0	e6.6	e3.9	e12	e5.6	8.7	5.8	4.2	7.2	0.64	0.15	4.0
28	e8.0	e6.7	e4.0	e12	e5.8	8.5	5.9	3.7	5.5	0.74	0.15	3.5
29	e7.7	e7.0	e4.3	e11	---	8.3	6.7	3.4	5.1	1.6	0.17	4.6
30	e7.2	e7.6	e4.8	e11	---	7.9	7.2	3.3	4.4	7.1	3.3	4.8
31	e7.0	---	e5.2	e10	---	7.9	---	3.3	---	8.1	7.4	---
TOTAL	209.4	217.4	179.9	249.1	204.6	239.3	195.6	180.2	144.1	44.34	26.53	153.3
MEAN	6.75	7.25	5.80	8.04	7.31	7.72	6.52	5.81	4.80	1.43	0.86	5.11
MAX	9.1	8.9	8.0	12	10	9.7	7.5	9.8	11	8.1	7.4	12
MIN	5.3	4.3	3.9	5.7	5.4	5.4	5.7	3.3	2.2	0.04	0.14	2.9
AC-FT	415	431	357	494	406	475	388	357	286	88	53	304

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1950 - 2003, BY WATER YEAR (WY)

	3.20	3.57	2.59	2.67	4.12	5.99	4.94	5.39	5.74	2.12	1.06	2.88
MEAN												
MAX	6.98	10.2	6.69	8.04	10.6	13.3	8.97	53.4	48.8	17.8	7.53	14.5
(WY)	(1994)	(1992)	(1993)	(2003)	(1991)	(1993)	(2002)	(1991)	(1991)	(1997)	(1997)	(1973)
MIN	0.000	0.000	0.000	0.000	0.000	0.27	0.097	0.38	0.043	0.000	0.000	0.000
(WY)	(1955)	(1955)	(1953)	(1951)	(1956)	(1954)	(1954)	(1955)	(1952)	(1956)	(1954)	(1952)

06244500 FIVEMILE CREEK ABOVE WYOMING CANAL, NEAR PAVILLION, WY—Continued

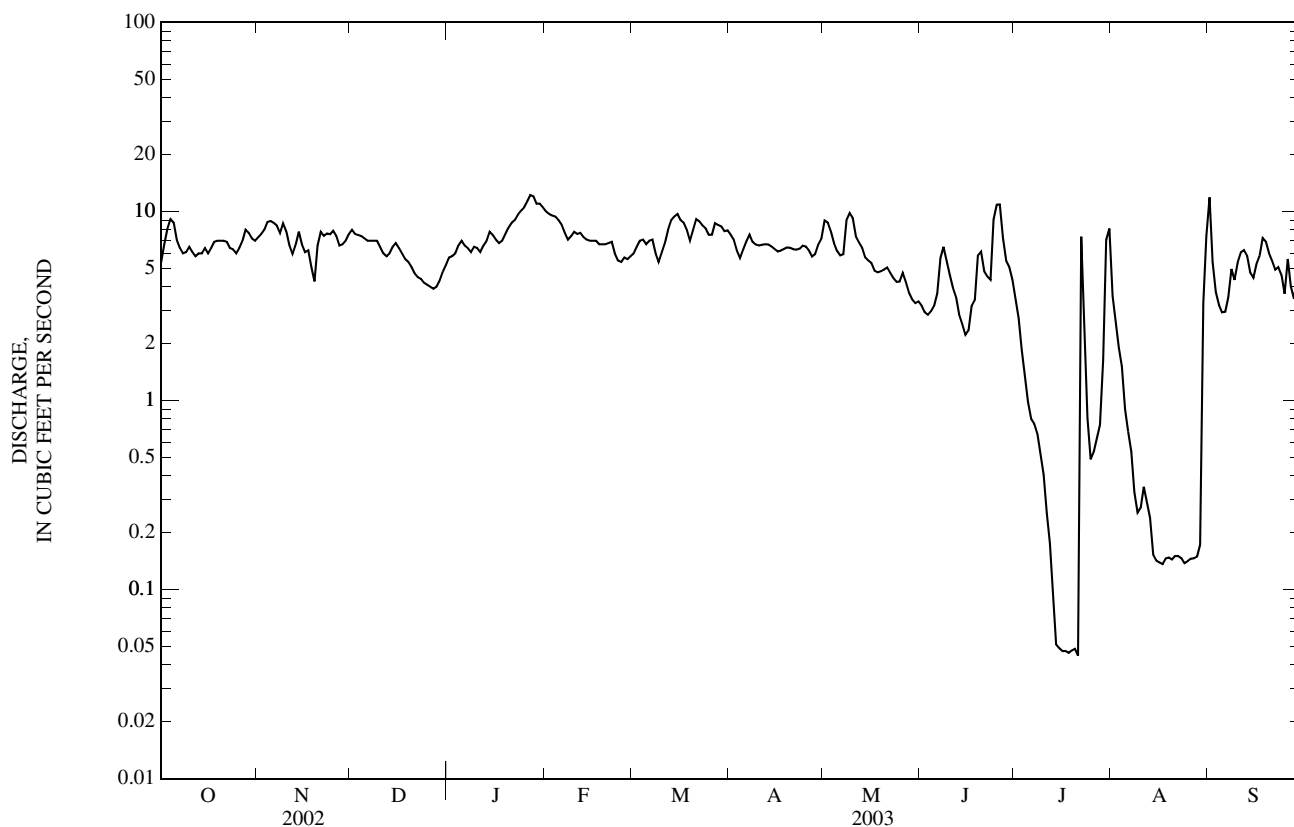
SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1950 - 2003	
ANNUAL TOTAL	2,153.48		2,043.77		--	
ANNUAL MEAN	5.90		5.60		3.68	
HIGHEST ANNUAL MEAN	--		--		12.4	
LOWEST ANNUAL MEAN	--		--		0.25	
HIGHEST DAILY MEAN	103	Jul 23	12	Jan 27, 28, Sep 1	273	Sep 20, 1950
LOWEST DAILY MEAN	0.16	Aug 19	0.04	Jul 21	0.00	Several days, most years
ANNUAL SEVEN-DAY MINIMUM	0.29	Aug 14	0.05	Jul 15	0.00	Several days, most years
MAXIMUM PEAK FLOW	--		17		1,750 ^a	
MAXIMUM PEAK STAGE	--		1.94 ^b		5.60 ^c	
ANNUAL RUNOFF (AC-FT)	4,270		4,050		2,660	
10 PERCENT EXCEEDS	10		8.7		7.8	
50 PERCENT EXCEEDS	6.0		6.2		2.4	
90 PERCENT EXCEEDS	0.44		0.52		0.00	

a From rating curve extended above 350 ft³/s.

b Observed.

c From floodmarks.

e Estimated.



06253000 FIVEMILE CREEK NEAR SHOSHONI, WY

LOCATION.--Lat 43° 13'20", long 108° 13'06", in NW¹/₄ SW¹/₄ sec.19, T.3 N., R.6 E., Fremont County, Hydrologic Unit 10080005, on right bank 1.2 mi upstream from normal high-water line of Boysen Reservoir at elevation 4,725 ft and 5.0 mi west of Shoshoni.

DRAINAGE AREA.--418 mi², of which 133 mi² probably is noncontributing.

PERIOD OF RECORD.--May 1941 to September 1942, August 1948 to September 1983, October 1988 to current year.

REVISED RECORDS.--WSP 1709: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 4,750 ft above NGVD of 1929, from topographic map. May 10, 1941 to September 30, 1942, nonrecording gage at site 1.0 mi downstream at different datum. August 28, 1948 to September 30, 1983, at same site and datum. U.S. Geological Survey data collection platform with satellite telemetry at station.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Natural flow of stream affected by regulation from reservoir system in the headwaters, diversions for irrigation, and return flow from irrigated areas.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of July 24, 1923, discharge, 3,500 ft³/s, from estimate provided by Bureau of Reclamation, gage height not determined.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	78	60	e58	e46	e47	e42	53	188	186	236	231	241
2	84	58	e56	e47	e43	e46	51	191	212	215	230	251
3	84	62	e56	e48	e40	e52	50	187	216	213	265	253
4	83	61	57	e50	e38	e62	48	172	201	203	262	229
5	82	62	59	e49	e39	63	47	166	216	208	240	227
6	80	60	58	e48	e38	66	48	154	238	212	220	230
7	78	59	e58	e47	e35	95	48	141	236	192	234	236
8	76	62	e56	e48	e34	87	52	185	238	206	199	241
9	75	63	e54	e46	e35	102	61	189	232	226	198	242
10	75	61	e52	e45	e36	78	100	161	238	193	193	260
11	73	60	e50	e43	e39	65	64	163	213	213	197	295
12	70	58	e52	e43	e36	59	105	163	216	214	183	294
13	70	60	e50	e44	e35	57	108	156	219	209	184	292
14	70	59	e48	e46	e35	55	96	166	209	204	204	289
15	70	60	e49	e48	e37	54	111	171	214	211	216	294
16	70	57	e52	e46	e39	53	114	177	219	230	210	291
17	69	57	e50	e41	e39	52	113	163	229	224	213	251
18	69	56	51	e40	e38	51	115	162	221	237	231	225
19	70	55	52	e42	e37	51	128	208	227	206	238	262
20	70	53	e47	e46	e36	51	131	187	222	207	233	212
21	71	55	e38	e47	e38	52	123	179	208	203	199	141
22	70	58	e41	e44	e40	51	134	167	212	229	204	127
23	73	58	e42	e43	e36	52	141	173	228	237	212	124
24	73	58	e40	e44	e34	51	145	162	296	233	215	122
25	72	59	e40	e46	e28	50	133	161	301	243	200	114
26	71	e56	e41	e48	e30	50	156	174	269	241	179	106
27	69	e52	e46	e46	e34	53	149	177	255	244	201	104
28	65	e52	e48	e45	e38	52	138	173	244	245	228	102
29	63	e54	e47	e46	---	53	143	178	241	240	227	100
30	62	e56	e45	e46	---	53	142	174	241	249	229	99
31	60	---	e46	e48	---	53	---	185	---	248	243	---
TOTAL	2,245	1,741	1,539	1,416	1,034	1,811	3,047	5,353	6,897	6,871	6,718	6,254
MEAN	72.4	58.0	49.6	45.7	36.9	58.4	102	173	230	222	217	208
MAX	84	63	59	50	47	102	156	208	301	249	265	295
MIN	60	52	38	40	28	42	47	141	186	192	179	99
AC-FT	4,450	3,450	3,050	2,810	2,050	3,590	6,040	10,620	13,680	13,630	13,330	12,400

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 2003, BY WATER YEAR (WY)

MEAN	144	79.0	58.6	50.4	48.2	52.5	81.8	178	275	325	331	285
MAX	298	135	114	89.9	79.5	87.2	201	275	442	524	525	527
(WY)	(2000)	(1998)	(1998)	(1998)	(1959)	(1963)	(1999)	(1999)	(1976)	(1983)	(1983)	(1999)
MIN	18.0	14.8	8.25	2.60	6.24	17.8	12.7	28.1	97.4	141	139	88.4
(WY)	(1942)	(1942)	(1942)	(1942)	(1942)	(1942)	(1942)	(1942)	(1941)	(1977)	(1977)	(1941)

06253000 FIVEMILE CREEK NEAR SHOSHONI, WY—Continued

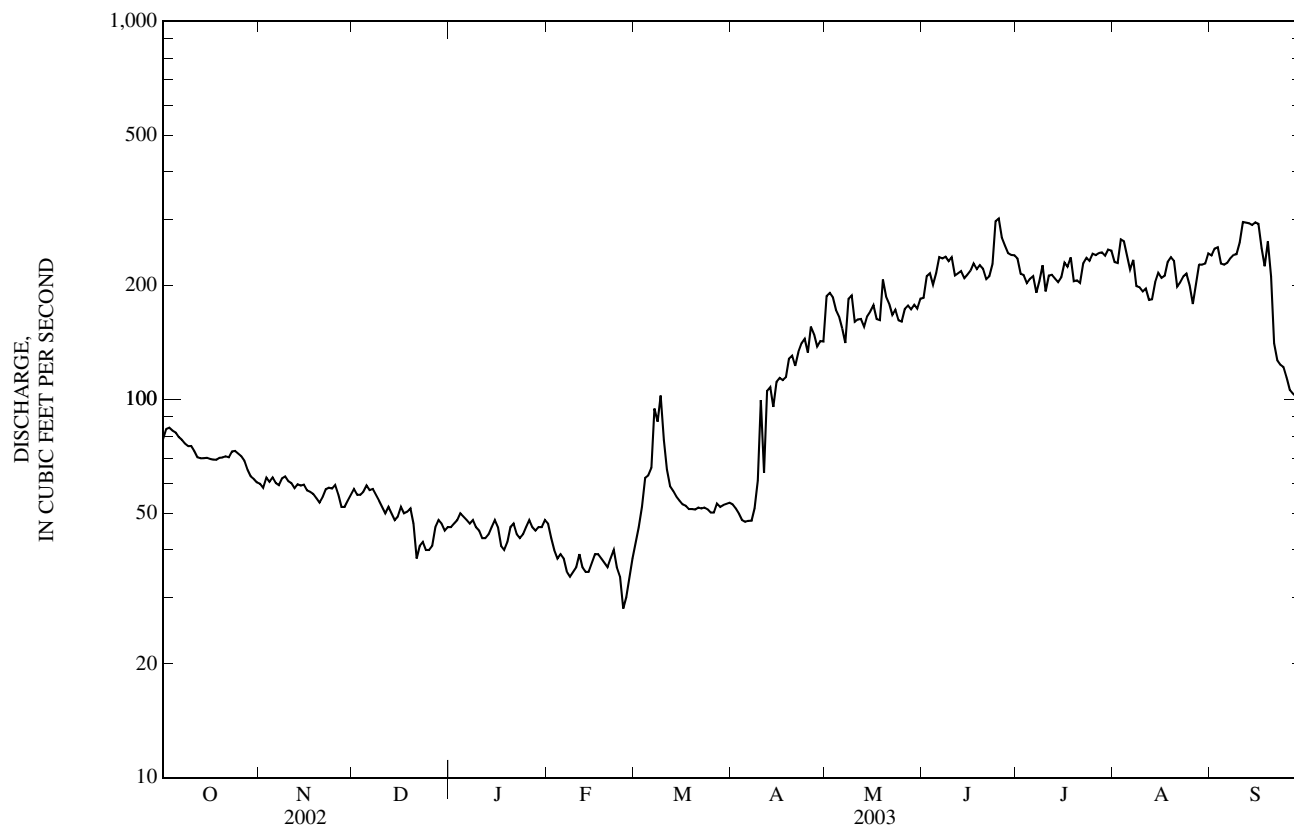
SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1941 - 2003	
ANNUAL TOTAL	30,867		44,926		--	
ANNUAL MEAN	84.6		123		161	
HIGHEST ANNUAL MEAN	--		--		253	
LOWEST ANNUAL MEAN	--		--		54.8	
HIGHEST DAILY MEAN	233	Jul 24	301	Jun 25	964	Sep 11, 1973
LOWEST DAILY MEAN	28 ^c	Jan 30	28 ^c	Feb 25	1.0	Jan 4, 1942
ANNUAL SEVEN-DAY MINIMUM	31	Jan 29	34	Feb 21	1.4	Jan 1, 1942
MAXIMUM PEAK FLOW	--		341 ^a	Jun 24	3,390 ^b	Jun 15, 1962
MAXIMUM PEAK STAGE	--		4.28 ^c	Dec 29	9.61 ^c	Dec 27, 1954
ANNUAL RUNOFF (AC-FT)	61,220		89,110		116,500	
10 PERCENT EXCEEDS	155		237		360	
50 PERCENT EXCEEDS	69		78		101	
90 PERCENT EXCEEDS	35		43		40	

a Gage height, 3.38 ft.

b Gage height, 7.85 ft.

c Backwater from ice.

e Estimated.



06259000 WIND RIVER BELOW BOYSEN RESERVOIR, WY

LOCATION.--Lat 43° 25' 30", long 108° 10' 42", in NW¹/₄ SW¹/₄ sec.9, T.5 N., R.6 E., Fremont County, Hydrologic Unit 10080005, on right bank 0.6 mi downstream from Boysen Dam and 13 mi north of Shoshoni.

DRAINAGE AREA.--7,701 mi².

PERIOD OF RECORD.--May 1951 to current year.

REVISED RECORDS.--WSP 1709: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 4,608.58 ft above NGVD of 1929. Bureau of Reclamation data collection platform with satellite telemetry at station.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Flow regulated by Boysen Reservoir since October 1951. Natural flow also affected by Bull Lake, Pilot Butte Reservoir, and several small reservoirs, combined capacity, 190,000 acre-ft, and diversions for irrigation of about 196,000 acres upstream from station.

COOPERATION.--Station operated and data provided by Bureau of Reclamation from April 1998; record computed and reviewed by U.S. Geological Survey.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	305	292	314	311	293	308	348	694	1,230	1,110	998	1,060
2	306	292	314	314	294	305	341	647	1,190	1,160	1,000	1,020
3	307	292	311	312	291	308	338	694	1,160	1,190	1,010	964
4	305	290	311	309	293	308	337	695	1,170	1,190	1,000	965
5	303	293	312	310	295	309	336	710	1,140	1,190	997	974
6	304	296	309	309	291	309	337	721	1,110	1,190	1,020	974
7	301	303	313	308	288	310	339	707	1,090	1,190	1,040	980
8	302	300	314	309	292	313	336	692	1,090	1,190	1,040	958
9	297	298	315	309	292	310	335	663	1,070	1,190	1,050	940
10	301	295	314	307	293	313	331	641	1,040	1,190	1,060	907
11	304	295	314	307	293	313	329	610	1,050	1,180	1,060	823
12	302	292	312	309	293	313	329	611	1,050	1,170	1,070	799
13	298	292	310	314	297	319	335	612	1,040	1,170	1,080	764
14	299	293	309	310	300	321	366	611	1,040	1,150	1,080	768
15	297	295	311	311	298	323	471	641	1,090	1,120	1,090	750
16	296	294	308	305	290	325	470	675	1,110	1,110	1,110	718
17	294	292	307	308	290	335	473	690	1,110	1,110	1,120	714
18	292	293	319	312	291	337	514	710	1,110	1,110	1,110	704
19	292	294	314	313	291	328	552	716	1,110	1,100	1,110	624
20	294	295	312	314	284	327	550	756	1,110	1,080	1,110	581
21	295	294	314	313	284	327	626	831	1,110	1,050	1,110	581
22	305	292	316	310	298	326	711	912	1,110	1,040	1,110	581
23	299	e300	315	306	299	329	732	968	1,110	1,030	1,100	570
24	297	307	313	307	294	329	766	1,010	1,130	1,040	1,120	558
25	297	311	313	310	296	331	834	1,060	1,120	1,050	1,140	555
26	299	312	312	307	298	344	843	1,100	1,070	1,050	1,130	556
27	298	311	311	297	305	345	900	1,150	1,040	1,050	1,120	571
28	299	306	310	292	308	352	885	1,170	1,030	1,050	1,110	572
29	299	312	313	293	---	349	869	1,180	1,030	1,040	1,080	526
30	296	313	312	294	---	345	839	1,220	1,070	1,010	1,070	371
31	293	---	312	292	---	354	---	1,220	---	1,000	1,060	---
TOTAL	9,276	8,944	9,684	9,522	8,231	10,065	15,772	25,317	32,930	34,500	33,305	22,428
MEAN	299	298	312	307	294	325	526	817	1,098	1,113	1,074	748
MAX	307	313	319	314	308	354	900	1,220	1,230	1,190	1,140	1,060
MIN	292	290	307	292	284	305	329	610	1,030	1,000	997	371
AC-FT	18,400	17,740	19,210	18,890	16,330	19,960	31,280	50,220	65,320	68,430	66,060	44,490

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1951 - 2003, BY WATER YEAR (WY)

MEAN	1,166	1,138	1,133	1,069	1,034	1,112	1,232	1,481	2,275	2,468	1,501	1,281
MAX	2,846	2,086	2,005	2,208	2,202	2,035	2,259	4,314	7,252	8,816	2,789	2,502
(WY)	(1983)	(1959)	(1959)	(1958)	(1958)	(1997)	(1998)	(1999)	(1991)	(1967)	(1997)	(1973)
MIN	299	298	301	299	210	213	389	777	980	935	909	703
(WY)	(2003)	(2003)	(1989)	(1989)	(1952)	(1952)	(1952)	(1952)	(1992)	(1992)	(1992)	(2002)

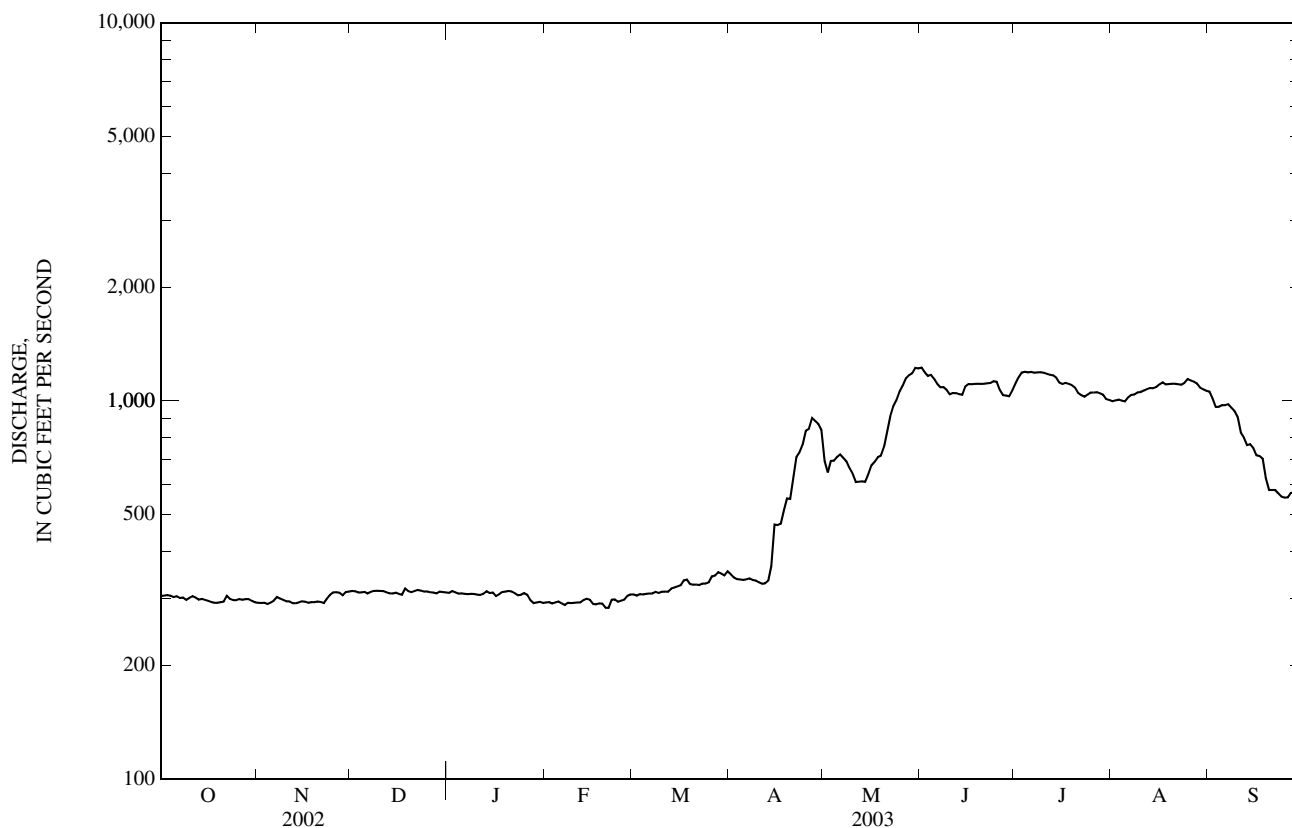
YELLOWSTONE RIVER BASIN

06259000 WIND RIVER BELOW BOYSEN RESERVOIR, WY—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1951 - 2003	
ANNUAL TOTAL	221,315		219,974		--	
ANNUAL MEAN	606		603		1,398	
HIGHEST ANNUAL MEAN	--		--		2,349	
LOWEST ANNUAL MEAN	--		--		603	
HIGHEST DAILY MEAN	1,150	Jul 2	1,230	Jun 1	13,200	Jul 7, 1967
LOWEST DAILY MEAN	290	Nov 4	284	Feb 20,21	4.7	Apr 3, 1962
ANNUAL SEVEN-DAY MINIMUM	293	Oct 30	290	Feb 15	106	Oct 12, 1951
MAXIMUM PEAK FLOW	--		1,300 ^a	Aug 25	13,500	Jul 7, 1967
MAXIMUM PEAK STAGE	--		4.87	May 29	13.35	Jul 7, 1967
ANNUAL RUNOFF (AC-FT)	439,000		436,300		1,013,000	
10 PERCENT EXCEEDS	1,030		1,110		2,160	
50 PERCENT EXCEEDS	431		337		1,140	
90 PERCENT EXCEEDS	299		294		611	

a Gage height, 4.60 ft.

e Estimated.



06260400 SOUTH FORK OWL CREEK BELOW ANCHOR RESERVOIR, WY

LOCATION.--Lat43° 39'57", long 108° 47'34", in sec.25, T.43 N., R.100 W., Hot Springs County, Hydrologic Unit 10080007, on left bank 1.6 mi downstream from Anchor Dam and 30 mi west of Thermopolis.

DRAINAGE AREA.--131 mi².

PERIOD OF RECORD.--April 1959 to current year (no winter records since 1988).

REVISED RECORDS.--WDR WY-76-1: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 6,120 ft above NGVD of 1929, from topographic map. Wyoming State Engineer's Office data collection platform with satellite telemetry at station.

REMARKS.--Records good. Flow regulated by Anchor Dam. No diversion upstream from station.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

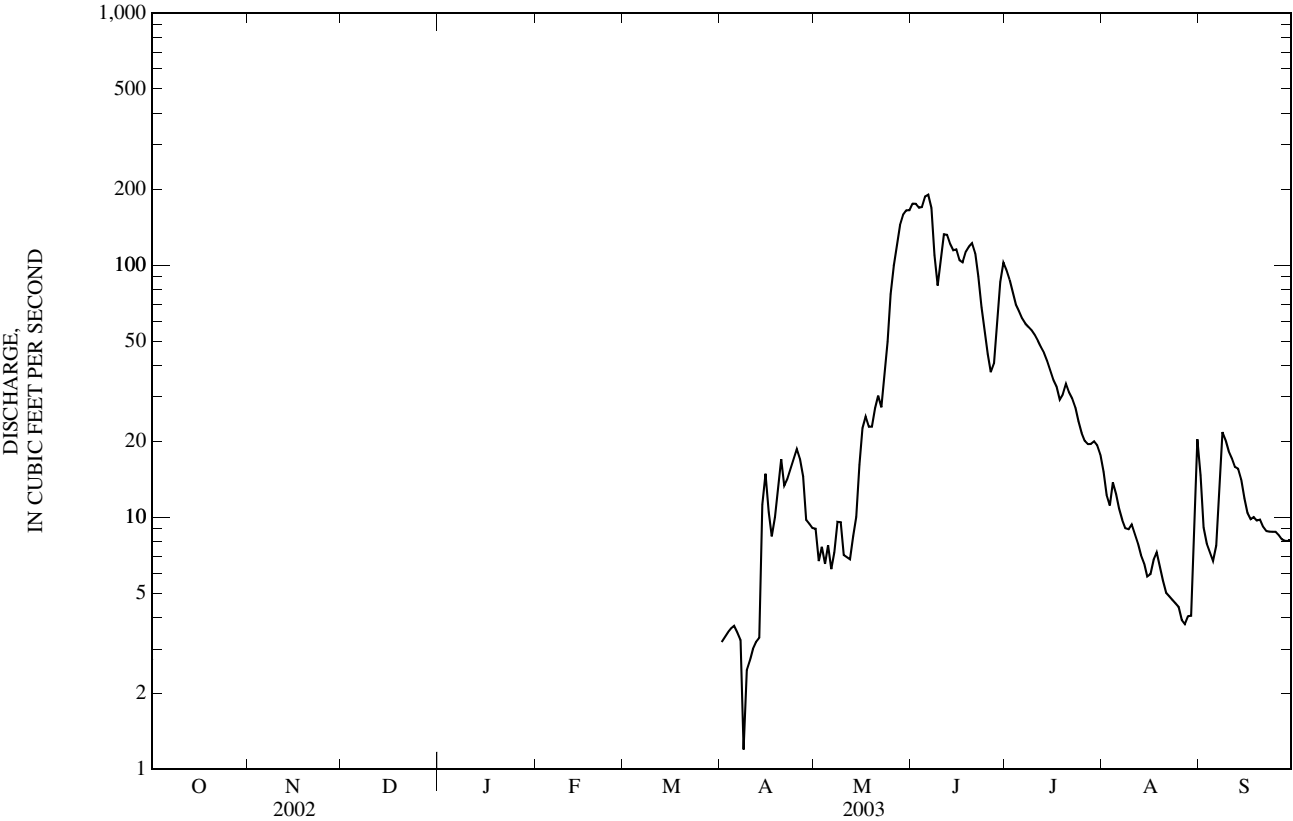
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	3.2	9.0	175	96	15	15
2	---	---	---	---	---	---	3.3	6.7	175	88	12	9.1
3	---	---	---	---	---	---	3.5	7.6	169	78	11	7.9
4	---	---	---	---	---	---	3.6	6.5	170	70	14	7.3
5	---	---	---	---	---	---	3.7	7.7	187	66	12	6.7
6	---	---	---	---	---	---	3.5	6.2	190	61	11	7.7
7	---	---	---	---	---	---	3.3	7.2	169	59	9.7	13
8	---	---	---	---	---	---	1.2	9.6	110	57	9.0	22
9	---	---	---	---	---	---	2.5	9.6	83	55	9.0	20
10	---	---	---	---	---	---	2.7	7.1	104	53	9.4	18
11	---	---	---	---	---	---	3.0	6.9	132	50	8.6	17
12	---	---	---	---	---	---	3.2	6.8	132	47	7.9	16
13	---	---	---	---	---	---	3.3	8.4	122	45	7.1	16
14	---	---	---	---	---	---	11	10	115	42	6.5	14
15	---	---	---	---	---	---	15	16	116	38	5.8	12
16	---	---	---	---	---	---	10	23	105	35	5.9	10
17	---	---	---	---	---	---	8.4	25	103	33	6.8	9.8
18	---	---	---	---	---	---	10	23	113	29	7.2	10
19	---	---	---	---	---	---	13	23	118	31	6.3	9.7
20	---	---	---	---	---	---	17	27	122	34	5.6	9.8
21	---	---	---	---	---	---	13	30	111	31	5.0	9.2
22	---	---	---	---	---	---	14	27	90	30	4.9	8.8
23	---	---	---	---	---	---	16	37	68	27	4.7	8.8
24	---	---	---	---	---	---	17	50	55	24	4.6	8.8
25	---	---	---	---	---	---	19	77	44	22	4.4	8.8
26	---	---	---	---	---	---	17	100	38	20	3.9	8.5
27	---	---	---	---	---	---	15	121	41	20	3.8	8.2
28	---	---	---	---	---	---	9.8	144	60	20	4.1	8.1
29	---	---	---	---	---	---	9.4	159	86	20	4.1	8.1
30	---	---	---	---	---	---	9.1	165	102	19	8.3	8.1
31	---	---	---	---	---	---	---	165	---	18	20	---
TOTAL	---	---	---	---	---	---	263.7	1,321.3	3,405	1,318	247.6	336.4
MEAN	---	---	---	---	---	---	8.79	42.6	114	42.5	7.99	11.2
MAX	---	---	---	---	---	---	19	165	190	96	20	22
MIN	---	---	---	---	---	---	1.2	6.2	38	18	3.8	6.7
AC-FT	---	---	---	---	---	---	523	2,620	6,750	2,610	491	667

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1959 - 2003, BY WATER YEAR (WY)*

MEAN	7.40	2.71	0.98	0.40	0.71	2.06	8.58	47.5	97.8	55.8	25.1	12.6
MAX	20.5	8.90	3.86	2.39	2.82	8.66	30.2	90.1	226	124	79.4	37.1
(WY)	(1983)	(1982)	(1982)	(1981)	(1988)	(1960)	(1987)	(1974)	(1986)	(1982)	(1995)	(1992)
MIN	2.49	0.013	0.000	0.000	0.000	0.000	0.000	14.3	17.2	4.67	3.62	2.52
(WY)	(1965)	(1962)	(1961)	(1960)	(1960)	(1961)	(1991)	(1981)	(2001)	(1994)	(2001)	(2000)

SUMMARY STATISTICS	FOR 203 WATER YEAR*		WATER YEARS 1959 - 2003*	
ANNUAL MEAN	--		22.1	
HIGHEST ANNUAL MEAN	--		35.9	1986
LOWEST ANNUAL MEAN	--		11.3	1985
HIGHEST DAILY MEAN	190	Jun 6	357	Jun 18, 1999
LOWEST DAILY MEAN	1.2	Apr 8	0.00	Several days, most years
MAXIMUM PEAK FLOW	216	Jun 5	373 ^a	May 26, 1967
MAXIMUM PEAK STAGE	3.54	Jun 5	4.22	Jun 17, 1999
ANNUAL RUNOFF (AC-FT)	--		16,050	

* For period of operation.
a Gage height, 3.64 ft.



06264700 BIGHORN RIVER AT LUCERNE, WY

LOCATION.--Lat 43° 44' 10", long 108° 09' 38", in SE $\frac{1}{4}$ sec. 32, T. 44 N., R. 94 W., Hot Springs County, Hydrologic Unit 10080007, at bridge on Black Mountain road, 0.7 mi upstream from Kirby Creek, 0.8 mi east of Lucerne, and 1.0 mi downstream from Owl Creek.

PERIOD OF RECORD.--Water years 1966 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

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 unfltrd, uS/cm 25 deg C (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	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)	Orthophosphate, water, fltrd, mg/L as P (00671)
OCT 31...	1540	346	658	14.2	129	8.8	943	-7.0	5.0	<0.04	<0.06	<0.008	<0.02
FEB 03...	1045	350	655	14.1	117	8.2	919	-7.0	1.5	0.06	0.08	<0.008	E.01
MAY 30...	1700	1,170	653	8.8	111	8.2	866	23.0	19.0	<0.04	<0.06	<0.008	<0.02
AUG 05...	1010	901	659	8.0	107	8.6	754	29.0	22.0	<0.04	<0.06	<0.008	<0.02

Date	E coli, modif. m-TEC, water, col/100 mL (90902)	E coli, m-TEC MF, water, col/100 mL (31633)	Fecal coliform, M-FC 0.7u MF col/100 mL (31625)
OCT 31...	--	E16k	28
FEB 03...	--	130	180
MAY 30...	77	--	E100k
AUG 05...	120	--	140

E -- Estimated value

k -- Counts outside acceptable range (Non-ideal colony count)

06265337 COTTONWOOD CREEK AT HIGH ISLAND RANCH, NEAR HAMILTON DOME, WY

LOCATION.--Lat 43° 45'46", long 108° 40'34", in SW $\frac{1}{4}$ NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.24, T.44 N., R.99 W., Hot Springs County, Hydrologic Unit 10080007, on right bank 15 ft upstream from county bridge, 5.2 miles west of Hamilton Dome, and 12 miles south of Grass Creek.

DRAINAGE AREA.--81.4 mi².

PERIOD OF RECORD.--May 1977 to September 1978 (discharge measurements and water quality only), April 1993 to current year. Prior to April 1993, published as Cottonwood Creek at county bridge, near Hamilton Dome.

GAGE.--Water-stage recorder. Elevation of gage is 5,677 ft above NGVD of 1929, from topographic map. Prior to September 9, 1996, at site 9 ft downstream at datum 3.00 ft higher. Wyoming State Engineer's Office data collection platform with satellite telemetry at station.

REMARKS.--Records fair except those for estimated daily discharges, which are poor.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.3	0.00	0.00	0.00	0.00	0.00	14	5.2	29	9.3	0.25	17
2	1.7	0.00	0.00	0.00	e0.00	0.00	12	4.9	25	7.9	0.00	0.00
3	1.6	0.00	0.00	0.00	e0.00	0.00	7.5	5.4	22	6.8	0.00	0.00
4	1.4	0.00	0.00	0.00	0.00	0.00	3.4	4.5	20	6.1	0.00	0.00
5	1.6	0.00	0.00	0.00	0.00	0.00	2.3	5.9	19	5.6	0.00	0.00
6	1.6	0.00	0.00	0.00	0.00	0.00	1.9	5.0	17	4.7	0.00	0.00
7	1.5	0.00	0.00	0.00	e0.00	0.00	0.87	5.0	17	4.6	0.00	0.00
8	1.4	0.00	0.00	0.00	e0.00	0.00	0.38	8.0	15	4.0	0.00	2.9
9	1.3	0.00	0.00	0.00	0.00	0.00	1.5	9.9	15	1.6	0.00	0.67
10	1.2	0.00	0.00	0.00	0.00	2.1	7.0	10	18	1.2	0.00	2.9
11	1.2	0.00	0.00	0.00	e0.00	8.8	13	12	16	0.24	0.00	5.4
12	1.5	0.00	0.00	0.00	e0.00	7.5	24	13	14	0.00	0.00	3.7
13	1.3	0.00	0.00	0.00	e0.00	11	31	14	13	0.00	0.00	5.2
14	0.79	0.00	0.00	0.00	e0.00	9.6	21	13	11	0.00	0.00	2.5
15	0.34	0.00	0.00	0.00	e0.00	4.6	27	17	10	0.00	0.00	0.99
16	0.04	0.00	0.00	0.00	e0.00	2.2	18	18	10	0.00	0.00	0.24
17	0.00	0.00	0.00	0.00	e0.00	0.82	14	22	9.3	0.00	0.00	0.01
18	0.00	0.00	0.00	0.00	0.00	0.00	9.2	22	7.2	0.00	0.00	0.60
19	0.00	0.00	0.00	0.00	0.00	0.00	4.0	20	6.2	1.5	0.00	0.06
20	0.00	0.00	0.00	0.00	0.00	0.14	2.5	17	10	4.3	0.00	0.40
21	0.00	0.00	0.00	0.00	0.00	1.1	1.8	17	9.0	2.2	0.00	0.11
22	0.00	0.00	0.00	0.00	0.00	2.2	4.1	21	8.1	0.24	0.00	0.02
23	0.00	e0.00	0.00	0.00	0.00	2.9	6.8	27	8.4	0.00	0.00	0.00
24	0.00	0.00	0.00	0.00	0.00	2.5	8.2	26	12	0.00	0.00	0.00
25	0.00	0.00	0.00	0.00	0.00	0.63	7.4	26	11	0.00	0.00	0.00
26	0.00	0.00	0.00	0.00	0.00	0.23	8.9	39	10	1.6	0.00	0.00
27	0.00	0.00	0.00	0.00	0.00	0.28	6.5	42	9.1	3.4	0.00	0.00
28	0.00	0.00	0.00	0.00	0.00	0.00	6.0	36	8.8	34	0.00	0.00
29	0.00	0.00	0.00	0.00	---	0.04	4.3	37	15	24	0.00	0.00
30	0.00	0.00	0.00	0.00	---	3.6	5.0	35	11	19	0.00	0.00
31	0.00	---	0.00	0.00	---	e9.0	---	35	---	15	12	---
TOTAL	19.77	0.00	0.00	0.00	0.00	69.24	273.55	572.8	406.1	157.28	12.25	42.70
MEAN	0.64	0.000	0.000	0.000	0.000	2.23	9.12	18.5	13.5	5.07	0.40	1.42
MAX	1.7	0.00	0.00	0.00	0.00	11	31	42	29	34	12	17
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.38	4.5	6.2	0.00	0.00	0.00
AC-FT	39	0.00	0.00	0.00	0.00	137	543	1,140	805	312	24	85

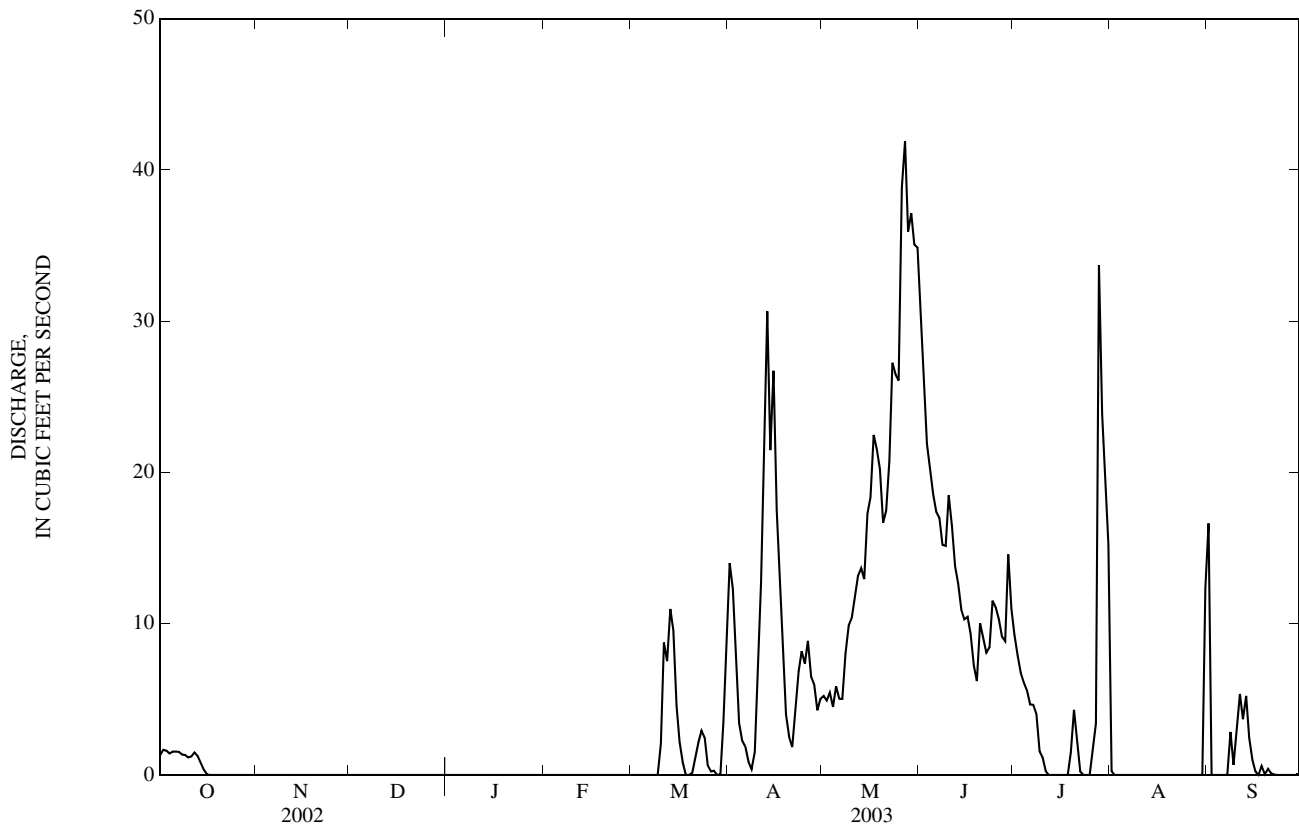
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1993 - 2003, BY WATER YEAR (WY)

MEAN	4.23	2.34	1.02	0.82	1.24	6.53	11.6	33.6	43.6	12.8	4.04	3.47
MAX	14.7	6.91	2.96	2.83	3.30	26.9	30.2	84.1	142	30.6	8.95	9.11
(WY)	(1999)	(1994)	(1998)	(1997)	(1996)	(1998)	(1999)	(1999)	(1997)	(1997)	(1998)	(1998)
MIN	0.14	0.000	0.000	0.000	0.000	1.18	3.87	4.03	2.05	1.01	0.004	0.000
(WY)	(2002)	(2002)	(2001)	(2001)	(2001)	(2002)	(2001)	(2001)	(2002)	(2000)	(2001)	(2000)

06265337 COTTONWOOD CREEK AT HIGH ISLAND RANCH, NEAR HAMILTON DOME, WY—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR	FOR 2003 WATER YEAR	WATER YEARS 1993 - 2003
ANNUAL TOTAL	690.41	1,553.69	--
ANNUAL MEAN	1.89	4.26	8.67
HIGHEST ANNUAL MEAN	--	--	21.0 1997
LOWEST ANNUAL MEAN	--	--	1.85 2002
HIGHEST DAILY MEAN	34 Jul 20	42 May 27	895 Jun 11, 1997
LOWEST DAILY MEAN	0.00 Many days	0.00 Many days	0.00 Many days, Most years
ANNUAL SEVEN-DAY MINIMUM	0.00 Jan 1	0.00 Oct 17	0.00 Sep 12, 1994
MAXIMUM PEAK FLOW	--	490 Jul 28	3,410 ^a Jul 10, 2001
MAXIMUM PEAK STAGE	--	5.97 Jul 28	10.76 ^b Jul 10, 2001
ANNUAL RUNOFF (AC-FT)	1,370	3,080	6,280
10 PERCENT EXCEEDS	6.5	15	22
50 PERCENT EXCEEDS	0.00	0.00	2.1
90 PERCENT EXCEEDS	0.00	0.00	0.00

e Estimated



YELLOWSTONE RIVER BASIN

06274300 BIGHORN RIVER AT BASIN, WY

LOCATION.--Lat 44° 23'00", long 108° 02'08", in SE $\frac{1}{4}$ NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec.21, T.51 N., R.93 W., Big Horn County, Hydrologic Unit 10080007, on left bank 10 ft downstream from county bridge on E Street, 0.2 mi northeast of Big Horn County Courthouse in Basin, and 1.8 mi downstream from Antelope Creek.

DRAINAGE AREA.--13,223 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1983 to current year.

GAGE.--Water-stage recorder. Datum of gage is 3,821.29 ft above NGVD of 1929. U.S. Geological Survey data collection platform with satellite telemetry at station.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Diversions for irrigation of about 226,000 acres upstream from station.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	454	596	e510	e660	e580	e520	856	1,900	3,490	1,090	477	703
2	519	580	e520	e640	e580	e500	781	1,270	2,880	1,070	456	686
3	587	578	e540	e640	e560	e540	665	703	1,990	989	461	646
4	643	584	e500	e640	e560	e520	612	558	1,500	966	460	580
5	610	594	e520	e640	e540	e500	589	559	1,300	941	444	553
6	594	597	e540	e640	e520	e480	573	579	1,180	894	408	567
7	588	608	538	e620	e500	e540	563	589	1,190	804	374	574
8	582	598	407	e620	e490	e520	555	731	1,160	742	382	575
9	568	597	e440	e620	e520	e560	551	1,360	1,120	677	393	581
10	565	593	e450	e600	e560	e640	460	1,170	1,230	668	397	697
11	563	590	e460	e600	e520	e860	438	1,250	1,360	595	417	1,140
12	568	583	e440	e580	e500	e1,400	464	1,070	1,420	628	387	871
13	577	577	e420	e560	e500	e2,200	459	851	1,340	609	383	774
14	578	577	e450	e540	e500	e2,800	466	716	1,240	604	382	788
15	580	577	e540	e580	e520	e2,300	469	627	1,190	528	385	756
16	577	579	e600	e600	e520	e2,000	537	655	1,210	527	353	741
17	574	577	e640	e580	e520	e1,300	643	672	1,290	496	362	709
18	578	576	e580	e580	e540	882	619	849	1,500	502	455	684
19	579	e560	e560	e560	e540	790	568	924	1,250	543	679	667
20	581	e560	e540	e580	e540	704	569	901	1,150	576	684	674
21	574	e560	e480	e620	e520	675	581	796	1,060	643	522	613
22	581	e540	e540	e580	e500	651	504	686	965	561	424	560
23	e600	e540	e520	e560	e450	630	560	693	877	439	387	542
24	e610	e520	e500	e540	e420	615	591	1,010	1,010	432	398	552
25	608	e520	e470	e540	e390	597	556	1,710	1,710	414	397	551
26	602	e500	e450	e540	e400	594	549	2,320	1,570	450	369	527
27	596	e490	e500	e580	e420	648	579	2,610	1,340	528	405	525
28	598	e500	e500	e600	e450	734	615	3,000	1,140	545	412	506
29	606	e520	e640	e620	---	719	611	3,350	1,550	579	403	526
30	606	e540	e720	e600	---	756	622	3,770	1,330	524	436	550
31	598	---	e680	e600	---	844	---	3,600	---	498	586	---
TOTAL	18,044	16,911	16,195	18,460	14,160	28,019	17,205	41,479	42,542	20,062	13,478	19,418
MEAN	582	564	522	595	506	904	574	1,338	1,418	647	435	647
MAX	643	608	720	660	580	2,800	856	3,770	3,490	1,090	684	1,140
MIN	454	490	407	540	390	480	438	558	877	414	353	506
AC-FT	35,790	33,540	32,120	36,620	28,090	55,580	34,130	82,270	84,380	39,790	26,730	38,520

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1984 - 2003, BY WATER YEAR (WY)

MEAN	1,472	1,365	1,250	1,167	1,212	1,470	1,371	2,368	3,806	2,234	1,105	1,257
MAX	2,346	2,439	1,933	1,975	1,772	2,753	2,929	6,252	11,210	8,574	2,627	2,326
(WY)	(1984)	(1984)	(1985)	(1992)	(1997)	(1998)	(1998)	(1999)	(1991)	(1995)	(1997)	(1998)
MIN	582	564	522	566	504	634	574	690	1,059	357	380	531
(WY)	(2003)	(2003)	(2003)	(1989)	(1989)	(1989)	(2003)	(2002)	(2001)	(1988)	(2002)	(2002)

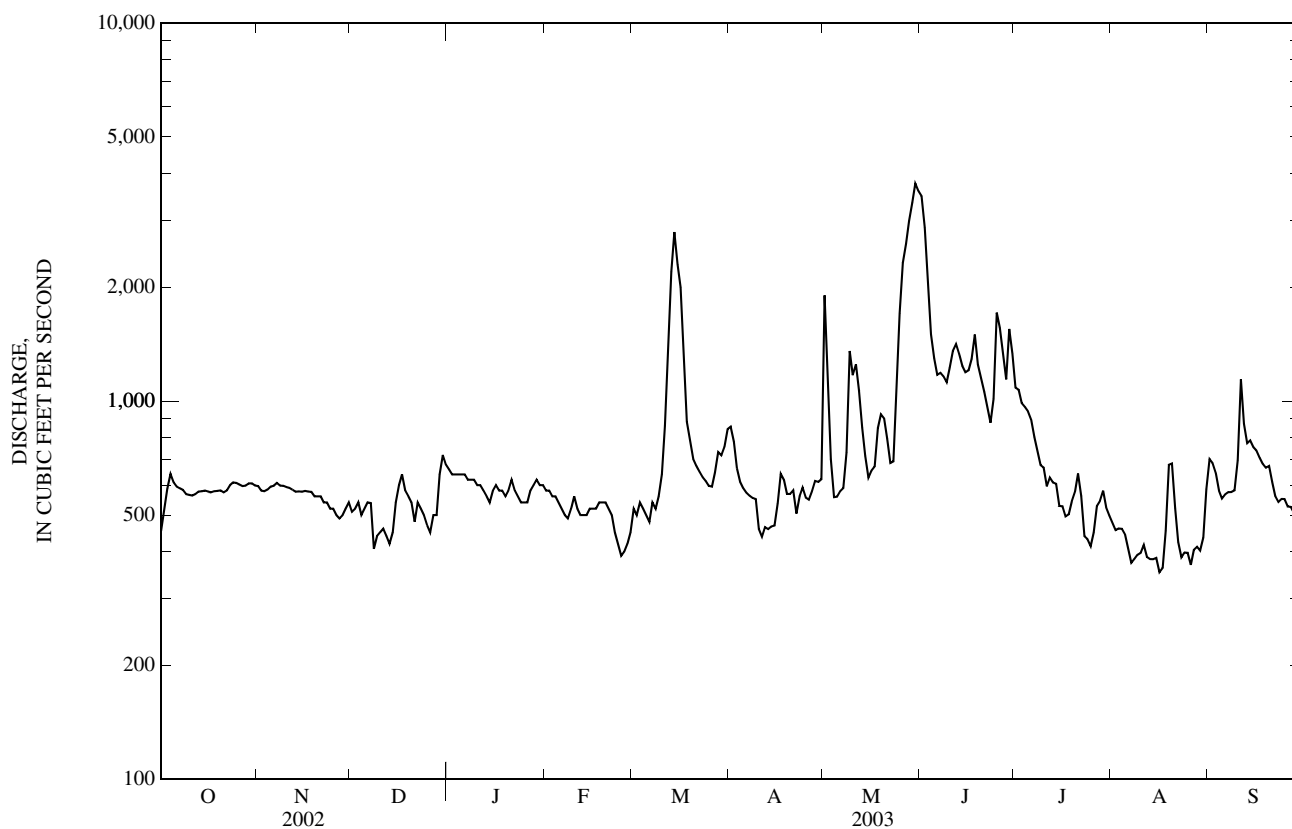
06274300 BIGHORN RIVER AT BASIN, WY—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1984 - 2003	
ANNUAL TOTAL	240,472		265,973		--	
ANNUAL MEAN	659		729		1,674	
HIGHEST ANNUAL MEAN	--		--		2,913	
LOWEST ANNUAL MEAN	--		--		691	
HIGHEST DAILY MEAN	3,650	Jun 2	3,770	May 30	16,600	Jun 8, 1991
LOWEST DAILY MEAN	295	Aug 2	353	Aug 16	276	Jul 27, 1988
ANNUAL SEVEN-DAY MINIMUM	330	Aug 2	381	Aug 11	292	Jul 24, 1988
MAXIMUM PEAK FLOW	--		4,110 ^a	May 30	19,500	Jun 7, 1991
MAXIMUM PEAK STAGE	--		6.94 ^b	Dec 11	10.49	Jun 7, 1991
ANNUAL RUNOFF (AC-FT)	477,000		527,600		1,212,000	
10 PERCENT EXCEEDS	872		1,200		2,850	
50 PERCENT EXCEEDS	593		580		1,300	
90 PERCENT EXCEEDS	400		450		609	

a Gage height, 5.58 ft.

b Backwater from ice.

e Estimated.



06274300 BIGHORN RIVER AT BASIN, WY—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1983 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

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 unfltrd, uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	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)	Orthophosphate, water, fltrd, mg/L as P (00671)
OCT 30...	1000	624	670	14.7	115	8.5	1,110	-4.0	0.0	<0.04	0.34	<0.008	<0.02
FEB 03...	1345	574	664	11.9	94	8.2	1,100	-5.0	0.0	0.05	0.40	E.004	<0.02
MAY 29...	0745	3,570	662	7.9	89	8.0	324	31.5	14.0	<0.04	0.21	0.008	E.01
AUG 05...	1315	417	667	10.0	136	8.4	1,080	29.5	23.5	<0.04	0.78	0.010	<0.02
Date		E coli, modif. m-TEC, water, col/100 mL (90902)		E coli, m-TEC MF, water, col/100 mL (31633)		Fecal coliform, M-FC 0.7u MF col/100 mL (31625)		Suspended sediment concentration mg/L (80154)		Suspended sediment load, tons/d (80155)			
OCT 30...		--		E24k		40		106		179			
FEB 03...		--		E25		26		186		288			
MAY 29...		1,600		--		1,700		1,730		16,700			
AUG 05...		250		--		490		139		157			

E -- Estimated value

k -- Counts outside acceptable range (Non-ideal colony count)

06276500 GREYBULL RIVER AT MEETEETSE, WY

LOCATION.--Lat 44° 09'20", long 108° 52'35", in sec.4, T.48 N., R.100 W., Park County, Hydrologic Unit 10080009, on right bank at Meeteetse, 0.3 mi upstream from bridge on State Highway 120, and 3.0 mi upstream from Meeteetse Creek.

DRAINAGE AREA.--681 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June to December 1897, April to October 1903 (gage heights and discharge measurements only), July 1920 to current year (no winter records since 1971). Partial records only for some periods prior to 1931, published in WSP 1309.

REVISED RECORDS.--WSP 1309: 1923(M), 1924, 1925(M). WSP 1709: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 5,739.42 ft above NGVD of 1929. See WSP 1916 for history of changes prior to April 28, 1938. April 28, 1938 to May 24, 1961, at site on left bank at datum 2.00 ft higher. May 25, 1961 to May 9, 1967, at site 100 ft downstream at present datum.

REMARKS.--Records fair. Some regulation by Sunshine Reservoir beginning May 1940, capacity, 52,990 acre-ft, and Lower Sunshine Reservoir beginning December 1972, capacity, 58,900 acre-ft. Diversions for irrigation of about 10,600 acres upstream from station. Several diversions upstream from station for irrigation downstream from station. Result of discharge measurement, in cubic feet per second, made during the period when station was not in operation, are given below:

Nov. 7 . . . 35.6
Mar. 25 . . . 20.9
Mar. 31 . . . 49.3

COOPERATION.--Station operated and record provided by the Wyoming State Engineer's Office; record reviewed by U.S. Geological Survey.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	62	114	797	620	484	330
2	---	---	---	---	---	---	54	122	703	632	481	324
3	---	---	---	---	---	---	39	120	725	593	489	313
4	---	---	---	---	---	---	33	114	666	550	472	303
5	---	---	---	---	---	---	43	116	572	543	452	324
6	---	---	---	---	---	---	43	106	490	532	455	341
7	---	---	---	---	---	---	41	97	448	526	445	359
8	---	---	---	---	---	---	40	114	370	531	435	263
9	---	---	---	---	---	---	50	113	550	538	448	189
10	---	---	---	---	---	---	66	120	703	489	449	186
11	---	---	---	---	---	---	42	122	723	490	435	181
12	---	---	---	---	---	---	36	132	658	484	413	187
13	---	---	---	---	---	---	32	150	656	460	409	184
14	---	---	---	---	---	---	29	175	637	444	402	173
15	---	---	---	---	---	---	30	245	665	437	393	165
16	---	---	---	---	---	---	26	336	655	407	379	161
17	---	---	---	---	---	---	20	358	693	368	384	164
18	---	---	---	---	---	---	49	320	733	371	387	160
19	---	---	---	---	---	---	95	266	754	411	376	159
20	---	---	---	---	---	---	99	223	681	392	372	154
21	---	---	---	---	---	---	100	228	627	464	376	155
22	---	---	---	---	---	---	121	287	516	539	365	151
23	---	---	---	---	---	---	136	466	413	523	372	141
24	---	---	---	---	---	---	137	701	376	521	348	134
25	---	---	---	---	---	---	129	719	336	517	356	131
26	---	---	---	---	---	---	143	733	308	515	359	124
27	---	---	---	---	---	---	117	824	359	530	356	120
28	---	---	---	---	---	---	103	828	470	525	303	124
29	---	---	---	---	---	---	110	763	560	490	299	130
30	---	---	---	---	---	---	112	872	623	490	337	141
31	---	---	---	---	---	---	---	1,010	---	463	396	---
TOTAL	---	---	---	---	---	---	2,137	10,894	17,467	15,395	12,427	5,971
MEAN	---	---	---	---	---	---	71.2	351	582	497	401	199
MAX	---	---	---	---	---	---	143	1,010	797	632	489	359
MIN	---	---	---	---	---	---	20	97	308	368	299	120
AC-FT	---	---	---	---	---	---	4,240	21,610	34,650	30,540	24,650	11,840

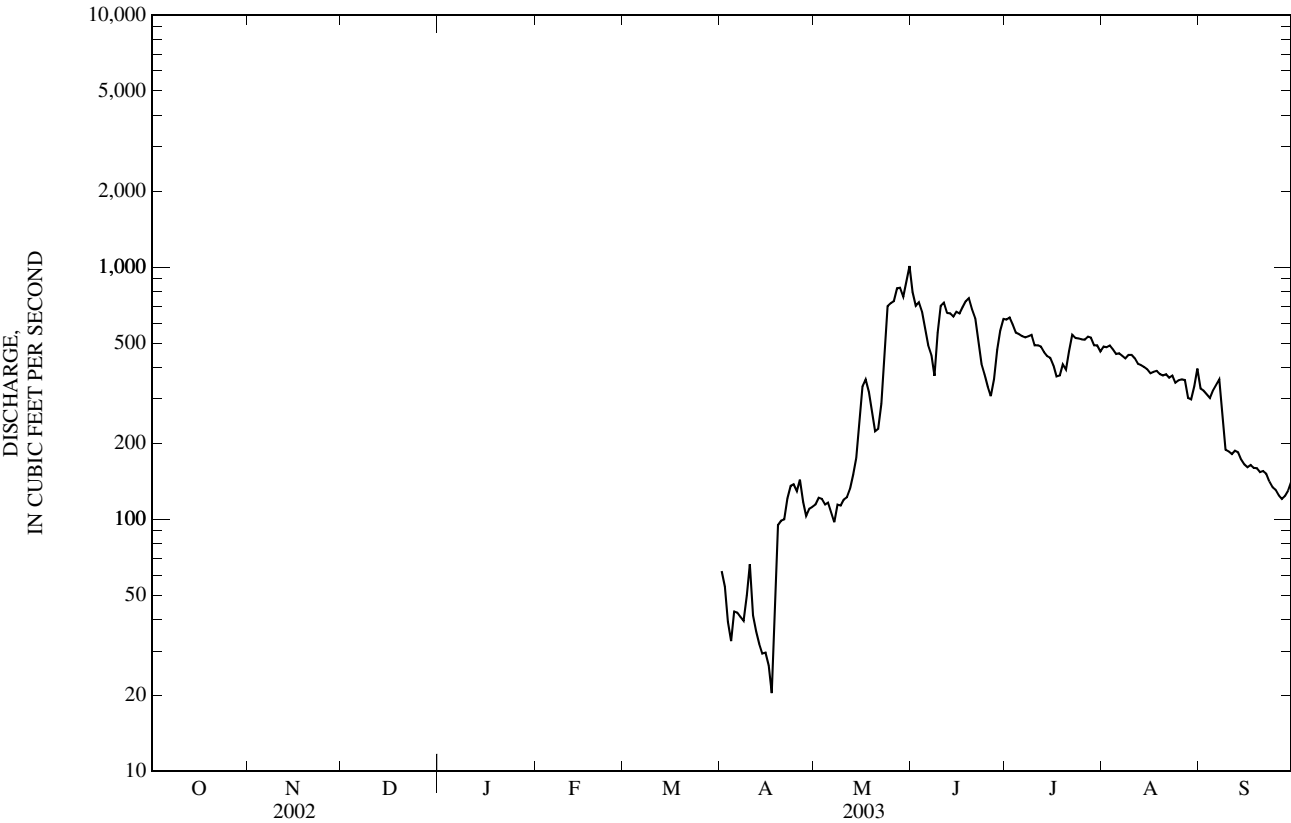
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1921 - 2003, BY WATER YEAR (WY)*

MEAN	167	107	78.3	64.5	63.7	77.3	131	564	1,142	795	488	268
MAX	593	248	134	105	104	117	441	1,422	3,185	2,219	1,704	662
(WY)	(1924)	(1942)	(1931)	(1943)	(1962)	(1942)	(1952)	(1924)	(1957)	(1965)	(1941)	(1941)
MIN	72.5	52.8	45.0	27.0	33.9	35.1	26.8	154	284	188	137	84.2
(WY)	(1956)	(1956)	(1970)	(1963)	(1960)	(1963)	(1978)	(1978)	(1934)	(1934)	(1940)	(1939)

06276500 GREYBULL RIVER AT MEETEETSE, WY—Continued

SUMMARY STATISTICS	FOR 2003 WATER YEAR*		WATER YEARS 1921 - 2003*	
ANNUAL MEAN	--		333	
HIGHEST ANNUAL MEAN	--		566	1957
LOWEST ANNUAL MEAN	--		130	1940
HIGHEST DAILY MEAN	1,010	May 31	6,770	Jun 6, 1957
LOWEST DAILY MEAN	20	Apr 17	13	Apr 18, 1989
MAXIMUM PEAK FLOW	1,150	May 31	13,600 ^a	Jun 15, 1963
MAXIMUM PEAK STAGE	2.76	May 31	9.20 ^b	Jun 15, 1963
ANNUAL RUNOFF (AC-FT)	--		241,200	

* For period of operation.
a From rating curve extended above 4,600 ft³/s on basis of velocity-area study.
b From floodmarks.



06276500 GREYBULL RIVER AT MEETEETSE, WY—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1995 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

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 unfltrd uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	E coli, modif. m-TEC, water, col/100 mL (90902)	E coli, m-TEC MF, water, col/100 mL (31633)	Fecal coliform, M-FC 0.7u MF col/100 mL (31625)	Suspended sediment concentration mg/L (80154)
OCT 31...	1245	33	620	12.9	109	8.6	750	-2.0	0.0	--	E4k	E8k	73
FEB 05...	1300	22	615	13.2	112	8.3	859	-7.0	0.0	--	<1	<1	40
MAY 28...	1800	713	621	7.7	98	7.7	121	31.0	17.0	80	--	77	877
AUG 06...	1210	466	620	8.2	105	8.6	335	35.0	17.0	61	--	E66k	36

Date	Suspended sediment load, tons/d (80155)
OCT 31...	6.5
FEB 05...	2.3
MAY 28...	1,690
AUG 06...	45

E-- Estimated value

k-- Counts outside acceptable range (Non-ideal colony count)

06278300 SHELL CREEK ABOVE SHELL RESERVOIR, WY

LOCATION.--Lat 44° 30'29", long 107° 24'11", in sec.1, T.52 N., R.88 W., Big Horn County, Hydrologic Unit 10080010, Bighorn National Forest, on right bank 0.2 mi upstream from Shell Reservoir, 1.1 mi downstream from Buckley Creek, 6.0 mi southeast of Shell Creek ranger station, and 19 mi east of Shell.

DRAINAGE AREA.--23.1 mi².

PERIOD OF RECORD.--October 1956 to current year. Prior to October 1969, published as Shell Creek above Shell Creek Reservoir.

REVISED RECORD.--WSP 1629: 1958. WSP 1709: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 9,050 ft above NGVD of 1929, from topographic map. U.S. Geological Survey data collection platform with satellite telemetry at station.

REMARKS.--Records good except those for estimated daily discharges, which are poor. No diversions upstream from station.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.9	e4.8	3.6	2.5	2.5	2.1	2.3	10	436	68	9.1	5.5
2	6.1	e5.2	3.6	2.4	2.4	2.1	2.2	9.8	213	61	8.6	5.2
3	6.1	e5.6	3.6	2.4	2.4	2.1	2.3	11	139	53	8.2	5.0
4	6.2	e6.0	3.6	2.4	2.6	2.1	2.3	9.7	106	45	8.2	4.9
5	6.4	e6.4	3.5	2.4	2.6	2.1	2.2	9.1	81	40	7.9	4.7
6	6.4	e7.0	3.3	2.3	2.6	2.2	2.2	8.7	70	36	7.5	5.0
7	7.0	7.0	3.2	2.3	2.6	2.3	2.2	8.7	64	34	7.1	5.1
8	6.7	6.9	3.2	2.2	2.5	2.4	2.2	7.8	63	32	6.9	5.3
9	6.4	6.9	3.1	2.1	2.5	2.4	2.3	7.5	103	30	6.7	6.2
10	6.2	6.8	3.1	2.0	2.5	2.3	3.1	7.1	175	28	6.5	6.6
11	6.3	6.3	3.1	1.8	2.5	2.3	6.0	6.9	201	26	6.2	6.9
12	e6.0	5.7	3.0	1.7	2.5	2.2	11	7.0	169	24	6.2	7.8
13	e5.8	5.5	3.1	1.8	2.5	2.2	16	7.6	163	22	e5.9	8.0
14	e6.0	5.3	3.1	1.8	2.5	2.2	25	e9.0	153	20	e5.8	7.7
15	e5.8	5.1	3.1	1.9	2.5	2.2	e30	e13	138	19	5.6	7.8
16	e5.8	4.8	3.0	1.9	2.4	2.2	e40	e20	130	18	5.3	7.5
17	e5.6	4.7	3.0	1.9	2.4	2.2	e30	e25	123	17	7.3	8.0
18	e5.8	4.5	2.9	1.9	2.5	2.3	e15	27	115	16	10	7.6
19	e6.2	4.3	2.8	2.0	2.5	2.4	10	30	109	15	7.7	7.5
20	e5.6	4.3	2.7	2.0	2.4	2.6	8.0	e35	94	15	6.9	7.3
21	e5.0	4.3	2.8	2.1	2.3	2.5	7.8	e30	80	14	6.4	7.1
22	e4.8	4.2	2.7	2.2	2.4	2.4	8.9	33	64	13	6.1	6.9
23	e4.5	e4.2	2.7	2.3	2.4	2.4	8.5	69	54	12	5.9	6.7
24	e4.6	e4.2	2.5	2.3	2.4	2.3	e9.0	166	55	12	5.8	6.5
25	e4.8	4.2	2.5	2.3	2.3	2.2	9.9	324	52	12	5.6	6.4
26	e4.8	4.0	2.4	2.2	2.2	2.2	e13	405	55	12	5.4	6.2
27	e5.0	4.0	2.4	2.4	2.2	2.3	12	442	68	11	5.4	6.1
28	e5.0	3.9	2.5	2.3	2.1	2.4	10	529	80	11	5.3	5.9
29	e4.5	3.8	2.6	2.4	---	2.4	10	645	79	10	5.5	5.8
30	e4.2	3.6	2.5	2.3	---	2.4	11	546	70	9.9	5.7	5.8
31	e4.6	---	2.5	2.4	---	2.3	---	590	---	9.4	6.0	---
TOTAL	174.1	153.5	91.7	66.9	68.2	70.7	314.4	4,048.9	3,502	745.3	206.7	193.0
MEAN	5.62	5.12	2.96	2.16	2.44	2.28	10.5	131	117	24.0	6.67	6.43
MAX	7.0	7.0	3.6	2.5	2.6	2.6	40	645	436	68	10	8.0
MIN	4.2	3.6	2.4	1.7	2.1	2.1	2.2	6.9	52	9.4	5.3	4.7
AC-FT	345	304	182	133	135	140	624	8,030	6,950	1,480	410	383

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1957 - 2003, BY WATER YEAR (WY)

MEAN	8.36	5.76	3.77	2.69	2.24	2.14	5.70	104	200	46.8	12.8	9.58
MAX	17.6	11.2	7.18	4.50	3.68	3.76	28.4	289	353	188	45.6	44.9
(WY)	(1962)	(1962)	(1995)	(1995)	(1998)	(1999)	(1987)	(1958)	(1968)	(1975)	(1968)	(1968)
MIN	3.10	2.91	1.95	1.55	1.09	1.14	1.23	15.2	48.9	11.5	3.66	2.77
(WY)	(1989)	(1976)	(1970)	(1980)	(1980)	(1961)	(1970)	(1975)	(1994)	(2001)	(2001)	(1988)

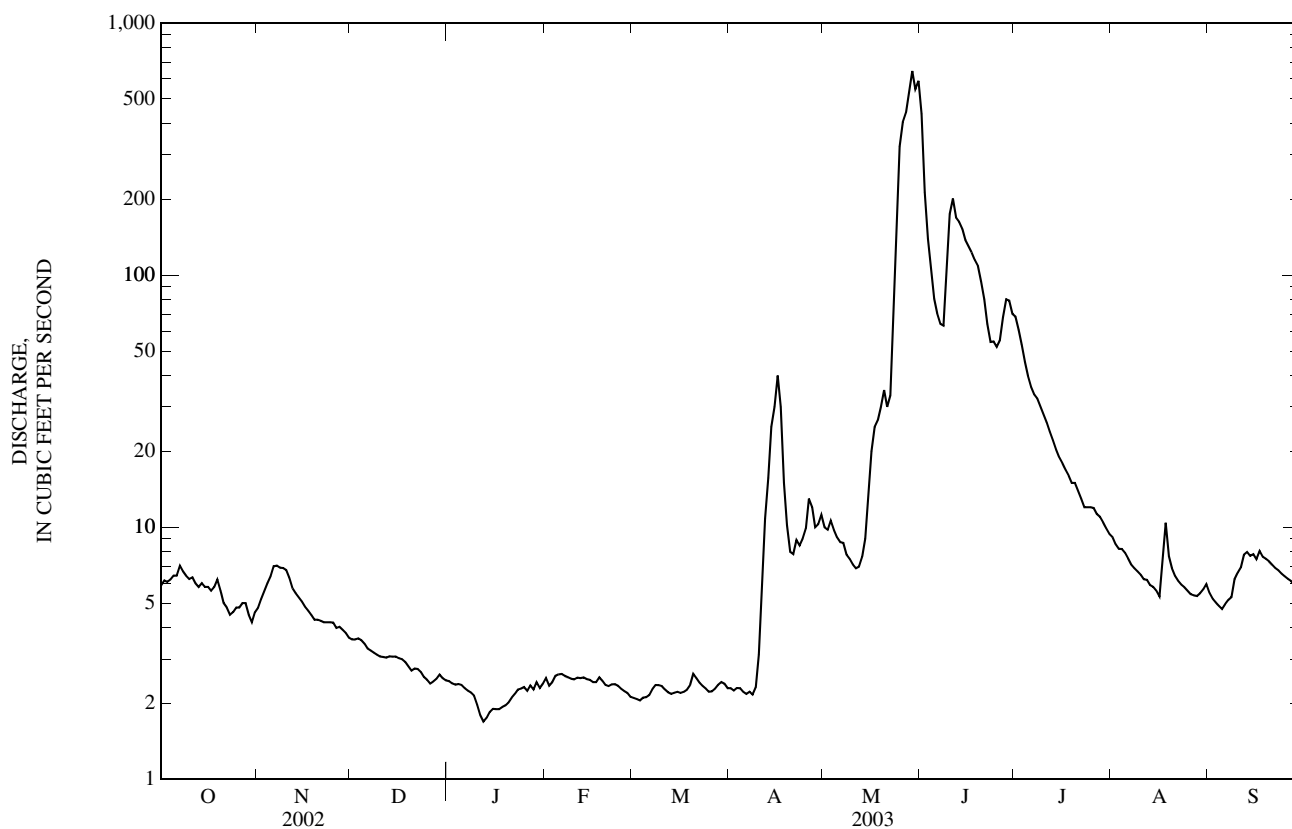
06278300 SHELL CREEK ABOVE SHELL RESERVOIR, WY—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1957 - 2003	
ANNUAL TOTAL	6,655.0		9,635.4		--	
ANNUAL MEAN	18.2		26.4		33.7	
HIGHEST ANNUAL MEAN	--		--		50.2	
LOWEST ANNUAL MEAN	--		--		17.9	
HIGHEST DAILY MEAN	650	May 31	645	May 29	1,010	Jun 15, 1963
LOWEST DAILY MEAN	1.1	Mar 27	1.7	Jan 12	0.60	Mar 7, 1967
ANNUAL SEVEN-DAY MINIMUM	1.2	Mar 21	1.8	Jan 11	0.90	Jan 27, 1980
MAXIMUM PEAK FLOW	--		1,110	May 29	1,870 ^a	Jun 15, 1963
MAXIMUM PEAK STAGE	--		6.77	May 29	7.84 ^b	Jun 15, 1963
ANNUAL RUNOFF (AC-FT)	13,200		19,110		24,400	
10 PERCENT EXCEEDS	40		62		94	
50 PERCENT EXCEEDS	4.2		5.8		5.6	
90 PERCENT EXCEEDS	1.4		2.2		1.9	

a From rating curve extended above 725 ft³/s on basis of velocity-area study.

b From floodmarks.

e Estimated.



06278500 SHELL CREEK NEAR SHELL, WY

LOCATION.--Lat 44° 33'54", long 107° 42'44", in SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec.17, T.53 N., R.90 W., Big Horn County, Hydrologic Unit 10080010, on right bank 0.9 mi upstream from White Creek and 5.0 mi northeast of Shell.

DRAINAGE AREA.--145 mi².

PERIOD OF RECORD.--October 1940 to current year (no winter records since 1971). Prior to December 1940, monthly discharge only, published in WSP 1309.

REVISED RECORDS.--WSP 1239: 1941, 1945(M), WSP 1709: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 4,370.05 ft above NGVD of 1929.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Some regulation by two small reservoirs, capacity, 3,650 acre-ft. Diversions upstream from station for irrigation of about 80 acres downstream from station. Results of discharge measurements, in cubic feet per second, made during the periods when station was not in operation, is given below:

Oct. 4 . . . 46.0

COOPERATION.--Station operated and record provided by the Wyoming State Engineer's Office; record reviewed by U.S. Geological Survey.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	28	49	987	168	97	87
2	---	---	---	---	---	---	28	46	612	159	95	89
3	---	---	---	---	---	---	28	43	425	146	94	88
4	---	---	---	---	---	---	25	45	355	137	94	86
5	---	---	---	---	---	---	24	42	306	129	94	84
6	---	---	---	---	---	---	26	39	281	121	95	84
7	---	---	---	---	---	---	25	37	268	115	94	84
8	---	---	---	---	---	---	25	72	250	110	94	85
9	---	---	---	---	---	---	26	87	258	105	93	86
10	---	---	---	---	---	---	29	86	309	102	88	85
11	---	---	---	---	---	---	32	83	384	97	89	85
12	---	---	---	---	---	---	35	83	352	94	89	86
13	---	---	---	---	---	---	40	89	330	90	89	85
14	---	---	---	---	---	---	48	91	324	86	88	80
15	---	---	---	---	---	---	54	104	305	109	87	78
16	---	---	---	---	---	---	57	120	280	103	86	65
17	---	---	---	---	---	---	57	149	277	98	90	59
18	---	---	---	---	---	---	56	145	256	96	104	59
19	---	---	---	---	---	25	52	130	246	94	94	58
20	---	---	---	---	---	25	51	117	228	94	93	58
21	---	---	---	---	---	26	50	115	213	91	92	56
22	---	---	---	---	---	26	48	131	194	90	92	55
23	---	---	---	---	---	27	45	208	181	95	90	54
24	---	---	---	---	---	26	50	312	187	97	91	53
25	---	---	---	---	---	26	56	424	180	97	91	53
26	---	---	---	---	---	26	70	521	152	97	90	52
27	---	---	---	---	---	26	61	e868	178	99	90	52
28	---	---	---	---	---	25	54	e983	183	101	90	52
29	---	---	---	---	---	24	49	1,050	189	97	91	52
30	---	---	---	---	---	26	54	1,120	175	98	92	52
31	---	---	---	---	---	26	---	1,020	---	97	91	---
TOTAL	---	---	---	---	---	---	1,283	8,409	8,865	3,312	2,847	2,102
MEAN	---	---	---	---	---	---	42.8	271	296	107	91.8	70.1
MAX	---	---	---	---	---	---	70	1,120	987	168	104	89
MIN	---	---	---	---	---	---	24	37	152	86	86	52
AC-FT	---	---	---	---	---	---	2,540	16,680	17,580	6,570	5,650	4,170

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 2003, BY WATER YEAR (WY)*

MEAN	57.0	47.2	41.5	36.9	35.2	35.1	50.2	272	494	167	99.0	77.5
MAX	95.2	76.4	60.4	48.7	44.6	48.0	138	553	990	473	158	134
(WY)	(1942)	(1969)	(1969)	(1948)	(1947)	(1946)	(1946)	(1988)	(1968)	(1975)	(1979)	(1968)
MIN	35.3	31.5	30.0	28.3	26.9	25.9	29.0	80.4	116	69.2	57.7	36.0
(WY)	(1955)	(1955)	(1941)	(1967)	(1961)	(1961)	(1961)	(1995)	(2001)	(1961)	(1966)	(1954)

06278500 SHELL CREEK NEAR SHELL, WY—Continued

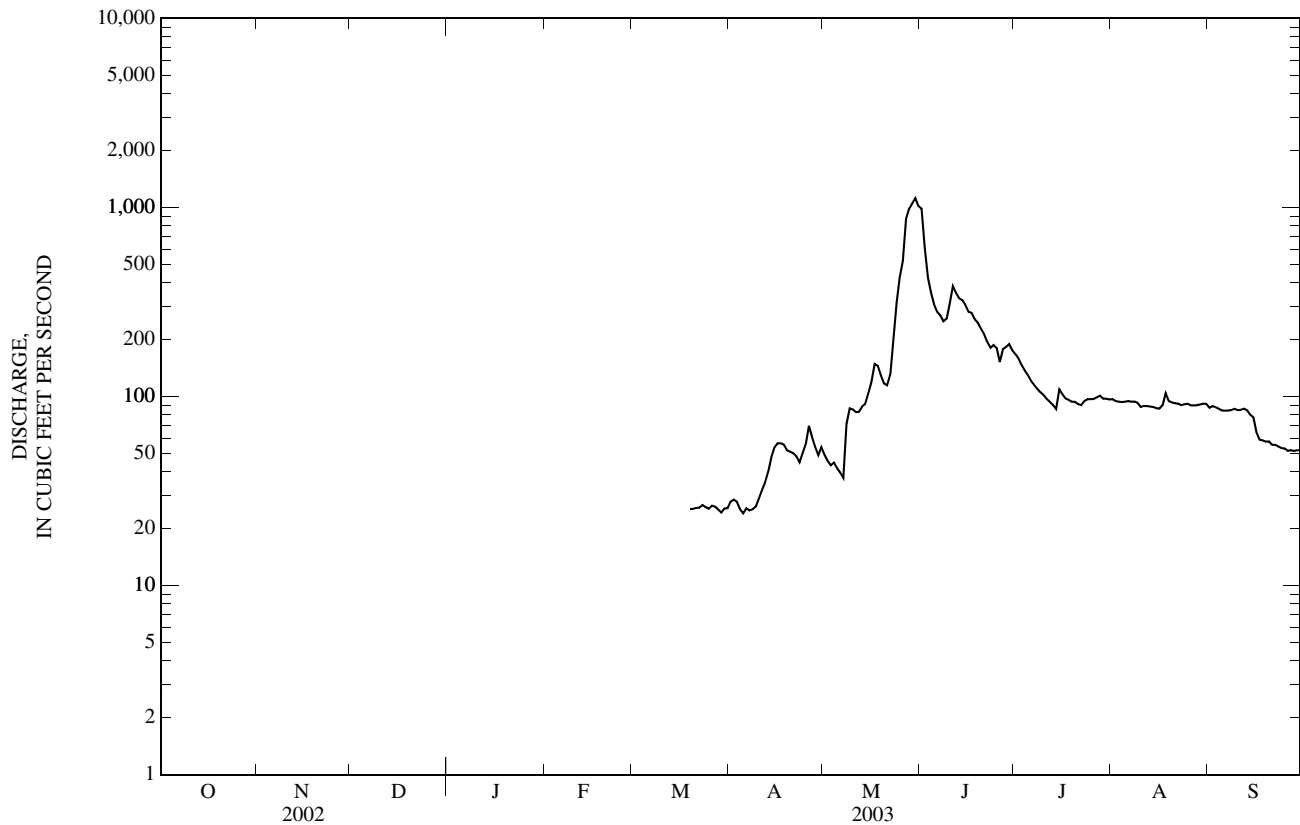
SUMMARY STATISTICS

FOR 2003 WATER YEAR*

WATER YEARS 1941 - 2003*

ANNUAL MEAN	--		118.6	
HIGHEST ANNUAL MEAN	--		160	1968
LOWEST ANNUAL MEAN	--		77.3	1966
HIGHEST DAILY MEAN	1,120	May 30	1,980	Jun 4, 1968
LOWEST DAILY MEAN	24	Mar 29, Apr 5	13	Apr 10, 1989
MAXIMUM PEAK FLOW	1,530	May 30	3,020 ^a	Jun 24, 1945
MAXIMUM PEAK STAGE	5.65	May 30	7.49	Jun 24, 1945
ANNUAL RUNOFF (AC-FT)	--		85,900	

* For period of operation.

^a From rating curve extended above 1,600 ft³/s.^e Estimated.

06279500 BIGHORN RIVER AT KANE, WY

LOCATION.--Lat 44° 45'31", long 108° 10'51", in NW $\frac{1}{4}$ NE $\frac{1}{4}$ SW $\frac{1}{4}$ sec.9, T.55 N., R.94 W., Big Horn County, 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 mi². Area at sites used prior to May 17, 1956, 15,846 mi².

WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WSP 1309: 1929(M). WSP 1509: 1929. WSP 1709: 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 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.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1923, 14.8 ft, September 30, 1923, site and datum in use April 1932 to May 1956.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	570	e700	e700	e720	743	745	e1,000	1,310	4,980	1,400	556	910
2	608	e700	e660	719	783	808	1,010	2,000	4,520	1,220	556	888
3	657	e700	e740	703	768	782	862	1,050	3,160	1,160	515	820
4	739	e710	e700	704	750	825	758	775	2,380	1,100	536	765
5	740	e710	e720	696	e720	753	721	725	1,970	1,060	514	694
6	703	e720	e740	722	e650	698	690	733	1,780	1,030	467	693
7	693	e720	e700	710	e600	710	675	747	1,720	966	426	724
8	689	719	e640	698	e560	753	663	733	1,670	884	402	721
9	678	723	e620	714	600	777	656	1,350	1,560	788	435	728
10	670	718	e580	691	635	733	615	1,490	1,570	723	433	812
11	671	715	e560	629	632	758	551	1,260	1,760	699	463	1,140
12	674	705	e550	563	690	1,040	563	1,290	1,940	678	461	1,290
13	687	699	e550	538	671	e2,000	579	1,020	1,850	692	424	1,020
14	699	704	e600	619	673	2,860	601	870	1,780	682	432	1,040
15	703	700	e700	684	699	2,590	605	779	1,680	641	430	983
16	704	692	e810	671	685	2,280	639	686	1,680	583	427	974
17	706	687	e830	629	711	1,640	764	667	1,680	587	417	951
18	705	688	e740	667	686	1,270	771	758	1,810	545	446	902
19	705	685	e720	595	686	1,120	732	900	1,780	580	555	884
20	706	689	e660	624	676	967	704	916	1,560	626	798	890
21	707	686	e580	681	665	866	704	860	1,470	687	641	857
22	710	e700	e560	749	e660	826	661	748	1,390	700	612	769
23	719	e710	e600	666	e600	797	605	688	1,290	582	593	748
24	731	e730	e640	621	e560	765	717	905	1,270	491	592	714
25	731	731	e580	655	e500	737	686	1,630	1,850	506	579	703
26	726	e700	e520	690	e460	725	642	2,600	2,120	476	560	688
27	711	e600	e480	677	e510	755	663	e3,500	1,640	599	556	672
28	700	e660	e490	699	e650	820	706	e4,000	1,460	634	592	656
29	707	e700	e560	708	---	862	760	4,560	1,490	705	570	656
30	706	e740	e730	701	---	860	701	5,030	1,830	634	591	674
31	e680	---	e760	717	---	e900	---	5,080	---	582	735	---
TOTAL	21,535	21,041	20,020	20,860	18,223	33,022	21,004	49,660	58,640	23,240	16,314	24,966
MEAN	695	701	646	673	651	1,065	700	1,602	1,955	750	526	832
MAX	740	740	830	749	783	2,860	1,010	5,080	4,980	1,400	798	1,290
MIN	570	600	480	538	460	698	551	667	1,270	476	402	656
AC-FT	42,710	41,730	39,710	41,380	36,150	65,500	41,660	98,500	116,300	46,100	32,360	49,520

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1930 - 2003, BY WATER YEAR (WY)

MEAN	1,789	1,660	1,447	1,358	1,525	1,812	1,793	3,150	5,750	3,112	1,432	1,515
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	701	627	580	550	740	684	744	1,032	501	305	386
(WY)	(1936)	(2003)	(1961)	(1937)	(1933)	(1989)	(2002)	(2002)	(1934)	(1961)	(1940)	(1935)

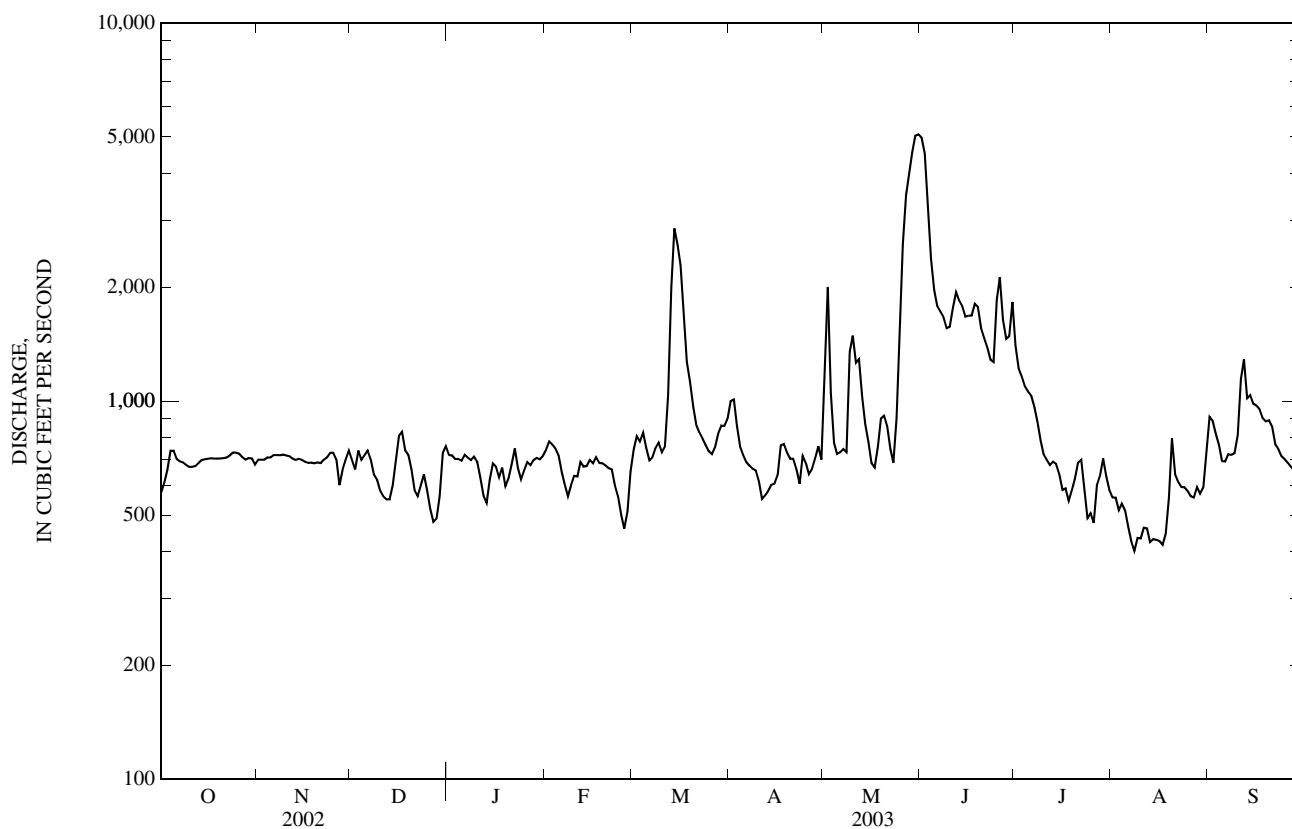
06279500 BIGHORN RIVER AT KANE, WY—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1930 - 2003*	
ANNUAL TOTAL	280,334		328,525		--	
ANNUAL MEAN	768		900		2,195	
HIGHEST ANNUAL MEAN	--		--		3,524	
LOWEST ANNUAL MEAN	--		--		781	
HIGHEST DAILY MEAN	5,640	Jun 2	5,080	May 31	24,800	Jun 15, 1935
LOWEST DAILY MEAN	368	Aug 2	402	Aug 8	179	Jul 22, 1934
ANNUAL SEVEN-DAY MINIMUM	404	Aug 8	434	Aug 12	184	Jul 18, 1934
MAXIMUM PEAK FLOW	--		5,920		25,200 ^a	
MAXIMUM PEAK STAGE	--		4.51		11.10 ^a	
ANNUAL RUNOFF (AC-FT)	556,000		651,600		1,590,000	
10 PERCENT EXCEEDS	967		1,560		3,940	
50 PERCENT EXCEEDS	700		705		1,620	
90 PERCENT EXCEEDS	465		560		760	

* August 1928 to September 1929 not included in computations, monthly only for selected months.

a Site and datum then in use.

e Estimated.



06279500 BIGHORN RIVER AT KANE, WY—Continued

WATER-QUALITY RECORDS

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

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

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 unfltrd 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	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)	Orthophosphate, water, fltrd, mg/L as P (00671)
OCT 30...	1300	698	674	14.3	114	8.7	1,180	0.5	1.0	<0.04	0.34	<0.008	<0.02
FEB 03...	1630	816	667	12.3	97	8.2	1,110	-7.0	0.0	0.11	0.57	E.006	E.01
MAY 30...	1320	4,960	667	7.8	91	7.8	321	29.5	16.0	E.03	0.21	E.004	<0.02
AUG 05...	1610	497	671	14.3	200	8.7	1,060	36.0	25.5	<0.04	0.29	0.008	<0.02
Date		E coli, modif. m-TEC, water, col/100 mL (90902)		E coli, m-TEC MF, water, col/100 mL (31633)		Fecal coliform, M-FC 0.7u MF col/100 mL (31625)		Suspended sediment concentration mg/L (80154)		Suspended sediment load, tons/d (80155)			
OCT 30...		--		E10k		E13k		70		132			
FEB 03...		--		180		160		334		736			
MAY 30...		2,000		--		E2500k		1,720		23,000			
AUG 05...		E13k		--		E29k		72		97			

E -- Estimated value

k -- Counts outside acceptable range

06279795 CROW CREEK AT MOUTH, AT PAHASKA, WY

LOCATION.--Lat 44°30'48", long 109°58'22", Park County, Hydrologic Unit 10080012, Shoshone National Forest, on right bank 0.3 mi upstream from mouth and 0.8 mi northwest of Pahaska.

DRAINAGE AREA.--19.1 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1989 to September 1993, March 2001 to current year (no winter records).

GAGE.--Water-stage recorder. Elevation of gage is 6,760 ft above NGVD of 1929, from topographic map. U.S. Geological Survey data collection platform with satellite telemetry at station.

REMARKS.--Records poor. No diversion upstream from station.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.9	---	---	---	---	---	5.8	16	244	74	15	11
2	8.9	---	---	---	---	---	6.0	15	203	76	15	10
3	9.0	---	---	---	---	---	5.9	15	160	67	14	11
4	9.0	---	---	---	---	---	5.9	15	131	62	14	10
5	10	---	---	---	---	---	e5.7	14	104	56	14	10
6	9.3	---	---	---	---	---	e5.7	14	105	54	14	11
7	9.6	---	---	---	---	---	e5.6	13	80	54	14	10
8	9.6	---	---	---	---	---	e5.6	13	81	52	13	11
9	9.4	---	---	---	---	---	6.4	13	99	48	13	10
10	9.3	---	---	---	---	---	7.3	12	121	46	13	11
11	9.8	---	---	---	---	---	8.2	12	133	45	13	11
12	9.1	---	---	---	---	e4.7	9.8	12	144	42	13	11
13	9.1	---	---	---	---	e4.8	14	14	129	39	13	10
14	9.0	---	---	---	---	e5.0	21	17	129	36	13	10
15	---	---	---	---	---	e5.1	22	29	152	33	13	10
16	---	---	---	---	---	e4.8	18	49	147	32	13	10
17	---	---	---	---	---	e4.7	17	57	146	30	12	9.7
18	---	---	---	---	---	e4.6	16	54	149	28	12	9.7
19	---	---	---	---	---	e4.5	15	41	148	27	12	9.6
20	---	---	---	---	---	e4.6	14	45	143	25	12	9.7
21	---	---	---	---	---	e4.8	17	55	142	24	12	9.6
22	---	---	---	---	---	e5.0	20	89	117	23	12	9.5
23	---	---	---	---	---	e4.9	20	128	104	22	12	9.5
24	---	---	---	---	---	e4.8	20	131	91	22	12	9.2
25	---	---	---	---	---	e4.8	23	180	89	20	12	9.2
26	---	---	---	---	---	e4.9	24	197	79	19	12	9.4
27	---	---	---	---	---	e4.9	21	221	76	18	11	9.2
28	---	---	---	---	---	e4.8	19	238	78	18	11	9.0
29	---	---	---	---	---	e4.7	17	294	79	17	11	8.7
30	---	---	---	---	---	e4.9	16	278	85	16	11	8.7
31	---	---	---	---	---	e5.3	---	259	---	16	11	---
TOTAL	---	---	---	---	---	---	411.9	2,540	3,688	1,141	392	297.7
MEAN	---	---	---	---	---	---	13.7	81.9	123	36.8	12.6	9.92
MAX	---	---	---	---	---	---	24	294	244	76	15	11
MIN	---	---	---	---	---	---	5.6	12	76	16	11	8.7
AC-FT	---	---	---	---	---	---	817	5,040	7,320	2,260	778	590

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 2003, BY WATER YEAR (WY)

MEAN	---	---	---	---	---	---	12.8	64.7	117	50.1	16.9	11.2
MAX	---	---	---	---	---	---	18.5	107	155	80.9	30.7	16.3
(WY)	---	---	---	---	---	---	(1990)	(2001)	(1991)	(1993)	(1993)	(1993)
MIN	---	---	---	---	---	---	6.49	36.0	59.8	22.5	9.57	7.83
(WY)	---	---	---	---	---	---	(1991)	(1990)	(1992)	(2001)	(2001)	(2001)

06279795 CROW CREEK AT MOUTH, AT PAHASKA, WY—Continued

SUMMARY STATISTICS

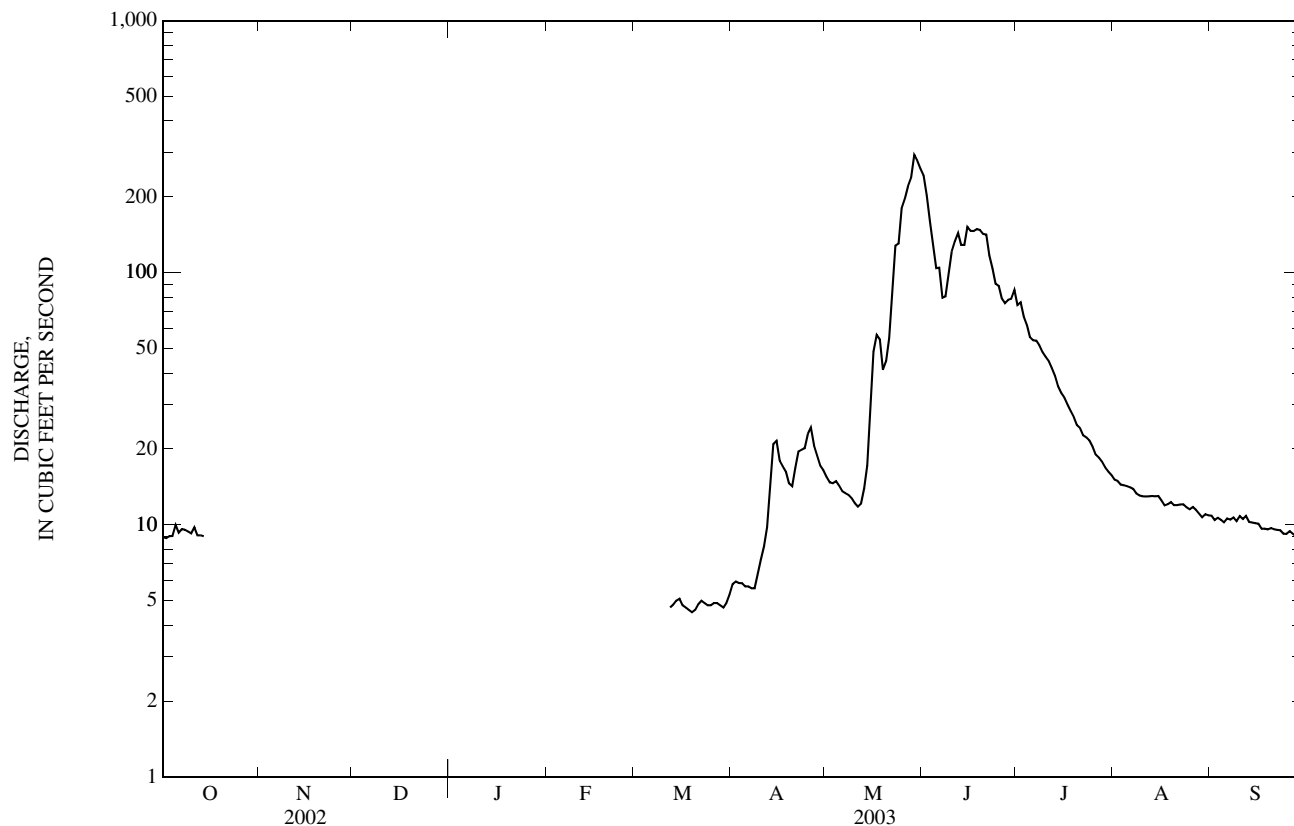
FOR 2003 WATER YEAR*

WATER YEARS 1989- 2003*

HIGHEST DAILY MEAN	294	May 29	294	May 29, 2003
LOWEST DAILY MEAN	4.5 ^e	Mar 19	3.7	Mar 20-22, 1993
MAXIMUM PEAK FLOW	355	May 29	355	May 29, 2003
MAXIMUM PEAK STAGE	2.62	May 29	2.74	June 12, 1991

* For period of operation.

e Estimated.



06279795 CROW CREEK AT MOUTH, AT PAHASKA, WY—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--March 1989 to September 1993, March 2001 to current year (no winter records).

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: March 1989 to September 1993, March 2001 to current year (no winter records).

PH: June 1989 to September 1993, March 2001 to current year (no winter records).

WATER TEMPERATURE: July 1989 to September 1993, March 2001 to current year (no winter records).

DISSOLVED OXYGEN: March 2001 to current year (no winter records).

SUSPENDED-SEDIMENT DISCHARGE: March 1989 to September 1993, March 2001 to current year (no winter records).

INSTRUMENTATION: Water-quality monitor and sediment pumping sampler.

REMARKS.--Specific conductance records excellent October 5-14, March 13 to May 3, June 13-15, June 24 to July 22, August 19 to September 1; good October 1-4, June 16-22, September 2-8, 22-30; and fair June 23, September 9-21. PH records excellent October 1-14, March 13-22, April 3 to May 29, June 13 to September 16; good March 23-30; and fair March 31 to April 2. Water temperature records good. Dissolved oxygen records excellent October 1-7, April 3-8, April 26 to May 13, May 28, 29, June 13-16, 24-28, July 8-11, 24, 25, August 18-26, September 8, 19-30; good April 9, 10, May 14, 15, June 16-19, June 29 to July 3, July 12-14, 26, August 27 to September 1; fair April 11-15, May 16-18, June 20-23, July 4-7, 15-18, 27-29, September 2-7; and poor April 16-24, July 19-23, July 30 to August 18. Water-temperature records represent water temperature at sensor within 0.2° C.

EXTREMES FOR PERIOD OF RECORD.--

SPECIFIC CONDUCTANCE: Maximum recorded, 112 microsiemens, May 5, 1990; minimum recorded, 25 microsiemens, September 20, 2002.

PH: Maximum recorded, 9.2, July 17, 1991; minimum recorded, 6.5, July 22, 1992.

WATER TEMPERATURE: Maximum recorded, 14.9° C, August 8, 1990; minimum recorded, 0.0° C, on many days during March and April most years.

DISSOLVED OXYGEN: Maximum recorded 11.9 mg/L, June 13, 2001; minimum recorded, 6.0 mg/L, October 7, 2002.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 275 mg/L, May 31, 2002; minimum daily mean, 0.0 mg/L, September 27-30, 1989.

SEDIMENT LOADS: Maximum daily, 169 tons, May 31, 2002; minimum daily, 0 tons, September 27-30, 1989 and March 20 to April 25, June 26, 27, July 4-7, August 2-4, 6-11, July 14 to September 5, and September 8-30, 2001.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum recorded, 100 microsiemens, April 7; minimum recorded, 33 microsiemens, June 19.

PH: Maximum recorded, 8.5, March 13, 14; minimum recorded, 6.7, May 28, 29.

WATER TEMPERATURE: Maximum recorded, 14.5° C, August 15, minimum recorded, 0.1° C, April 28, 29, and May 5-8.

DISSOLVED OXYGEN: Maximum recorded, 12.7 mg/L, August 18; minimum recorded, 6.0 October 7.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 106 mg/L, May 29; minimum daily mean, 1 mg/L, many days.

SEDIMENT LOADS: Maximum daily, 86 tons, May 29; minimum daily, 0.01 tons, March 13-15, 18, 28, 29, and April 3, 4.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

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 unfltrd uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, unfltrd mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)
MAR													
13...	1000	E4.8	592	--	--	8.0	97	3.5	1.5	27	7.32	2.16	0.68
APR													
02...	1330	6.1	580	10.4	101	7.9	95	9.0	2.5	26	6.99	2.13	0.67
24...	1300	19	590	10.3	101	7.5	75	10.0	3.8	21	5.72	1.73	0.71
MAY													
08...	1400	13	589	10.6	102	8.0	78	3.5	3.1	23	6.24	1.86	0.60
19...	1400	40	602	10.0	99	7.5	67	7.0	5.0	21	5.57	1.66	0.72
27...	1400	243	601	9.2	99	7.4	48	24.0	8.0	18	5.02	1.40	0.74
JUN													
12...	1300	143	592	9.5	100	7.8	48	23.0	6.5	16	4.36	1.21	0.51
23...	1400	105	592	9.7	97	7.7	52	12.0	5.0	16	4.55	1.23	0.50
JUL													
07...	1300	60	593	9.2	102	7.8	58	28.0	8.8	18	4.95	1.34	0.52
23...	1500	24	602	8.1	99	7.8	69	28.0	13.5	21	5.67	1.62	0.63
AUG													
18...	1400	13	599	11.6	133	8.0	78	25.0	10.5	23	6.07	1.89	0.73
SEP													
17...	1300	9.6	594	10.1	99	8.0	77	7.5	4.0	26	7.11	2.09	0.67

06279795 CROW CREEK AT MOUTH, AT PAHASKA, WY—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Sodium adsorp- tion ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Alka- linity, wat flt fxd end lab, mg/L as CaCO3 (29801)	Chlor- ide, water, fltrd, mg/L (00940)	Fluor- ide, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, sum of consti- tuents mg/L (70301)	Residue water, fltrd, tons/ acre-ft (70303)	Residue water, fltrd, tons/d (70302)	Residue on evap. at 180degC wat flt mg/L (70300)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Ammonia + org-N, water, unfltrd mg/L as N (00625)
MAR 13...	0.8	10.1	47	0.68	0.16	28.0	3.8	82	0.11	--	78	<0.10	<0.10
APR 02...	0.8	9.58	48	0.87	0.15	27.4	3.8	80	0.10	1.25	76	E.07	E.07
24...	0.6	6.19	35	0.25	<0.17	22.3	3.1	62	0.09	3.33	65	E.08	0.15
MAY 08...	0.6	6.97	42	0.52	<0.17	22.5	3.0	67	0.09	2.30	65	E.07	E.07
19...	0.5	5.10	32	0.62	<0.2	21.4	2.7	58	0.09	6.77	63	E.10	0.30
27...	0.4	3.80	24	0.36	<0.2	20.1	1.8	48	0.05	24.1	37	E.08	0.17
JUN 12...	0.4	3.91	23	0.21	<0.2	19.3	1.5	45	0.07	19.6	51	E.08	E.10
23...	0.4	4.04	25	0.22	<0.2	19.7	1.7	47	0.07	15.3	54	E.05	<0.10
JUL 07...	0.5	4.73	27	0.20	<0.2	19.7	1.9	50	0.06	7.54	47	<0.10	<0.10
23...	0.6	6.24	33	0.59	<0.2	20.4	2.5	57	0.09	4.22	65	<0.10	<0.10
AUG 18...	0.7	7.26	39	0.46	<0.2	23.6	2.6	66	0.09	2.31	66	<0.10	E.09
SEP 17...	0.7	8.16	41	0.45	<0.2	26.4	3.2	73	0.11	2.09	81	<0.10	E.07
Date	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)	Ortho- phos- phate, water, fltrd, mg/L as P (00671)	Phos- phorus, water, fltrd, mg/L (00666)	Phos- phorus, water, unfltrd mg/L (00665)	Alum- inum, water, fltrd, ug/L (01106)	Anti- mony, water, fltrd, ug/L (01095)	Arsenic water, fltrd, ug/L (01000)	Barium, water, fltrd, ug/L (01005)	Beryll- ium, water, fltrd, ug/L (01010)	Boron, water, fltrd, ug/L (01020)	Cadmium water, fltrd, ug/L (01025)
MAR 13...	<0.04	0.09	<0.008	0.06	0.059	0.060	2	<0.30	0.9	4	<0.06	30	<0.04
APR 02...	<0.04	E.04	<0.008	0.06	0.056	0.062	--	--	--	--	--	--	--
24...	<0.04	0.23	<0.008	0.04	0.041	0.050	6	<0.30	0.7	4	<0.06	19	<0.04
MAY 08...	<0.04	0.06	<0.008	0.03	0.024	0.034	--	--	--	--	--	--	--
19...	<0.04	0.33	<0.008	0.03	0.034	0.053	10	<0.30	0.5	5	<0.06	10	<0.04
27...	<0.04	0.26	<0.008	0.03	0.038	0.081	--	--	--	--	--	--	--
JUN 12...	<0.04	0.06	<0.008	0.03	0.030	0.049	11	<0.30	0.4	4	<0.06	E5	<0.04
23...	<0.04	<0.06	<0.008	0.03	0.032	0.046	--	--	--	--	--	--	--
JUL 07...	<0.04	<0.06	<0.008	0.03	0.030	0.039	5	<0.30	0.4	4	<0.06	E6	<0.04
23...	<0.04	<0.06	<0.008	0.04	0.040	0.043	--	--	--	--	--	--	--
AUG 18...	<0.04	<0.06	<0.008	0.04	0.045	0.047	3	<0.30	0.6	4	<0.06	14	<0.04
SEP 17...	<0.04	<0.06	<0.008	0.04	0.048	0.050	4	<0.30	0.7	4	<0.06	18	<0.04
Date	Chrom- ium, water, fltrd, ug/L (01030)	Cobalt water, fltrd, ug/L (01035)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Lithium water, fltrd, ug/L (01130)	Mangan- ese, water, fltrd, ug/L (01056)	Molyb- denum, water, fltrd, ug/L (01060)	Nickel, water, fltrd, ug/L (01065)	Selen- ium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Stront- ium, water, fltrd, ug/L (01080)	Thall- ium, water, fltrd, ug/L (01057)
MAR 13...	<0.8	0.025	0.3	<10	<0.08	0.6	0.2	1.2	0.49	<0.5	E.1	46.5	<0.04
APR 02...	--	--	--	<10	--	--	E.8	--	--	--	--	--	--
24...	<0.8	0.033	0.7	11	<0.08	E.5	0.3	0.6	0.42	<0.5	<0.2	45.4	E.02
MAY 08...	--	--	--	<10	--	--	E.8	--	--	--	--	--	--
19...	<0.8	0.038	0.8	E10	E.05	E.5	0.6	0.4	0.43	<0.5	<0.2	46.4	<0.04
27...	--	--	--	16	--	--	0.9	--	--	--	--	--	--
JUN 12...	E.4	0.029	0.6	10	<0.08	<0.5	0.6	E.2	0.26	<0.5	<0.2	31.9	<0.04
23...	--	--	--	E5	--	--	0.4	--	--	--	--	--	--
JUL 07...	<0.8	0.019	0.4	E4	<0.08	E.3	0.4	0.3	0.25	<0.5	<0.2	36.2	<0.04
23...	--	--	--	E5	--	--	0.6	--	--	--	--	--	--
AUG 18...	<0.8	0.026	0.3	E4	<0.08	0.5	0.4	0.8	0.32	<0.5	<0.2	43.4	<0.04
SEP 17...	E.6	0.027	0.3	<8	<0.08	0.6	0.4	1.1	0.19	<0.5	<0.2	46.3	<0.04

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

E -- Estimated value
M-- Presence verified, not quantified

DAY	MAX	MIN	MEAN		MAX	MIN	MEAN		MAX	MIN	MEAN		MAX	MIN	MEAN
	OCTOBER				NOVEMBER				DECEMBER				JANUARY		
1	66	64	65		---	---	---		---	---	---		---	---	---
2	69	66	67		---	---	---		---	---	---		---	---	---
3	72	69	71		---	---	---		---	---	---		---	---	---
4	73	72	72		---	---	---		---	---	---		---	---	---
5	73	70	71		---	---	---		---	---	---		---	---	---
6	76	73	75		---	---	---		---	---	---		---	---	---
7	77	73	77		---	---	---		---	---	---		---	---	---
8	78	72	75		---	---	---		---	---	---		---	---	---
9	80	78	79		---	---	---		---	---	---		---	---	---
10	81	80	80		---	---	---		---	---	---		---	---	---
11	80	79	79		---	---	---		---	---	---		---	---	---
12	83	79	82		---	---	---		---	---	---		---	---	---
13	84	82	83		---	---	---		---	---	---		---	---	---
14	83	82	83		---	---	---		---	---	---		---	---	---
15	---	---	---		---	---	---		---	---	---		---	---	---
16	---	---	---		---	---	---		---	---	---		---	---	---
17	---	---	---		---	---	---		---	---	---		---	---	---
18	---	---	---		---	---	---		---	---	---		---	---	---
19	---	---	---		---	---	---		---	---	---		---	---	---
20	---	---	---		---	---	---		---	---	---		---	---	---
21	---	---	---		---	---	---		---	---	---		---	---	---
22	---	---	---		---	---	---		---	---	---		---	---	---
23	---	---	---		---	---	---		---	---	---		---	---	---
24	---	---	---		---	---	---		---	---	---		---	---	---
25	---	---	---		---	---	---		---	---	---		---	---	---
26	---	---	---		---	---	---		---	---	---		---	---	---
27	---	---	---		---	---	---		---	---	---		---	---	---
28	---	---	---		---	---	---		---	---	---		---	---	---
29	---	---	---		---	---	---		---	---	---		---	---	---
30	---	---	---		---	---	---		---	---	---		---	---	---
31	---	---	---		---	---	---		---	---	---		---	---	---
MONTH	84	64	76		---	---	---		---	---	---		---	---	---

06279795 CROW CREEK AT MOUTH, AT PAHASKA, WY—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS—Continued
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	---	---	---	---	---	---	94	92	94	78	75	76
2	---	---	---	---	---	---	94	92	93	79	76	77
3	---	---	---	---	---	---	96	94	96	79	75	77
4	---	---	---	---	---	---	97	95	96	79	76	77
5	---	---	---	---	---	---	96	92	94	80	77	79
6	---	---	---	---	---	---	98	96	97	81	78	80
7	---	---	---	---	---	---	100	95	97	81	78	80
8	---	---	---	---	---	---	99	95	96	82	78	80
9	---	---	---	---	---	---	97	90	94	82	79	80
10	---	---	---	---	---	---	94	87	91	83	79	81
11	---	---	---	---	---	---	94	86	90	83	79	81
12	---	---	---	---	---	---	91	84	88	83	79	80
13	---	---	---	97	93	96	86	75	81	80	78	79
14	---	---	---	96	93	95	76	68	72	80	69	77
15	---	---	---	97	95	96	74	68	71	70	58	67
16	---	---	---	97	95	96	77	74	76	64	58	61
17	---	---	---	98	97	97	77	76	76	63	57	61
18	---	---	---	98	97	98	77	75	76	69	58	64
19	---	---	---	98	97	98	78	76	77	70	68	69
20	---	---	---	98	97	97	78	77	77	69	66	68
21	---	---	---	98	97	97	77	70	75	67	64	66
22	---	---	---	97	95	96	72	70	71	64	49	60
23	---	---	---	95	93	94	74	72	73	59	45	54
24	---	---	---	96	94	96	75	71	73	56	44	51
25	---	---	---	97	95	96	73	68	72	53	43	49
26	---	---	---	96	93	95	72	68	69	51	46	49
27	---	---	---	95	93	94	74	72	73	52	41	47
28	---	---	---	95	87	91	75	72	74	48	39	45
29	---	---	---	96	92	94	76	74	75	44	38	42
30	---	---	---	96	95	95	76	75	76	---	---	---
31	---	---	---	96	92	94	---	---	---	---	---	---
MONTH	---	---	---	98	87	96	100	68	82	83	38	67
JUNE			JULY			AUGUST			SEPTEMBER			
1	---	---	---	52	51	52	---	---	---	80	75	78
2	---	---	---	52	51	52	---	---	---	81	77	79
3	---	---	---	53	52	53	---	---	---	81	77	79
4	---	---	---	54	53	54	---	---	---	81	75	79
5	---	---	---	55	54	55	---	---	---	81	77	79
6	---	---	---	56	55	56	---	---	---	81	76	79
7	---	---	---	57	55	56	---	---	---	83	79	81
8	---	---	---	57	56	57	---	---	---	84	79	83
9	---	---	---	59	57	58	---	---	---	---	---	---
10	---	---	---	60	58	59	---	---	---	---	---	---
11	---	---	---	61	59	60	---	---	---	---	---	---
12	---	---	---	62	60	61	---	---	---	---	---	---
13	48	37	46	62	61	62	---	---	---	---	---	---
14	48	43	46	64	62	62	---	---	---	---	---	---
15	48	41	45	65	63	64	---	---	---	---	---	---
16	48	40	45	66	64	65	---	---	---	---	---	---
17	48	35	44	67	64	66	---	---	---	---	---	---
18	49	37	46	68	66	67	---	---	---	82	70	77
19	50	33	43	68	66	67	76	67	71	82	76	80
20	50	41	48	69	66	68	79	73	75	87	81	84
21	52	37	47	70	68	69	80	75	77	86	85	85
22	56	50	52	70	69	69	80	78	79	87	85	86
23	54	42	51	---	---	---	80	79	80	89	86	87
24	55	54	54	---	---	---	81	79	80	89	87	88
25	57	55	56	---	---	---	81	79	80	90	88	89
26	57	57	57	---	---	---	80	78	79	91	87	89
27	58	56	57	---	---	---	80	78	79	91	89	90
28	57	55	56	---	---	---	80	79	79	91	89	90
29	56	53	55	---	---	---	81	79	80	91	89	90
30	54	51	53	---	---	---	80	78	79	91	88	90
31	---	---	---	---	---	---	80	78	79	---	---	---
MONTH	58	33	50	70	51	61	81	67	78	91	70	84
YEAR	100	33	74									

PH, WATER, UNFILTERED, FIELD, STANDARD UNITS
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	8.1	8.0	---	---	---	---	---	---	---	---	---	---
2	8.1	8.0	---	---	---	---	---	---	---	---	---	---
3	8.2	8.0	---	---	---	---	---	---	---	---	---	---
4	8.2	8.0	---	---	---	---	---	---	---	---	---	---
5	8.1	8.0	---	---	---	---	---	---	---	---	---	---
6	8.2	8.0	---	---	---	---	---	---	---	---	---	---
7	8.1	8.0	---	---	---	---	---	---	---	---	---	---
8	8.1	8.0	---	---	---	---	---	---	---	---	---	---
9	8.1	8.0	---	---	---	---	---	---	---	---	---	---
10	8.2	8.0	---	---	---	---	---	---	---	---	---	---
11	8.2	8.0	---	---	---	---	---	---	---	---	---	---
12	8.1	8.0	---	---	---	---	---	---	---	---	---	---
13	8.1	8.0	---	---	---	---	---	---	---	---	8.5	8.2
14	8.1	8.0	---	---	---	---	---	---	---	---	8.5	8.3
15	---	---	---	---	---	---	---	---	---	---	8.3	8.3
16	---	---	---	---	---	---	---	---	---	---	8.3	8.3
17	---	---	---	---	---	---	---	---	---	---	8.4	8.3
18	---	---	---	---	---	---	---	---	---	---	8.4	8.3
19	---	---	---	---	---	---	---	---	---	---	8.3	8.2
20	---	---	---	---	---	---	---	---	---	---	8.3	8.3
21	---	---	---	---	---	---	---	---	---	---	8.3	8.3
22	---	---	---	---	---	---	---	---	---	---	8.3	8.1
23	---	---	---	---	---	---	---	---	---	---	8.2	8.1
24	---	---	---	---	---	---	---	---	---	---	8.2	8.2
25	---	---	---	---	---	---	---	---	---	---	8.2	8.2
26	---	---	---	---	---	---	---	---	---	---	8.2	8.1
27	---	---	---	---	---	---	---	---	---	---	8.1	8.1
28	---	---	---	---	---	---	---	---	---	---	8.1	8.1
29	---	---	---	---	---	---	---	---	---	---	8.1	8.1
30	---	---	---	---	---	---	---	---	---	---	8.1	8.0
31	---	---	---	---	---	---	---	---	---	---	8.0	8.0
MONTH	8.2	8.0	---	---	---	---	---	---	---	---	8.5	8.0
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	8.0	8.0	7.8	7.7	---	---	7.7	7.5	8.1	7.8	8.1	7.9
2	8.0	7.7	7.9	7.7	---	---	7.7	7.5	8.0	7.8	8.1	7.9
3	7.8	7.7	7.9	7.6	---	---	7.7	7.5	8.1	7.8	8.1	8.0
4	7.7	7.7	7.8	7.6	---	---	7.7	7.5	8.0	7.8	8.1	8.0
5	7.7	7.6	7.9	7.6	---	---	7.7	7.5	8.0	7.8	8.1	8.0
6	7.7	7.7	7.9	7.6	---	---	7.7	7.5	8.0	7.8	8.1	8.0
7	7.7	7.7	8.0	7.6	---	---	7.9	7.5	8.1	7.8	8.2	8.0
8	7.7	7.6	8.0	7.6	---	---	7.9	7.6	8.0	7.9	8.2	8.0
9	7.7	7.7	8.0	7.7	---	---	7.9	7.7	8.1	7.9	8.2	8.0
10	7.7	7.6	8.0	7.7	---	---	7.9	7.7	8.1	7.9	8.2	8.0
11	7.7	7.6	8.0	7.7	---	---	7.9	7.7	8.1	7.8	8.2	8.0
12	7.7	7.6	8.0	7.7	---	---	7.9	7.7	8.1	7.9	8.2	8.0
13	7.7	7.6	8.0	7.7	7.7	7.6	7.9	7.7	8.1	7.9	8.1	8.0
14	7.7	7.6	8.0	7.6	7.7	7.6	7.9	7.7	8.1	7.8	8.1	8.0
15	7.7	7.6	7.9	7.5	7.7	7.6	7.9	7.7	8.1	7.8	8.2	8.0
16	7.7	7.6	7.8	7.5	7.7	7.4	7.9	7.7	8.1	7.9	8.2	8.0
17	7.7	7.6	7.8	7.4	7.6	7.4	7.9	7.7	8.0	7.9	---	---
18	7.7	7.6	7.7	7.4	7.6	7.4	8.0	7.7	8.1	7.9	---	---
19	7.7	7.6	7.7	7.4	7.6	7.5	7.9	7.7	8.1	7.9	---	---
20	7.7	7.6	7.8	7.4	7.6	7.5	8.0	7.7	8.1	7.9	---	---
21	7.8	7.6	7.7	7.4	7.6	7.5	8.0	7.7	8.1	7.9	---	---
22	7.7	7.6	7.9	7.2	7.6	7.5	8.0	7.8	8.1	7.9	---	---
23	7.7	7.6	7.6	7.2	7.7	7.6	8.0	7.8	8.1	7.9	---	---
24	8.0	7.6	7.5	7.1	7.6	7.5	8.0	7.8	8.1	7.9	---	---
25	7.9	7.7	7.4	7.1	7.7	7.5	8.0	7.8	8.1	7.9	---	---
26	7.8	7.7	7.4	7.2	7.7	7.5	8.0	7.8	8.1	7.9	---	---
27	7.8	7.7	7.4	6.8	7.7	7.5	8.0	7.8	8.1	7.9	---	---
28	7.7	7.6	7.1	6.7	7.7	7.5	8.0	7.8	8.1	7.9	---	---
29	7.8	7.7	7.4	6.7	7.7	7.5	8.0	7.8	8.1	7.9	---	---
30	7.8	7.7	---	---	7.7	7.5	8.0	7.8	8.1	7.9	---	---
31	---	---	---	---	---	---	8.0	7.8	8.0	7.9	---	---
MONTH	8.0	7.6	8.0	6.7	7.7	7.4	8.0	7.5	8.1	7.8	8.2	7.9
YEAR	8.5	6.7										

06279795 CROW CREEK AT MOUTH, AT PAHASKA, WY—Continued

TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	3.1	2.0	---	---	---	---	---	---	---	---	---	---
2	4.3	1.7	---	---	---	---	---	---	---	---	---	---
3	4.8	2.1	---	---	---	---	---	---	---	---	---	---
4	4.6	3.5	---	---	---	---	---	---	---	---	---	---
5	4.5	2.7	---	---	---	---	---	---	---	---	---	---
6	5.5	3.1	---	---	---	---	---	---	---	---	---	---
7	5.6	2.8	---	---	---	---	---	---	---	---	---	---
8	4.8	2.6	---	---	---	---	---	---	---	---	---	---
9	4.1	2.2	---	---	---	---	---	---	---	---	---	---
10	5.0	1.7	---	---	---	---	---	---	---	---	---	---
11	4.9	2.1	---	---	---	---	---	---	---	---	---	---
12	2.1	0.1	---	---	---	---	---	---	---	---	---	---
13	2.0	0.1	---	---	---	---	---	---	---	---	---	---
14	2.2	0.5	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	---	---	---	---
22	---	---	---	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---	---	---	---
27	---	---	---	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	---	---	---	---
29	---	---	---	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	5.6	0.1	---	---	---	---	---	---	---	---	---	---
FEBRUARY			MARCH			APRIL			MAY			
1	---	---	---	---	---	---	2.4	2.1	2.2	3.9	1.5	2.7
2	---	---	---	---	---	---	2.4	2.0	2.2	5.4	1.6	3.4
3	---	---	---	---	---	---	2.0	0.7	1.3	3.9	2.2	3.2
4	---	---	---	---	---	---	0.9	0.3	0.6	5.0	2.1	3.4
5	---	---	---	---	---	---	0.3	0.1	0.1	3.6	2.3	3.0
6	---	---	---	---	---	---	0.9	0.1	0.5	3.7	1.6	2.7
7	---	---	---	---	---	---	0.8	0.1	0.4	4.7	2.0	3.4
8	---	---	---	---	---	---	1.7	0.1	0.9	4.2	1.7	3.1
9	---	---	---	---	---	---	2.4	0.8	1.7	4.6	1.8	3.2
10	---	---	---	---	---	---	2.7	1.5	2.2	4.7	2.1	3.4
11	---	---	---	---	---	---	3.1	1.8	2.5	5.0	2.3	3.6
12	---	---	---	---	---	---	3.1	1.9	2.6	5.1	2.9	4.1
13	---	---	---	1.6	1.4	1.5	3.0	2.0	2.6	7.5	2.8	4.8
14	---	---	---	1.7	1.4	1.6	3.3	1.5	2.2	8.5	2.0	5.1
15	---	---	---	1.8	1.3	1.5	3.0	1.7	2.3	7.7	2.5	4.5
16	---	---	---	1.8	1.8	1.8	3.5	1.7	2.5	7.7	2.6	4.4
17	---	---	---	1.8	1.5	1.7	3.5	1.4	2.2	7.7	2.1	4.1
18	---	---	---	1.7	1.4	1.6	3.5	1.9	2.6	3.9	1.4	2.8
19	---	---	---	1.7	1.2	1.5	3.9	1.1	2.5	5.6	0.5	2.8
20	---	---	---	1.6	0.8	1.3	4.6	1.0	2.9	7.3	0.7	3.6
21	---	---	---	1.9	1.4	1.6	5.0	1.0	3.0	6.8	1.9	4.2
22	---	---	---	2.1	1.7	1.9	4.5	1.9	3.2	8.8	2.9	4.7
23	---	---	---	2.1	1.0	1.5	3.7	2.3	3.1	8.2	2.6	4.3
24	---	---	---	1.1	0.5	0.8	5.0	2.7	3.6	7.9	2.6	4.3
25	---	---	---	1.5	0.5	1.0	5.0	1.9	3.4	7.2	2.8	4.3
26	---	---	---	1.5	0.6	1.3	3.0	0.9	2.4	6.8	3.0	4.4
27	---	---	---	0.8	0.4	0.6	4.2	0.5	2.3	8.0	3.0	4.7
28	---	---	---	0.5	0.1	0.2	3.0	1.2	1.9	8.1	3.0	4.7
29	---	---	---	1.2	0.1	0.4	4.4	2.0	3.2	7.4	3.3	4.7
30	---	---	---	1.9	1.2	1.6	4.6	2.4	3.3	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	---	---	---	2.1	0.1	1.3	5.0	0.1	2.2	8.8	0.5	3.8

YELLOWSTONE RIVER BASIN

06279795 CROW CREEK AT MOUTH, AT PAHASKA, WY—Continued

DISSOLVED OXYGEN, WATER, UNFILTERED, MILLIGRAMS PER LITER
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER				NOVEMBER			DECEMBER			JANUARY		
1	8.3	8.1	8.2	---	---	---	---	---	---	---	---	---
2	8.3	7.7	8.0	---	---	---	---	---	---	---	---	---
3	8.1	7.5	7.8	---	---	---	---	---	---	---	---	---
4	7.8	7.4	7.6	---	---	---	---	---	---	---	---	---
5	7.8	7.2	7.5	---	---	---	---	---	---	---	---	---
6	7.6	6.7	7.3	---	---	---	---	---	---	---	---	---
7	7.3	3.0	6.8	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	---	---	---	---
22	---	---	---	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---	---	---	---
27	---	---	---	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	---	---	---	---
29	---	---	---	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	8.3	3.0	7.6	---	---	---	---	---	---	---	---	---
FEBRUARY				MARCH			APRIL			MAY		
1	---	---	---	---	---	---	---	---	---	11.8	10.9	11.4
2	---	---	---	---	---	---	---	---	---	11.8	10.5	11.1
3	---	---	---	---	---	---	11.5	10.9	11.3	11.5	10.8	11.1
4	---	---	---	---	---	---	11.8	11.5	11.7	11.6	10.6	11.1
5	---	---	---	---	---	---	11.9	11.8	11.9	11.6	11.0	11.3
6	---	---	---	---	---	---	11.9	11.7	11.8	11.8	11.0	11.5
7	---	---	---	---	---	---	12.3	11.8	12.1	11.6	10.7	11.2
8	---	---	---	---	---	---	12.3	11.6	12.0	11.8	9.8	11.0
9	---	---	---	---	---	---	11.9	11.3	11.6	10.7	9.3	9.8
10	---	---	---	---	---	---	11.7	11.1	11.4	9.7	9.1	9.4
11	---	---	---	---	---	---	11.6	11.1	11.3	9.7	9.0	9.3
12	---	---	---	---	---	---	11.5	11.0	11.2	9.4	8.8	9.1
13	---	---	---	---	---	---	11.5	11.1	11.2	9.4	8.4	9.0
14	---	---	---	---	---	---	11.7	10.9	11.4	9.7	8.2	8.9
15	---	---	---	---	---	---	11.5	11.0	11.3	10.2	8.4	9.1
16	---	---	---	---	---	---	11.7	10.8	11.3	9.6	8.2	9.1
17	---	---	---	---	---	---	11.7	10.8	11.3	9.5	8.4	9.1
18	---	---	---	---	---	---	11.4	10.8	11.1	9.9	9.3	9.5
19	---	---	---	---	---	---	11.9	10.8	11.3	10.2	9.5	---
20	---	---	---	---	---	---	12.0	10.6	11.2	---	---	---
21	---	---	---	---	---	---	11.9	10.2	11.0	---	---	---
22	---	---	---	---	---	---	11.4	10.4	10.8	---	---	---
23	---	---	---	---	---	---	11.1	10.6	10.8	---	---	---
24	---	---	---	---	---	---	11.0	10.2	10.7	---	---	---
25	---	---	---	---	---	---	11.3	10.2	10.7	---	---	---
26	---	---	---	---	---	---	11.8	10.9	11.2	---	---	---
27	---	---	---	---	---	---	12.1	10.7	11.4	---	---	---
28	---	---	---	---	---	---	11.8	11.1	11.5	10.4	8.9	9.9
29	---	---	---	---	---	---	11.5	10.6	11.1	10.2	9.1	9.8
30	---	---	---	---	---	---	11.4	10.7	11.1	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	---	---	---	---	---	---	12.3	10.2	11.3	11.8	8.2	10.1

06279795 CROW CREEK AT MOUTH, AT PAHASKA, WY—Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY)
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Day	Mean discharge (cfs)	Mean concentration (mg/l)	Load (tons/ day)	Mean discharge (cfs)	Mean concentration (mg/l)	Load (tons/ day)	Mean discharge (cfs)	Mean concentration (mg/l)	Load (tons/ day)
OCTOBER			NOVEMBER			DECEMBER			
1	8.9	---	---	---	---	---	---	---	---
2	8.9	---	---	---	---	---	---	---	---
3	9.0	---	---	---	---	---	---	---	---
4	9.0	---	---	---	---	---	---	---	---
5	10	---	---	---	---	---	---	---	---
6	9.3	---	---	---	---	---	---	---	---
7	9.6	---	---	---	---	---	---	---	---
8	9.6	---	---	---	---	---	---	---	---
9	9.4	---	---	---	---	---	---	---	---
10	9.3	---	---	---	---	---	---	---	---
11	9.8	---	---	---	---	---	---	---	---
12	9.1	---	---	---	---	---	---	---	---
13	9.1	---	---	---	---	---	---	---	---
14	9.0	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	---
22	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---
27	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	---
29	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---
TOTAL	130.0	---	0	0	---	0	0	---	0
JANUARY			FEBRUARY			MARCH			
1	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	e4.7	---	---	---
13	---	---	---	---	---	e4.8	1	e0.01	---
14	---	---	---	---	---	e5.0	1	e0.01	---
15	---	---	---	---	---	e5.1	1	e0.01	---
16	---	---	---	---	---	e4.8	1	e0.02	---
17	---	---	---	---	---	e4.7	1	e0.02	---
18	---	---	---	---	---	e4.6	1	e0.01	---
19	---	---	---	---	---	e4.5	1	e0.02	---
20	---	---	---	---	---	e4.6	1	e0.02	---
21	---	---	---	---	---	e4.8	1	e0.02	---
22	---	---	---	---	---	e5.0	1	e0.02	---
23	---	---	---	---	---	e4.9	1	e0.02	---
24	---	---	---	---	---	e4.8	1	e0.02	---
25	---	---	---	---	---	e4.8	1	e0.02	---
26	---	---	---	---	---	e4.9	1	e0.02	---
27	---	---	---	---	---	e4.9	1	e0.02	---
28	---	---	---	---	---	e4.8	e1	e0.01	---
29	---	---	---	---	---	e4.7	e1	e0.01	---
30	---	---	---	---	---	e4.9	1	e0.02	---
31	---	---	---	---	---	e5.3	1	e0.02	---
TOTAL	0	---	0	0	---	0	96.6	---	0.32

06279795 CROW CREEK AT MOUTH, AT PAHASKA, WY—Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY)—Continued
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Day	Mean discharge (cfs)	Mean concentration (mg/l)	Load (tons/ day)	Mean discharge (cfs)	Mean concentration (mg/l)	Load (tons/ day)	Mean discharge (cfs)	Mean concentration (mg/l)	Load (tons/ day)
		APRIL			MAY			JUNE	
1	5.8	2	0.03	16	2	0.06	244	28	18
2	6.0	1	0.02	15	1	0.04	203	20	11
3	5.9	1	0.01	15	1	0.04	160	17	7.2
4	5.9	1	0.01	15	1	0.04	131	13	4.6
5	e5.7	5	e0.13	14	1	0.04	104	12	3.4
6	e5.7	2	e0.04	14	1	0.05	105	13	3.6
7	e5.6	2	e0.04	13	2	0.07	80	10	2.2
8	e5.6	1	e0.02	13	1	0.05	81	10	2.2
9	6.4	2	0.04	13	1	0.03	99	13	3.6
10	7.3	4	0.08	12	1	0.03	121	18	6.2
11	8.2	5	0.11	12	1	0.03	133	24	9.0
12	9.8	7	0.20	12	1	0.04	144	14	5.3
13	14	16	0.62	14	2	0.07	129	11	3.9
14	21	14	0.76	17	4	0.21	129	10	3.4
15	22	9	0.52	29	21	2.3	152	11	4.6
16	18	4	0.21	49	22	2.9	147	14	5.7
17	17	3	0.15	57	16	2.5	146	13	5.1
18	16	3	0.13	54	13	1.9	149	12	5.0
19	15	3	0.12	41	7	0.76	148	10	4.0
20	14	3	0.11	45	6	0.79	143	10	4.1
21	17	2	0.11	55	7	1.2	142	11	4.3
22	20	3	0.14	89	25	6.5	117	9	3.0
23	20	3	0.17	128	76	27	104	9	2.4
24	20	3	0.14	131	80	31	91	8	2.1
25	23	3	0.19	180	90	45	89	7	1.7
26	24	6	0.37	197	67	36	79	6	1.4
27	21	3	0.17	221	49	30	76	5	1.0
28	19	3	0.15	238	78	54	78	4	0.95
29	17	2	0.09	294	106	86	79	4	0.84
30	16	2	0.09	278	72	54	85	4	1.0
31	---	---	---	259	38	26	---	---	---
TOTAL	411.9	---	4.97	2,540	---	408.65	3,688	---	130.79

06279795 CROW CREEK AT MOUTH, AT PAHASKA, WY—Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY)—Continued
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Day	Mean discharge (cfs)	Mean concentration (mg/l)	Load (tons/ day)	Mean discharge (cfs)	Mean concentration (mg/l)	Load (tons/ day)	Mean discharge (cfs)	Mean concentration (mg/l)	Load (tons/ day)
		JULY			AUGUST			SEPTEMBER	
1	74	5	0.94	15	2	0.09	11	1	0.04
2	76	4	0.81	15	2	0.08	10	1	0.04
3	67	3	0.59	14	2	0.10	11	2	0.05
4	62	4	0.65	14	3	0.10	10	2	0.05
5	56	4	0.56	14	2	0.08	10	2	0.05
6	54	4	0.54	14	2	0.07	11	2	0.05
7	54	4	0.58	14	2	0.09	10	2	0.05
8	52	4	0.53	13	3	0.11	11	2	0.06
9	48	4	0.48	13	2	0.07	10	2	0.06
10	46	4	0.47	13	2	0.07	11	2	0.05
11	45	4	0.46	13	2	0.07	11	2	0.05
12	42	4	0.44	13	2	0.08	11	2	0.05
13	39	4	0.42	13	2	0.09	10	1	0.03
14	36	4	0.36	13	2	0.06	10	1	0.03
15	33	3	0.27	13	2	0.08	10	1	0.03
16	32	3	0.26	13	e2	e0.06	10	1	0.03
17	30	3	0.28	12	e1	e0.03	9.7	2	0.04
18	28	3	0.24	12	1	0.05	9.7	e1	e0.03
19	27	4	0.27	12	2	0.06	9.6	e2	e0.04
20	25	3	0.21	12	1	0.04	9.7	e1	e0.03
21	24	3	0.20	12	2	0.06	9.6	e1	e0.03
22	23	3	0.19	12	3	0.09	9.5	e1	e0.03
23	22	3	0.19	12	4	0.14	9.5	e1	e0.03
24	22	3	0.19	12	3	0.10	9.2	e1	e0.03
25	20	5	0.28	12	2	0.07	9.2	e2	e0.04
26	19	4	0.21	12	2	0.05	9.4	e1	e0.03
27	18	3	0.16	11	2	0.05	9.2	e1	e0.02
28	18	3	0.15	11	1	0.04	9.0	e1	e0.02
29	17	3	0.14	11	1	0.04	8.7	e1	e0.02
30	16	3	0.13	11	2	0.05	8.7	e1	e0.02
31	16	2	0.09	11	1	0.04	---	---	---
TOTAL	1,141	---	11.29	392	---	2.21	297.7	---	1.13
YEAR	8,697.2	559.36							

e Estimated

06279940 NORTH FORK SHOSHONE RIVER AT WAPITI, WY

LOCATION.--Lat 44° 28' 10", long 109° 25' 49", in SE $\frac{1}{4}$ NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 19, T. 52 N., R. 104 W., Park County, Hydrologic Unit 10080012, on left bank 1,000 ft downstream from bridge on U.S. Highway 14-20, 0.3 mi upstream from Jim Creek, and 0.3 mi downstream from Wapiti.

DRAINAGE AREA.--699 mi².

PERIOD OF RECORD.--October 1989 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 5,580 ft above NGVD of 1929, from topographic map. U.S. Geological Survey data collection platform with satellite telemetry at station.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Diversion for irrigation of about 1,500 acres upstream from station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 9, 1981, at station 06280000 North Fork Shoshone River near Wapiti, 4.2 mi downstream, reached a discharge of 20,000 ft³/s.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	192	e80	146	e130	270	e120	324	e620	7,030	2,570	670	273
2	197	e76	176	e120	221	e110	316	e580	5,540	2,500	631	260
3	195	e90	162	e130	145	e120	325	e600	4,480	2,410	616	262
4	194	e110	153	137	e120	e120	250	e580	3,890	2,310	630	257
5	228	e140	148	136	e100	e120	211	e560	3,300	2,230	605	248
6	223	e150	144	e120	e90	117	215	e520	3,010	2,160	568	261
7	216	e160	113	e100	86	118	196	e490	2,550	2,080	535	308
8	228	169	91	e100	e120	e110	214	526	2,730	1,990	516	273
9	204	170	e80	e90	e130	123	349	483	3,280	1,900	507	289
10	196	163	e90	e80	e130	130	588	466	3,800	1,830	503	278
11	230	160	e110	98	e130	143	767	451	4,140	1,770	503	296
12	222	160	134	e130	e120	164	900	460	3,940	1,740	480	324
13	210	161	155	155	e120	201	1,060	574	3,820	1,690	457	360
14	206	161	164	143	143	253	1,140	742	3,680	1,600	435	294
15	200	157	152	134	136	254	1,040	1,200	3,990	1,460	436	271
16	196	148	139	e120	e120	311	776	1,850	4,510	1,380	467	256
17	189	157	139	e110	e120	250	662	1,990	4,460	1,330	473	260
18	187	152	122	e110	e120	212	597	1,840	4,380	1,280	410	254
19	185	152	e90	119	e120	201	541	1,210	4,340	1,270	372	247
20	184	159	e84	130	e110	202	512	1,070	4,080	1,200	353	239
21	184	163	e90	e120	e120	199	675	1,160	3,900	1,190	343	232
22	185	166	e110	e120	e110	202	873	1,680	3,030	1,130	335	226
23	176	e160	e90	129	e90	242	929	2,980	2,370	1,070	361	219
24	185	e130	e70	126	e80	217	822	3,880	2,010	1,050	328	217
25	185	e100	e60	123	e100	202	920	4,670	1,720	1,110	310	214
26	168	e80	e100	126	e140	205	1,020	4,900	1,530	1,020	299	210
27	163	e100	e160	145	e130	216	758	5,540	1,630	944	295	208
28	174	e120	e150	157	e120	206	672	6,260	1,930	882	297	206
29	172	e140	e140	e130	---	192	614	7,790	2,040	808	294	206
30	e120	e140	133	132	---	192	e610	8,550	2,370	747	302	205
31	e100	---	134	147	---	e250	---	7,740	---	701	295	---
TOTAL	5,894	4,174	3,829	3,847	3,541	5,702	18,876	71,962	103,480	47,352	13,626	7,653
MEAN	190	139	124	124	126	184	629	2,321	3,449	1,527	440	255
MAX	230	170	176	157	270	311	1,140	8,550	7,030	2,570	670	360
MIN	100	76	60	80	80	110	196	451	1,530	701	294	205
AC-FT	11,690	8,280	7,590	7,630	7,020	11,310	37,440	142,700	205,300	93,920	27,030	15,180

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 2003, BY WATER YEAR (WY)

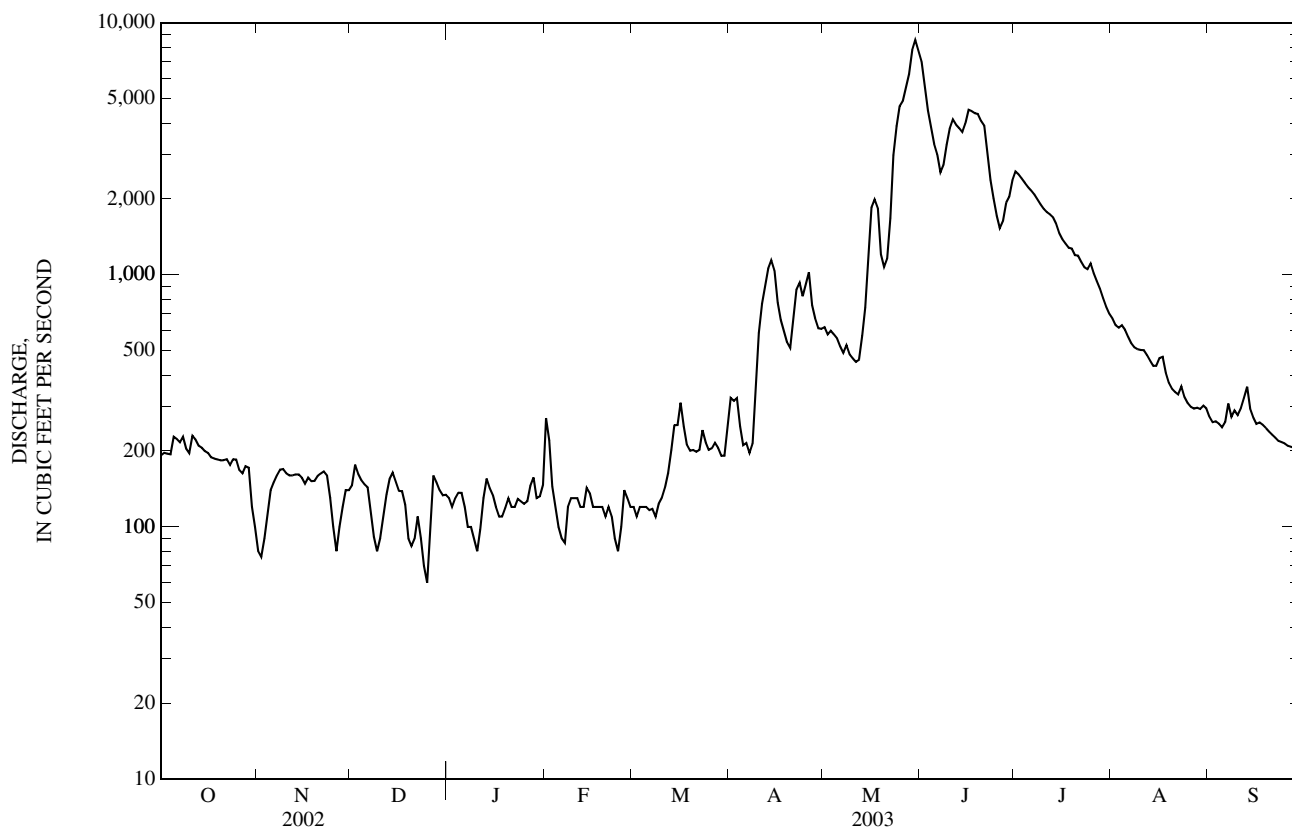
MEAN	253	204	156	142	142	198	523	2,062	3,546	1,837	563	317
MAX	330	304	283	199	184	294	792	3,459	6,251	3,130	1,015	480
(WY)	(1998)	(1997)	(1996)	(1997)	(1997)	(1997)	(1990)	(1997)	(1997)	(1996)	(1997)	(1997)
MIN	183	139	124	107	98.6	114	282	1,221	1,506	595	249	170
(WY)	(2002)	(2003)	(2003)	(2001)	(2001)	(2002)	(1993)	(1990)	(2001)	(1994)	(1994)	(1994)

06279940 NORTH FORK SHOSHONE RIVER AT WAPITI, WY—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1990 - 2003	
ANNUAL TOTAL	252,879		289,936		--	
ANNUAL MEAN	693		794		830	
HIGHEST ANNUAL MEAN	--		--		1,324	
LOWEST ANNUAL MEAN	--		--		502	
HIGHEST DAILY MEAN	6,320	Jun 1	8,550	May 30	8,940	Jun 10, 1997
LOWEST DAILY MEAN	60 ^e	Dec 25	60 ^e	Dec 25	60 ^e	Dec 25, 2002
ANNUAL SEVEN-DAY MINIMUM	85	Dec 19	85	Dec 19	81	Dec 19, 1996
MAXIMUM PEAK FLOW	--		11,200	May 30	11,200	May 30, 2003
MAXIMUM PEAK STAGE	--		8.68	May 30	9.54 ^a	Jun 13, 1991
ANNUAL RUNOFF (AC-FT)	501,600		575,100		601,500	
10 PERCENT EXCEEDS	2,200		2,330		2,560	
50 PERCENT EXCEEDS	200		222		260	
90 PERCENT EXCEEDS	107		110		130	

a Discharge 9,460 ft³/s.

e Estimated.



06280300 SOUTH FORK SHOSHONE RIVER NEAR VALLEY, WY

LOCATION.--Lat 44° 12'30", long 109° 33'15", in NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.24, T.49 N., R.106 W., Park County, Hydrologic Unit 10080013, Shoshone National Forest, on left bridge abutment of U.S. Forest Service bridge, 0.4 mi downstream from Boulder Creek, 3.2 mi northeast of Valley, and 34 mi southwest of Cody.

DRAINAGE AREA.--297 mi².

PERIOD OF RECORD.--October 1956 to September 1958, October 1959 to current year.

REVISED RECORDS.--WRD WY 1974: 1963.

GAGE.--Water-stage recorder. Elevation of gage is 6,200 ft above NGVD of 1929, from topographic map. Prior to November 22, 1961, at site 75 ft upstream at same datum. U.S. Geological Survey data collection platform with satellite telemetry at station.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Diversions for irrigation of about 450 acres upstream from station.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	148	75	72	68	86	62	85	246	2,860	1,420	379	185
2	148	70	78	70	91	58	84	220	2,100	1,350	358	175
3	146	63	81	77	70	61	81	241	1,660	1,270	347	172
4	146	60	84	79	55	61	78	222	1,460	1,220	335	166
5	144	60	86	81	53	60	76	221	1,320	1,170	315	163
6	144	63	86	74	51	62	74	194	1,250	1,140	302	209
7	144	70	78	70	54	62	73	169	1,050	1,120	288	263
8	145	75	70	73	48	61	74	190	1,090	1,100	284	217
9	143	81	65	72	47	62	90	173	1,280	1,040	304	202
10	139	84	59	63	49	65	148	157	1,510	981	287	208
11	143	85	57	65	52	68	254	151	1,660	973	336	211
12	132	86	57	69	53	73	298	159	1,550	961	289	208
13	128	90	63	75	57	82	382	197	1,470	931	267	204
14	129	95	74	79	62	97	384	242	1,440	872	251	189
15	126	96	82	77	62	97	315	422	1,550	810	254	177
16	126	93	78	68	61	90	216	651	1,580	763	243	168
17	124	99	80	66	63	85	191	669	1,720	736	278	173
18	124	96	80	63	63	84	173	565	1,980	736	244	170
19	121	97	68	66	61	80	166	375	1,830	725	226	166
20	121	96	58	73	61	77	174	341	1,700	672	213	162
21	122	95	61	75	65	75	242	372	1,550	666	206	155
22	122	98	63	71	67	75	295	576	1,290	638	201	150
23	115	e96	60	72	61	77	293	1,080	1,030	598	204	146
24	119	e94	51	71	e48	75	304	1,500	891	575	194	145
25	113	71	53	71	65	73	385	1,740	792	600	186	142
26	107	58	47	74	55	77	376	1,890	747	579	179	138
27	109	57	49	82	59	77	255	2,240	843	546	176	138
28	110	63	62	81	61	74	257	2,510	1,070	498	174	137
29	111	68	65	77	---	74	233	3,200	1,190	459	173	138
30	98	69	64	78	---	74	241	3,420	1,350	423	217	137
31	87	---	65	75	---	76	---	3,900	---	398	225	---
TOTAL	3,934	2,403	2,096	2,255	1,680	2,274	6,297	28,233	42,813	25,970	7,935	5,214
MEAN	127	80.1	67.6	72.7	60.0	73.4	210	911	1,427	838	256	174
MAX	148	99	86	82	91	97	385	3,900	2,860	1,420	379	263
MIN	87	57	47	63	47	58	73	151	747	398	173	137
AC-FT	7,800	4,770	4,160	4,470	3,330	4,510	12,490	56,000	84,920	51,510	15,740	10,340

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1957 - 2003, BY WATER YEAR (WY)

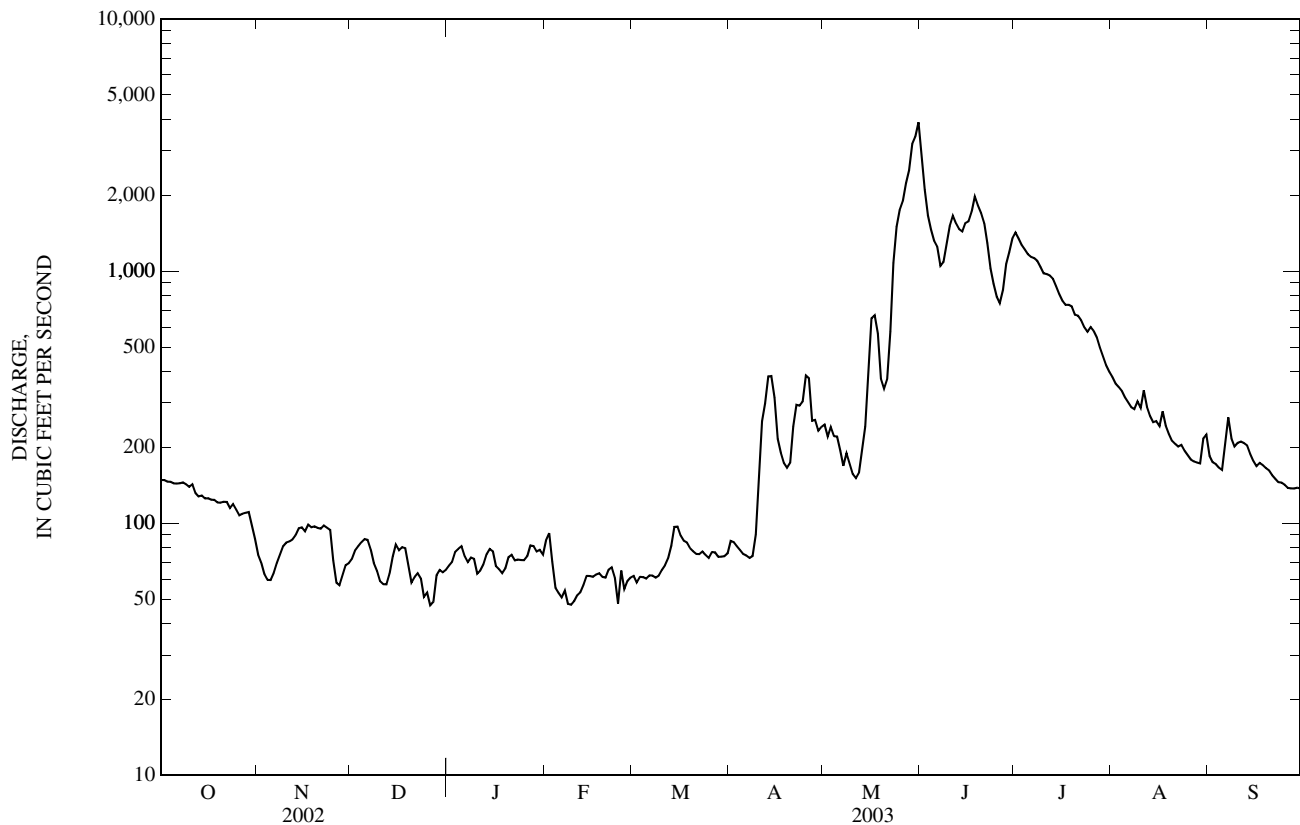
MEAN	155	108	82.6	76.5	72.5	79.5	164	747	1,720	1,106	371	210
MAX	244	147	109	100	93.8	128	341	1,387	2,920	2,287	834	341
(WY)	(1983)	(1985)	(1966)	(1997)	(1962)	(1986)	(1962)	(1958)	(1997)	(1975)	(1982)	(1982)
MIN	92.5	70.6	56.2	55.2	54.8	59.8	69.6	252	828	308	127	110
(WY)	(1989)	(1980)	(1989)	(1989)	(1989)	(1975)	(1970)	(1977)	(2001)	(1988)	(2001)	(1988)

06280300 SOUTH FORK SHOSHONE RIVER NEAR VALLEY, WY—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1957 - 2003	
ANNUAL TOTAL	113,293		131,104		--	
ANNUAL MEAN	310		359		409	
HIGHEST ANNUAL MEAN	--		--		609	1997
LOWEST ANNUAL MEAN	--		--		221	1977
HIGHEST DAILY MEAN	2,300	Jun 1	3,900	May 31	6,100	Jun 9, 1981
LOWEST DAILY MEAN	47	Dec 26	47	Dec 26, Feb 9	31	Dec 21, 1998
ANNUAL SEVEN-DAY MINIMUM	55	Dec 21	51	Feb 5	40	Dec 18, 1990
MAXIMUM PEAK FLOW	--		4,590	May 29	10,000	Jun 9, 1981
MAXIMUM PEAK STAGE	--		8.63	May 29	9.24 ^a	Jun 9, 1981
ANNUAL RUNOFF (AC-FT)	224,700		260,000		296,000	
10 PERCENT EXCEEDS	1,070		1,130		1,240	
50 PERCENT EXCEEDS	126		138		138	
90 PERCENT EXCEEDS	58		61		67	

a From floodmarks.

e Estimated.



06281000 SOUTH FORK SHOSHONE RIVER ABOVE BUFFALO BILL RESERVOIR, WY

LOCATION.--Lat 44° 25'09", long 109° 15'26", in lot 5, SE $\frac{1}{4}$ NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 5, T.51 N., R.103 W., Park County, Hydrologic Unit 10080013, on right bank at old diversion structure 0.2 miles downstream from Cody Canal diversion, 1 mile upstream from normal pool of Buffalo Bill Reservoir at elevation 5,364 ft, and 12.5 miles southwest of Cody.

DRAINAGE AREA.--585 mi².

PERIOD OF RECORD.--May to November 1903, May 1905 to September 1908, January 1921 to September 1926, October 1973 to current year (gage heights only June to September 1908). No winter records 1906, 1908, 1922. Published as "at Marquette" 1903, 1905-8, and as Shoshone River above Shoshone Reservoir 1921-26.

REVISED RECORDS.--WSP 1309: 1907.

GAGE.--Water-stage recorder. Elevation of gage is 5,440 ft above NGVD of 1929, from topographic map. April 26 to November 30, 1903, and May 1905 to May 30, 1908, nonrecording gages at sites within about 6.0 mi downstream at different datums. Prior to October 3, 1989, recording gage at site 1.1 mile downstream at different datum. U.S. Geological Survey data collection platform with satellite telemetry at station.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Diversions for irrigation of about 11,000 acres upstream from station.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.97	e120	109	113	94	e82	136	161	4,080	1,170	27	5.5
2	5.8	e110	112	111	101	e80	132	153	3,090	1,110	21	4.9
3	12	e105	115	107	94	e80	129	146	2,270	1,110	18	4.7
4	7.0	e100	117	104	91	e82	121	140	1,940	1,110	17	4.5
5	1.7	e100	119	103	e82	e80	117	131	1,580	1,100	13	4.5
6	1.7	103	120	100	e80	e80	117	106	1,390	1,130	9.3	4.5
7	1.9	105	116	96	e80	e80	116	63	1,020	1,070	8.4	11
8	2.1	109	109	96	e75	e80	115	74	967	1,020	6.9	7.6
9	5.0	113	108	e95	e70	e84	128	93	1,200	1,060	6.8	7.7
10	9.4	115	103	e90	e72	e90	169	101	1,370	995	5.8	11
11	14	117	104	e85	e76	e95	257	87	1,750	968	23	14
12	17	117	109	e95	e80	e100	361	76	1,610	777	22	6.1
13	9.2	120	111	105	e90	112	489	105	1,530	784	15	7.9
14	20	122	108	99	96	129	433	112	1,540	739	13	6.4
15	61	125	113	99	87	126	346	178	1,720	676	12	5.1
16	76	123	114	e95	83	124	241	403	1,760	605	12	4.7
17	79	126	114	e90	83	117	216	495	1,720	522	21	4.7
18	82	125	114	e90	84	115	197	559	2,050	459	13	18
19	82	127	115	e85	84	112	191	232	1,990	468	9.8	22
20	82	127	e110	92	84	109	192	131	1,840	377	8.5	21
21	84	126	e100	e90	88	108	199	128	1,650	341	7.5	19
22	92	e125	e100	e85	87	108	259	186	1,290	210	7.3	7.4
23	94	e125	e100	e85	e82	114	249	634	957	220	7.0	2.0
24	99	e125	e90	e86	e82	110	248	1,200	770	229	6.5	2.0
25	104	e115	e76	88	e70	106	312	1,830	644	239	6.6	2.0
26	98	e105	e100	89	e80	114	292	1,910	546	227	6.1	1.8
27	95	e100	107	91	e80	118	211	2,300	589	203	5.6	1.8
28	95	103	120	94	e80	111	171	2,720	1,020	143	5.6	1.6
29	119	108	117	89	---	110	153	3,520	1,170	85	5.3	1.7
30	131	108	110	90	---	115	132	4,450	1,440	67	5.6	1.7
31	e125	---	110	90	---	121	---	5,010	---	41	9.1	---
TOTAL	1,705.77	3,449	3,370	2,927	2,335	3,192	6,429	27,434	46,493	19,255	354.7	216.8
MEAN	55.0	115	109	94.4	83.4	103	214	885	1,550	621	11.4	7.23
MAX	131	127	120	113	101	129	489	5,010	4,080	1,170	27	22
MIN	0.97	100	76	85	70	80	115	63	546	41	5.3	1.6
AC-FT	3,380	6,840	6,680	5,810	4,630	6,330	12,750	54,420	92,220	38,190	704	430

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1903 - 2003, BY WATER YEAR (WY)

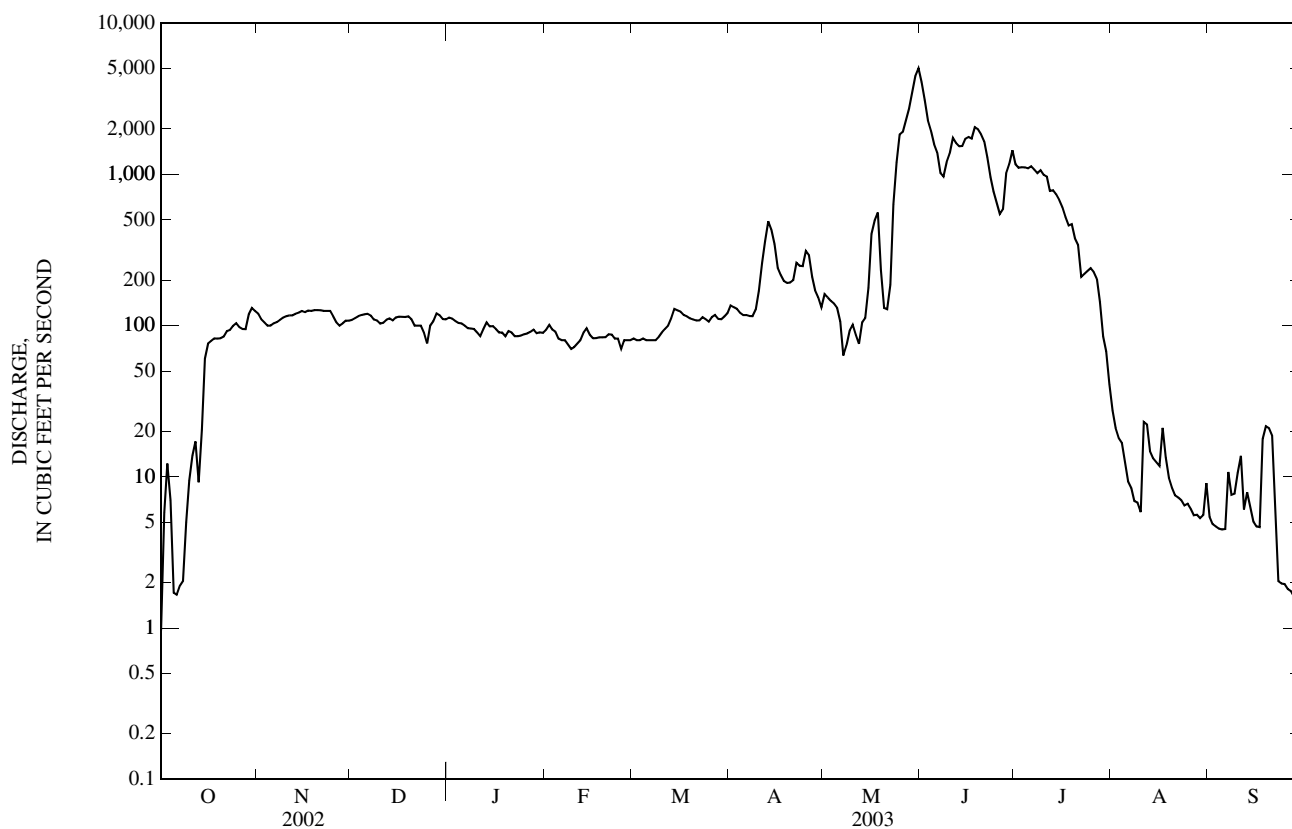
	1903	1904	1905	1906	1907	1908	1909	1910	1911	1912	1913	1914
MEAN	106	153	116	103	99.9	112	188	684	1,714	1,026	179	80.8
MAX	407	268	167	158	145	174	387	1,281	3,813	3,033	1,083	381
(WY)	(1924)	(1924)	(1998)	(1997)	(1998)	(1986)	(1925)	(1991)	(1997)	(1907)	(1907)	(1907)
MIN	18.0	71.2	54.5	51.9	72.9	76.8	52.9	168	495	18.9	0.74	0.039
(WY)	(1979)	(1980)	(1925)	(1995)	(1985)	(1924)	(2001)	(1977)	(1994)	(1994)	(2001)	(1992)

06281000 SOUTH FORK SHOSHONE RIVER ABOVE BUFFALO BILL RESERVOIR, WY—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1903 - 2003	
ANNUAL TOTAL	80,040.51		117,161.27		--	
ANNUAL MEAN	219		321		372	
HIGHEST ANNUAL MEAN	--		--		705	
LOWEST ANNUAL MEAN	--		--		148	
HIGHEST DAILY MEAN	2,480	Jun 1	5,010	May 31	7,370	Jun 9, 1981
LOWEST DAILY MEAN	0.77	Aug 11	0.97	Oct 1	0.00	Several days, 1992-1993
ANNUAL SEVEN-DAY MINIMUM	0.84	Aug 10	1.8	Sep 24	0.00	Sep 15, 1992
MAXIMUM PEAK FLOW	--		6,460		9,960	Jun 9, 1981
MAXIMUM PEAK STAGE	--		8.61		9.41 ^a	Jun 9, 1981
ANNUAL RUNOFF (AC-FT)	158,800		232,400		269,400	
10 PERCENT EXCEEDS	690		1,080		1,140	
50 PERCENT EXCEEDS	83		105		120	
90 PERCENT EXCEEDS	1.2		7.0		18	

a Site and datum then in use.

e Estimated.



06281700 SHOSHONE RIVER ABOVE DEMARIS SPRINGS, NEAR CODY, WY

LOCATION.--Lat 44° 30'39", long 109° 08'47", in NW¹/₄ SE¹/₄ sec.5, T.52 N., R.102 W, Park County, Hydrologic Unit 10080014, at bridge on State Highway 16, 1.9 mi downstream from Buffalo Bill Reservoir, and 3.8 mi west of Cody city limits.

PERIOD OF RECORD.--October 1987 to February 2003 (discontinued).

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Turbidity, wat unflab, Hach 2100AN NTU (99872)	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)	Hardness, water, unfltrd mg/L as CaCO ₃ (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)
OCT 30...	1915	98	2.9	636	10.1	97	7.4	212	-9.0	6.0	74	21.6	4.94
DEC 18...	1230	112	--	634	11.9	105	8.7	255	0.0	2.5	96	27.8	6.34
FEB 04...	1710	118	5.7	635	11.7	102	7.4	296	-10.0	2.0	110	32.5	7.39
Date	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Alkalinity, wat flt fxd end lab, mg/L as CaCO ₃ (29801)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/acre-ft (70303)	Residue water, fltrd, tons/d (70302)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)
OCT 30...	1.24	0.7	12.9	83	1.05	<0.17	11.7	24.0	127	0.17	33.7	E.09	<0.04
DEC 18...	1.56	0.7	14.7	E97	1.69	0.20	11.9	31.3	--	--	--	0.18	<0.04
FEB 04...	2.08	0.7	15.8	110	1.30	0.22	12.4	38.1	175	0.24	55.9	0.11	<0.04
Date				Nitrite + nitrate water fltrd, mg/L as N (00631)			Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, fltrd, mg/L (00666)	Phosphorus, water, unfltrd mg/L (00665)				
OCT 30...				<0.06			E.02	E.03	E.03				
DEC 18...				<0.06			E.01	<0.04	E.03				
FEB 04...				<0.05			E.01	<0.06	<0.06				

E -- Estimated value

06282000 SHOSHONE RIVER BELOW BUFFALO BILL RESERVOIR, WY

LOCATION.--Lat 44° 31'00", long 109° 05'50", in lot 71, NE $\frac{1}{4}$ sec.3, T.52 N., R.102 W., Park County, Hydrologic Unit 10080014, on left bank 0.5 mi downstream from Trail Creek, 1.0 mi west of Cody city limits, and 5.5 mi downstream from Buffalo Bill Reservoir.

DRAINAGE AREA.--1,538 mi². Area at site prior to October 1, 1949, 1,502 mi².

PERIOD OF RECORD.--January 1921 to current year. Prior to October 1944, published as "below Shoshone Reservoir".

GAGE.--Water-stage recorder. Elevation of gage is 4,900 ft above NGVD of 1929, from topographic map. Prior to October 1, 1949, at site 2.5 mi upstream at different datum. Bureau of Reclamation data collection platform with satellite telemetry at station.

REMARKS.--Records good. Flow completely regulated by Buffalo Bill Reservoir. Diversions upstream from station for irrigation of about 56,100 acres, of which about 37,900 acres are downstream from station. Diversion, 2.1 mi upstream, to Heart Mountain Canal began in 1943.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum flood since construction of Buffalo Bill Reservoir in 1909, 18,700 ft³/s, June 15, 1918, by computation of flow over Corbett Dam, 10 mi downstream.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	691	163	166	175	173	174	173	1,060	1,130	2,440	1,100	1,050
2	682	184	164	175	174	173	179	1,020	1,090	2,710	1,100	972
3	646	187	164	175	174	174	177	1,020	1,100	2,250	1,100	955
4	637	191	166	175	174	174	178	1,020	1,060	1,950	1,070	953
5	636	190	166	175	170	171	176	998	1,040	1,950	1,050	958
6	636	193	168	175	169	171	176	1,000	1,040	1,940	1,070	960
7	629	192	170	175	175	172	177	1,000	1,040	1,780	1,080	959
8	629	193	168	175	177	174	177	994	1,040	1,640	1,070	953
9	625	194	168	174	173	174	177	987	1,040	1,450	1,060	922
10	621	194	170	174	171	174	176	975	1,030	1,200	1,060	878
11	424	190	170	174	171	177	174	973	1,020	1,150	1,050	883
12	246	191	170	174	171	178	180	952	1,040	1,150	1,050	882
13	196	191	172	175	171	180	179	931	1,050	1,150	1,040	878
14	192	192	173	177	171	176	181	957	1,520	1,150	1,040	826
15	189	194	173	177	171	177	179	969	2,320	1,150	1,030	812
16	190	194	174	178	170	178	241	920	3,900	1,150	1,040	767
17	191	194	174	180	170	179	575	934	4,700	1,150	1,030	750
18	171	193	176	179	170	180	591	923	5,510	1,150	1,040	743
19	152	195	178	178	170	179	724	940	6,310	1,150	1,030	733
20	155	191	179	177	169	179	730	933	6,240	1,150	1,030	749
21	157	184	191	176	173	178	731	926	5,580	1,150	1,040	770
22	158	163	205	176	178	178	818	983	4,940	1,150	1,030	771
23	159	167	205	176	177	179	870	1,000	2,790	1,130	1,020	755
24	160	166	206	169	175	179	1,010	1,010	1,370	1,140	1,020	782
25	161	163	208	158	174	176	1,020	1,010	1,630	1,160	1,030	811
26	161	162	209	158	174	177	1,020	1,090	1,640	1,160	1,080	806
27	160	162	209	160	174	177	1,070	1,110	1,620	1,160	1,070	809
28	160	164	209	179	174	173	1,170	1,170	1,620	1,120	1,070	813
29	162	164	209	179	---	173	1,170	1,140	1,660	1,120	1,080	747
30	160	164	202	172	---	172	1,140	1,110	1,920	1,110	1,080	709
31	159	---	179	173	---	172	---	1,130	---	1,100	1,050	---
TOTAL	10,295	5,465	5,641	5,393	4,833	5,448	15,539	31,185	68,990	43,310	32,710	25,356
MEAN	332	182	182	174	173	176	518	1,006	2,300	1,397	1,055	845
MAX	691	195	209	180	178	180	1,170	1,170	6,310	2,710	1,100	1,050
MIN	152	162	164	158	169	171	173	920	1,020	1,100	1,020	709
AC-FT	20,420	10,840	11,190	10,700	9,590	10,810	30,820	61,860	136,800	85,910	64,880	50,290

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1943 - 2003, BY WATER YEAR (WY)

MEAN	667	515	514	484	482	512	834	1,440	2,427	2,527	1,298	937
MAX	1,198	966	944	894	904	1,638	3,013	3,162	6,440	6,556	3,397	2,113
(WY)	(1953)	(1952)	(1951)	(1952)	(1997)	(1997)	(1997)	(1997)	(1943)	(1943)	(1958)	(1958)
MIN	187	128	111	115	65.4	72.5	113	827	807	1,017	685	582
(WY)	(1989)	(1989)	(1989)	(1989)	(1959)	(1959)	(1959)	(1995)	(1992)	(1993)	(1977)	(1988)

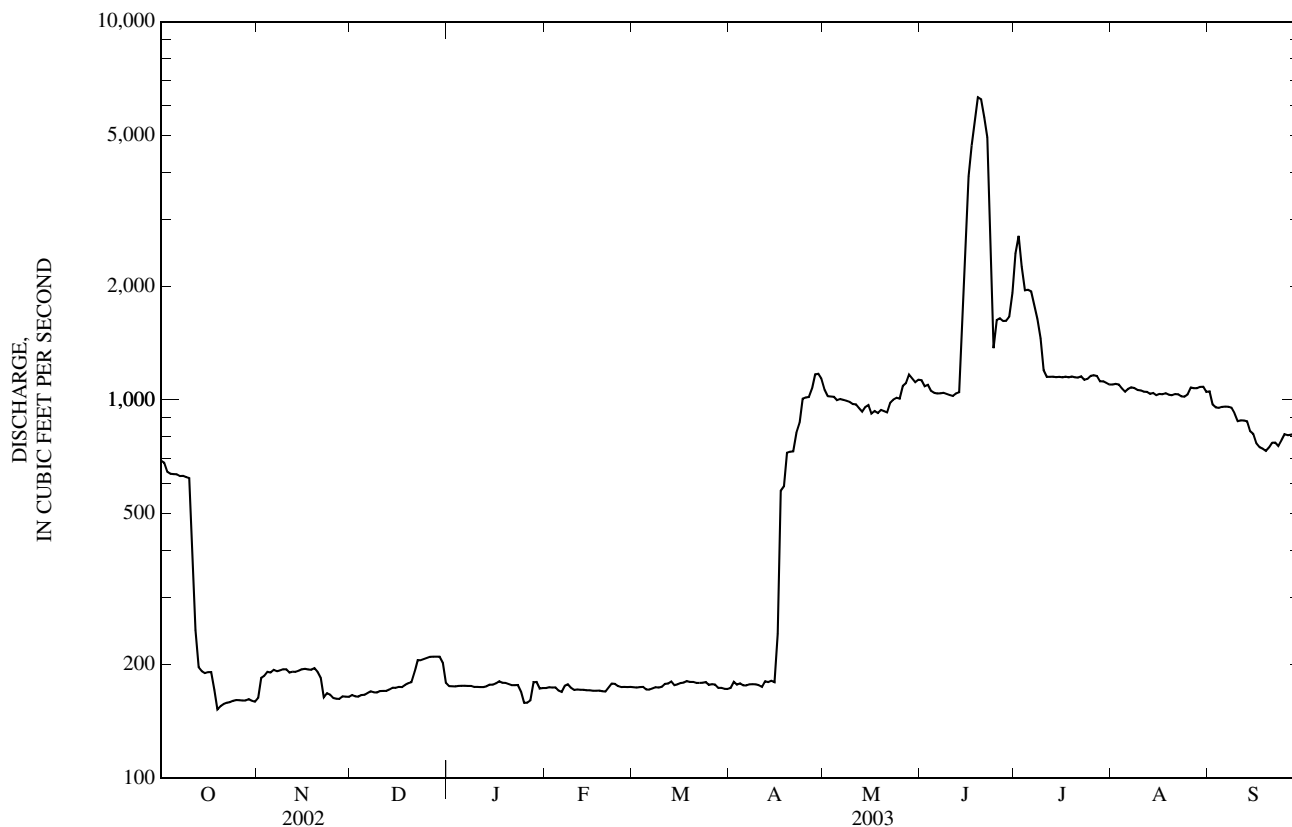
06282000 SHOSHONE RIVER BELOW BUFFALO BILL RESERVOIR, WY—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1943 - 2003*	
ANNUAL TOTAL	208,947		254,165		1,056 ^a	
ANNUAL MEAN	572		696		1,764	
HIGHEST ANNUAL MEAN	--		--		556	
LOWEST ANNUAL MEAN	--		--		1943	
HIGHEST DAILY MEAN	1,320	May 14	6,310	Jun 19	15,100	Jun 9, 1981
LOWEST DAILY MEAN	152	Oct 19	152	Oct 19	59	Nov 19, 1933#
ANNUAL SEVEN-DAY MINIMUM	157	Oct 19	157	Oct 19	64	Jan 21, 1959
MAXIMUM PEAK FLOW	--		6,710	Jun 19	17,300	Jun 9, 1981#
MAXIMUM PEAK STAGE	--		8.29	Jun 19	11.57	Jun 9, 1981
ANNUAL RUNOFF (AC-FT)	414,400		504,100		765,000	
10 PERCENT EXCEEDS	1,150		1,150		1,830	
50 PERCENT EXCEEDS	202		209		834	
90 PERCENT EXCEEDS	166		169		274	

* For period of record following Heart Mountain Diversion, see REMARKS.

For period of record through 2003.

a Average discharge (water years 1922-1942) prior to Heart Mountain Diversion, 1,256 ft³/s.



06284500 BITTER CREEK NEAR GARLAND, WY

LOCATION.--Lat 44° 45' 13", long 108° 35' 29", in SW¹/₄ SW¹/₄ SW¹/₄ sec.7, T.55 N., R.97 W., Big Horn County, Hydrologic Unit 10080014, 100 ft downstream from bridge on county road, 1.0 mi upstream from mouth, 4.0 mi southeast of Garland, and 5.0 mi southwest of Byron.

DRAINAGE AREA.--80.5 mi².

PERIOD OF RECORD.--Water years 1951-53, 1958-61, 1969 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: April 1969 to September 1983.

WATER TEMPERATURES: July 1969 to September 1983.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

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 uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	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)	Orthophosphate, water, fltrd, mg/L as P (00671)
OCT 30...	1700	48	661	13.0	112	8.8	1,200	-8.0	3.0	<0.04	5.62	0.012	<0.02
FEB 04...	0930	22	659	13.1	107	8.5	1,450	-5.0	1.0	<0.04	4.62	0.028	E.01
MAY 28...	2045	233	657	7.8	97	8.2	646	24.0	18.5	E.03	2.41	0.032	0.10
AUG 05...	1955	343	659	8.9	110	8.1	599	32.0	18.5	<0.04	2.59	0.011	E.07

Date	E coli, modif. m-TEC, water, col/ 100 mL (90902)	E coli, m-TEC MF, water, col/ 100 mL (31633)	Fecal coli-form, M-FC 0.7u MF col/ 100 mL (31625)
OCT 30...	--	67	120
FEB 04...	--	230	E200k
MAY 28...	250	--	450
AUG 05...	630	--	670

E -- Estimated value

k -- Counts outside acceptable range (Non-ideal colony count)

06285100 SHOSHONE RIVER NEAR LOVELL, WY

LOCATION.--Lat 44° 50' 19", long 108° 26' 04", in NW 1/4 NE 1/4 NE 1/4 sec. 17, T.56 N., R.96 W., Big Horn County, Hydrologic Unit 10080014, on left bank 20 ft downstream from bridge on County Road 9 and 1.5 mi west of Lovell.

DRAINAGE AREA.--2,350 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1966 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 3,850 ft above NGVD of 1929, from topographic map. Prior to October 1, 1976, at site 500 ft downstream, at datum 2.00 ft higher. October 1, 1976 to September 30, 1980, at site 500 ft downstream, at datum 1.00 ft higher. October 1, 1981 to November 13, 1986, at site 500 ft downstream at same datum. U.S. Geological Survey data collection platform with satellite telemetry at station.

REMARKS.--Records fair except those for March 13 to July 24, and those for estimated daily discharges, which are poor. Flow regulated by Buffalo Bill Reservoir. Natural flow of stream affected by storage reservoirs, power development, diversions upstream from station for irrigation of about 143,000 acres, of which about 8,000 acres are downstream from station, and return flow from irrigated areas.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	533	e422	393	e330	e360	e350	e370	473	304	1,660	e508	775
2	605	434	397	e320	e350	e370	341	482	386	2,210	517	723
3	681	453	402	e330	345	e370	312	362	408	2,040	e536	558
4	620	458	385	e330	340	e350	297	308	439	1,340	589	539
5	639	460	384	329	327	e320	280	318	473	1,440	508	539
6	591	453	382	326	e290	e340	277	283	530	1,400	e490	528
7	584	459	e360	316	e290	e330	239	221	577	1,240	469	558
8	554	454	e350	319	e300	e310	201	314	e579	e840	483	611
9	565	460	e350	323	e310	e300	162	658	532	808	459	648
10	558	453	e340	e300	e320	e320	114	513	497	482	475	e630
11	550	453	e350	e280	322	e450	94	513	438	318	487	636
12	480	448	e350	e290	e310	e700	108	506	402	290	474	691
13	410	450	e360	e300	e310	927	94	462	338	256	e484	770
14	e339	452	e360	e320	326	755	e51	386	457	267	407	749
15	338	458	e370	310	326	496	e59	357	1,090	267	364	733
16	622	457	375	e290	330	438	e77	329	2,710	241	397	644
17	477	454	373	e280	329	398	260	284	3,780	234	444	567
18	448	443	369	e270	332	374	217	279	4,620	270	508	571
19	404	446	e360	e290	333	364	305	334	5,670	275	484	601
20	376	446	e310	e310	339	359	538	288	6,380	291	469	574
21	356	448	e340	313	345	349	543	296	5,590	302	445	578
22	369	432	e350	e300	e320	345	506	224	5,440	310	451	643
23	368	435	e360	e290	e260	344	429	212	4,010	e350	472	639
24	370	415	e320	e300	e210	331	314	163	1,340	319	490	573
25	e395	403	e280	e310	e230	323	288	168	1,240	339	479	592
26	370	e380	e270	e330	e260	324	236	223	1,330	389	434	585
27	359	e390	e290	e350	e280	e310	213	237	1,240	455	442	550
28	352	404	e310	e400	e320	e330	268	189	1,220	508	457	578
29	351	405	e340	371	---	e320	314	193	1,230	473	515	616
30	412	399	e340	354	---	e300	284	174	1,160	481	608	514
31	450	---	e320	362	---	e320	---	225	---	505	736	---
TOTAL	14,526	13,124	10,840	9,843	8,714	12,217	7,791	9,974	54,410	20,600	15,081	18,513
MEAN	469	437	350	318	311	394	260	322	1,814	665	486	617
MAX	681	460	402	400	360	927	543	658	6,380	2,210	736	775
MIN	338	380	270	270	210	300	51	163	304	234	364	514
AC-FT	28,810	26,030	21,500	19,520	17,280	24,230	15,450	19,780	107,900	40,860	29,910	36,720

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1967 - 2003, BY WATER YEAR (WY)

MEAN	755	705	638	572	594	666	789	866	1,860	1,714	726	768
MAX	1,251	1,146	1,168	1,065	1,139	1,951	3,353	2,925	4,935	4,686	1,305	1,354
(WY)	(1972)	(1969)	(1969)	(1973)	(1973)	(1997)	(1997)	(1996)	(1981)	(1982)	(1982)	(1991)
MIN	369	297	306	226	228	243	248	193	203	149	207	245
(WY)	(1989)	(1986)	(1995)	(1991)	(1989)	(1995)	(1981)	(1977)	(1977)	(1977)	(1977)	(1977)

06285100 SHOSHONE RIVER NEAR LOVELL, WY—Continued

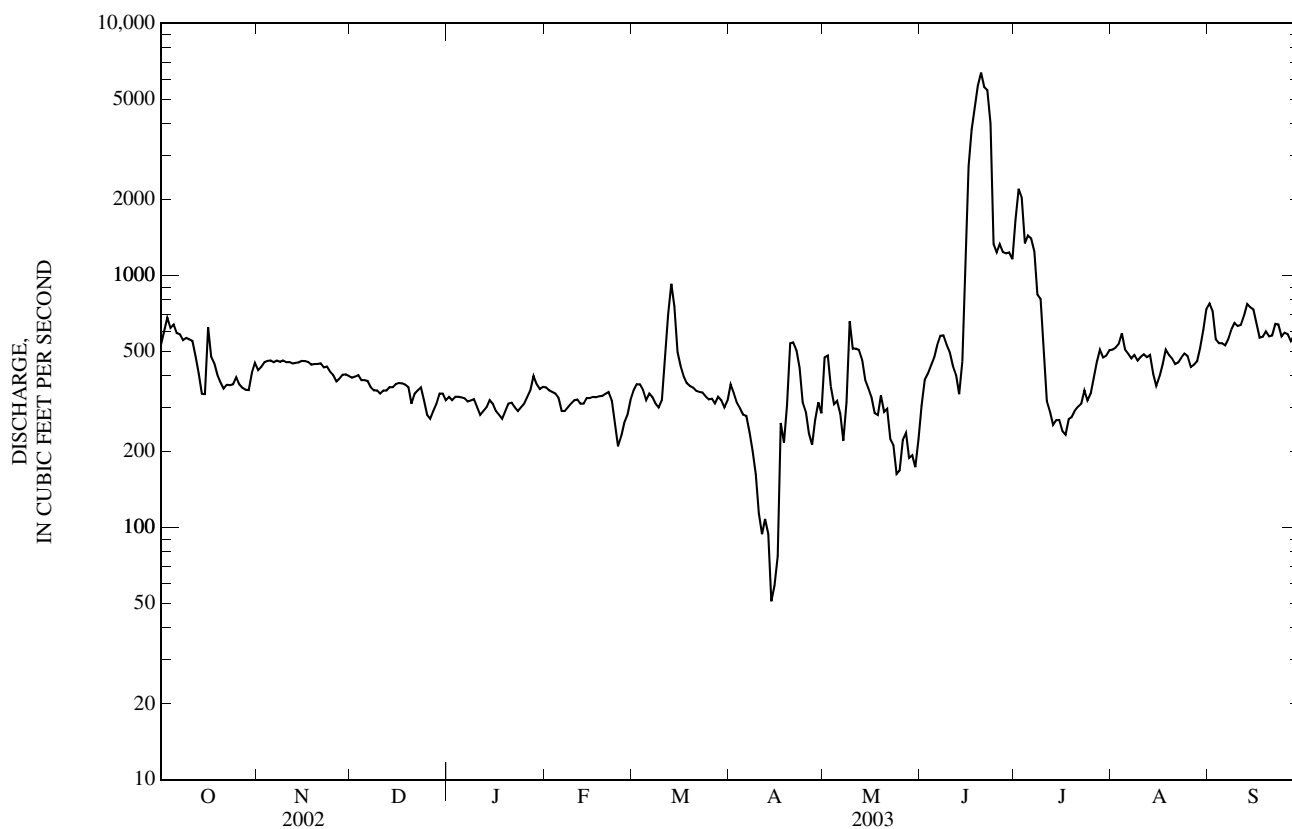
SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1967 - 2003	
ANNUAL TOTAL	134,186		195,633		--	
ANNUAL MEAN	368		536		888	
HIGHEST ANNUAL MEAN	--		--		1,659	
LOWEST ANNUAL MEAN	--		--		356	
HIGHEST DAILY MEAN	681	Oct 3	6,380	Jun 20	15,200	Jun 10, 1981
LOWEST DAILY MEAN	159	Apr 24	51 ^c	Apr 14	27	May 31, 1977
ANNUAL SEVEN-DAY MINIMUM	212	Apr 18	85	Apr 10	48	May 30, 1977
MAXIMUM PEAK FLOW	--		6,550 ^a	Jun 20	16,400 ^b	Jun 10, 1981
MAXIMUM PEAK STAGE	--		10.61 ^c	Jan 23	11.27	Jun 13, 2001
ANNUAL RUNOFF (AC-FT)	266,200		388,000		643,500	
10 PERCENT EXCEEDS	491		667		1,440	
50 PERCENT EXCEEDS	360		374		653	
90 PERCENT EXCEEDS	256		270		320	

a Gage height, 9.88 ft.

b Gage height, 9.16 ft, site and datum then in use, at present datum.

c Backwater from ice.

e Estimated.



06285100 SHOSHONE RIVER NEAR LOVELL, WY—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1967-97, October 1999 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1966 to September 1983.

WATER TEMPERATURES: October 1966 to September 1983.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

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 unfltrd uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	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)	Orthophosphate, water, fltrd, mg/L as P (00671)
OCT 30...	1525	514	669	13.2	105	8.5	1,060	-4.0	0.5	E.03	1.60	E.006	<0.02
FEB 04...	0800	347	663	12.1	96	8.4	1,090	-10.0	0.5	0.04	1.44	0.011	E.01
MAY 29...	1350	223	662	12.7	170	8.8	745	34.5	22.5	<0.04	0.85	0.028	E.01
AUG 05...	1810	481	665	9.2	123	8.6	648	34.5	22.5	<0.04	1.79	0.013	0.05
						E coli, modif. m-TEC, water, col/ 100 mL (90902)	E coli, m-TEC MF, water, col/ 100 mL (31633)	Fecal coli-form, M-FC 0.7u MF col/ 100 mL (31625)					
OCT 30...						--	88	130					
FEB 04...						--	62	57					
MAY 29...						240	--	300					
AUG 05...						350	--	380					

E -- Estimated value

06287000 BIGHORN RIVER NEAR ST. XAVIER, MT

LOCATION.--Lat 45° 19'00", long 107° 55'05", in NW $\frac{1}{4}$ NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 16, T.6 S., R.31 E., Big Horn County, Hydrologic Unit 10080015, on right bank 800 ft downstream from Yellowtail dam, 1,500 ft downstream from Lime Kiln Creek, 14 mi southwest of St. Xavier, and at river mile 83.9.

DRAINAGE AREA.--19,667 mi². Area at site used prior to April 16, 1963, 19,626 mi².

PERIOD OF RECORD.--October 1934 to current year.

GAGE.--Water-stage recorder. Datum of gage is 3,158.38 ft above NGVD of 1929 (levels by U.S. Army Corps of Engineers). Prior to April 16, 1963, and June 13, 1964 to March 31, 1965, water-stage recorder at site 1.2 mi upstream at different datum. April 1, 1965 to July 31, 1966, water-stage recorder at site 1,300 ft downstream at present datum. Bureau of Reclamation data collection platform with satellite telemetry at station.

REMARKS.--Records fair. Figures of discharge given herein are sum of river flow and flow of Bighorn Canal. Some regulation by 14 reservoirs in Wyoming with combined capacity of 1,400,000 acre-ft and complete regulation by Bighorn Lake since November 3, 1965. Diversions for irrigation of about 375,000 acres upstream from station. Station operated and record provided by the Montana District.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,460	1,280	1,330	1,320	1,360	1,310	1,570	1,290	1,300	1,920	1,870	1,880
2	1,460	1,310	1,330	1,330	1,360	1,310	1,570	1,280	1,300	1,930	1,980	1,870
3	1,450	1,290	1,330	1,330	1,370	1,310	1,570	1,270	1,300	1,970	1,990	1,850
4	1,430	1,290	1,340	1,340	1,380	1,320	1,570	1,280	1,370	1,980	1,960	1,820
5	1,430	1,280	1,360	1,350	1,310	1,320	1,580	1,270	1,380	1,980	1,930	1,760
6	1,430	1,280	1,360	1,350	1,330	1,320	1,590	1,270	1,460	1,980	1,930	1,750
7	1,410	1,280	1,370	1,350	1,410	1,310	1,600	1,280	1,510	2,010	1,930	1,740
8	1,450	1,270	1,190	1,360	1,420	1,320	1,310	1,270	1,550	2,050	1,920	1,710
9	1,490	1,280	1,380	1,370	1,430	1,330	1,310	1,270	1,690	2,050	1,920	1,690
10	1,410	1,280	1,380	1,370	1,440	1,330	1,310	1,270	1,750	2,070	1,920	1,670
11	1,310	1,270	1,380	1,370	1,450	1,330	1,310	1,270	1,820	2,070	1,920	1,640
12	1,300	1,270	1,390	1,390	1,460	1,320	1,300	1,260	1,900	2,080	1,910	1,620
13	1,300	1,270	1,400	1,390	1,470	1,330	1,310	1,260	1,920	2,080	1,910	1,600
14	1,290	1,260	1,410	1,380	1,480	1,330	1,300	1,260	1,940	2,080	1,910	1,600
15	1,280	1,260	1,410	1,380	1,490	1,340	1,310	1,260	1,950	2,070	1,900	1,580
16	1,270	1,260	1,420	1,390	1,500	1,330	1,310	1,260	1,950	2,070	1,900	1,570
17	1,450	1,260	1,420	1,400	1,520	1,340	1,310	1,260	1,950	2,080	1,900	1,540
18	1,440	1,250	1,300	1,410	1,530	1,340	1,300	1,260	1,950	2,070	1,890	1,700
19	1,430	1,250	1,320	1,420	1,530	1,340	1,300	1,260	1,950	2,090	1,880	1,830
20	1,420	1,250	1,340	1,420	1,540	1,330	1,290	1,260	1,940	2,090	1,880	1,830
21	1,420	1,260	1,380	1,410	1,560	1,330	1,290	1,250	1,940	2,110	1,870	1,830
22	1,400	1,260	1,410	1,430	1,320	1,540	1,300	1,250	1,930	2,120	1,870	1,810
23	1,380	1,270	1,420	1,290	1,320	1,540	1,300	1,250	1,930	2,120	1,870	1,790
24	1,350	1,280	1,290	1,300	1,310	1,550	1,290	1,250	1,930	2,120	1,860	1,760
25	1,320	1,290	1,290	1,310	1,300	1,550	1,290	1,250	1,940	2,100	1,850	1,730
26	1,300	1,310	1,290	1,320	1,310	1,560	1,290	1,250	1,930	2,100	1,810	1,710
27	1,250	1,300	1,290	1,300	1,310	1,560	1,280	1,250	1,940	2,110	1,890	1,690
28	1,160	1,310	1,290	1,300	1,310	1,560	1,280	1,250	1,940	2,110	1,940	1,680
29	1,150	1,320	1,290	1,310	---	1,560	1,280	1,240	1,940	2,110	1,920	1,670
30	1,120	1,320	1,310	1,340	---	1,570	1,280	1,250	1,920	2,060	1,910	1,660
31	1,190	---	1,310	1,350	---	1,580	---	1,300	---	1,800	1,900	---
TOTAL	41,950	38,360	41,730	42,080	39,520	43,410	40,900	39,150	53,220	63,580	59,040	51,580
MEAN	1,353	1,279	1,346	1,357	1,411	1,400	1,363	1,263	1,774	2,051	1,905	1,719
MAX	1,490	1,320	1,420	1,430	1,560	1,580	1,600	1,300	1,950	2,120	1,990	1,880
MIN	1,120	1,250	1,190	1,290	1,300	1,310	1,280	1,240	1,300	1,800	1,810	1,540
AC-FT	83,210	76,090	82,770	83,470	78,390	86,100	81,130	77,650	105,600	126,100	117,100	102,300

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1935 - 2003, BY WATER YEAR (WY)

MEAN	2,932	2,887	2,703	2,573	2,641	2,888	2,872	3,797	6,978	5,465	2,865	2,709
MAX	5,142	5,151	4,999	5,267	4,384	4,809	6,675	8,744	17,900	18,890	6,784	4,555
(WY)	(1972)	(1983)	(1968)	(1968)	(1976)	(1976)	(1972)	(1947)	(1935)	(1967)	(1997)	(1973)
MIN	1,224	856	1,095	1,090	888	327	678	900	1,078	1,144	1,260	1,074
(WY)	(1978)	(1966)	(1935)	(1935)	(1936)	(1966)	(1966)	(1966)	(1966)	(1960)	(1966)	(1966)

06287000 BIGHORN RIVER NEAR ST. XAVIER, MT—Continued

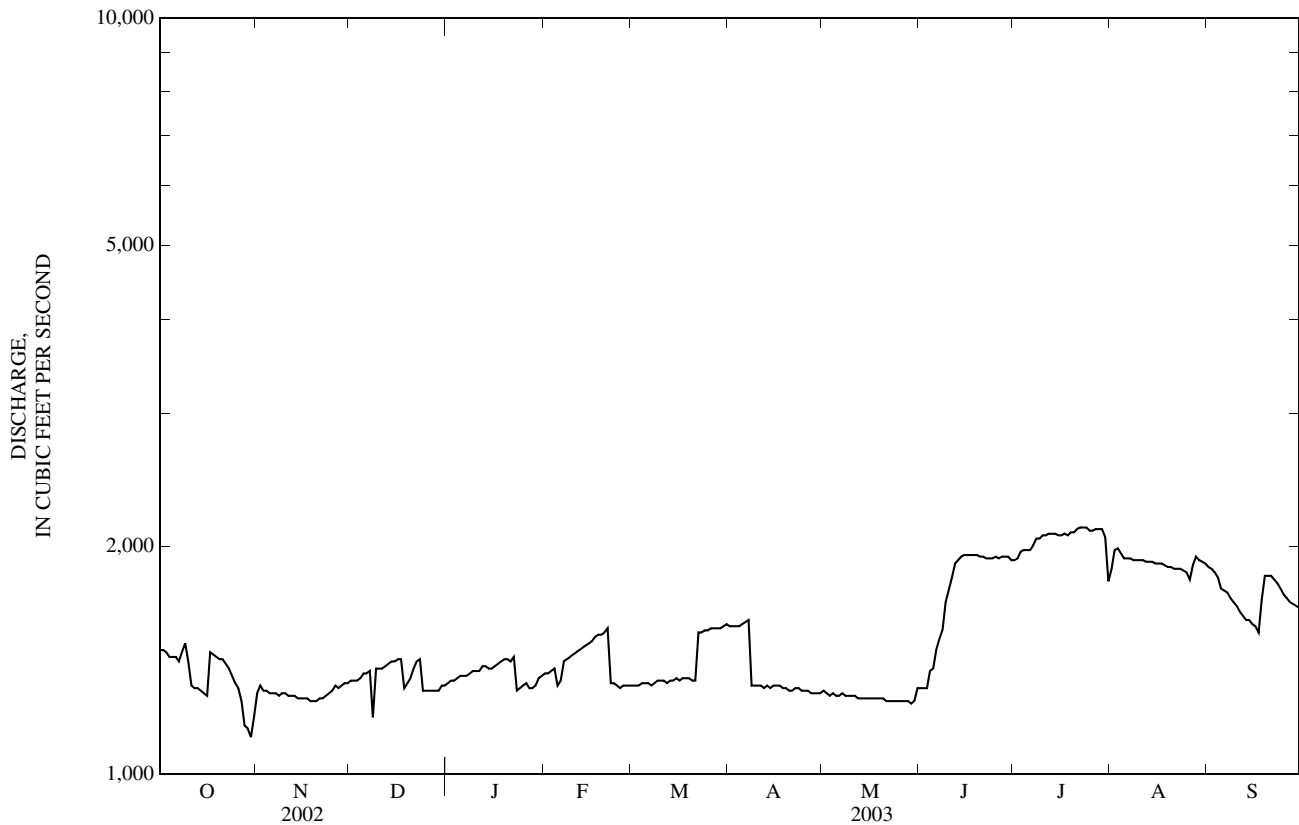
SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1935 - 2003	
ANNUAL TOTAL	529,260		554,520		--	
ANNUAL MEAN	1,450		1,519		3,444	
HIGHEST ANNUAL MEAN	--		--		5,059 1947	
LOWEST ANNUAL MEAN	--		--		1,565 1966	
HIGHEST DAILY MEAN	2,010	Jul 10,11,14,15	2,120	Jul 22-24	37,400	Jun 16, 1935
LOWEST DAILY MEAN	1,120	Oct 30	1,120	Oct 30	112	Apr 2, 1967
ANNUAL SEVEN-DAY MINIMUM	1,180	Jun 28	1,210	Oct 26	195	May 25, 1966
MAXIMUM PEAK FLOW	--		2,220	Aug 25	37,400	Jun 16, 1935
MAXIMUM PEAK STAGE	--		59.98	Nov 26	--	
ANNUAL RUNOFF (AC-FT)	1,050,000		1,100,000		2,495,000	
10 PERCENT EXCEEDS	1,600		1,940		5,760	
50 PERCENT EXCEEDS	1,460		1,380		2,820	
90 PERCENT EXCEEDS	1,270		1,270		1,510	

SUMMARY STATISTICS	WATER YEARS 1935 - 1961*		WATER YEARS 1967 - 2003**	
ANNUAL MEAN	3,426		3,435	
HIGHEST ANNUAL MEAN	5,059	1947	4,839	1999
LOWEST ANNUAL MEAN	1,706	1961	1,650	2002
HIGHEST DAILY MEAN	37,400	Jun 16, 1935	24,800	Jul 6, 1967
LOWEST DAILY MEAN	300	Dec 20, 1951	112	Apr 2, 1967
ANNUAL SEVEN-DAY MINIMUM	656	Dec 25, 1934	518	Mar 25, 1970
MAXIMUM PEAK FLOW	37,400	Jun 19, 1935	25,300	Jul 5, 1967
MAXIMUM PEAK STAGE	228	Dec 9, 1937	112 ^a	Apr 2, 1967
ANNUAL RUNOFF (AC-FT)	2,482,000		2,489,000	
10 PERCENT EXCEEDS	6,640		5,480	
50 PERCENT EXCEEDS	2,450		3,100	
90 PERCENT EXCEEDS	1,370		1,740	

* Prior to construction of Yellowtail Dam.

** After completion of Yellowtail Dam.

a Result of discharge measurements.



06289000 LITTLE BIGHORN RIVER AT STATE LINE, NEAR WYOLA, MT

LOCATION.--Lat 45°00'25", long 107°36'52", in SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec.36, T.9 S., R.33 E., Bighorn County, Hydrologic Unit 10080016, on right bank 20 ft downstream from county bridge, 0.5 mi north of Wyoming-Montana State line, 1 mi downstream from West Fork, 13 mi southwest of Wyola, and at river mile 115.2.

DRAINAGE AREA.--193 mi².

PERIOD OF RECORD.--March 1939 to current year. Prior to October 1940, published as Little Horn River at State Line, near Wyola.

REVISED RECORDS.--WSP 1729: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 4,350 ft above NGVD of 1929, from topographic map.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Diversions for irrigation of 163 acres upstream from station. Station operated and record by the Montana District.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	61	34	53	48	46	e44	60	115	1,020	190	103	87
2	61	37	53	47	46	e44	65	108	792	185	100	84
3	62	42	53	47	45	e44	63	110	587	180	99	83
4	64	58	51	47	46	e44	58	125	493	174	99	83
5	62	63	51	47	43	e45	55	119	440	170	98	83
6	62	60	49	46	36	e43	57	117	412	166	96	83
7	60	59	47	46	33	e39	55	113	389	163	94	83
8	60	58	46	46	45	e30	53	119	369	160	93	83
9	60	57	50	43	44	e28	56	115	370	154	93	86
10	58	56	52	27	49	e35	63	114	385	148	92	87
11	61	55	52	31	49	e50	69	110	395	144	92	86
12	57	53	49	46	45	e48	76	118	387	141	91	86
13	58	53	51	55	45	e48	84	144	379	138	91	86
14	59	53	51	51	46	e48	86	164	364	135	89	84
15	59	53	51	49	44	e48	95	193	347	133	88	83
16	58	52	50	48	43	e49	92	237	341	131	87	82
17	57	52	50	47	43	e49	87	289	332	127	98	83
18	60	52	50	46	43	e49	86	305	320	126	100	82
19	60	52	40	46	43	e49	86	271	309	124	92	81
20	59	52	35	46	43	e49	78	244	297	122	91	80
21	59	52	e35	45	43	52	79	237	285	119	89	80
22	57	52	e35	35	42	52	85	270	268	117	88	80
23	56	55	e30	44	e25	54	94	378	253	114	87	80
24	57	50	31	46	e20	52	115	525	257	112	87	80
25	57	40	30	46	e20	51	125	754	247	113	87	80
26	54	38	35	47	e25	52	148	927	241	113	87	78
27	54	60	63	48	e35	52	128	991	224	112	87	78
28	57	59	63	47	e40	51	118	1,020	211	108	87	78
29	55	57	54	46	---	49	109	1,110	202	106	89	78
30	43	54	51	46	---	51	118	1,120	195	105	87	78
31	38	---	50	46	---	53	---	1,180	---	103	87	---
TOTAL	1,785	1,568	1,461	1,405	1,127	1,452	2,543	11,742	11,111	4,233	2,848	2,465
MEAN	57.6	52.3	47.1	45.3	40.2	46.8	84.8	379	370	137	91.9	82.2
MAX	64	63	63	55	49	54	148	1,180	1,020	190	103	87
MIN	38	34	30	27	20	28	53	108	195	103	87	78
AC-FT	3,540	3,110	2,900	2,790	2,240	2,880	5,040	23,290	22,040	8,400	5,650	4,890

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 2003, BY WATER YEAR (WY)

	MEAN	86.3	75.4	67.7	62.7	61.4	61.5	84.9	324	516	218	123	97.7
MAX	120	104	91.2	84.9	88.0	86.4	172	533	1,125	689	228	151	
(WY)	(1976)	(1942)	(1976)	(1946)	(1946)	(1946)	(1946)	(1977)	(1975)	(1975)	(1975)	(1975)	
MIN	57.6	52.3	46.8	43.6	40.2	46.8	50.7	127	145	94.8	69.8	63.6	
(WY)	(2003)	(2003)	(2002)	(1963)	(2003)	(2003)	(1961)	(1953)	(2001)	(2002)	(1961)	(2001)	

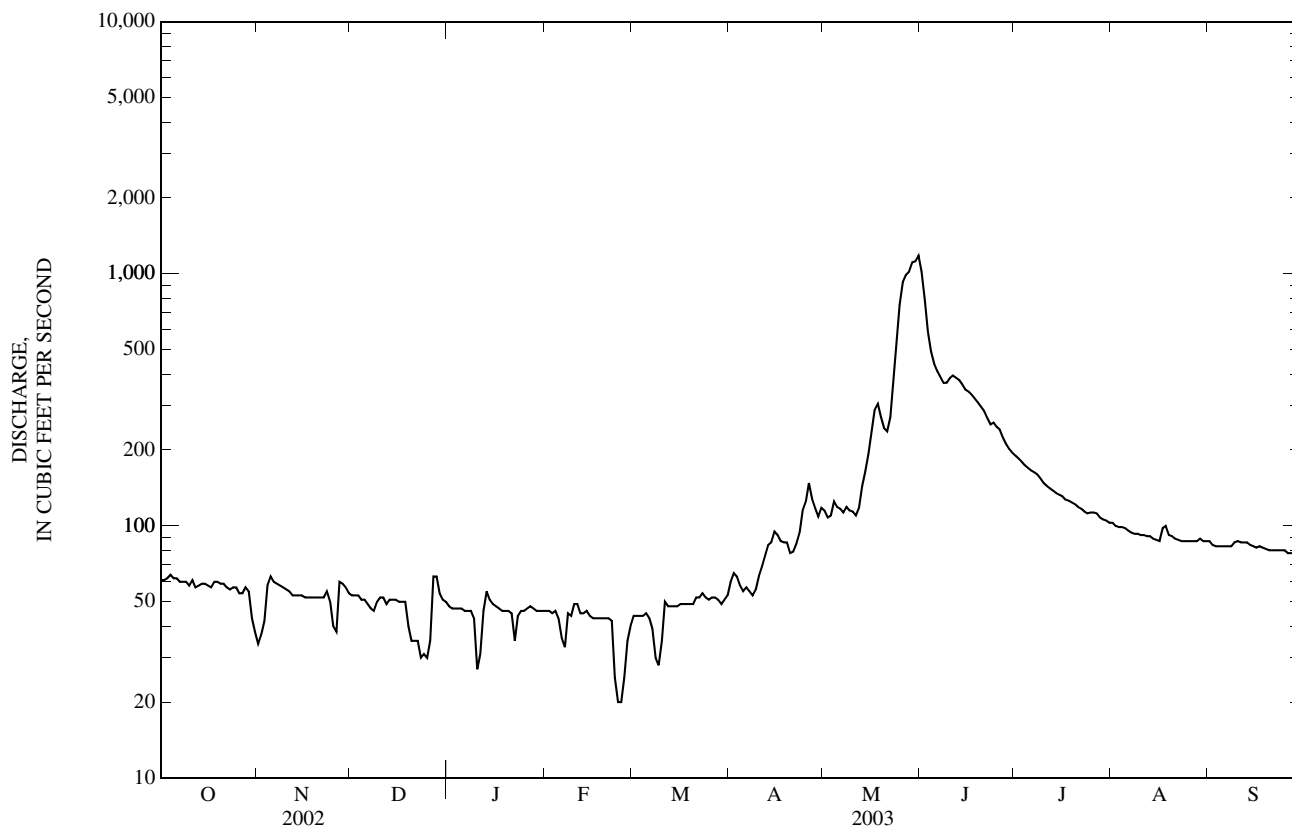
06289000 LITTLE BIGHORN RIVER AT STATE LINE, NEAR WYOLA, MT—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR	FOR 2003 WATER YEAR	WATER YEARS 1940 - 2003
ANNUAL TOTAL	28,558	43,740	--
ANNUAL MEAN	78.2	120	148
HIGHEST ANNUAL MEAN	--	--	253 1975
LOWEST ANNUAL MEAN	--	--	78.7 2002
HIGHEST DAILY MEAN	500 ^e Jun 2	1,180 May 31	2,340 Jun 4, 1944
LOWEST DAILY MEAN	30 Dec 23,25	20 ^e Feb 24,25	18 Feb 2, 1989
ANNUAL SEVEN-DAY MINIMUM	33 Dec 20	30 Feb 20	27 Dec 18, 1983
MAXIMUM PEAK FLOW	--	1,460 May 31	2,730 ^a Jun 3, 1944
MAXIMUM PEAK STAGE	--	3.98 May 31	5.93 ^b Jun 9, 1944
ANNUAL RUNOFF (AC-FT)	56,640	86,760	107,500
10 PERCENT EXCEEDS	150	255	334
50 PERCENT EXCEEDS	58	62	83
90 PERCENT EXCEEDS	45	43	56

a Gage height, 4.97 ft, from rating curve extended above 1,400 ft³/s.

b Result of log jam.

c Estimated.



06289600 WEST PASS CREEK NEAR PARKMAN, WY

LOCATION.--Lat 44° 59' 16", long 107° 28' 56", in NE $\frac{1}{4}$ NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 21, T. 58 N., R. 88 W., Sheridan County, Hydrologic Unit 10080016, on right bank, anchored to concrete headwall of culvert on county road and 7.6 mi northwest of Parkman.

DRAINAGE AREA.--15.4 mi².

PERIOD OF RECORD.--October 1982 to current year (no winter records water years 1985-87).

GAGE.--Water-stage recorder. Elevation of gage is 4,220 ft above NGVD of 1929, from topographic map. Prior to April 2, 1985, at site 100 ft north (on abandoned channel) at datum 4.28 ft lower. April 2, 1985 to March 27, 1986, at site 300 ft upstream at datum 0.95 ft higher. April 2, 1985 to September 30, 1998, at same site at datum 1.00 ft lower. U.S. Geological Survey data collection platform with satellite telemetry at station.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Natural flow of stream affected by diversions for irrigation upstream from station.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.1	e5.6	5.1	4.3	5.2	e5.0	8.2	33	50	15	9.2	6.1
2	6.3	e5.4	5.1	4.3	5.0	e4.8	8.0	22	43	15	9.1	6.0
3	6.3	e5.3	5.1	4.5	4.5	e5.0	7.8	20	37	15	8.9	6.1
4	6.7	5.2	4.6	4.5	4.6	e4.8	7.8	21	33	14	8.6	6.0
5	6.6	5.0	5.0	4.5	4.3	e4.7	8.0	21	31	14	8.5	5.9
6	6.4	4.9	e4.9	4.5	e4.0	e5.0	8.3	22	34	13	8.6	5.9
7	6.1	4.9	e4.8	4.5	e4.6	e5.0	8.5	21	32	13	8.4	6.0
8	5.9	4.9	e4.7	4.7	4.6	e5.0	8.7	25	28	13	8.0	6.1
9	6.0	4.9	e4.8	e4.7	4.9	e5.8	8.6	28	28	13	7.9	5.9
10	6.0	4.9	4.9	e4.3	4.9	e6.0	8.7	29	28	12	7.7	6.1
11	6.3	4.9	4.8	e4.1	5.1	7.0	8.7	33	28	12	7.6	6.1
12	6.0	4.9	e4.8	e4.3	e4.4	6.3	8.7	24	27	12	7.8	6.4
13	5.9	4.9	4.8	e4.4	4.8	13	9.0	25	27	11	8.1	6.2
14	5.9	4.9	4.7	4.6	5.1	15	9.2	28	26	11	7.8	6.2
15	6.0	5.1	4.9	4.5	4.9	8.8	9.8	33	25	11	7.6	5.9
16	6.0	5.0	4.7	e4.4	4.8	7.7	10	36	25	11	7.4	5.8
17	5.7	4.9	4.7	4.5	4.9	9.4	10	37	24	11	8.3	6.6
18	5.7	5.0	4.7	e4.5	4.8	7.4	11	38	23	11	7.7	6.3
19	5.7	5.1	e4.6	4.6	4.8	7.1	12	35	23	11	7.1	6.1
20	5.7	5.1	e4.4	4.7	4.8	7.3	12	31	22	10	7.0	6.0
21	5.7	5.1	e4.5	e4.4	4.8	7.4	12	29	21	10	6.8	6.0
22	5.6	5.2	e4.4	e4.0	4.4	10	12	29	21	10	6.7	6.1
23	5.2	5.6	e4.2	e4.4	e4.1	13	13	34	20	10	6.6	5.9
24	5.3	e5.6	e4.0	e5.0	e3.9	8.2	17	41	22	10	6.7	5.9
25	5.7	e5.2	e4.2	e4.8	e4.1	7.3	15	46	20	10	6.8	5.6
26	5.8	e5.0	e4.3	e4.8	e4.3	7.7	17	49	18	10	6.4	5.6
27	5.6	5.3	e4.4	e4.8	e4.7	8.0	19	53	17	10	6.3	5.7
28	5.7	5.9	e4.4	e4.8	e4.8	7.3	19	53	17	9.9	6.5	5.8
29	5.6	5.6	e4.5	4.8	---	7.0	19	55	16	9.4	6.6	5.9
30	e5.4	5.2	4.3	5.2	---	9.1	33	57	16	9.4	6.4	5.9
31	e6.0	---	4.4	5.2	---	9.2	---	53	---	9.2	6.3	---
TOTAL	182.9	154.5	143.7	141.6	130.1	234.3	359.0	1,061	782	355.9	233.4	180.1
MEAN	5.90	5.15	4.64	4.57	4.65	7.56	12.0	34.2	26.1	11.5	7.53	6.00
MAX	6.7	5.9	5.1	5.2	5.2	15	33	57	50	15	9.2	6.6
MIN	5.2	4.9	4.0	4.0	3.9	4.7	7.8	20	16	9.2	6.3	5.6
AC-FT	363	306	285	281	258	465	712	2,100	1,550	706	463	357

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1983 - 2003, BY WATER YEAR (WY)*

	MEAN	7.62	7.25	6.44	6.24	6.08	7.39	13.1	32.8	24.5	12.7	8.66	7.66
	MAX	9.95	9.30	9.02	8.10	7.98	10.5	25.2	79.9	60.6	26.9	14.9	11.6
	(WY)	(1996)	(1996)	(1996)	(1996)	(1996)	(1997)	(1994)	(1995)	(1995)	(1995)	(1995)	(1995)
	MIN	4.61	4.42	4.64	4.25	4.02	5.64	7.31	13.0	7.82	5.21	4.58	4.63
	(WY)	(2002)	(2002)	(2003)	(1988)	(1989)	(1991)	(2001)	(1985)	(1985)	(1985)	(2001)	(2001)

06289600 WEST PASS CREEK NEAR PARKMAN, WY—Continued

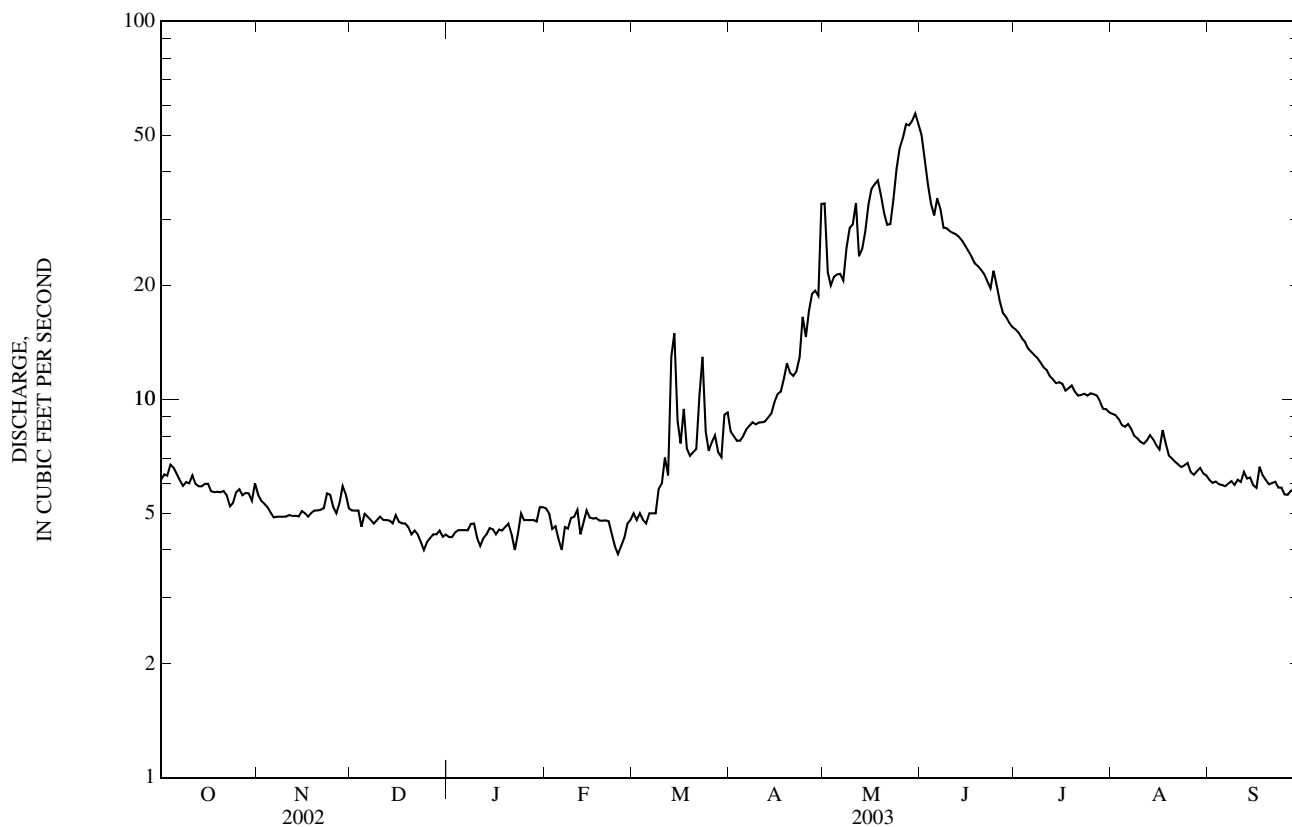
SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1983 - 2003*	
ANNUAL TOTAL	2,578.2		3,958.5		--	
ANNUAL MEAN	7.06		10.8		12.2	
HIGHEST ANNUAL MEAN	--		--		21.2	
LOWEST ANNUAL MEAN	--		--		6.81	
HIGHEST DAILY MEAN	33	May 22	57	May 30	291	May 9, 1995
LOWEST DAILY MEAN	1.6 ^e	Mar 1	3.9 ^e	Feb 24	0.00 ^a	Dec 25, 1998
ANNUAL SEVEN-DAY MINIMUM	3.7	Feb 25	4.3	Dec 22	0.81	Feb 3, 1989
MAXIMUM PEAK FLOW	--		63	May 11	340	May 9, 1995
MAXIMUM PEAK STAGE	--		2.70	May 11	4.76 ^b	Apr 28, 1984
ANNUAL RUNOFF (AC-FT)	5,110		7,850		8,840	
10 PERCENT EXCEEDS	12		26		24	
50 PERCENT EXCEEDS	5.6		6.3		7.9	
90 PERCENT EXCEEDS	4.5		4.5		5.3	

* For period of operation.

a Result of channel blockage or diversion upstream.

b Backwater from ice, site and datum then in use.

e Estimated.



06289820 EAST PASS CREEK NEAR DAYTON, WY

LOCATION.--Lat 44° 59'26", long 107° 25'20", in NE $\frac{1}{4}$ SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 24, T.58 N., R. 88 W., Sheridan County, Hydrologic Unit 10080016, on right bank 0.4 mi downstream from bridge on Sheridan County Road 144, 5.0 mi northwest of Parkman, and 11.2 mi northwest of Dayton.

DRAINAGE AREA.--21.7 mi².

PERIOD OF RECORD.--October 1982 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 4,405 ft above NGVD of 1929, from topographic map. October 1982 to August 1995, at site 270 ft upstream at different datum. August 1995 to April 1996, at site 0.3 mi downstream at different datum. U.S. Geological Survey data collection platform with satellite telemetry at station.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Several small reservoirs upstream from station, combined capacity, 415 acre-ft, for irrigation. Diversions for irrigation of about 2,900 acres upstream from station.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.8	6.0	7.4	6.8	6.9	e6.0	12	30	75	11	3.7	5.3
2	5.3	6.7	7.4	6.7	6.8	e6.3	12	24	64	10	3.4	5.5
3	5.3	6.9	7.3	6.8	6.4	e6.0	12	24	54	9.8	3.2	5.6
4	5.6	6.9	7.0	6.8	5.8	e5.6	12	25	47	9.7	3.0	5.5
5	5.6	6.9	7.1	6.7	e5.4	e6.0	12	26	41	9.6	3.1	5.5
6	5.5	7.0	7.1	6.6	e5.0	e6.0	11	27	42	9.3	3.4	5.4
7	5.1	7.1	7.0	6.6	e5.4	e6.2	11	26	41	11	3.4	5.5
8	5.1	7.1	6.8	6.6	e6.6	e5.8	11	28	37	11	3.3	5.5
9	5.1	7.8	7.0	e6.0	e6.4	e6.6	11	30	38	11	3.2	5.5
10	4.9	8.0	6.9	e4.9	e6.4	e7.5	11	33	39	10	3.2	5.7
11	5.5	7.5	6.8	e5.4	6.2	8.3	11	33	39	10	3.0	5.6
12	5.5	7.4	6.6	e6.4	e6.0	9.2	12	30	37	9.9	3.0	5.9
13	5.3	5.0	6.9	e6.6	e6.0	12	12	36	33	9.8	3.0	5.8
14	5.3	0.84	7.0	6.6	e6.4	16	13	40	29	9.6	3.0	5.6
15	5.2	1.1	7.2	e6.5	6.3	13	14	45	27	9.7	3.2	5.4
16	5.1	1.1	7.2	e6.3	6.2	12	14	50	25	9.6	5.6	5.5
17	5.1	1.1	7.1	6.3	6.3	13	13	48	24	8.8	6.1	6.3
18	5.1	3.1	7.1	e6.0	6.1	12	13	47	22	8.2	5.9	6.0
19	4.9	7.5	e6.0	6.2	6.0	11	13	40	21	8.2	5.4	6.2
20	4.8	7.3	e5.6	6.2	6.0	11	13	36	20	8.0	5.2	6.2
21	5.0	7.1	e6.0	6.0	6.1	10	13	33	17	7.1	5.2	6.1
22	5.9	7.2	e5.8	4.8	e6.0	11	13	31	14	6.8	5.0	6.0
23	5.7	7.8	e5.0	5.6	e6.0	14	15	35	15	6.5	5.0	5.9
24	5.7	6.9	e4.5	e6.0	e5.0	12	19	49	19	6.1	5.0	5.9
25	5.7	e5.5	e4.8	e6.6	e5.6	12	22	66	16	5.1	4.7	6.0
26	5.6	e6.5	e5.1	e7.0	e6.0	12	23	81	15	5.2	4.4	5.8
27	5.7	e7.8	6.6	e7.0	e6.3	11	22	87	15	5.1	4.1	6.0
28	5.9	8.4	6.9	e6.8	e6.0	11	21	85	16	4.6	4.5	6.1
29	5.8	8.2	6.4	6.4	---	11	20	86	13	4.4	5.3	6.1
30	6.0	7.5	6.6	6.8	---	11	25	99	12	4.2	5.4	6.0
31	6.6	---	6.8	6.7	---	12	---	84	---	3.8	5.4	---
TOTAL	167.7	185.24	203.0	196.7	169.6	306.5	436	1,414	907	253.1	130.3	173.4
MEAN	5.41	6.17	6.55	6.35	6.06	9.89	14.5	45.6	30.2	8.16	4.20	5.78
MAX	6.6	8.4	7.4	7.0	6.9	16	25	99	75	11	6.1	6.3
MIN	4.8	0.84	4.5	4.8	5.0	5.6	11	24	12	3.8	3.0	5.3
AC-FT	333	367	403	390	336	608	865	2,800	1,800	502	258	344

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1983 - 2003, BY WATER YEAR (WY)

MEAN	8.62	8.77	8.33	8.46	8.40	9.79	16.3	42.9	34.7	12.7	7.08	7.14
MAX	13.9	11.4	10.5	10.5	10.6	14.2	32.4	90.8	82.8	32.9	14.8	14.8
(WY)	(1996)	(1996)	(1996)	(1996)	(1996)	(1997)	(1994)	(1995)	(1995)	(1992)	(1993)	(1995)
MIN	5.41	6.17	6.55	6.35	6.06	7.29	9.30	15.2	6.65	5.06	2.73	3.92
(WY)	(2003)	(2003)	(2003)	(2003)	(2003)	(1990)	(1992)	(1985)	(1985)	(1985)	(1988)	(2002)

06289820 EAST PASS CREEK NEAR DAYTON, WY—Continued

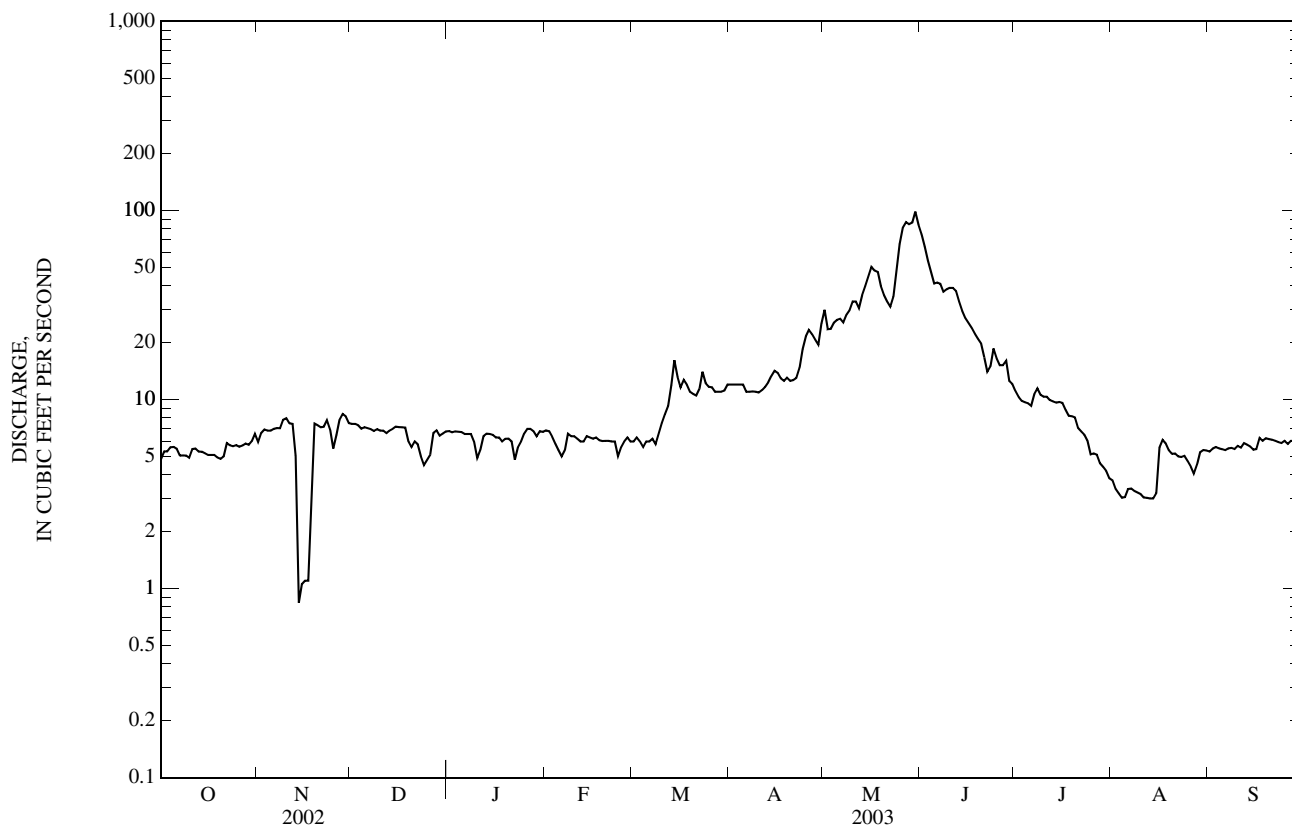
SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1983 - 2003	
ANNUAL TOTAL	2,706.34		4,542.54		--	
ANNUAL MEAN	7.41		12.4		14.5	
HIGHEST ANNUAL MEAN	--		--		23.6	
LOWEST ANNUAL MEAN	--		--		7.54	
HIGHEST DAILY MEAN	31	May 22	99	May 30	304	May 9, 1995
LOWEST DAILY MEAN	0.84 ^a	Nov 14	0.84 ^a	Nov 14	0.84 ^a	Nov 14, 2002
ANNUAL SEVEN-DAY MINIMUM	1.9	Sep 10	2.8	Nov 12	1.9	Sep 10, 2002
MAXIMUM PEAK FLOW	--		106		511 ^b	
MAXIMUM PEAK STAGE	--		6.43		9.00 ^c	
ANNUAL RUNOFF (AC-FT)	5,370		9,010		10,470	
10 PERCENT EXCEEDS	10		30		28	
50 PERCENT EXCEEDS	6.9		6.8		9.1	
90 PERCENT EXCEEDS	3.9		5.0		5.8	

a The result of pumping upstream.

b Gage height, 4.47 ft, site and datum then in use, from rating curve extended above 221 ft³/s.

c Ice jam, site and datum then in use.

e Estimated.



06290000 PASS CREEK NEAR WYOLA, MT

LOCATION.--Lat 45° 03' 23", long 107° 21' 19", in NE $\frac{1}{4}$ NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 13, T.9S., R.35E., Big Horn County, Hydrologic Unit 10080016, on right bank 125 ft downstream from bridge on U.S. Highway 87, 2.0 mi downstream from Twin Creek, 5.5 mi south of Wyola, and at river mile 10.2.

DRAINAGE AREA.--111 mi². Drainage area at site used prior to September 30, 1956 119 mi².

PERIOD OF RECORD.--June 1935 to September 1956 (no winter records prior to 1939), October 1982 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 3,920 ft above NGVD of 1929, from topographic map. December 21, 1950 to September 30, 1956, water-stage recorder, and June 4, 1935 to December 20, 1950, nonrecording gage at site 0.3 mi upstream at different datum. Flow is equivalent. U.S. Geological Survey data collection platform with satellite telemetry at station.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Diversions for irrigation of about 2,500 acres upstream of station. Several observations of water temperature and specific conductance were made during the year. Station operated and record provided by the Montana District.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	e6.0	12	e9.0	e12	e10	47	182	167	31	e3.5	e7.0
2	11	8.1	12	e9.0	e11	e10	41	164	150	30	e3.5	e7.0
3	11	9.9	12	e9.0	e10	e10	38	101	133	28	e3.5	e7.0
4	10	11	9.5	e9.0	e10	e10	34	81	116	26	e3.0	e7.0
5	10	11	8.8	e9.0	e9.0	e10	31	79	97	24	e3.0	e7.0
6	9.2	11	8.6	e9.0	e8.0	e10	30	78	96	22	e3.0	e7.0
7	9.9	11	9.7	e9.0	e9.0	e9.0	29	77	134	21	e3.0	e7.0
8	9.7	11	9.1	e9.0	e10	e8.0	28	93	119	23	e3.0	e7.0
9	9.7	10	9.1	e9.0	e11	e9.0	27	132	94	22	e3.0	e7.0
10	9.4	11	9.7	e7.0	e11	e12	26	187	90	22	e3.0	e8.0
11	10	11	9.3	e8.0	e11	e20	26	218	86	21	e3.0	e9.0
12	14	10	8.0	e10	e11	e40	26	215	78	21	e3.0	e10
13	11	10	9.2	e10	e11	e80	27	135	71	19	e3.0	e10
14	10	8.7	9.0	e10	e11	e150	29	131	64	18	e3.0	e10
15	9.3	9.4	9.1	e10	e11	e200	30	136	59	15	e5.0	e10
16	9.2	9.8	8.3	e10	e12	160	32	143	58	15	e7.0	e10
17	9.2	9.7	7.5	e10	e15	82	31	144	54	16	e8.0	e11
18	9.4	e10	7.4	e10	e14	79	31	142	50	12	e9.0	e12
19	9.6	9.9	6.1	e10	e12	56	37	140	48	13	e8.0	e13
20	9.7	10	5.5	e10	e11	48	36	126	50	12	e7.0	e12
21	9.4	9.7	e5.0	e8.0	e10	43	33	110	46	11	e7.0	e12
22	12	9.6	e5.0	e6.0	e8.0	49	32	101	43	9.2	e7.0	e12
23	12	12	e5.0	e7.0	e6.0	99	33	104	41	9.3	e7.0	e12
24	12	12	e5.0	e8.0	e4.0	86	51	124	53	7.9	e7.0	e12
25	12	6.6	e4.5	e10	e6.0	55	49	146	59	7.2	e7.0	e12
26	13	4.9	e6.0	e12	e8.0	45	46	163	50	5.8	e7.0	e12
27	12	7.1	e7.0	e12	e9.0	44	48	170	46	7.0	e6.0	e12
28	13	9.6	e8.0	e11	e10	42	47	167	43	6.1	e6.0	e12
29	13	11	e8.0	e11	---	36	46	164	40	5.3	e7.0	e12
30	e9.0	11	e8.0	e12	---	34	57	180	34	3.9	e7.0	e12
31	e8.0	---	e8.0	e12	---	45	---	174	---	3.7	e7.0	---
TOTAL	327.7	292.0	249.4	295.0	281.0	1,591.0	1,078	4,307	2,269	487.4	162.5	298.0
MEAN	10.6	9.73	8.05	9.52	10.0	51.3	35.9	139	75.6	15.7	5.24	9.93
MAX	14	12	12	12	15	200	57	218	167	31	9.0	13
MIN	8.0	4.9	4.5	6.0	4.0	8.0	26	77	34	3.7	3.0	7.0
AC-FT	650	579	495	585	557	3,160	2,140	8,540	4,500	967	322	591

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 2003, BY WATER YEAR (WY)*

	MEAN	17.4	18.4	16.6	17.9	25.1	38.9	51.5	101	88.0	29.3	13.0	13.4
MAX		27.8	27.9	33.6	32.3	57.8	115	106	324	375	92.6	38.5	29.1
(WY)		(1945)	(1946)	(1943)	(1984)	(1948)	(1947)	(1994)	(1984)	(1944)	(1944)	(1944)	(1944)
MIN		5.73	9.55	5.73	6.55	9.86	8.81	20.3	31.1	16.6	5.91	1.86	1.67
(WY)		(1955)	(2002)	(2002)	(2001)	(2002)	(2002)	(1992)	(1985)	(1985)	(1985)	(1940)	(2001)

06290000 PASS CREEK NEAR WYOLA, MT—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR	FOR 2003 WATER YEAR	WATER YEARS 1939 - 2003*
ANNUAL TOTAL	5,018.69	11,638.0	--
ANNUAL MEAN	13.70	31.9	35.9
HIGHEST ANNUAL MEAN	--	--	76.8 1944
LOWEST ANNUAL MEAN	--	--	13.6 2002
HIGHEST DAILY MEAN	90 ^e Apr 7	218 May 11	1,120 Jun 20, 1947
LOWEST DAILY MEAN	0.00 Sep 1-7	3.0 Aug 4-14	0.00 Sep 1-7, 2002
ANNUAL SEVEN-DAY MINIMUM	0.00 Sep 1	3.0 Aug 4	0.00 Sep 1, 2002
MAXIMUM PEAK FLOW	--	344 ^a May 12	1,150 ^b Jun 4, 1944
MAXIMUM PEAK STAGE	--	4.72 ^c Mar 14	6.96 May 9, 1995
ANNUAL RUNOFF (AC-FT)	9,950	23,080	26,020
10 PERCENT EXCEEDS	27	98	78
50 PERCENT EXCEEDS	9.7	11	21
90 PERCENT EXCEEDS	4.3	6.4	8.0

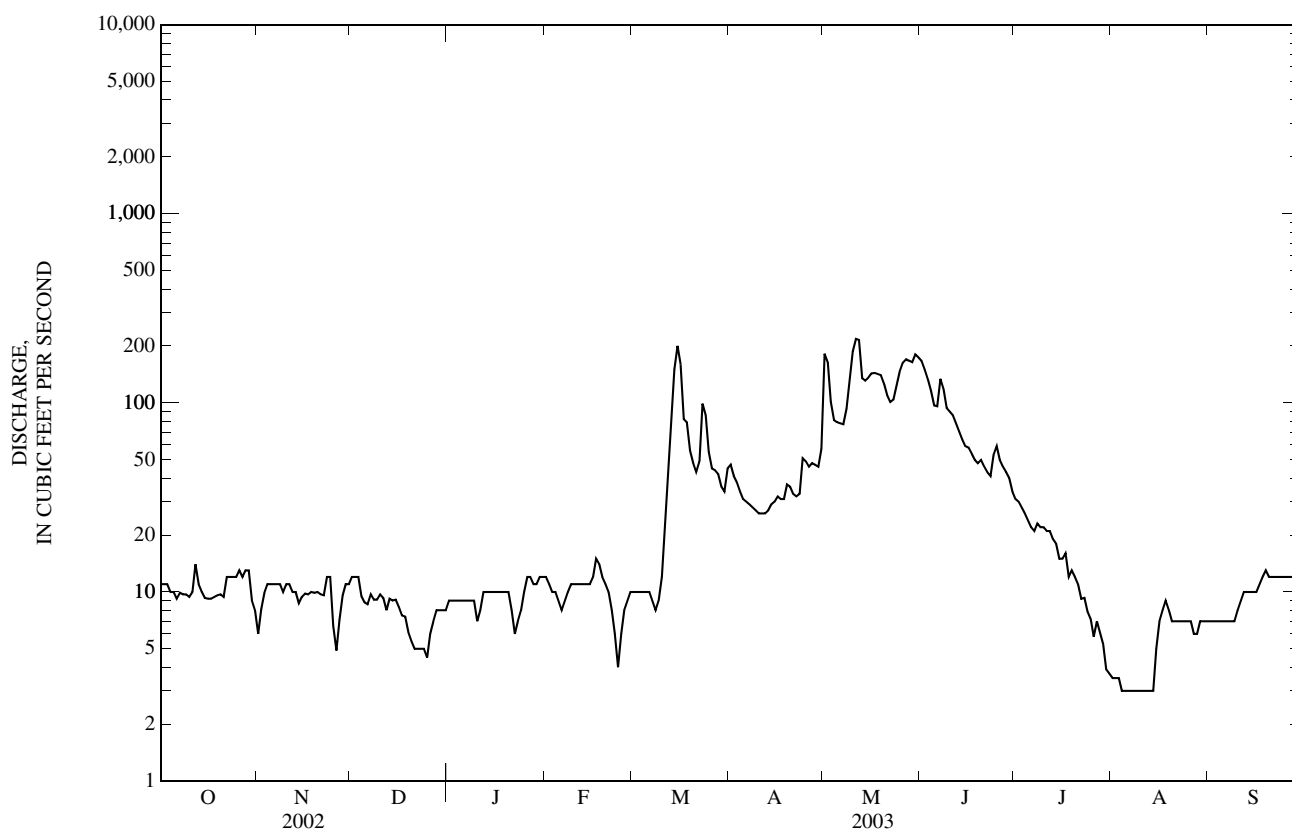
* For period of operation.

a Gage height, 3.88 ft

b Gage height, 4.83 ft, from rating extended above 400 ft³/s.

c Backwater from ice.

e Estimated.



YELLOWSTONE RIVER BASIN

06297500 HIGHLINE DITCH NEAR DAYTON, WY

LOCATION.--Lat 44° 51' 11", long 107° 18' 14", in NE $\frac{1}{4}$ SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 2, T.56 N., R87 W., Sheridan County, Hydrologic Unit 10090101, on right bank 0.8 mi downstream from diversion from Tongue River and 2.3 mi southwest of Dayton.

PERIOD OF RECORD.--April 1941 to current year (no winter records).

GAGE.--Water-stage recorder. Elevation of gage is 4,100 ft above NGVD of 1929, from topographic map.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Flow diverted from Tongue River for irrigation. Prior to water year 2002, figures for this station were included in 06298000 Tongue River near Dayton, WY.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	e0.00	0.37	25	11	22	12
2	---	---	---	---	---	---	e0.00	1.1	24	11	22	12
3	---	---	---	---	---	---	e0.00	1.1	23	11	22	12
4	---	---	---	---	---	---	e0.00	1.1	23	11	22	12
5	---	---	---	---	---	---	e0.00	5.1	23	11	22	12
6	---	---	---	---	---	---	e0.00	8.3	23	11	22	12
7	---	---	---	---	---	---	e0.00	8.3	23	11	22	12
8	---	---	---	---	---	---	e0.00	3.8	22	7.9	22	12
9	---	---	---	---	---	---	e0.00	0.09	22	16	22	13
10	---	---	---	---	---	---	e0.00	0.05	22	17	22	13
11	---	---	---	---	---	---	e0.00	0.05	22	21	21	13
12	---	---	---	---	---	---	e4.0	0.04	22	21	21	10
13	---	---	---	---	---	---	e6.5	0.04	22	21	21	4.4
14	---	---	---	---	---	---	e6.5	0.02	22	21	21	4.3
15	---	---	---	---	---	---	e6.5	3.3	22	21	21	4.4
16	---	---	---	---	---	---	e6.5	5.9	21	21	17	4.3
17	---	---	---	---	---	---	e6.5	6.1	22	21	12	4.2
18	---	---	---	---	---	---	e6.5	6.1	21	21	12	4.2
19	---	---	---	---	---	---	e6.5	5.8	21	18	12	4.3
20	---	---	---	---	---	---	e6.5	5.7	21	15	12	4.4
21	---	---	---	---	---	---	e10	5.6	21	19	12	4.4
22	---	---	---	---	---	---	e12	5.7	21	22	12	4.4
23	---	---	---	---	---	---	e14	8.7	21	22	12	4.4
24	---	---	---	---	---	---	e16	10	11	22	12	4.5
25	---	---	---	---	---	---	e16	11	14	22	12	4.5
26	---	---	---	---	---	---	e16	11	19	22	12	4.5
27	---	---	---	---	---	---	e16	10	14	22	12	2.4
28	---	---	---	---	---	---	e16	16	11	21	12	1.1
29	---	---	---	---	---	---	16	24	11	22	12	1.1
30	---	---	---	---	---	---	10	25	11	22	12	1.1
31	---	---	---	---	---	---	---	25	---	22	12	---
TOTAL	---	---	---	---	---	---	198.00	214.36	600	556.9	522	211.9
MEAN	---	---	---	---	---	---	6.60	6.91	20.0	18.0	16.8	7.06
MAX	---	---	---	---	---	---	16	25	25	22	22	13
MIN	---	---	---	---	---	---	0.00	0.02	11	7.9	12	1.1
AC-FT	---	---	---	---	---	---	393	425	1,190	1,100	1,040	420

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1920 - 2003, BY WATER YEAR (WY)*

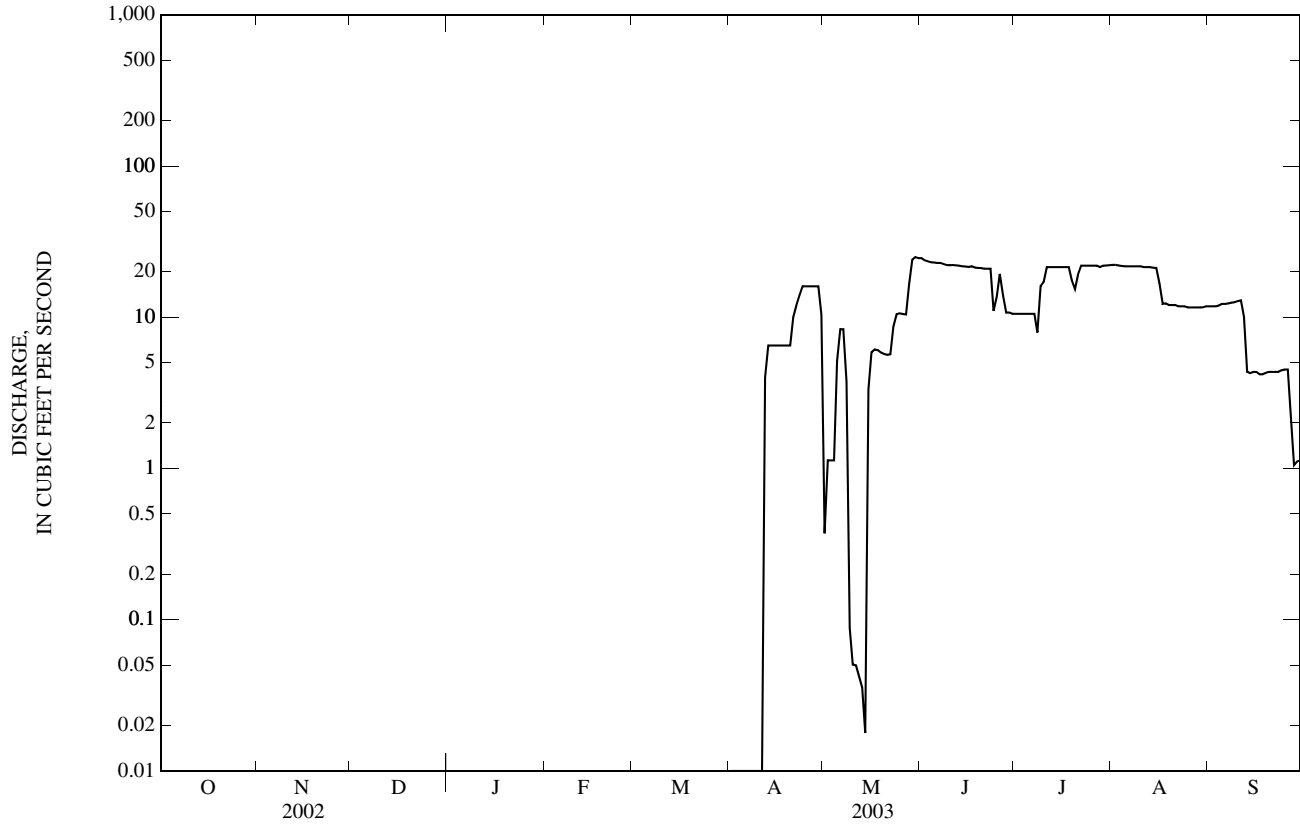
MEAN	5.44	0.29	0.000	0.000	0.000	0.000	0.42	7.03	17.2	19.3	19.6	14.8
MAX	20.7	5.00	0.000	0.000	0.000	0.007	8.59	27.2	30.5	30.9	27.6	23.7
(WY)	(1955)	(1944)	(1921)	(1921)	(1921)	(1989)	(1981)	(1998)	(1996)	(1996)	(1983)	(1952)
MIN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	2.82	8.33	3.16
(WY)	(1921)	(1921)	(1921)	(1921)	(1921)	(1921)	(1922)	(1922)	(1957)	(1992)	(1923)	(1923)

06297500 HIGHLINE DITCH NEAR DAYTON, WY—Continued

SUMMARY STATISTICS

FOR 2003 WATER YEAR*

WATER YEARS 1920 - 2003*

HIGHEST DAILY MEAN
LOWEST DAILY MEAN25 May 30-Jun 1
0.00^e Apr 1-1135. Jun 13, 1979
0.00 Many days,
each year* For period of operation.
e Estimated.

06298000 TONGUE RIVER NEAR DAYTON, WY

LOCATION.--Lat 44° 50'58", long 107° 18'14", in NE $\frac{1}{4}$ NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.11, T.56 N., R.87 W., Sheridan County, Hydrologic Unit 10090101, on left bank 0.5 mi upstream from Crystal Draw, 0.6 mi downstream from intake of Highline Ditch, and 2.5 mi southwest of Dayton.

DRAINAGE AREA.--206 mi².

PERIOD OF RECORD.--October 1918 to September 1929, October 1940 to current year. Monthly discharge only for some periods, published in WSP 1309.

REVISED RECORDS.--WSP 1309: 1921.

GAGE.--Water-stage recorder. Elevation of gage is 4,060 ft above NGVD of 1929, from topographic map. U.S. Geological Survey data collection platform with satellite telemetry at station.

REMARKS.--Records good. Small diversion upstream from station for Dayton municipal supply. Prior to water year 2002, figures of adjustments for diversion by Highline Ditch near Dayton were included with this station.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

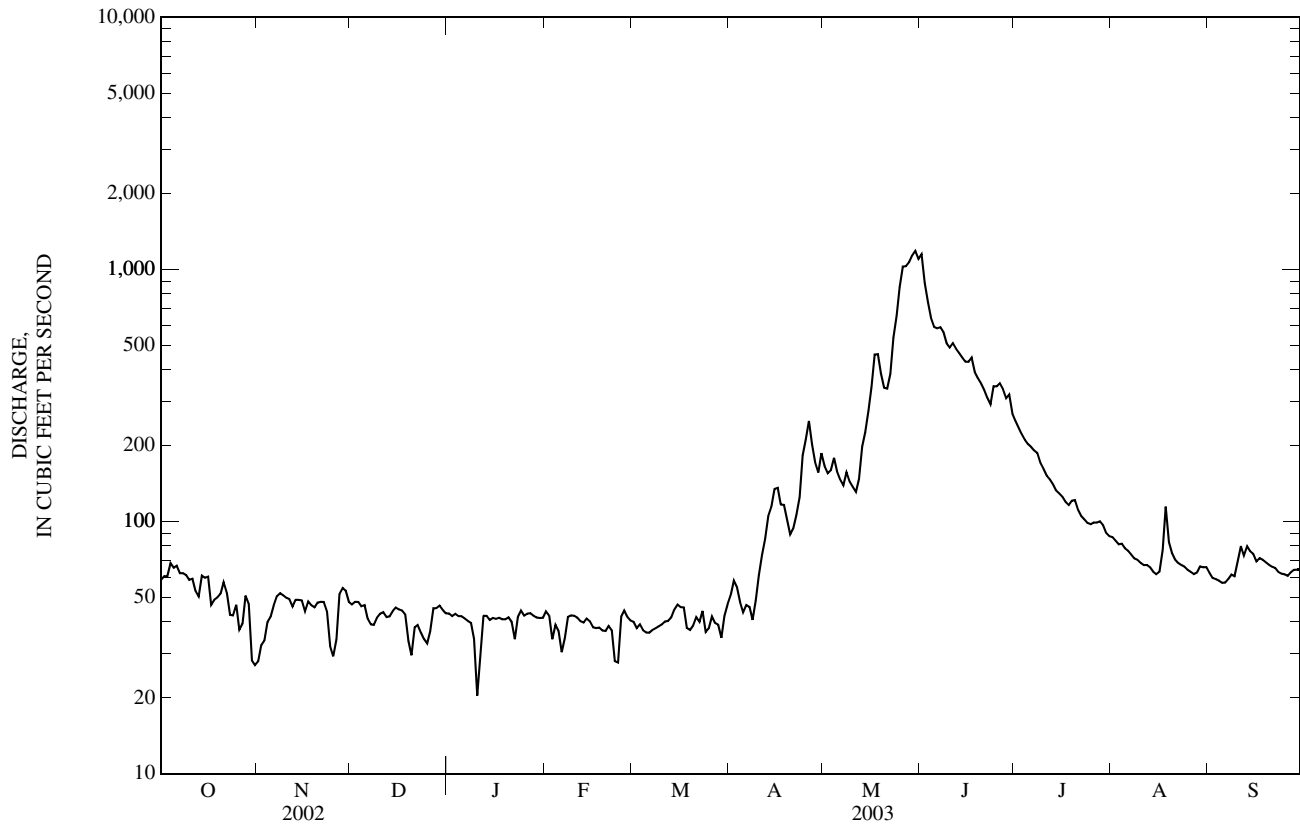
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	59	28	47	43	44	40	51	166	1,150	251	87	62
2	61	32	48	42	42	38	58	156	883	236	84	60
3	61	34	48	43	34	39	55	160	742	222	81	59
4	68	40	46	42	39	37	48	179	643	211	82	58
5	66	42	47	42	37	36	44	158	592	203	78	57
6	67	46	41	41	30	36	47	147	584	198	77	57
7	62	51	39	40	35	37	46	139	590	191	74	59
8	62	52	39	40	42	38	41	157	565	187	71	62
9	61	51	42	34	42	38	49	144	509	170	70	61
10	59	50	43	20	42	39	61	137	490	162	68	69
11	59	49	44	30	42	40	74	131	510	152	67	80
12	53	46	42	42	40	40	85	148	484	147	67	73
13	50	49	42	42	40	42	105	198	466	140	66	80
14	61	49	44	41	41	45	114	226	447	133	63	76
15	60	49	46	41	40	47	135	275	431	129	62	74
16	60	44	45	41	38	46	136	341	430	125	63	70
17	47	48	44	42	38	46	117	460	447	120	77	72
18	49	47	43	41	38	38	117	461	391	116	115	71
19	50	46	34	41	37	37	102	387	371	121	83	69
20	52	48	29	42	37	39	89	339	353	122	75	67
21	57	48	38	40	39	42	94	337	333	112	71	66
22	52	48	39	34	37	40	106	386	310	105	69	65
23	43	44	36	42	28	44	125	536	292	102	67	63
24	42	32	34	44	28	36	183	654	344	99	66	62
25	47	29	33	42	42	38	213	850	344	98	64	62
26	37	34	37	43	44	42	251	1,030	354	99	63	61
27	39	52	45	43	42	40	202	1,030	335	99	62	63
28	51	54	45	42	41	39	172	1,070	308	100	63	64
29	47	53	46	42	---	35	157	1,140	319	97	66	64
30	28	48	45	41	---	42	187	1,190	268	90	66	64
31	27	---	43	42	---	47	---	1,100	---	88	66	---
TOTAL	1,637	1,343	1,294	1,245	1,079	1,243	3,264	13,832	14,285	4,425	2,233	1,970
MEAN	52.8	44.8	41.7	40.2	38.5	40.1	109	446	476	143	72.0	65.7
MAX	68	54	48	44	44	47	251	1,190	1,150	251	115	80
MIN	27	28	29	20	28	35	41	131	268	88	62	57
AC-FT	3,250	2,660	2,570	2,470	2,140	2,470	6,470	27,440	28,330	8,780	4,430	3,910

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1919 - 2003, BY WATER YEAR (WY)

	MEAN	81.6	67.4	60.6	55.5	52.2	51.5	108	517	690	239	110	83.9
MAX	284	155	108	88.9	80.8	72.0	354	1,048	1,482	767	244	163	
(WY)	(1924)	(1924)	(1924)	(1924)	(1924)	(1924)	(1926)	(1926)	(1978)	(1975)	(1927)	(1968)	
MIN	49.6	41.1	38.0	36.1	34.1	37.5	44.2	212	138	68.1	45.5	42.8	
(WY)	(1955)	(1941)	(2002)	(1941)	(1941)	(2002)	(1975)	(2002)	(2001)	(2001)	(2001)	(1966)	

06298000 TONGUE RIVER NEAR DAYTON, WY—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1919 - 2003	
ANNUAL TOTAL	30,605		47,850		--	
ANNUAL MEAN	83.8		131		178	
HIGHEST ANNUAL MEAN	--		--		316	1924
LOWEST ANNUAL MEAN	--		--		82.0	2001
HIGHEST DAILY MEAN	556	Jun 1	1,190	May 30	2,590	Jun 5, 1968
LOWEST DAILY MEAN	25	Feb 25	20	Jan 10	18	Nov 29, 1919
ANNUAL SEVEN-DAY MINIMUM	33	Oct 30	33	Oct 30	31	Nov 9, 1940
MAXIMUM PEAK FLOW	--		1,490	May 30	3,400	Jun 3, 1944
MAXIMUM PEAK STAGE	--		4.62	May 30	6.45	Jun 3, 1944
ANNUAL RUNOFF (AC-FT)	60,710		94,910		128,700	
10 PERCENT EXCEEDS	189		342		475	
50 PERCENT EXCEEDS	49		59		73	
90 PERCENT EXCEEDS	36		38		48	



YELLOWSTONE RIVER BASIN

06299500 WOLF CREEK AT WOLF, WY

LOCATION.--Lat 44° 46'21", long 107° 14'01", in NE¹/₄ SW¹/₄ NW¹/₄ sec.4, T.55 N., R.86 W., Sheridan County, Hydrologic Unit 10090101, on left bank at Wolf and 0.5 mi downstream from Red Canyon Creek.

DRAINAGE AREA.--37.8 mi².

PERIOD OF RECORD.--January 1945 to current year (no winter records since 1971). Monthly discharge for January to March 1945, published in WSP 1309.

GAGE.--Water-stage recorder. Elevation of gage is 4,525 ft above NGVD of 1929, from topographic map. Prior to May 26, 1945, nonrecording gage at same site and datum.

REMARKS.--Records good. No diversion upstream from station. Result of discharge measurement, in cubic feet per second, made during the period when station was not in operation is given below:

Oct. 7 . . . 7.08

COOPERATION.--Station operated and record provided by the Wyoming State Engineer's Office; record reviewed by the Geological Survey.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	9.0	39	296	62	19	9.1
2	---	---	---	---	---	---	11	37	251	61	18	8.3
3	---	---	---	---	---	---	11	37	216	58	17	8.2
4	---	---	---	---	---	---	8.5	38	178	56	17	7.8
5	---	---	---	---	---	---	7.3	37	156	53	16	7.5
6	---	---	---	---	---	---	6.8	36	147	52	15	7.5
7	---	---	---	---	---	---	6.4	35	146	50	15	7.9
8	---	---	---	---	---	---	6.2	36	142	48	14	9.5
9	---	---	---	---	---	---	7.0	33	135	46	14	8.6
10	---	---	---	---	---	---	11	33	133	44	13	12
11	---	---	---	---	---	---	14	32	131	42	13	14
12	---	---	---	---	---	---	17	33	127	40	13	12
13	---	---	---	---	---	---	20	41	124	38	12	11
14	---	---	---	---	---	---	22	49	117	36	12	11
15	---	---	---	---	---	---	26	57	109	35	11	10
16	---	---	---	---	---	---	26	66	109	33	10	9.1
17	---	---	---	---	---	---	24	78	109	31	12	9.5
18	---	---	---	---	---	---	23	87	92	31	21	9.3
19	---	---	---	---	---	---	20	82	85	30	13	8.9
20	---	---	---	---	---	---	19	80	80	29	12	8.7
21	---	---	---	---	---	---	20	82	73	27	11	8.1
22	---	---	---	---	---	---	22	94	68	26	10	7.9
23	---	---	---	---	---	---	27	121	64	25	9.7	7.5
24	---	---	---	---	---	---	33	154	72	24	9.7	7.5
25	---	---	---	---	---	---	36	189	71	24	9.3	7.5
26	---	---	---	---	---	---	40	230	77	24	8.8	7.4
27	---	---	---	---	---	---	40	259	80	24	8.7	7.4
28	---	---	---	---	---	---	38	278	83	22	8.8	7.2
29	---	---	---	---	---	---	36	297	78	21	9.6	7.3
30	---	---	---	---	---	---	40	292	65	20	9.8	7.5
31	---	---	---	---	---	---	---	294	---	20	9.9	---
TOTAL	---	---	---	---	---	---	627.2	3,256	3,614	1,132	392.3	265.2
MEAN	---	---	---	---	---	---	20.9	105	120	36.5	12.7	8.84
MAX	---	---	---	---	---	---	40	297	296	62	21	14
MIN	---	---	---	---	---	---	6.2	32	64	20	8.7	7.2
AC-FT	---	---	---	---	---	---	1,240	6,460	7,170	2,250	778	526

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1946 - 2003, BY WATER YEAR (WY)*

MEAN	8.77	6.98	5.69	4.73	4.48	4.96	14.2	94.5	129	36.6	14.7	9.94
MAX	14.2	9.97	7.46	6.07	5.64	9.27	37.4	179	287	95.2	30.8	23.0
(WY)	(1969)	(1952)	(1969)	(1962)	(1962)	(1972)	(1994)	(1978)	(1975)	(1975)	(1951)	(1968)
MIN	6.46	5.73	3.83	2.80	3.15	3.65	6.39	25.1	18.9	10.3	5.54	5.29
(WY)	(1957)	(1961)	(1950)	(1950)	(1957)	(1957)	(1958)	(2001)	(2001)	(2001)	(2001)	(2001)

06299500 WOLF CREEK AT WOLF, WY—Continued

SUMMARY STATISTICS

FOR 2003 WATER YEAR*

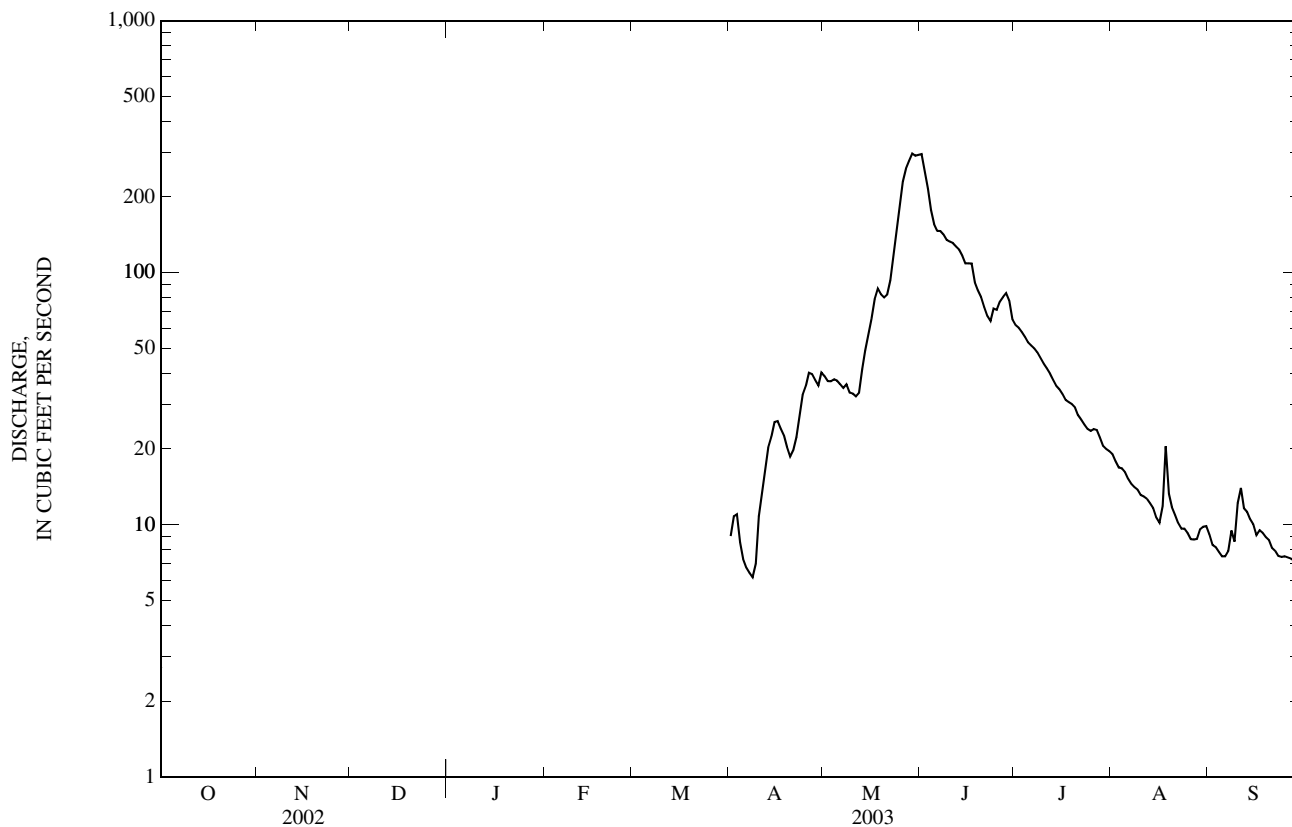
WATER YEARS 1946 - 2003*

ANNUAL MEAN
HIGHEST ANNUAL MEAN
LOWEST ANNUAL MEAN
HIGHEST DAILY MEAN
LOWEST DAILY MEAN
MAXIMUM PEAK FLOW
MAXIMUM PEAK STAGE
ANNUAL RUNOFF (AC-FT)

--
--
--
297 May 29
6.2 Apr 8
351 May 29
3.03 May 29
--

29.3
45.0 1964
13.8 1960
601 Jun 9, 1964
1.8 Feb 26, 1947
1,130^a Jun 15, 1963
4.60 Jun 15, 1963
21,220

* For period of operation.

a From rating curve extended above 500 ft³/s.

06301480 CONEY CREEK ABOVE TWIN LAKES, NEAR BIG HORN, WY

LOCATION.--Lat 44° 36'05", long 107° 19'01", unsurveyed, Sheridan County, Hydrologic Unit 10090101, Bighorn National Forest, 0.2 mi upstream from Twin Lakes, and 17.0 mi southwest of Big Horn.

DRAINAGE AREA.--3.41 mi².

PERIOD OF RECORD.--October 1990 to current year (no winter records 1993 to 1996, 1998-2003).

GAGE.--Water-stage recorder. Elevation of gage is 8,690 ft above NGVD of 1929, from topographic map. U.S. Geological Survey data collection platform with satellite telemetry at station.

REMARKS.--Records good. No diversion upstream from station. Result of discharge measurement, in cubic feet per second, made when station was not in operation, is given below:

Oct. 3 . . . 0.35

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	4.7	97	13	1.5	0.14
2	---	---	---	---	---	---	---	3.2	56	12	1.3	0.13
3	---	---	---	---	---	---	---	3.0	37	10	1.2	0.12
4	---	---	---	---	---	---	---	2.9	29	8.6	1.1	0.11
5	---	---	---	---	---	---	---	2.7	22	7.5	0.95	0.11
6	---	---	---	---	---	---	---	2.8	18	6.9	0.85	0.11
7	---	---	---	---	---	---	---	3.5	16	6.7	0.70	0.15
8	---	---	---	---	---	---	---	4.9	15	6.2	0.61	0.15
9	---	---	---	---	---	---	---	3.0	19	5.8	0.57	0.15
10	---	---	---	---	---	---	---	2.5	28	5.4	0.46	0.33
11	---	---	---	---	---	---	---	2.0	36	5.0	0.35	0.45
12	---	---	---	---	---	---	---	1.9	33	4.5	0.32	0.89
13	---	---	---	---	---	---	---	2.0	31	4.0	0.30	1.3
14	---	---	---	---	---	---	---	2.1	29	3.6	0.28	1.3
15	---	---	---	---	---	---	---	2.5	27	3.3	0.25	1.3
16	---	---	---	---	---	---	---	3.2	23	3.0	0.22	1.3
17	---	---	---	---	---	---	---	4.7	20	2.8	0.37	1.3
18	---	---	---	---	---	---	---	7.8	20	2.6	0.70	1.3
19	---	---	---	---	---	---	---	9.1	17	2.9	0.73	1.2
20	---	---	---	---	---	---	---	8.5	17	3.1	0.66	1.2
21	---	---	---	---	---	---	---	7.3	15	2.7	0.55	1.1
22	---	---	---	---	---	---	---	8.2	12	2.3	0.43	1.0
23	---	---	---	---	---	---	---	15	9.9	2.1	0.35	0.94
24	---	---	---	---	---	---	---	30	12	1.8	0.27	0.85
25	---	---	---	---	---	---	---	53	9.6	1.7	0.24	0.78
26	---	---	---	---	---	---	---	68	10	1.7	0.21	0.67
27	---	---	---	---	---	---	---	79	14	2.2	0.18	0.57
28	---	---	---	---	---	---	---	86	19	2.6	0.16	0.50
29	---	---	---	---	---	---	---	97	17	2.4	0.16	0.42
30	---	---	---	---	---	---	---	86	14	2.1	0.16	0.41
31	---	---	---	---	---	---	---	94	---	1.8	0.15	---
TOTAL	---	---	---	---	---	---	---	700.5	722.5	140.3	16.28	20.28
MEAN	---	---	---	---	---	---	---	22.6	24.1	4.53	0.53	0.68
MAX	---	---	---	---	---	---	---	97	97	13	1.5	1.3
MIN	---	---	---	---	---	---	---	1.9	9.6	1.7	0.15	0.11
AC-FT	---	---	---	---	---	---	---	1,390	1,430	278	32	40

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1991 - 2003, BY WATER YEAR (WY)*

MEAN	0.57	0.50	0.27	0.16	0.13	0.14	0.58	18.5	25.4	5.97	1.24	0.60
MAX	0.71	0.61	0.36	0.22	0.20	0.21	1.59	27.4	50.9	14.1	3.50	1.26
(WY)	(1993)	(1993)	(1993)	(1992)	(1992)	(1992)	(1992)	(1992)	(1995)	(1995)	(1993)	(1998)
MIN	0.52	0.43	0.17	0.12	0.089	0.055	0.15	8.58	6.46	1.01	0.073	0.10
(WY)	(1992)	(1997)	(1991)	(1997)	(1997)	(1997)	(1997)	(1995)	(2001)	(2001)	(2001)	(2001)

06301480 CONEY CREEK ABOVE TWIN LAKES, NEAR BIG HORN, WY—Continued

SUMMARY STATISTICS

FOR 2003 WATER YEAR*

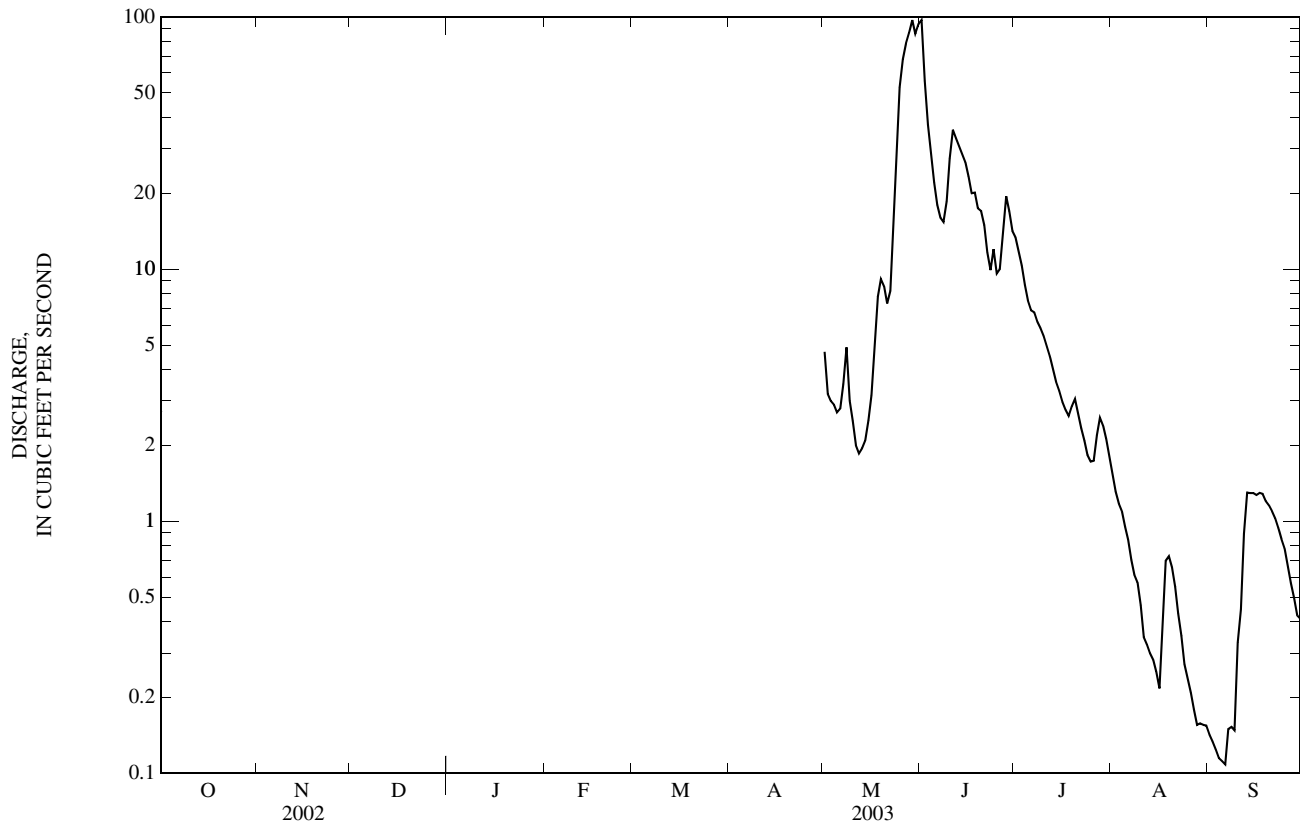
WATER YEARS 1991 - 2003*

ANNUAL MEAN	--	5.43
HIGHEST ANNUAL MEAN	--	5.84 1992
LOWEST ANNUAL MEAN	--	4.83 1991
HIGHEST DAILY MEAN	97 May 29, Jun 1	105 Jun 16, 1995
LOWEST DAILY MEAN	0.11 Sep 4-6	0.00 Sep 4, 5, 2001
MAXIMUM PEAK FLOW	126 May 29	135 ^a Jun 15, 1995
MAXIMUM PEAK STAGE	4.27 May 29	5.05 ^b May 14, 1991
ANNUAL RUNOFF (AC-FT)	--	3,940

* For period of operation.

a Gage height, 4.35 ft.

b Backwater from snow and ice.



06301495 CONEY CREEK BELOW TWIN LAKES, NEAR BIG HORN, WY

LOCATION.--Lat 44° 36' 33", long 107° 18' 32", unsurveyed, Sheridan County, Hydrologic Unit 10090101, Bighorn National Forest, 30 ft downstream from Twin Lakes Reservoir, 0.4 mi upstream from mouth, and 16.2 mi southwest of Big Horn.

DRAINAGE AREA.--8.07 mi².

PERIOD OF RECORD.--October 1990 to September 1994, October 1995 to current year (no winter records 1993, 1994, 1996, 1998-2003).

GAGE.--Water-stage recorder and concrete weir. Elevation of gage is 8,560 ft above NGVD of 1929, from topographic map. October 1990 to September 1998, at site 0.2 mi downstream at different datum. U.S. Geological Survey data collection platform with satellite telemetry at station.

REMARKS.--Records fair except those for daily discharges less than 1 cubic foot per second and those for estimated daily discharges, which are poor. Flow regulated by Twin Lakes Reservoir, capacity, 3,400 acre-ft. Seasonal records collected by State of Wyoming at site 0.2 mi downstream, at different datum, 1971-90. Result of discharge measurement, in cubic feet per second, made when station was not in operation, is given below:

Oct. 10 . . . 0.18

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	0.73	1.1	0.87	7.2	3.8
2	---	---	---	---	---	---	---	0.75	1.0	0.87	11	3.6
3	---	---	---	---	---	---	---	e0.70	1.0	0.86	9.8	3.6
4	---	---	---	---	---	---	---	e0.60	0.99	0.86	9.9	3.6
5	---	---	---	---	---	---	---	0.60	0.98	0.86	9.9	3.6
6	---	---	---	---	---	---	---	0.64	0.96	0.87	9.8	3.6
7	---	---	---	---	---	---	---	0.66	0.98	0.87	9.9	3.6
8	---	---	---	---	---	---	---	0.65	0.98	0.53	10	3.5
9	---	---	---	---	---	---	---	0.65	0.97	0.14	10	3.4
10	---	---	---	---	---	---	---	0.66	0.99	0.14	10	3.4
11	---	---	---	---	---	---	---	0.72	0.97	0.14	10	3.4
12	---	---	---	---	---	---	---	0.73	0.96	0.15	10	3.4
13	---	---	---	---	---	---	---	e0.80	0.94	0.14	10	3.4
14	---	---	---	---	---	---	---	0.76	0.95	0.14	10	3.4
15	---	---	---	---	---	---	---	0.76	0.94	0.15	9.5	3.9
16	---	---	---	---	---	---	---	e0.80	0.96	6.9	8.9	4.6
17	---	---	---	---	---	---	---	0.81	0.95	7.5	8.9	4.6
18	---	---	---	---	---	---	---	e0.80	0.93	7.9	9.0	4.6
19	---	---	---	---	---	---	---	0.78	0.93	7.9	9.0	4.4
20	---	---	---	---	---	---	---	0.76	0.87	7.9	9.0	4.4
21	---	---	---	---	---	---	---	0.80	0.86	7.0	9.0	4.4
22	---	---	---	---	---	---	---	0.92	0.85	6.4	8.9	4.5
23	---	---	---	---	---	---	---	0.93	0.85	6.3	8.8	4.6
24	---	---	---	---	---	---	---	0.95	0.86	6.2	8.8	4.5
25	---	---	---	---	---	---	---	0.97	0.88	5.7	8.8	4.3
26	---	---	---	---	---	---	---	0.98	e0.90	5.5	8.7	4.3
27	---	---	---	---	---	---	---	1.0	0.87	5.5	8.5	4.2
28	---	---	---	---	---	---	---	1.0	0.87	5.5	8.5	4.2
29	---	---	---	---	---	---	---	1.1	0.87	5.5	5.9	4.1
30	---	---	---	---	---	---	---	1.0	0.87	5.4	3.8	4.0
31	---	---	---	---	---	---	---	1.1	---	5.4	3.8	---
TOTAL	---	---	---	---	---	---	---	25.11	28.03	110.09	275.3	118.9
MEAN	---	---	---	---	---	---	---	0.81	0.93	3.55	8.88	3.96
MAX	---	---	---	---	---	---	---	1.1	1.1	7.9	11	4.6
MIN	---	---	---	---	---	---	---	0.60	0.85	0.14	3.8	3.4
AC-FT	---	---	---	---	---	---	---	50	56	218	546	236

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1991 - 2003, BY WATER YEAR (WY)*

MEAN	1.68	0.38	0.20	0.14	0.17	0.23	0.52	23.5	36.8	12.2	8.20	5.76
MAX	4.50	0.56	0.32	0.26	0.32	0.51	1.32	54.4	81.3	27.1	18.7	12.7
(WY)	(1991)	(1997)	(1992)	(1992)	(1992)	(1992)	(1992)	(1993)	(1997)	(1992)	(1998)	(1999)
MIN	0.50	0.14	0.13	0.045	0.040	0.041	0.20	0.21	0.21	3.55	2.03	0.78
(WY)	(1992)	(1993)	(1997)	(1997)	(1997)	(1997)	(1993)	(2002)	(2002)	(2003)	(1996)	(1996)

06301495 CONEY CREEK BELOW TWIN LAKES, NEAR BIG HORN, WY—Continued

SUMMARY STATISTICS

FOR 2003 WATER YEAR*

WATER YEARS 1991 - 2003*

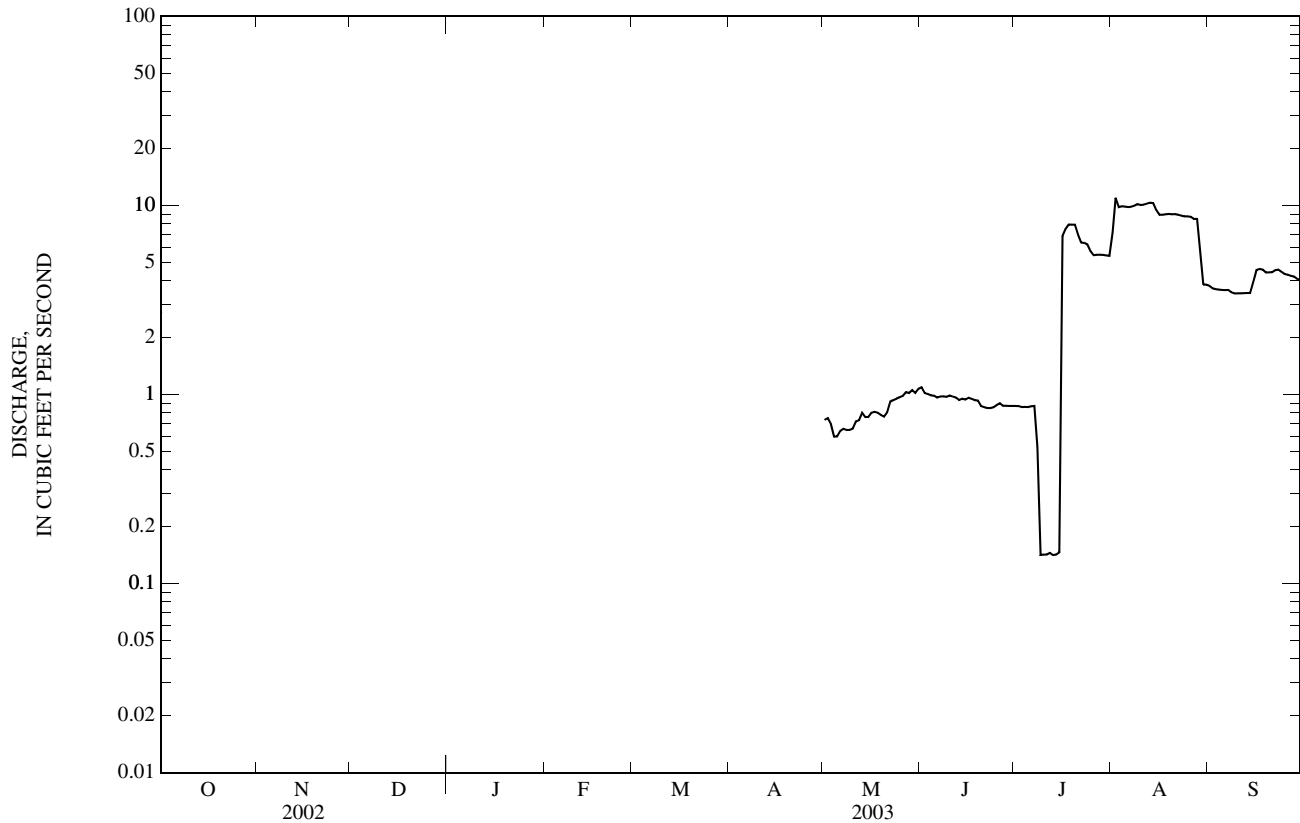
ANNUAL MEAN	--	12.0
HIGHEST ANNUAL MEAN	--	12.6 1992
LOWEST ANNUAL MEAN	--	11.2 1991
HIGHEST DAILY MEAN	11.0 Aug 2	172.0 May 29, 1993
LOWEST DAILY MEAN	0.14 Several days	0.03 Many days, 2001
MAXIMUM PEAK FLOW	27.0 Jul 16	223 ^a May 29, 1993
MAXIMUM PEAK STAGE	1.48 Jul 16	4.32 ^b May 1, 1997

* For period of operation.

a Gage height, 3.16 ft, site and datum then in use.

b Backwater from snow and ice, site and datum then in use.

c Estimated.



06303500 LITTLE GOOSE CREEK IN CANYON, NEAR BIG HORN, WY

LOCATION.--Lat 44° 35' 46", long 107° 02' 22", in SE $\frac{1}{4}$ SW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 1, T. 53 N., R. 85 W., Sheridan County, Hydrologic Unit 10090101, on left bank 100 ft upstream from headgate of Lower Peralta ditch and 6.5 mi southwest of Big Horn.

DRAINAGE AREA.--51.6 mi².

PERIOD OF RECORD.--April 1941 to current year (no winter records since 1971).

REVISED RECORDS.--WDR WY-76-1: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 4,860 ft above NGVD of 1929, from topographic map.

REMARKS.--Records good. Three small reservoirs upstream from station, combined capacity, 860 acre-ft, two of which store some imported water. Water imported into drainage basin upstream from station from East Goose Creek basin is diverted downstream from station for irrigation. Result of discharge measurement, in cubic feet per second, made when station was not in operation, is given below:

Oct. 3 . . . 10.8

COOPERATION.--Station operated and record provided by the Wyoming State Engineer's Office; record reviewed by U.S. Geological Survey.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	15	76	432	157	93	65
2	---	---	---	---	---	---	20	72	323	150	89	62
3	---	---	---	---	---	---	21	73	276	141	88	57
4	---	---	---	---	---	---	17	74	239	132	92	49
5	---	---	---	---	---	---	14	74	211	125	93	49
6	---	---	---	---	---	---	14	72	201	119	96	50
7	---	---	---	---	---	---	14	69	199	105	101	53
8	---	---	---	---	---	---	12	73	196	97	103	56
9	---	---	---	---	---	---	14	66	196	95	103	56
10	---	---	---	---	---	---	19	66	207	95	102	73
11	---	---	---	---	---	---	27	64	224	90	102	68
12	---	---	---	---	---	---	35	66	213	83	97	67
13	---	---	---	---	---	---	48	72	210	78	98	60
14	---	---	---	---	---	---	54	82	206	80	96	57
15	---	---	---	---	---	---	62	98	200	82	90	54
16	---	---	---	---	---	---	57	115	193	80	89	49
17	---	---	---	---	---	---	51	134	188	84	94	50
18	---	---	---	---	---	---	48	148	172	84	96	43
19	---	---	---	---	---	---	46	142	166	93	86	41
20	---	---	---	---	---	---	42	137	163	101	86	37
21	---	---	---	---	---	---	45	135	167	91	75	37
22	---	---	---	---	---	---	54	140	157	82	73	36
23	---	---	---	---	---	---	66	171	149	84	72	35
24	---	---	---	---	---	---	78	219	169	89	72	35
25	---	---	---	---	---	---	87	276	163	92	72	32
26	---	---	---	---	---	---	96	324	163	100	73	30
27	---	---	---	---	---	---	91	352	171	101	72	30
28	---	---	---	---	---	---	84	376	177	100	67	30
29	---	---	---	---	---	---	80	441	175	97	68	29
30	---	---	---	---	---	---	82	449	161	96	69	29
31	---	---	---	---	---	---	---	437	---	95	69	---
TOTAL	---	---	---	---	---	---	1,393	5,093	6,067	3,098	2,676	1,419
MEAN	---	---	---	---	---	---	46.4	164	202	99.9	86.3	47.3
MAX	---	---	---	---	---	---	96	449	432	157	103	73
MIN	---	---	---	---	---	---	12	64	149	78	67	29
AC-FT	---	---	---	---	---	---	2,760	10,100	12,030	6,140	5,310	2,810

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 2003, BY WATER YEAR (WY)

MEAN	23.6	13.1	10.4	8.58	8.11	8.48	34.7	175	234	103	80.8	51.3
MAX	46.0	26.5	17.5	12.3	13.9	14.1	106	339	502	209	124	90.0
(WY)	(1959)	(1962)	(1942)	(1942)	(1962)	(1962)	(1943)	(1944)	(1995)	(1975)	(1968)	(1978)
MIN	12.7	8.51	6.49	4.99	5.37	5.76	9.46	64.9	50.5	66.6	41.1	20.4
(WY)	(1954)	(1955)	(1950)	(1950)	(1950)	(1950)	(1970)	(2001)	(2001)	(1981)	(1981)	(1960)

06303500 LITTLE GOOSE CREEK IN CANYON, NEAR BIG HORN, WY—Continued

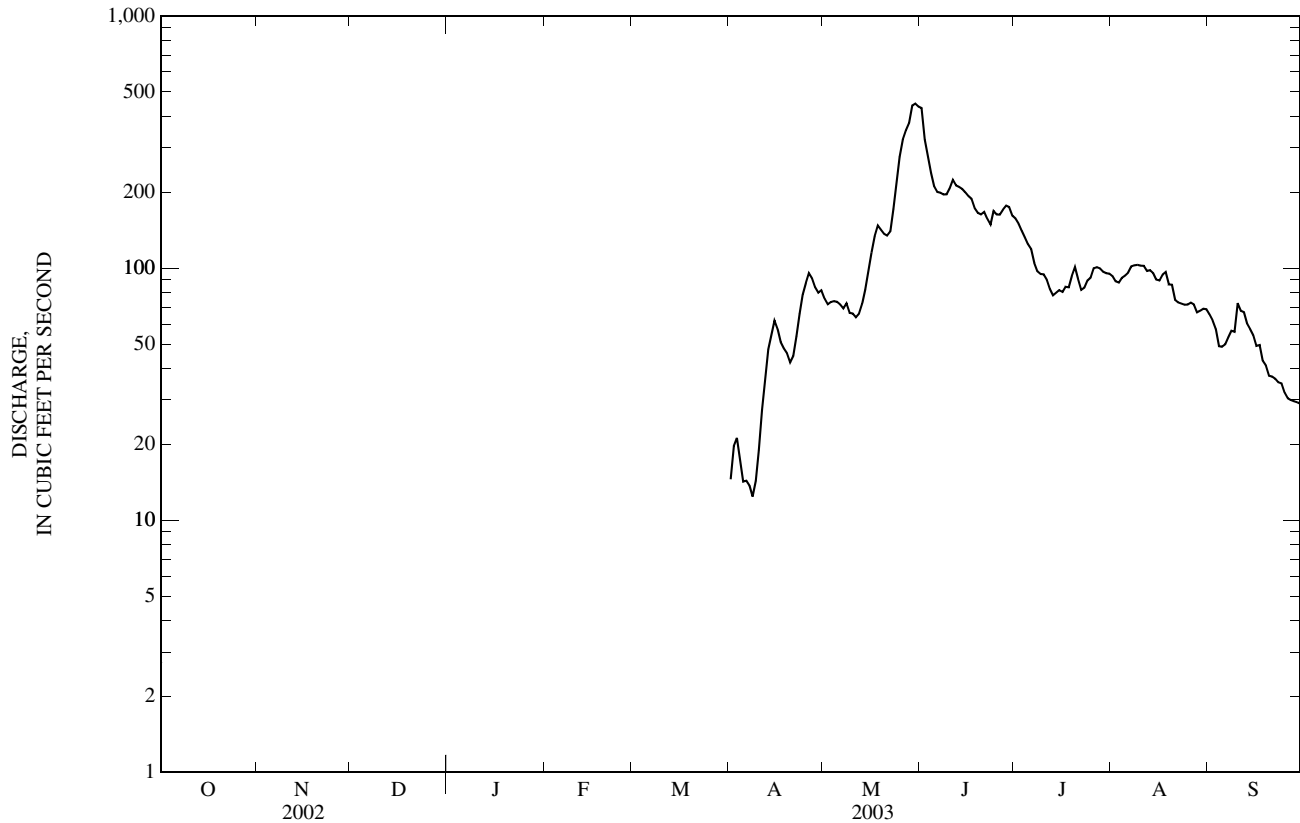
SUMMARY STATISTICS

FOR 2003 WATER YEAR*

WATER YEARS 1941-2003*

ANNUAL MEAN	--		63.36	
HIGHEST ANNUAL MEAN	--		83.9	1970
LOWEST ANNUAL MEAN	--		40.6	Jun 15, 1963
HIGHEST DAILY MEAN	449	May 30	837.	Jun 15, 1963
LOWEST DAILY MEAN	12	Apr 8	3.0	Jan 3, 1950
MAXIMUM PEAK FLOW	541	May 29	1,350 ^a	Jun 15, 1963
MAXIMUM PEAK STAGE	4.47	May 29	6.78	Jun 15, 1963
ANNUAL RUNOFF (AC-FT)	--		48,900	

* For period of operation.

a From rating curve extended above 900 ft³/s.

06304500 LITTLE GOOSE CREEK AT SHERIDAN, WY

LOCATION.--Lat 44° 48'10", long 106° 57'10", in NE $\frac{1}{4}$ NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.26, T.56 N., R.84 W., Sheridan County, Hydrologic Unit 10090101, at bridge on Sheridan Avenue in Sheridan and 0.6 mi upstream from mouth.

PERIOD OF RECORD.--March 1979 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

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 unfltrd uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, unfltrd mg/L as CaCO ₃ (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)
OCT 07...	1345	22	668	12.7	132	8.5	724	26.5	11.0	370	70.6	46.5	2.35
NOV 19...	0900	22	670	13.1	107	8.5	693	4.5	1.5	350	70.2	43.2	2.01
DEC 11...	1500	35	664	14.5	114	8.4	618	5.0	0.0	310	62.2	37.6	1.76
JAN 29...	1115	31	670	11.9	93	8.1	676	5.0	0.0	290	55.5	37.8	8.27
FEB 27...	1110	20	662	14.3	113	8.3	683	8.5	0.0	330	66.3	40.1	1.87
MAR 25...	1030	58	667	13.0	115	8.4	737	7.5	4.5	340	65.4	43.9	3.21
APR 25...	1010	105	661	10.6	107	8.4	301	17.0	9.5	130	28.3	15.6	1.21
MAY 21...	1545	150	670	11.7	122	8.5	288	22.0	11.5	130	28.1	15.3	1.03
JUN 17...	1250	162	672	9.3	106	8.2	228	26.5	15.5	110	22.6	12.3	1.02
JUL 29...	1750	17	670	9.2	130	8.5	580	36.0	26.0	280	50.9	37.5	2.58
AUG 25...	1535	12	670	10.6	151	8.6	740	33.5	26.5	360	61.4	49.4	2.82
SEP 22...	1500	45	--	--	--	8.4	513	23.0	12.5	260	52.6	31.6	2.04
Date	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Alkalinity, wat flt fxd end lab, mg/L as CaCO ₃ (29801)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/ acre-ft (70303)	Residue water, fltrd, tons/d (70302)	Residue on evap. at 180degC wat flt mg/L (70300)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)
OCT 07...	0.5	23.3	E202	4.72	0.38	9.88	108	--	--	--	441	--	--
NOV 19...	0.5	21.2	213	4.23	0.34	9.46	103	381	0.57	24.7	416	<0.04	<0.06
DEC 11...	0.4	17.9	E257	3.43	0.30	10.7	81.3	--	--	--	391	--	--
JAN 29...	0.5	20.2	248	7.73	0.29	11.1	87.4	377	0.57	34.4	417	--	--
FEB 27...	0.5	19.4	E263	5.10	0.26	9.67	97.2	--	--	--	436	<0.04	0.18
MAR 25...	0.6	23.9	257	6.46	0.31	8.80	135	442	0.66	76.0	485	--	--
APR 25...	0.3	8.31	118	1.29	<0.17	9.43	36.3	171	0.25	52.5	185	--	--
MAY 21...	0.3	8.21	117	2.15	<0.2	10.4	31.0	167	0.25	73.4	181	<0.04	0.06
JUN 17...	0.3	6.68	94	2.91	<0.2	11.0	22.8	136	0.20	63.7	146	--	--
JUL 29...	0.5	19.4	212	5.14	0.3	9.44	96.0	348	0.49	16.4	357	--	--
AUG 25...	0.6	23.9	239	5.23	0.3	6.02	152	445	0.63	15.0	464	<0.04	<0.06
SEP 22...	0.4	15.3	226	3.16	0.3	7.96	63.8	313	0.44	39.6	326	--	--

06304500 LITTLE GOOSE CREEK AT SHERIDAN, WY—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Nitrite water, ftrd, mg/L as N (00613)	Ortho- phos- phate, water, ftrd, mg/L as P (00671)	E coli, modif. m-TEC, water, col/ 100 mL (90902)	E coli, m-TEC MF, water, col/ 100 mL (31633)	Fecal coli- form, M-FC 0.7u MF col/ 100 mL (31625)	Alum- inum, water, unfltrd recover- able, ug/L (01105)	Arsenic water, ftrd, ug/L (01000)	Barium, water, unfltrd recover- able, ug/L (01007)	Beryll- ium, water, unfltrd recover- able, ug/L (01012)	Iron, water, ftrd, ug/L (01046)	Mangan- ese, water, ftrd, ug/L (01056)	Selen- ium, water, unfltrd ug/L (01147)
OCT 07...	--	--	--	--	--	28	0.6	61	<0.06	11	4.9	E.4
NOV 19...	<0.008	<0.02	--	E17k	23	71	0.4	63	<0.06	19	9.2	E.4
DEC 11...	--	--	--	--	--	144	0.3	58	<0.06	18	10.5	E.4
JAN 29...	--	--	--	--	--	185	0.9	62	<0.06	96	26.4	0.7
FEB 27...	<0.008	<0.02	--	<1	E2k	42	0.3	64	<0.06	16	21.6	0.6
MAR 25...	--	--	--	--	--	180	0.7	66	<0.06	15	42.5	0.9
APR 25...	--	--	--	--	--	375	0.4	32	E.03	18	17.0	E.4
MAY 21...	<0.008	<0.02	20	--	34	354	0.3	33	<0.06	E8	10.1	<0.5
JUN 17...	--	--	--	--	--	369	0.3	33	E.04	26	12.5	<0.5
JUL 29...	--	--	--	--	--	62	1.1	54	<0.06	9	3.7	0.6
AUG 25...	<0.008	E.01	670	--	800	40	0.9	62	<0.06	15	8.8	0.8
SEP 22...	--	--	--	--	--	112	0.5	52	<0.06	12	7.8	E.3

E -- Estimated value

k -- Counts outside acceptable range

06305500 GOOSE CREEK BELOW SHERIDAN, WY

LOCATION.--Lat 44° 49'25", long 106° 57'40", in SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec.15, T.56 N., R.84 W., Sheridan County, Hydrologic Unit 10090101, 700 ft north of Sheridan city limits and 0.2 mi downstream from Soldier Creek.

DRAINAGE AREA.--392 mi².

PERIOD OF RECORD.--Water years 1959-65, 1968 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

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 unfltrd uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, unfltrd mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	
OCT 07...	1450	33	669	14.1	151	8.6	756	26.0	12.5	370	70.3	46.8	3.32	
NOV 19...	0745	40	670	12.3	100	8.4	735	2.0	1.5	360	71.2	43.1	2.51	
DEC 11...	1615	63	666	14.2	113	8.4	657	-0.5	0.5	310	62.9	37.4	2.31	
JAN 29...	1000	79	670	12.2	95	8.1	646	-4.0	0.0	270	52.7	34.7	7.32	
FEB 27...	1000	52	664	13.2	104	8.2	689	-2.0	0.0	320	65.3	37.8	2.35	
MAR 25...	0915	110	669	12.3	106	8.4	777	4.5	3.5	350	66.1	44.7	3.68	
APR 25...	0900	201	661	9.5	97	8.2	322	15.0	10.0	140	30.4	16.1	1.50	
MAY 21...	1710	289	670	11.6	123	8.5	308	19.5	12.0	140	29.6	15.6	1.37	
JUN 17...	1020	595	673	0.0	0.0	7.8	184	24.5	14.0	83	18.3	9.16	1.10	
JUL 30...	0710	16	671	5.8	71	7.8	667	13.5	19.0	320	59.8	40.3	3.48	
AUG 25...	1720	13	671	12.8	180	8.5	691	33.5	26.0	320	53.8	44.5	4.04	
SEP 22...	1610	88	--	--	--	8.5	562	24.0	14.5	280	55.0	33.6	2.96	
Date		Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Alkalinity, wat flt fxd end lab, mg/L as CaCO3 (29801)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/acre-ft (70303)	Residue water, fltrd, tons/d (70302)	Residue on evap. at 180degC wat flt mg/L (70300)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)
OCT 07...	0.7	29.1	--o	6.82	0.37	8.09	146	--	--	--	501	--	--	
NOV 19...	0.6	25.9	245	5.31	0.32	8.42	135	440	0.66	52.4	485	<0.04	0.12	
DEC 11...	0.6	23.6	E249	7.15	0.29	10.2	111	--	--	--	426	--	--	
JAN 29...	0.7	25.4	217	12.2	0.29	10.3	103	376	0.57	88.9	417	--	--	
FEB 27...	0.6	26.4	244	8.28	0.25	9.50	122	419	0.60	62.1	444	0.15	0.33	
MAR 25...	0.7	28.6	256	7.96	0.30	7.59	171	483	0.70	154	517	--	--	
APR 25...	0.4	10.0	116	2.15	<0.17	9.05	47.5	186	0.26	105	194	--	--	
MAY 21...	0.4	9.63	114	2.84	<0.2	9.57	42.8	180	0.26	151	193	<0.04	0.10	
JUN 17...	0.3	5.84	71	1.88	<0.2	9.18	22.8	111	0.16	194	121	--	--	
JUL 30...	0.6	25.6	228	8.06	0.3	2.53	120	397	0.56	17.8	411	--	--	
AUG 25...	0.7	28.6	229	9.88	0.3	6.51	141	428	0.62	15.9	453	<0.04	0.25	
SEP 22...	0.5	20.1	222	4.79	0.3	7.50	91.6	349	0.50	88.0	371	--	--	

06305500 GOOSE CREEK BELOW SHERIDAN, WY—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Nitrite water, ftrd, mg/L as N (00613)	Ortho- phos- phate, water, ftrd, mg/L as P (00671)	E coli, modif. m-TEC, water, col/ 100 mL (90902)	E coli, m-TEC MF, water, col/ 100 mL (31633)	Fecal coli- form, M-FC 0.7u MF col/ 100 mL (31625)	Alum- inum, water, unfltrd recover- able, ug/L (01105)	Arsenic water, ftrd, ug/L (01000)	Barium, water, unfltrd recover- able, ug/L (01007)	Beryll- ium, water, unfltrd recover- able, ug/L (01012)	Iron, water, ftrd, ug/L (01046)	Mangan- ese, water, ftrd, ug/L (01056)	Selen- ium, water, unfltrd ug/L (01147)
OCT 07...	--	--	--	--	--	39	0.6	50	<0.06	13	6.3	E.5
NOV 19...	<0.008	0.06	--	88	180	48	0.4	53	<0.06	23	12.3	0.6
DEC 11...	--	--	--	--	--	84	E.3	47	<0.06	18	14.9	0.6
JAN 29...	--	--	--	--	--	215	0.7	52	<0.06	72	31.4	1.0
FEB 27...	0.031	0.07	--	78	130	59	0.3	52	<0.06	20	26.0	0.6
MAR 25...	--	--	--	--	--	180	0.7	58	<0.06	18	47.6	1.1
APR 25...	--	--	--	--	--	322	0.4	31	<0.06	19	18.7	E.4
MAY 21...	<0.008	0.02	55	--	58	340	0.3	32	<0.06	E7	14.7	0.6
JUN 17...	--	--	--	--	--	340	0.4	28	E.04	36	12.5	<0.5
JUL 30...	--	--	--	--	--	131	0.8	57	<0.06	14	25.1	0.7
AUG 25...	<0.008	0.24	160	--	300	78	0.9	52	<0.06	17	9.2	1.1
SEP 22...	--	--	--	--	--	126	0.6	51	<0.06	12	8.6	E.4

E -- Estimated value

06305700 GOOSE CREEK NEAR ACME, WY

LOCATION.--Lat 44° 53'11", long 106° 59'18", in SE $\frac{1}{4}$ SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.28, T.57 N., R.84 W., Sheridan County, Hydrologic Unit 10090101, on right bank 0.2 mi north of county road, 1.6 mi south of Acme, and 3.4 mi upstream from mouth.

DRAINAGE AREA.--413 mi².

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

GAGE.--Water-stage recorder. Elevation of gage is 3,620 ft above NGVD of 1929, from topographic map. U.S. Geological Survey data collection platform with satellite telemetry at station.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Some regulation by many small reservoirs, combined capacity, about 15,000 acre-ft. Natural flow of stream affected by transbasin diversions, storage reservoirs, diversions for irrigation, and return flow from irrigated areas.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	34	40	e45	e49	e120	58	116	382	1,200	422	13	35
2	46	52	e40	e56	e90	51	121	329	1,210	402	15	31
3	38	64	e40	e64	78	57	123	268	870	352	11	25
4	41	56	e36	e56	76	54	114	256	683	311	10	23
5	42	51	e40	e50	56	55	96	238	557	286	9.8	22
6	47	49	e39	e56	50	57	90	219	514	225	8.8	27
7	44	52	e39	e60	51	58	92	209	522	208	9.5	25
8	47	53	e38	e54	75	56	85	259	480	206	8.1	26
9	47	52	e39	e45	68	61	81	257	439	180	6.2	40
10	45	51	e40	e30	70	76	82	281	428	164	8.0	62
11	49	49	e39	e34	64	93	95	331	536	143	9.8	81
12	45	47	e35	e45	52	112	110	284	636	125	7.6	73
13	46	45	e44	e56	57	e130	130	252	591	101	8.2	83
14	45	47	e43	e54	62	e150	149	257	585	77	6.5	83
15	43	51	e50	e43	54	e170	167	279	547	67	7.9	78
16	41	44	e46	e45	49	e170	169	302	525	65	7.3	75
17	42	49	e47	e47	58	e160	155	340	535	54	15	78
18	41	46	e46	e47	61	e150	145	361	482	49	35	89
19	42	46	e40	e47	55	e140	158	386	452	44	36	86
20	40	48	e36	e54	55	131	147	358	425	47	30	79
21	41	46	e40	e46	56	128	136	341	395	48	25	79
22	51	43	e42	e38	54	132	129	314	363	39	21	89
23	46	e40	e40	e48	43	147	150	344	306	27	19	85
24	e45	e39	e38	e60	66	135	176	397	413	21	17	71
25	43	e35	e40	e80	71	114	192	505	478	18	17	68
26	46	e40	e48	e68	73	104	214	619	417	19	14	66
27	45	e48	e54	e80	71	110	226	804	408	19	16	62
28	46	e50	e50	e120	64	104	211	947	404	25	22	60
29	47	e44	e56	e90	---	95	199	1,020	495	25	26	67
30	46	e36	e48	e110	---	90	248	1,180	454	19	34	69
31	45	---	e52	e130	---	95	---	1,040	---	15	41	---
TOTAL	1,366	1,413	1,330	1,862	1,799	3,243	4,306	13,359	16,350	3,803	514.7	1,837
MEAN	44.1	47.1	42.9	60.1	64.2	105	144	431	545	123	16.6	61.2
MAX	51	64	56	130	120	170	248	1,180	1,210	422	41	89
MIN	34	35	35	30	43	51	81	209	306	15	6.2	22
AC-FT	2,710	2,800	2,640	3,690	3,570	6,430	8,540	26,500	32,430	7,540	1,020	3,640

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1984 - 2003, BY WATER YEAR (WY)

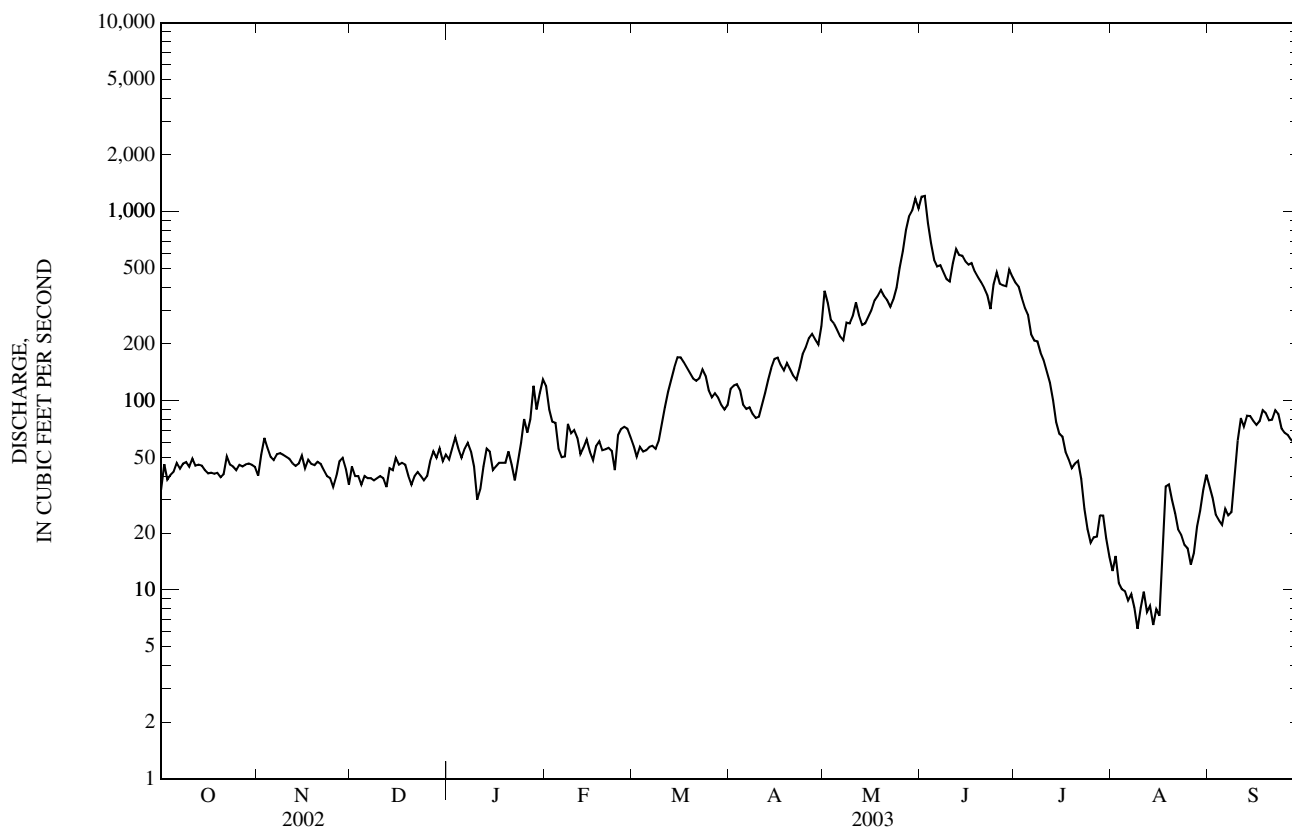
MEAN	99.2	91.8	76.7	69.3	83.6	98.5	133	382	568	145	58.9	84.1
MAX	156	144	107	109	137	185	195	891	1,592	547	157	158
(WY)	(1985)	(1999)	(1996)	(1990)	(1996)	(1994)	(1994)	(1984)	(1995)	(1995)	(1998)	(1998)
MIN	41.6	47.1	42.3	43.5	36.7	46.0	71.7	52.4	39.2	9.51	15.6	28.0
(WY)	(2002)	(2003)	(2002)	(2002)	(1989)	(2002)	(2002)	(2001)	(2001)	(2001)	(1988)	(2001)

06305700 GOOSE CREEK NEAR ACME, WY—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1984 - 2003	
ANNUAL TOTAL	18,423.8		51,182.7		--	
ANNUAL MEAN	50.5		140		152	
HIGHEST ANNUAL MEAN	--		--		303	
LOWEST ANNUAL MEAN	--		--		50.4	
HIGHEST DAILY MEAN	497	Jun 1	1,210	Jun 2	3,040	Jun 17, 1995
LOWEST DAILY MEAN	3.2	Jul 17	6.2	Aug 9	3.0	Aug 24, 2001
ANNUAL SEVEN-DAY MINIMUM	7.2	Jul 11	7.7	Aug 9	4.3	Aug 22, 2001
MAXIMUM PEAK FLOW	--		1,390	May 30	3,330	Jun 17, 1995
MAXIMUM PEAK STAGE	--		5.30	May 30	7.65 ^a	Feb 25, 1986
ANNUAL RUNOFF (AC-FT)	36,540		101,500		109,900	
10 PERCENT EXCEEDS	73		399		314	
50 PERCENT EXCEEDS	43		57		89	
90 PERCENT EXCEEDS	16		25		38	

a From floodmarks, backwater from ice.

e Estimated.



06306250 PRAIRIE DOG CREEK NEAR ACME, WY

LOCATION.--Lat 44° 59'02", long 106° 50'21", in NE $\frac{1}{4}$ SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 23, T.58 N., R.83 W., Sheridan County, Hydrologic Unit 10090101, on right bank 600 ft upstream from county bridge, 0.9 mi upstream from mouth, 2.8 mi downstream from Coutant Creek, and 7.6 mi northeast of Acme.

DRAINAGE AREA.--358 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1970 to September 1979, June 2000 to current year. Records for May 1965 to September 1970 in files of Wyoming State Engineer's Office.

GAGE.--Water-stage recorder. Elevation of gage is 3,450 ft above NGVD of 1929, from topographic map.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Diversions for irrigation of about 13,600 acres above station, of which about 60 acres are below station. Flow supplemented by 3 transbasin diversions from North Piney Creek and South Piney Creek via Prairie Dog Creek ditch, Piney and Cruse ditch, and Mead-Coffeen ditch.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e34	e13	e15	e12	e12	e8.4	50	30	12	43	2.0	15
2	e36	e14	e14	e13	e11	e8.8	55	42	15	39	1.7	16
3	e38	e16	e13	e14	e10	e9.0	51	46	15	33	4.1	15
4	e40	e17	e12	e13	e10	e9.4	49	40	18	30	5.8	15
5	e39	e19	e11	e13	e9.4	e9.8	43	33	16	32	4.1	11
6	e38	e21	e11	e12	e8.6	e10	37	32	14	34	4.0	12
7	37	e22	e11	e12	e8.8	e9.4	36	32	17	32	5.5	12
8	37	20	e12	e12	e9.2	e8.6	34	31	36	27	7.3	13
9	37	19	e13	e11	e9.4	e12	36	36	39	19	9.8	20
10	35	18	e13	e9.4	e9.6	e14	34	46	37	8.9	13	27
11	28	18	e13	e9.6	e9.8	e15	32	46	38	12	14	30
12	25	18	e12	e11	e9.8	e23	31	69	33	5.4	13	38
13	25	17	e13	e12	e9.6	e120	30	59	27	3.8	13	41
14	24	17	e13	e11	e10	e250	29	46	26	3.6	13	44
15	22	17	e14	e11	e10	e240	26	39	26	3.9	9.5	43
16	21	17	e15	e11	e11	231	26	32	29	2.8	8.1	48
17	19	17	e14	e12	e11	206	25	36	40	6.4	6.1	48
18	18	16	e13	e13	e10	171	25	42	50	4.5	5.7	54
19	18	16	e12	e14	e10	119	24	39	49	3.3	9.3	61
20	18	16	e11	e12	e9.8	71	26	44	46	6.7	12	58
21	18	16	e11	e10	e9.6	71	28	45	45	10	12	57
22	18	16	e11	e9.0	e8.6	74	24	39	38	11	9.6	56
23	19	16	e11	e9.6	e7.6	75	22	29	41	9.6	12	57
24	19	16	e10	e10	e7.4	79	21	22	48	5.2	15	52
25	19	e13	e10	e9.6	e7.8	77	16	17	59	6.3	16	48
26	20	e12	e10	e11	e8.2	66	12	19	63	5.9	13	49
27	20	e13	e11	e12	e8.8	57	11	18	54	6.0	11	48
28	19	e15	e12	e11	e8.8	52	13	19	51	5.5	12	48
29	19	e14	e13	e9.8	---	47	11	13	50	5.4	12	48
30	18	e13	e12	e11	---	41	15	13	48	3.0	11	49
31	e14	---	e12	e12	---	38	---	13	---	2.2	11	---
TOTAL	792	492	378	353.0	265.8	2,222.4	872	1,067	1,080	420.4	295.6	1,133
MEAN	25.5	16.4	12.2	11.4	9.49	71.7	29.1	34.4	36.0	13.6	9.54	37.8
MAX	40	22	15	14	12	250	55	69	63	43	16	61
MIN	14	12	10	9.0	7.4	8.4	11	13	12	2.2	1.7	11
AC-FT	1,570	976	750	700	527	4,410	1,730	2,120	2,140	834	586	2,250

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1971 - 2003, BY WATER YEAR (WY)*

MEAN	37.1	28.5	23.0	18.1	33.5	76.2	59.2	80.9	35.4	18.9	25.6	38.8
MAX	59.5	43.6	32.3	26.7	82.7	167	101	384	86.2	45.0	45.7	79.0
(WY)	(1974)	(1974)	(1976)	(1974)	(1974)	(1972)	(1971)	(1978)	(1978)	(1975)	(1978)	(1973)
MIN	15.5	12.3	10.9	8.55	9.49	16.7	21.8	7.82	3.09	4.39	3.00	13.4
(WY)	(2002)	(2002)	(2002)	(2002)	(2003)	(2002)	(2001)	(2001)	(2002)	(2001)	(2001)	(2001)

06306250 PRAIRIE DOG CREEK NEAR ACME, WY—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1971 - 2003*	
ANNUAL TOTAL	7,292.01		9,371.2		--	
ANNUAL MEAN	20.0		25.7		39.8	
HIGHEST ANNUAL MEAN	--		--		72.8	
LOWEST ANNUAL MEAN	--		--		17.7	
HIGHEST DAILY MEAN	159	Apr 7	250 ^e	Mar 14	3,090	May 19, 1978
LOWEST DAILY MEAN	0.70	Jul 18	1.7	Aug 2	0.48	Jul 7, 2001
ANNUAL SEVEN-DAY MINIMUM	1.1	Jul 13	3.3	Jul 30	0.70	Jul 5, 2001
MAXIMUM PEAK FLOW	--		Unknown	Mar 14	3,940 ^a	May 18, 1978
MAXIMUM PEAK STAGE	--		5.50 ^b	Mar 14	12.60 ^c	May 18, 1978
ANNUAL RUNOFF (AC-FT)	14,460		18,590		28,830	
10 PERCENT EXCEEDS	45		49		66	
50 PERCENT EXCEEDS	14		16		29	
90 PERCENT EXCEEDS	2.8		8.7		10	

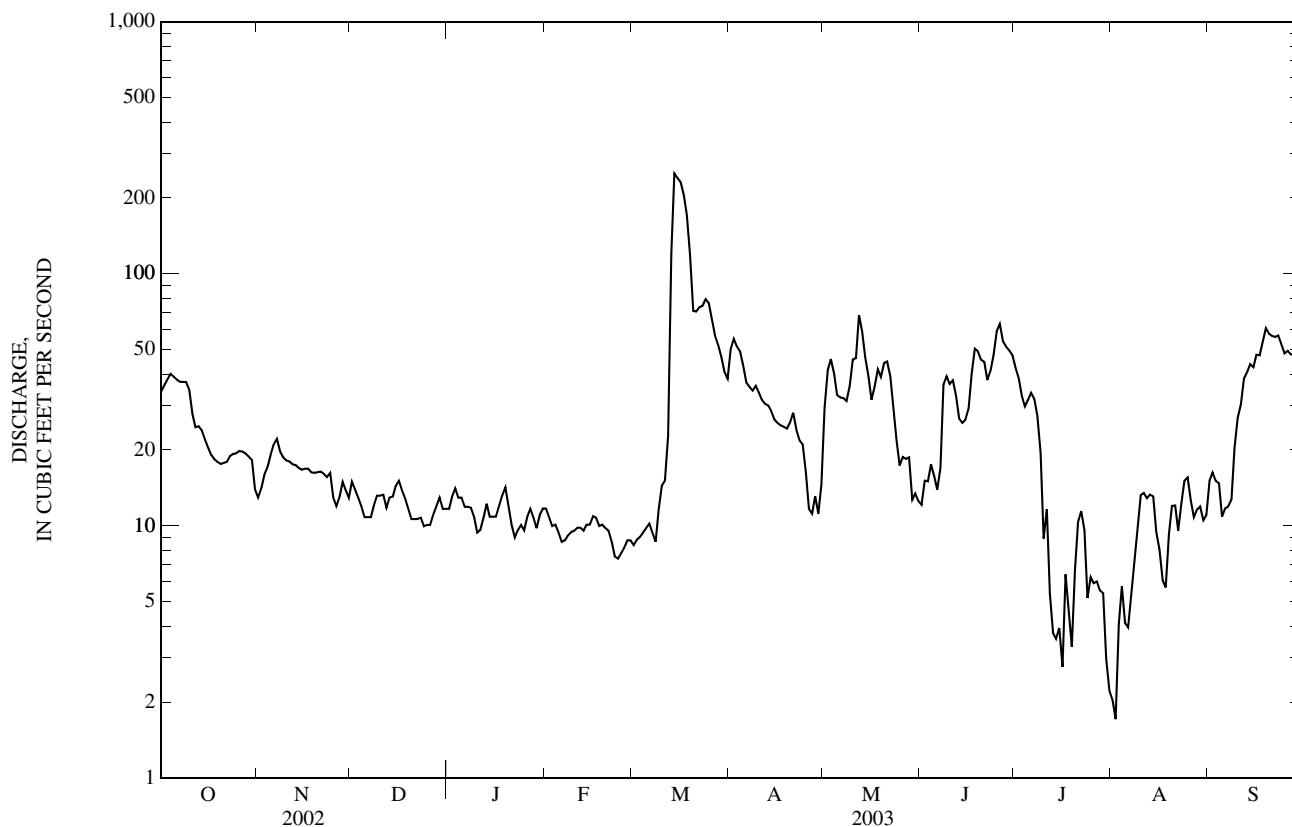
* For period of operation.

a From rating curve extended above 760 ft³/s on basis of slope-area determination of peak flow.

b Backwater from ice.

c From floodmarks.

e Estimated.



YELLOWSTONE RIVER BASIN
06306250 PRAIRIE DOG CREEK NEAR ACME, WY—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1976-1992, April 2000 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

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 unfltrd uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, unfltrd mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	
OCT 07...	1635	36	675	9.8	101	8.3	962	20.0	11.0	460	94.9	53.4	4.58	
NOV 18...	1645	17	675	12.6	103	8.5	1,450	4.5	2.0	690	135	86.7	5.98	
DEC 12...	0745	12	674	12.7	99	7.9	1,610	-13.0	0.0	780	153	95.4	6.97	
JAN 29...	0745	9.8	676	11.9	92	8.0	1,460	-4.0	0.0	720	143	87.6	6.50	
FEB 27...	0800	8.2	670	10.7	84	8.0	1,940	-10.0	0.0	960	184	121	9.63	
MAR 25...	0740	80	676	11.7	100	8.3	1,290	4.0	3.5	580	111	74.2	8.67	
APR 25...	0725	17	668	8.2	87	8.3	1,520	11.5	12.0	690	129	90.1	8.61	
MAY 21...	1915	42	676	8.0	89	8.2	1,010	17.0	14.5	460	89.7	56.1	5.31	
JUN 17...	0745	37	677	6.1	73	8.3	942	21.0	18.0	440	90.3	51.8	5.23	
JUL 30...	0925	2.6	677	7.4	90	8.0	1,960	25.5	18.5	880	163	116	9.90	
AUG 26...	0740	12	676	7.5	89	8.0	1,240	18.0	17.5	570	119	67.0	7.38	
SEP 22...	1750	57	--	--	--	8.0	642	24.0	13.0	310	65.9	34.2	3.60	
Date		Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Alkalinity, wat flt fxd end lab, mg/L as CaCO3 (29801)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/ acre-ft (70303)	Residue water, fltrd, tons/d (70302)	Residue on evap. at 180degC wat flt mg/L (70300)	Aluminum, water, unfltrd recover-able, ug/L (01105)	Arsenic water, fltrd, ug/L (01000)
OCT 07...	0.9	42.0	E177	3.06	0.28	11.8	268	--	--	--	682	494	0.7	
NOV 18...	1	72.9	E282	4.16	0.31	11.0	508	--	--	--	1,110	82	0.7	
DEC 12...	1	76.7	E336	4.15	0.34	13.8	529	--	--	--	1,230	181	0.6	
JAN 29...	1	67.9	370	3.54	0.31	13.0	465	1,010	1.48	28.8	1,090	98	0.6	
FEB 27...	1	106	E396	5.95	0.28	15.2	739	--	--	--	1,570	105	0.9	
MAR 25...	1	66.5	281	6.02	0.28	10.2	436	882	1.34	212	983	2,920	1.2	
APR 25...	1	85.3	338	4.13	0.28	7.88	545	1,070	1.60	54.0	1,180	369	1.0	
MAY 21...	1	52.9	241	3.50	0.2	11.0	302	665	0.97	81.1	715	2,410	0.8	
JUN 17...	0.9	43.9	223	2.74	0.2	14.4	293	635	0.93	68.0	681	1,990	1.0	
JUL 30...	2	146	317	5.88	0.3	14.1	803	1,450	2.14	11.1	1,580	68	1.0	
AUG 26...	1	63.6	296	3.59	0.3	15.2	412	865	1.27	30.2	934	667	1.0	
SEP 22...	0.6	22.9	187	1.93	0.2	10.9	163	414	0.58	65.7	427	1,470	0.6	

06306250 PRAIRIE DOG CREEK NEAR ACME, WY—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Barium, water, unfltrd recover- able, ug/L (01007)	Beryll- ium, water, unfltrd recover- able, ug/L (01012)	Iron, water, fltrd, ug/L (01046)	Mangan- ese, water, fltrd, ug/L (01056)	Selen- ium, water, unfltrd ug/L (01147)
OCT 07...	38	E.04	<10	24.6	0.9
NOV 18...	40	<0.06	E6	56.3	1.5
DEC 12...	45	<0.06	10	56.9	1.6
JAN 29...	40	<0.06	E6	60.4	1.6
FEB 27...	64	<0.06	E18	67.2	1.8
MAR 25...	91	0.28	15	17.8	1.2
APR 25...	48	E.04	<10	61.9	1.1
MAY 21...	57	0.26	<8	16.4	0.9
JUN 17...	54	0.18	<8	10.3	0.7
JUL 30...	62	<0.06	10	119	1.6
AUG 26...	47	E.05	E5	78.4	1.2
SEP 22...	43	0.12	<8	17.3	0.5

E -- Estimated value

06306300 TONGUE RIVER AT STATE LINE, NEAR DECKER, MT

LOCATION.--Lat 45° 00'32", long 106° 50'08", in NW 1/4 NW 1/4 NE 1/4 sec.33, T.9 S., R.40 E., Big Horn County, Hydrologic Unit 10090101, on left bank 1 mi north of Wyoming-Montana State line, 1.4 mi southeast of Decker, 1.6 mi upstream from Badger Creek, and at river mile 200.9.

DRAINAGE AREA.--1,453 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1960 to current year. Records published as "near Decker" May 1928 to September 1938, not equivalent owing to intervening drainage area.

GAGE.--Water-stage recorder. Datum of gage is 3,429.14 ft above NGVD of 1929 (levels by U.S. Army Corps of Engineers). U.S. Geological Survey data collection platform with satellite telemetry at station.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Flow regulated by many small reservoirs in Wyoming, combined capacity, about 15,000 acre-ft. Diversions for irrigation of about 64,300 acres upstream from station. Station operated and record provided by the Montana District.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	136	e120	e130	e150	e180	e130	234	638	2,520	796	65	109
2	149	e120	e120	e150	e190	e130	252	687	2,690	750	62	103
3	156	e120	e110	e160	180	e140	267	565	2,180	684	59	97
4	153	e130	e100	e160	e160	e150	267	530	1,780	619	62	91
5	157	e140	e100	e160	e140	e150	238	536	1,550	569	58	86
6	162	148	e110	e160	e130	e160	215	491	1,440	523	56	83
7	162	150	e110	e170	e120	e170	212	461	1,410	464	55	92
8	159	149	e120	e160	e100	e220	205	461	1,370	441	62	97
9	160	149	e130	e140	e130	e280	195	558	1,260	402	60	110
10	163	150	e130	e120	e140	e300	192	536	1,170	343	63	139
11	156	147	e130	e110	e150	349	201	660	1,190	324	65	156
12	159	144	e120	e130	e150	464	227	579	1,310	299	71	193
13	155	140	e130	e140	e150	926	252	535	1,280	270	68	188
14	147	138	e140	e130	e150	1,810	297	550	1,250	242	67	216
15	146	140	e140	e120	e160	1,890	322	578	1,170	219	62	207
16	143	144	e130	e120	e170	1,480	361	642	1,120	197	59	207
17	143	140	e130	e120	e180	615	359	758	1,150	189	60	206
18	143	143	e140	e130	e180	589	337	908	1,090	173	70	217
19	136	142	e130	e140	e180	464	336	952	1,010	163	108	226
20	138	141	e120	e150	e170	328	336	877	961	159	116	225
21	140	140	e110	e150	e140	312	300	821	903	164	97	214
22	147	135	e100	e130	e120	318	292	779	849	151	84	214
23	161	137	e100	e120	e90	321	304	843	759	129	77	217
24	149	e140	e100	e130	e100	331	330	1,030	780	104	74	211
25	143	e130	e110	e140	e110	294	400	1,260	1,030	98	72	197
26	144	e110	e120	e160	e120	259	451	1,590	961	78	63	196
27	142	e120	e130	e150	e130	252	502	1,860	960	71	61	191
28	139	e130	e140	e160	e130	245	465	2,140	922	72	61	187
29	e140	e120	e130	e170	---	231	439	2,260	936	69	65	189
30	e130	e120	e130	e190	---	211	420	2,450	908	70	75	189
31	e120	---	e140	e170	---	213	---	2,550	---	66	91	---
TOTAL	4,578	4,077	3,780	4,490	4,050	13,732	9,208	30,085	37,909	8,898	2,168	5,053
MEAN	148	136	122	145	145	443	307	970	1,264	287	69.9	168
MAX	163	150	140	190	190	1,890	502	2,550	2,690	796	116	226
MIN	120	110	100	110	90	130	192	461	759	66	55	83
AC-FT	9,080	8,090	7,500	8,910	8,030	27,240	18,260	59,670	75,190	17,650	4,300	10,020

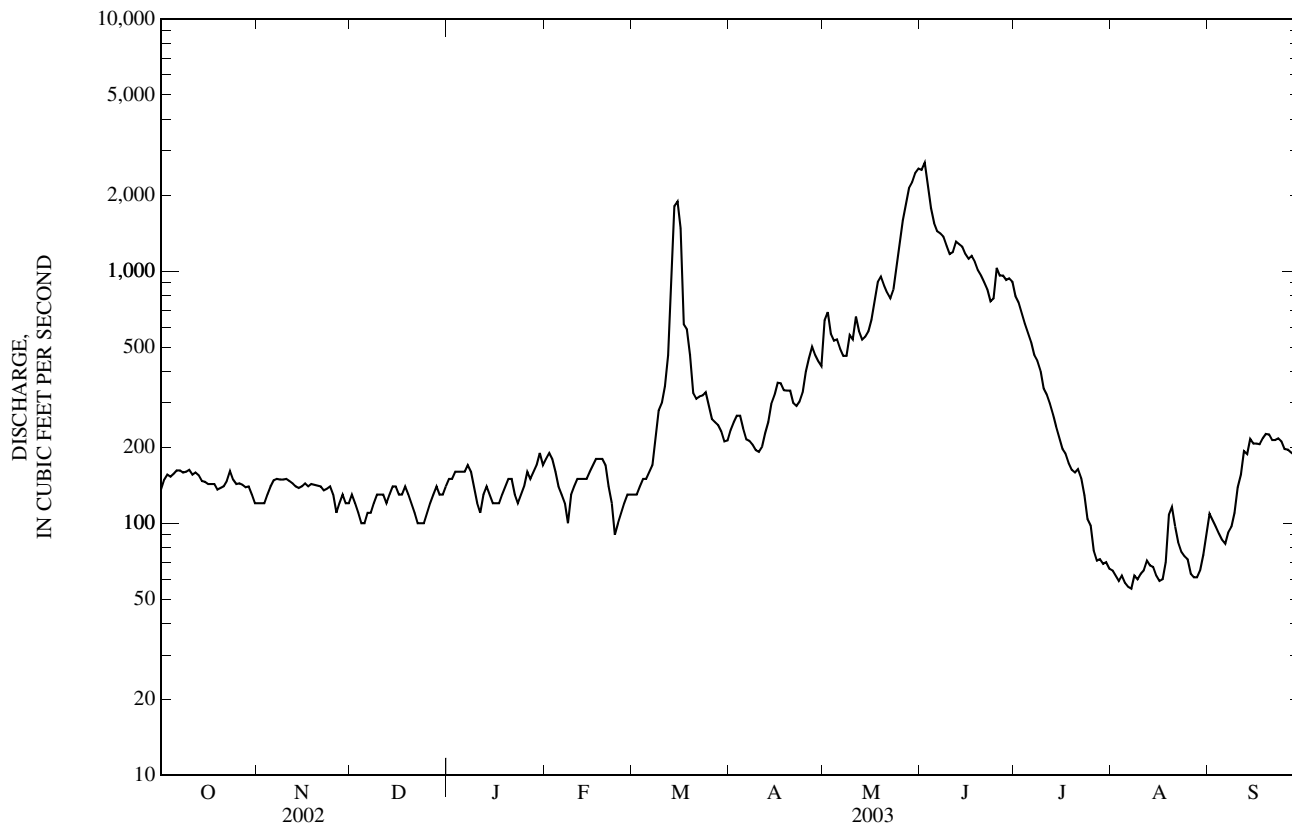
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1961 - 2003, BY WATER YEAR (WY)

MEAN	251	222	178	176	227	306	354	1,132	1,630	457	173	216
MAX	403	324	271	330	672	855	676	3,283	3,570	1,674	475	615
(WY)	(1969)	(1974)	(1976)	(1974)	(1971)	(1972)	(1977)	(1978)	(1978)	(1975)	(1968)	(1968)
MIN	116	126	102	78.7	79.8	88.5	124	268	176	54.7	13.1	73.3
(WY)	(1961)	(2002)	(1985)	(2002)	(2002)	(2002)	(1961)	(2002)	(2001)	(2001)	(2001)	(2001)

06306300 TONGUE RIVER AT STATE LINE, NEAR DECKER, MT—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR	FOR 2003 WATER YEAR	WATER YEARS 1961 - 2003
ANNUAL TOTAL	52,055	128,028	--
ANNUAL MEAN	143	351	443
HIGHEST ANNUAL MEAN	--	--	862 1978
LOWEST ANNUAL MEAN	--	--	138 2002
HIGHEST DAILY MEAN	874 Jun 2	2,690 Jun 2	15,400 May 19, 1978
LOWEST DAILY MEAN	46 Aug 4	55 Aug 7	5.4 Aug 24, 1961
ANNUAL SEVEN-DAY MINIMUM	52 Aug 2	59 Aug 3	7.2 Aug 22, 1961
MAXIMUM PEAK FLOW	--	2,820 May 31	17,500 May 12, 1978
MAXIMUM PEAK STAGE	--	6.84 May 31	14.25 May 12, 1978
ANNUAL RUNOFF (AC-FT)	103,300	253,900	321,200
10 PERCENT EXCEEDS	219	930	1,040
50 PERCENT EXCEEDS	120	159	231
90 PERCENT EXCEEDS	70	91	112

e Estimated.



06306300 TONGUE RIVER AT STATE LINE, NEAR DECKER, MT—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1966 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1965 to September 1976, November 1980 to December 1986, August 2000 to current year.

WATER TEMPERATURE: October 1965 to September 1976.

INSTRUMENTATION.--Specific conductance probe installed August 21, 2000.

REMARKS.--Missing conductance data for November 21 to April 9 due to ice conditions and for September 19-21, 26-29 due to erroneous values. Records rated good except for April 26 to June 4, which is rated fair. Unpublished records of instantaneous water temperature and specific conductance are available in files of the Montana District office.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 1,490 microsiemens/cm August 12, 1966; minimum daily, 192 microsiemens/cm, June 7, 1976.

WATER TEMPERATURE: Maximum, 30.5°C, July 16, 1966; minimum, 0.0°C on many days during winter.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 827 microsiemens/cm, October 29; minimum daily, 161 microsiemens/cm, May 30 and June 1.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Turbidity, NTU (00076)	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 uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, unfltrd mg/L as CaCO3 (00900)	Calcium, water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)
OCT 01...	1700	134	--	680	8.8	90	8.4	694	6.0	11.0	320	63.4	39.6
NOV 21...	1530	140	--	676	13.8	127	8.3	725	15.0	6.5	330	65.5	39.9
DEC 18...	0900	E140	--	667	10.8	85	8.2	680	0.0	0.0	310	65.3	36.7
JAN 07...	1000	E170	--	679	12.3	95	8.2	598	5.5	0.0	260	56.1	29.8
FEB 06...	1200	130	--	683	9.5	73	7.9	711	-6.0	0.0	310	63.8	35.9
MAR 07...	1200	E170	--	667	9.6	75	8.0	751	-7.0	0.0	360	73.2	43.0
APR 10...	0830	198	--	676	9.6	96	7.9	813	7.0	10.0	350	68.7	43.2
MAY 06...	1430	480	--	678	9.9	104	8.0	488	12.0	12.0	210	46.6	23.8
JUN 04...	1515	1,740	--	674	8.6	93	8.0	222	16.0	13.5	91	21.7	8.83
JUL 01...	1530	769	--	668	8.6	114	8.4	282	34.0	22.5	120	27.7	13.1
AUG 05...	1630	57	--	667	9.4	141	8.4	657	26.5	29.0	260	51.3	32.5
SEP 02...	1130	106	--	679	6.7	81	8.5	796	24.0	18.5	320	59.6	40.4

06306300 TONGUE RIVER AT STATE LINE, NEAR DECKER, MT—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Potas- sium, water, ftrd, mg/L (00935)	Sodium adsorp- tion ratio (00931)	Sodium, water, ftrd, mg/L (00930)	ANC, wat unf fixed end pt, lab, mg/L as CaCO ₃ (90410)	Alka- linity, wat ftrd fxd end lab, mg/L as CaCO ₃ (29801)	Chlor- ide, water, ftrd, mg/L (00940)	Fluor- ide, water, ftrd, mg/L (00950)	Silica, water, ftrd, mg/L (00955)	Sulfate water, ftrd, mg/L (00945)	Residue water, ftrd, sum of consti- tuents mg/L (70301)	Residue water, ftrd, tons/ acre-ft (70303)	Residue water, ftrd, tons/d (70302)	Residue on evap. at 180degC wat ftrd mg/L (70300)
OCT 01...	2.94	0.9	35.2	E197	E175	3.98	0.33	5.85	146	--	--	--	441
NOV 21...	2.70	0.8	32.9	E222	212	4.24	0.32	4.43	153	430	0.61	169	448
DEC 18...	2.17	0.7	30.4	E228	E215	5.06	0.28	6.62	136	--	--	--	451
JAN 07...	1.86	0.7	26.8	225	225	3.63	0.28	5.54	90.6	349	0.50	--	365
FEB 06...	4.77	0.9	34.5	242	241	6.39	0.30	7.65	142	440	0.56	144	411
MAR 07...	2.88	0.9	37.1	259	299	6.60	0.28	5.67	161	510	0.69	--	508
APR 10...	3.26	0.9	39.6	255	254	4.55	0.28	2.71	201	515	0.74	292	546
MAY 06...	2.25	0.6	20.4	162	158	3.45	0.18	7.43	99.1	298	0.43	411	317
JUN 04...	1.09	0.3	6.33	85	82	1.14	<0.2	8.61	25.6	123	0.19	646	137
JUL 01...	1.24	0.4	9.26	110	109	1.49	<0.2	8.13	38.7	165	0.25	378	182
AUG 05...	3.18	1	38.2	225	222	4.74	0.3	6.51	126	396	0.57	64.4	419
SEP 02...	3.64	0.9	35.4	235	215	5.47	0.3	6.23	162	442	0.67	140	490
Date	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, ftrd, mg/L as N (00608)	Nitrite + nitrate water ftrd, mg/L as N (00631)	Nitrite water, ftrd, mg/L as N (00613)	Ortho- phos- phate, water, ftrd, mg/L as P (00671)	Phos- phorus, water, unfltrd mg/L (00665)	Alum- inum, water, unfltrd recover- able, ug/L (01105)	Arsenic water, ftrd, ug/L (01000)	Arsenic water unfltrd ug/L (01002)	Barium, water, unfltrd recover- able, ug/L (01007)	Beryll- ium, water, unfltrd recover- able, ug/L (01012)	Boron, water, unfltrd recover- able, ug/L (01022)	Cadmium water, unfltrd ug/L (01027)
OCT 01...	0.24	<0.04	<0.022	<0.002	<0.007	0.020	60	0.6	<2	41	<0.06	61	<0.04
NOV 21...	0.20	E.02	<0.022	<0.002	<0.007	0.011	77	0.5	<2	47	<0.06	84	<0.04
DEC 18...	0.16	<0.04	0.051	0.006	<0.007	E.02	51	0.3	<2	44	<0.06	67	<0.04
JAN 07...	0.37	<0.04	<0.022	<0.002	<0.007	0.016	19	0.3	<2	46	<0.06	54	<0.04
FEB 06...	0.42	0.05	0.184	0.004	0.029	0.066	71	0.3	<2	52	<0.06	63	<0.04
MAR 07...	0.20	E.02	0.135	0.003	<0.007	0.019	38	0.3	<2	53	<0.06	65	<0.04
APR 10...	0.40	<0.04	<0.022	<0.002	E.004	0.055	335	0.6	E1	58	E.04	77	E.02
MAY 06...	0.64	<0.04	E.021	E.002	0.008	0.117	672	0.5	<2	56	0.12	47	0.05
JUN 04...	0.53	<0.04	0.063	0.004	0.013	0.103	558	0.4	E2	35	0.06	18	E.03
JUL 01...	0.37	<0.04	<0.022	<0.002	0.010	0.072	377	0.5	3	35	E.04	30	E.02
AUG 05...	0.30	<0.04	<0.022	<0.002	<0.007	0.030	127	0.8	E1	68	<0.06	90	<0.04
SEP 02...	0.34	<0.04	<0.022	<0.002	<0.007	0.020	79	0.7	E2	57	<0.06	100	E.03

06306300 TONGUE RIVER AT STATE LINE, NEAR DECKER, MT—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Chromium, water, unfltrd recover- able, ug/L (01034)	Copper, water, unfltrd recover- able, ug/L (01042)	Iron, water, fltrd, ug/L (01046)	Iron, water, unfltrd recover- able, ug/L (01045)	Lead, water, unfltrd recover- able, ug/L (01051)	Manganese, water, fltrd, ug/L (01056)	Manganese, water, unfltrd recover- able, ug/L (01055)	Mercury, water, unfltrd recover- able, ug/L (71900)	Nickel, water, unfltrd recover- able, ug/L (01067)	Selenium, water, unfltrd ug/L (01147)	Zinc, water, unfltrd recover- able, ug/L (01092)	Suspnd. sediment, sieve diameter percent <.063mm (70331)	Suspended sediment concentration mg/L (80154)
OCT 01...	<0.8	1.1	E9	140	0.16	10.9	21.8	--	3.54	0.5	E2	72	68
NOV 21...	<0.8	2.7	12	110	0.09	14.4	17.3	--	4.34	0.6	4	44	42
DEC 18...	<0.8	1.4	E9	190	0.36	11.7	16.4	--	4.10	0.5	E2	27	44
JAN 07...	<0.8	0.8	13	80	0.09	10.2	10.8	--	3.82	E.2	E2	73	7
FEB 06...	E.4	2.3	28	210	0.18	18.8	28.3	--	4.11	0.5	3	96	7
MAR 07...	<0.8	1.5	26	120	E.04	18.1	21.4	--	3.06	0.5	2	37	35
APR 10...	E.6	2.6	26	750	0.64	37.4	80.5	--	3.68	0.9	5	82	65
MAY 06...	1.6	3.6	<10	1,120	1.79	9.8	72.7	--	2.96	0.5	9	97	98
JUN 04...	0.9	4.5	42	1,050	1.16	10.1	61.0	E.01	2.08	E.4	6	81	85
JUL 01...	E.6	1.7	20	730	0.83	6.9	53.4	--	1.94	E.3	19	80	46
AUG 05...	<0.8	2.4	<8	220	0.26	6.5	31.4	--	3.53	0.9	3	86	42
SEP 02...	<0.8	2.4	E5	160	0.17	6.2	20.3	--	3.42	0.6	21	75	51

Suspended
sediment
load,
tons/d
(80155)

OCT 01...	25
NOV 21...	16
DEC 18...	--
JAN 07...	--
FEB 06...	2.5
MAR 07...	--
APR 10...	35
MAY 06...	127
JUN 04...	399
JUL 01...	96
AUG 05...	6.5
SEP 02...	15

E -- Estimated value

06306300 TONGUE RIVER AT STATE LINE, NEAR DECKER, MT—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	721	694	708	844	760	799	---	---	---	---	---	---
2	726	681	708	900	833	852	---	---	---	---	---	---
3	699	667	686	1,030	832	881	---	---	---	---	---	---
4	712	680	695	917	828	873	---	---	---	---	---	---
5	690	668	681	895	806	853	---	---	---	---	---	---
6	698	670	684	863	801	837	---	---	---	---	---	---
7	695	668	682	855	763	812	---	---	---	---	---	---
8	697	674	685	805	773	785	---	---	---	---	---	---
9	696	665	682	787	764	775	---	---	---	---	---	---
10	706	676	693	775	750	764	---	---	---	---	---	---
11	718	694	708	770	744	759	---	---	---	---	---	---
12	736	700	719	766	695	748	---	---	---	---	---	---
13	757	730	744	765	689	742	---	---	---	---	---	---
14	769	716	744	781	728	762	---	---	---	---	---	---
15	761	716	737	767	744	757	---	---	---	---	---	---
16	776	742	756	762	733	750	---	---	---	---	---	---
17	780	740	758	779	752	766	---	---	---	---	---	---
18	768	734	751	764	734	752	---	---	---	---	---	---
19	779	724	755	765	737	752	---	---	---	---	---	---
20	775	738	756	769	731	750	---	---	---	---	---	---
21	780	748	762	---	---	---	---	---	---	---	---	---
22	761	725	746	---	---	---	---	---	---	---	---	---
23	742	711	729	---	---	---	---	---	---	---	---	---
24	743	715	732	---	---	---	---	---	---	---	---	---
25	749	729	739	---	---	---	---	---	---	---	---	---
26	774	732	750	---	---	---	---	---	---	---	---	---
27	789	739	755	---	---	---	---	---	---	---	---	---
28	812	740	779	---	---	---	---	---	---	---	---	---
29	827	745	796	---	---	---	---	---	---	---	---	---
30	814	767	787	---	---	---	---	---	---	---	---	---
31	808	769	785	---	---	---	---	---	---	---	---	---
MONTH	827	665	732	1,030	689	788	---	---	---	---	---	---
FEBRUARY			MARCH			APRIL			MAY			
1	---	---	---	---	---	---	---	---	---	507	474	489
2	---	---	---	---	---	---	---	---	---	546	499	524
3	---	---	---	---	---	---	---	---	---	566	546	557
4	---	---	---	---	---	---	---	---	---	567	555	560
5	---	---	---	---	---	---	---	---	---	555	499	531
6	---	---	---	---	---	---	---	---	---	501	480	487
7	---	---	---	---	---	---	---	---	---	495	482	488
8	---	---	---	---	---	---	---	---	---	485	471	478
9	---	---	---	---	---	---	---	---	---	490	457	473
10	---	---	---	---	---	---	---	---	---	524	490	515
11	---	---	---	---	---	---	824	779	800	538	503	517
12	---	---	---	---	---	---	794	732	756	597	538	574
13	---	---	---	---	---	---	737	670	701	574	538	557
14	---	---	---	---	---	---	670	585	618	544	389	501
15	---	---	---	---	---	---	585	529	549	507	441	487
16	---	---	---	---	---	---	533	491	513	509	486	502
17	---	---	---	---	---	---	491	472	478	488	449	469
18	---	---	---	---	---	---	490	468	481	449	396	419
19	---	---	---	---	---	---	491	483	486	399	377	386
20	---	---	---	---	---	---	504	481	492	380	371	374
21	---	---	---	---	---	---	545	502	521	377	368	372
22	---	---	---	---	---	---	544	525	534	375	360	369
23	---	---	---	---	---	---	538	514	529	361	338	350
24	---	---	---	---	---	---	516	488	503	340	294	318
25	---	---	---	---	---	---	489	438	458	297	273	287
26	---	---	---	---	---	---	489	427	443	280	257	269
27	---	---	---	---	---	---	520	489	508	262	195	237
28	---	---	---	---	---	---	507	487	495	202	180	193
29	---	---	---	---	---	---	497	469	482	184	166	177
30	---	---	---	---	---	---	485	466	475	174	161	169
31	---	---	---	---	---	---	---	---	---	182	168	175
MONTH	---	---	---	---	---	---	824	427	541	597	161	413

06309200 MIDDLE FORK POWDER RIVER NEAR BARNUM, WY

LOCATION.--Lat 43° 34'40", long 107° 08'16", in SE $\frac{1}{4}$ SW $\frac{1}{4}$ NE $\frac{1}{4}$ sec.26, T.42 N., R.86 W., Washakie County, Hydrologic Unit 10090201, on left bank 1,100 ft downstream from Rock Creek and 13 mi southwest of Barnum.

DRAINAGE AREA.--45.2 mi².

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

GAGE.--Water-stage recorder. Elevation of gage is 7,220 ft above NGVD of 1929, from topographic map. Prior to October 1, 1970, at site 1,000 ft upstream at different datum. October 1, 1970 to August 17, 1987, at site 100 ft upstream at datum 6.78 ft higher (gage operated concurrently with present site September 15, 1983 to August 17, 1987). U.S. Geological Survey data collection platform with satellite telemetry at station.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. No diversion upstream from station.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.1	e4.4	e3.7	e3.1	e3.2	e3.2	e5.0	27	24	7.7	4.3	4.0
2	4.6	e4.5	e3.6	e3.2	e3.3	e3.1	e7.0	26	26	7.1	4.3	3.9
3	4.8	e4.5	e3.6	e3.3	e3.1	e3.0	e8.0	28	24	6.7	4.3	3.9
4	5.2	e4.5	e3.6	e3.2	e3.0	e2.8	e7.0	29	20	6.6	4.3	3.9
5	5.1	e4.5	e3.6	e3.1	e3.0	e2.9	e6.0	27	20	6.3	4.3	3.9
6	4.7	e4.5	e3.5	e3.1	e3.0	e3.0	5.4	26	22	6.2	4.3	3.9
7	4.5	e4.6	e3.5	e3.1	e2.8	e3.1	4.9	26	27	6.1	4.3	3.9
8	4.3	e4.4	e3.5	e3.1	e2.9	e3.1	5.0	31	22	5.7	4.3	3.9
9	4.3	e4.4	e3.5	e3.1	e2.9	e3.1	6.4	29	19	5.4	4.3	3.9
10	4.3	e4.3	e3.4	e2.9	e2.9	e3.2	e8.0	28	18	5.4	4.2	5.9
11	e4.3	e4.2	e3.4	e3.0	e3.0	3.0	e15	26	14	5.3	4.1	5.8
12	e4.4	e4.2	e3.4	e3.1	e3.0	3.2	e30	30	13	5.2	4.1	5.1
13	e4.4	e4.2	e3.7	e3.2	e3.0	e3.4	e50	36	12	5.0	4.1	5.7
14	e4.3	e4.1	e3.5	e3.1	e3.2	e5.0	e60	46	12	4.6	4.1	5.2
15	4.3	e4.1	e3.4	e3.1	e3.1	e7.0	e55	53	11	4.5	4.1	4.4
16	4.3	e4.0	e3.3	e3.0	e3.1	e8.0	e50	68	11	4.5	4.1	4.2
17	4.2	e4.1	e3.4	e3.0	e3.2	e7.0	47	87	11	4.4	4.6	5.8
18	4.2	e3.9	e3.3	e3.0	e3.2	e6.0	44	97	9.5	4.5	5.7	6.4
19	4.1	e4.1	e3.2	e3.0	e3.2	e5.0	35	67	9.0	4.6	4.3	6.3
20	4.2	e4.0	e3.2	e3.2	e3.2	4.0	28	52	9.2	4.5	4.1	6.2
21	4.2	e4.0	e3.2	e3.0	e3.1	3.7	30	50	8.9	4.3	4.0	5.3
22	4.1	e4.2	e3.2	e3.0	e3.1	e3.6	43	54	8.5	4.3	3.9	4.6
23	e4.1	e4.0	e3.2	e2.8	e3.1	e3.8	56	52	9.3	4.3	3.9	4.4
24	e4.1	e3.9	e3.1	e3.0	e2.7	e4.0	64	50	16	4.3	3.9	4.3
25	e4.2	e3.7	e3.1	e3.1	e2.9	e3.9	88	47	18	4.3	3.9	4.1
26	e4.3	e3.7	e3.1	e3.1	e3.1	3.7	80	49	16	4.3	3.9	4.0
27	e4.5	e3.8	e3.1	e3.1	e3.1	e3.4	54	40	11	4.4	3.9	4.0
28	e4.6	e3.8	e3.2	e3.0	e3.1	e4.0	36	35	9.8	4.3	3.9	4.0
29	e4.7	e3.7	e3.2	e2.9	---	e4.7	34	31	14	4.4	3.9	4.0
30	e4.6	e3.7	e3.3	e3.0	---	4.1	34	29	9.2	4.4	5.4	4.3
31	e4.2	---	e3.2	e3.2	---	4.0	---	27	---	4.3	4.9	---
TOTAL	136.2	124.0	104.2	95.1	85.5	125.0	995.7	1,303	454.4	157.9	131.7	139.2
MEAN	4.39	4.13	3.36	3.07	3.05	4.03	33.2	42.0	15.1	5.09	4.25	4.64
MAX	5.2	4.6	3.7	3.3	3.3	8.0	88	97	27	7.7	5.7	6.4
MIN	4.1	3.7	3.1	2.8	2.7	2.8	4.9	26	8.5	4.3	3.9	3.9
AC-FT	270	246	207	189	170	248	1,970	2,580	901	313	261	276

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1962 - 2003, BY WATER YEAR (WY)

	MEAN	7.04	6.54	5.66	5.12	5.26	6.63	34.1	155	88.3	17.7	8.51	7.20
MAX	15.1	22.9	10.3	7.78	10.1	14.2	106	326	299	39.9	18.3	17.0	
(WY)	(1999)	(1999)	(1999)	(1983)	(1969)	(1972)	(1987)	(1999)	(1975)	(1975)	(1968)	(1968)	
MIN	2.45	2.00	2.75	2.48	2.87	3.47	8.00	42.0	13.0	5.09	4.25	4.16	
(WY)	(1963)	(1963)	(1962)	(1962)	(2002)	(2002)	(1970)	(2003)	(2001)	(2003)	(2003)	(1969)	

06309200 MIDDLE FORK POWDER RIVER NEAR BARNUM, WY—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1962 - 2003	
ANNUAL TOTAL	3,926.0		3,851.9		--	
ANNUAL MEAN	10.8		10.6		29.0	
HIGHEST ANNUAL MEAN	--		--		51.4	
LOWEST ANNUAL MEAN	--		--		10.6	
HIGHEST DAILY MEAN	90	Apr 15	97	May 18	954	Apr 29, 1999
LOWEST DAILY MEAN	2.6	Feb 9,10	2.7 ^c	Feb 24	1.0	Dec 15, 1964
ANNUAL SEVEN-DAY MINIMUM	2.8	Feb 5	2.9	Feb 4	1.2	Jan 22, 1966
MAXIMUM PEAK FLOW	--		118 ^a	May 18	7,110 ^b	Jun 15, 1963
MAXIMUM PEAK STAGE	--		6.76 ^c	Apr 18	12.60 ^d	Jun 15, 1963
ANNUAL RUNOFF (AC-FT)	7,790		7,640		21,040	
10 PERCENT EXCEEDS	34		30		70	
50 PERCENT EXCEEDS	4.3		4.3		7.0	
90 PERCENT EXCEEDS	3.0		3.1		4.4	

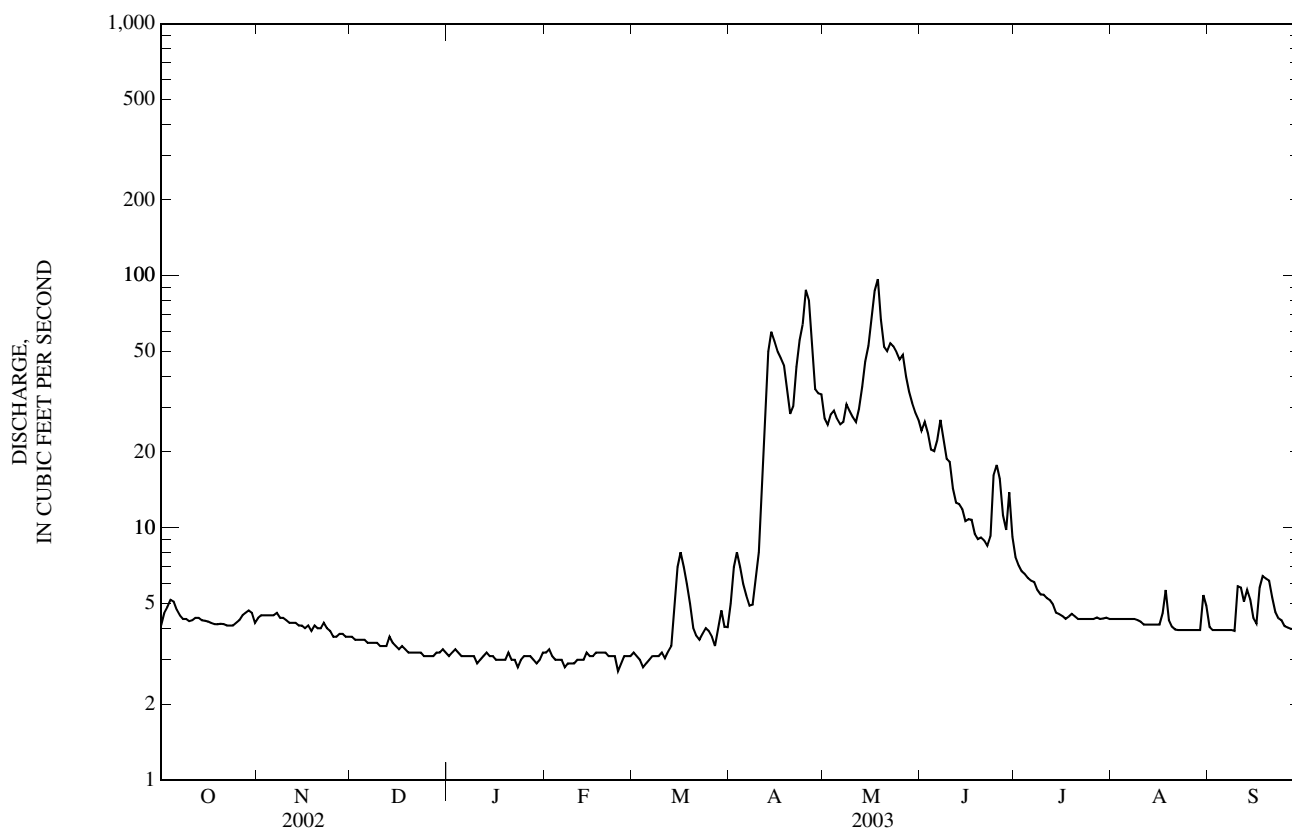
a Gage height, 6.60 ft.

b On basis of slope-area measurement of peak flow.

c Backwater from ice.

d From floodmarks, site and datum then in use.

e Estimated.



06311000 NORTH FORK POWDER RIVER NEAR HAZELTON, WY

LOCATION.--Lat 44° 01' 40", long 107° 04' 49", in SW $\frac{1}{4}$ SE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 21, T. 47 N., R. 85 W., Johnson County, Hydrologic Unit 10090201, on left bank 0.5 mi upstream from Dullknife Reservoir, 0.6 mi downstream from Twin Creek, 7.2 mi southwest of Hazelton, and 19 mi northwest of Mayoworth.

DRAINAGE AREA.--24.5 mi².

PERIOD OF RECORD.--September 1946 to current year. Monthly discharge only for some periods, published in WSP 1309.

REVISED RECORDS.--WSP 1279: 1947-48(M), 1949, 1950-51(M), 1952. WDR WY-98: 1997.

GAGE.--Water-stage recorder. Elevation of gage is 8,180 ft above NGVD of 1929, from topographic map. Prior to October 1, 1966, at site 0.7 mi downstream at different datum. October 1, 1966 to August 26, 1986, at site 0.1 mi upstream at different datum. U.S. Geological Survey data collection platform with satellite telemetry at station.

REMARKS.--Records good except those for estimated daily discharges, which are poor. No diversion upstream from station.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.7	e2.5	2.2	1.7	1.6	1.4	1.8	20	96	23	6.3	4.3
2	4.3	e2.7	2.2	1.6	1.6	1.5	2.7	17	76	20	5.9	3.6
3	4.5	e2.8	2.3	1.6	1.6	1.5	2.7	15	64	19	5.7	3.4
4	5.5	e2.8	2.3	1.7	1.6	1.5	2.0	14	59	18	5.9	3.2
5	5.3	e2.9	2.3	1.7	1.6	1.5	1.8	13	54	17	5.7	3.1
6	4.9	e3.0	2.2	1.7	1.5	1.5	1.7	12	58	16	5.3	3.3
7	4.5	e3.0	2.1	1.7	1.5	1.5	1.7	12	59	15	5.1	3.3
8	4.7	e4.0	2.1	1.6	1.5	1.5	1.6	13	50	15	4.8	3.6
9	4.4	e3.7	e2.1	1.5	1.5	1.5	e2.0	12	47	14	4.7	4.3
10	e4.0	e3.3	e2.0	1.4	1.5	1.5	e6.0	11	44	13	4.5	5.1
11	e3.8	e3.0	e2.0	1.3	1.5	1.5	e3.0	11	43	12	4.4	5.8
12	e3.5	2.7	2.0	1.2	1.5	1.5	e100	13	39	12	4.2	5.0
13	e3.7	2.9	1.9	1.3	1.5	1.5	e140	23	38	11	3.9	5.3
14	e3.8	2.6	2.0	1.4	1.5	1.6	e120	39	36	11	3.8	5.1
15	e4.0	2.5	2.0	1.4	1.5	1.6	e110	53	32	10	3.6	4.5
16	e3.8	2.4	2.1	1.5	1.5	1.7	e100	89	45	10	3.3	3.8
17	e3.8	2.3	2.0	1.4	1.5	1.8	e95	114	70	9.7	5.2	4.3
18	e3.7	2.1	2.0	1.3	1.5	1.6	104	119	47	9.7	9.4	4.8
19	e3.7	2.2	1.9	1.2	1.5	1.6	82	82	34	10	6.1	5.4
20	e3.6	2.1	1.7	1.3	1.4	1.6	51	53	30	9.4	6.3	4.7
21	e3.6	2.2	1.6	1.4	1.5	1.6	78	61	28	8.4	4.8	3.9
22	e3.6	2.1	1.6	1.4	1.4	1.6	78	111	26	7.7	4.2	3.6
23	e3.4	e2.1	1.6	1.5	1.4	1.7	44	147	30	7.4	3.9	3.5
24	e3.0	2.1	1.6	1.5	1.4	1.6	25	139	47	7.0	3.6	3.2
25	e3.2	2.2	1.5	1.5	1.4	1.6	e28	150	48	7.1	3.4	3.3
26	e3.4	2.1	1.4	1.5	1.5	1.6	e35	138	46	12	3.3	3.1
27	e3.5	2.1	1.4	1.5	1.4	1.6	e28	122	36	11	3.2	3.0
28	e3.5	2.2	1.5	1.5	1.4	1.5	25	114	30	8.9	3.2	3.1
29	e3.0	2.4	1.5	1.5	---	1.5	32	112	34	8.1	3.1	3.0
30	e2.9	2.3	1.8	1.6	---	1.6	e30	104	26	7.1	4.9	3.1
31	e2.7	---	1.7	1.6	---	1.6	---	100	---	6.6	5.8	---
TOTAL	119.0	77.3	58.6	46.0	41.8	48.4	1,359.0	2,033	1,372	366.1	147.5	118.7
MEAN	3.84	2.58	1.89	1.48	1.49	1.56	45.3	65.6	45.7	11.8	4.76	3.96
MAX	5.5	4.0	2.3	1.7	1.6	1.8	140	150	96	23	9.4	5.8
MIN	2.7	2.1	1.4	1.2	1.4	1.4	1.6	11	26	6.6	3.1	3.0
AC-FT	236	153	116	91	83	96	2,700	4,030	2,720	726	293	235

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1946 - 2003, BY WATER YEAR (WY)

MEAN	4.33	3.48	2.79	2.29	2.12	2.23	9.90	60.1	63.0	16.9	6.96	4.98
MAX	10.4	10.1	6.96	4.50	4.00	4.99	45.3	119	178	46.8	13.3	9.74
(WY)	(1983)	(1983)	(1983)	(1958)	(1958)	(1960)	(2003)	(1947)	(1967)	(1975)	(1997)	(1982)
MIN	2.03	1.70	1.41	0.80	1.00	1.19	1.09	20.7	9.08	4.88	2.66	2.47
(WY)	(1961)	(1981)	(1967)	(1949)	(1959)	(1967)	(1961)	(2001)	(2001)	(1960)	(2001)	(1960)

06311000 NORTH FORK POWDER RIVER NEAR HAZELTON, WY—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1946 - 2003	
ANNUAL TOTAL	3,489.4		5,787.4		--	
ANNUAL MEAN	9.56		15.9		15.0	
HIGHEST ANNUAL MEAN	--		--		26.7	1967
LOWEST ANNUAL MEAN	--		--		5.05	2001
HIGHEST DAILY MEAN	92.	May 19	150	May 25	354	Jun 15, 1953
LOWEST DAILY MEAN	1.4	Dec 26-27	1.2	Jan 12, 19	0.60 ^a	Oct 30, 1960
ANNUAL SEVEN-DAY MINIMUM	1.5	Dec 23	1.4	Jan 9	0.64	Apr 12, 1961
MAXIMUM PEAK FLOW	--	--	230 ^b	May 22	886 ^c	Jun 15, 1953
MAXIMUM PEAK STAGE	--	--	5.12 ^d	Apr 13	6.21 ^f	May 14, 1984
ANNUAL RUNOFF (AC-FT)	6,920		11,480		10,840	
10 PERCENT EXCEEDS	28		50		43	
50 PERCENT EXCEEDS	3.7		3.4		3.8	
90 PERCENT EXCEEDS	1.7		1.5		1.8	

a May have been less during winter months of water years 1947 and 1948.

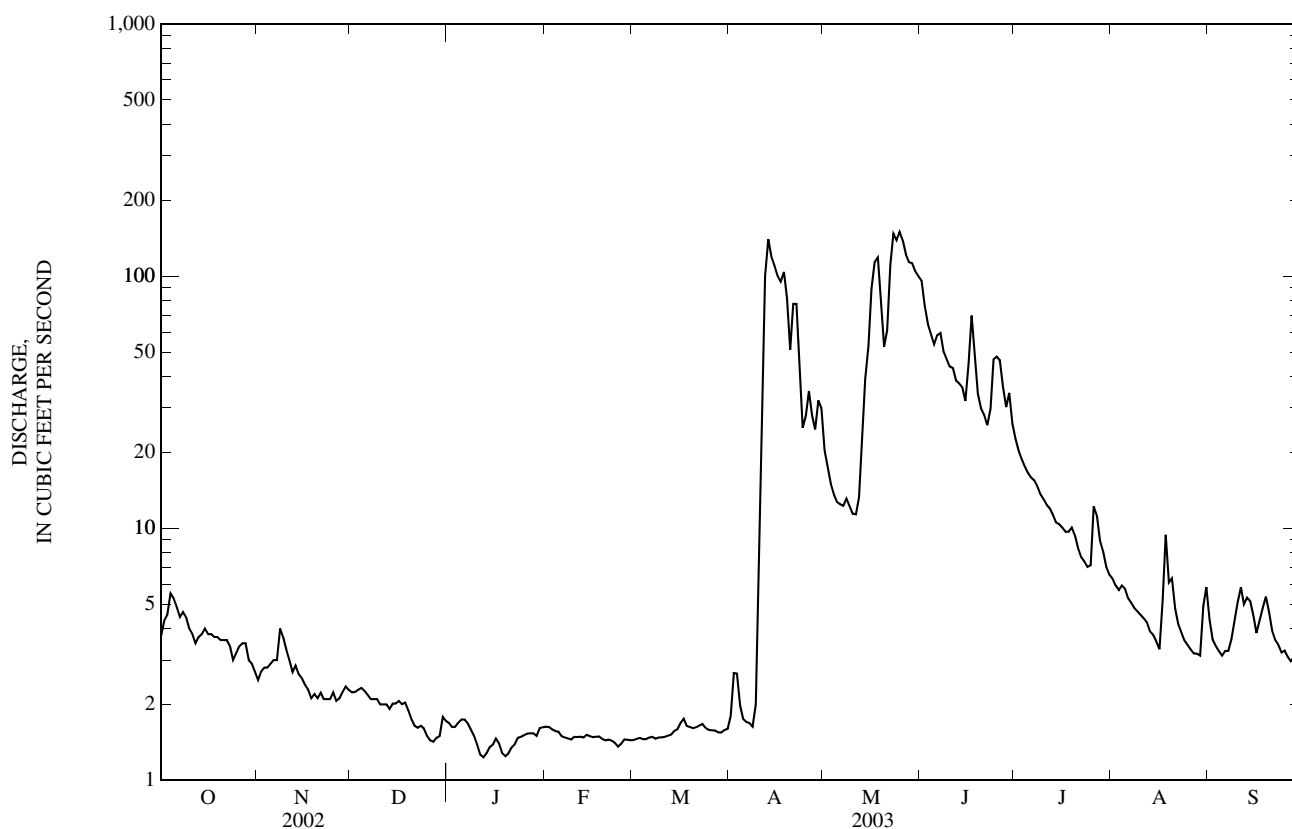
b Gage height, 3.85 ft.

c Gage height, 4.34 ft, site and datum then in use, from rating curve extended above 110 ft³/s, on basis of slope-area measurement of peak flow.

d Backwater from ice.

e Estimated.

f Backwater from ice, site and datum then in use.



06311400 NORTH FORK POWDER RIVER BELOW PASS CREEK, NEAR MAYOWORTH, WY

LOCATION.--Lat 43° 54'41", long 106° 53'20", in NW $\frac{1}{4}$ NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.36, T.46 N., R.84 W., Johnson County, Hydrologic Unit 10090201, on left bank 0.8 mi downstream from Pass Creek, 1.2 mi upstream from Hat Ranch, 7.2 mi northwest of Mayoworth, and 13 mi downstream from Dullknife Reservoir.

DRAINAGE AREA.--100 mi².

PERIOD OF RECORD.--October 1973 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 5,700 ft above NGVD of 1929, from topographic map. Prior to September 15, 1983, at site 60 ft downstream at same datum. U.S. Geological Survey data collection platform with satellite telemetry at station.

REMARKS.--Records good except those for December to April which are fair, and those for estimated daily discharges, which are poor. Some regulation for irrigation by Dullknife Reservoir 13 mi upstream, capacity, 4,350 acre-ft.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19	e16	17	18	18	19	18	21	127	40	53	29
2	18	e16	17	18	18	19	19	20	107	37	52	28
3	18	17	17	18	18	19	19	20	87	34	51	28
4	18	17	17	18	19	19	18	20	81	33	50	28
5	18	17	17	18	18	19	18	19	78	32	50	28
6	17	17	17	17	e18	19	19	18	74	31	51	26
7	17	17	17	17	e18	19	19	19	84	30	51	24
8	17	17	17	17	e18	19	18	21	75	30	51	23
9	17	17	17	17	e17	19	19	20	62	30	51	22
10	17	17	17	e16	e17	19	21	19	55	28	50	23
11	17	17	17	15	e17	19	27	18	55	26	49	22
12	18	17	17	16	e17	19	72	19	52	26	47	22
13	17	17	17	16	e17	19	79	24	49	25	47	22
14	17	17	17	16	17	19	117	29	50	24	46	22
15	17	17	17	16	17	19	126	32	49	22	45	21
16	17	17	17	16	16	19	80	29	49	22	44	21
17	17	17	17	16	15	18	45	31	83	22	45	22
18	17	17	17	16	15	17	39	29	72	21	46	21
19	17	17	e15	17	15	17	38	27	52	34	45	21
20	17	17	e15	17	16	17	27	42	48	41	44	20
21	17	17	17	18	16	15	24	55	43	40	42	18
22	17	17	17	18	16	14	39	86	41	41	41	18
23	17	17	16	18	e16	13	47	159	41	41	35	18
24	17	17	e16	18	e17	13	46	160	58	41	32	18
25	17	15	17	18	19	13	48	158	66	42	31	17
26	17	e15	17	17	19	16	44	159	68	52	31	17
27	17	17	17	16	19	18	32	147	54	56	31	17
28	17	17	19	15	19	18	26	140	50	56	30	17
29	17	17	19	15	---	18	24	137	51	55	30	18
30	17	17	18	15	---	18	27	136	47	54	31	18
31	17	---	18	15	---	18	---	126	---	53	30	---
TOTAL	534	504	527	518	482	547	1,195	1,940	1,908	1,119	1,332	649
MEAN	17.2	16.8	17.0	16.7	17.2	17.6	39.8	62.6	63.6	36.1	43.0	21.6
MAX	19	17	19	18	19	19	126	160	127	56	53	29
MIN	17	15	15	15	15	13	18	18	41	21	30	17
AC-FT	1,060	1,000	1,050	1,030	956	1,080	2,370	3,850	3,780	2,220	2,640	1,290

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1974 - 2003, BY WATER YEAR (WY)

MEAN	21.7	19.4	18.9	18.4	18.1	18.1	27.2	75.1	87.3	45.6	39.0	31.4
MAX	31.5	25.3	23.1	21.0	22.0	21.1	47.9	176	193	80.5	52.4	53.8
(WY)	(1983)	(1999)	(1977)	(2000)	(2000)	(2000)	(1977)	(1978)	(1995)	(1975)	(1998)	(1997)
MIN	16.1	15.8	14.9	15.1	14.2	14.6	16.9	20.7	29.7	30.8	26.1	18.2
(WY)	(1990)	(1990)	(1991)	(1991)	(1991)	(1991)	(1993)	(2002)	(2001)	(1977)	(1985)	(2001)

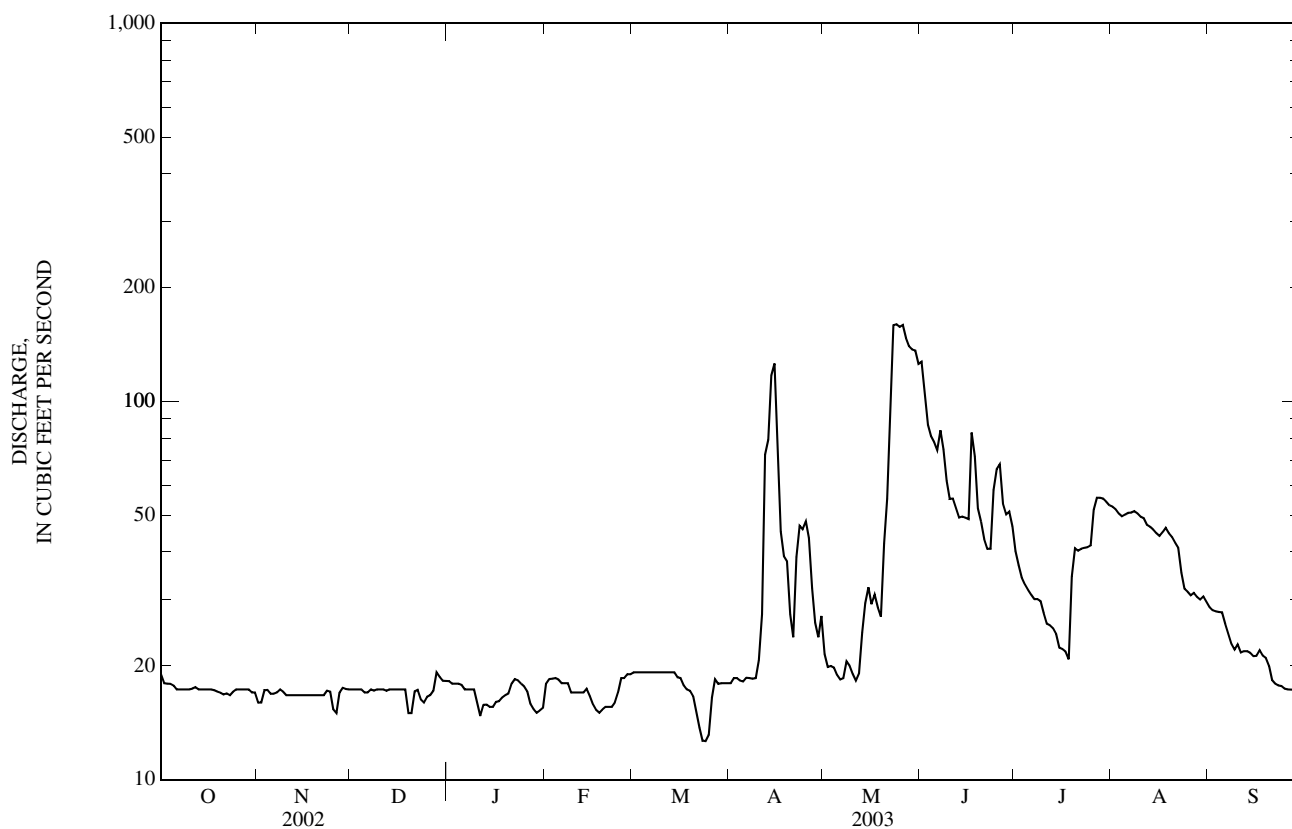
06311400 NORTH FORK POWDER RIVER BELOW PASS CREEK, NEAR MAYOWORTH, WY—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1974 - 2003	
ANNUAL TOTAL	8,325		11,255		--	
ANNUAL MEAN	22.8		30.8		35.1	
HIGHEST ANNUAL MEAN	--		--		51.6	1978
LOWEST ANNUAL MEAN	--		--		22.8	2001
HIGHEST DAILY MEAN	50	Jun 21	160	May 24	379	Jun 5, 1995
LOWEST DAILY MEAN	15	Nov 25, 26, Dec 19, 20 Dec 18	13	Mar 23-25	9.5	Feb 6, 1991
ANNUAL SEVEN-DAY MINIMUM	16		14	Mar 20	11	Feb 5, 1991
MAXIMUM PEAK FLOW	--		268	Apr 14	1,590 ^a	Aug 1, 1984
MAXIMUM PEAK STAGE	--		5.17	Apr 14	8.89 ^b	Aug 1, 1984
ANNUAL RUNOFF (AC-FT)	16,510		22,320		25,410	
10 PERCENT EXCEEDS	37		54		61	
50 PERCENT EXCEEDS	19		19		21	
90 PERCENT EXCEEDS	17		17		17	

a From rating curve extended above 400 ft³/s on basis of slope-area measurement of peak flow.

b From floodmarks.

c Estimated.



06313400 SALT CREEK NEAR SUSSEX, WY

LOCATION.--Lat 43° 37' 19", long 106° 22' 04", in NE $\frac{1}{4}$ NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 8, T. 42 N., R. 79 W., Johnson County, Hydrologic Unit 10090204, on left bank 200 ft upstream from bridge on West Sussex Dugout oil field road, 6.3 mi southwest of Sussex, and 12.6 mi upstream from mouth.

DRAINAGE AREA.--769 mi².

PERIOD OF RECORD.--Water years 1949, 1952, 1968 to 1981, October 1982 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

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 uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, unfltrd mg/L as CaCO ₃ (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)
OCT 24...	1730	13	644	9.6	96	8.4	5,660	5.5	7.0	590	138	59.4	34.6
NOV 19...	1540	13	651	11.3	102	8.4	5,890	10.0	3.5	630	152	60.5	28.1
DEC 06...	0915	4.9	649	12.7	105	8.3	6,500	2.5	0.0	660	159	64.7	33.0
JAN 28...	0830	16	648	12.1	99	8.2	5,180	-4.0	0.0	630	166	53.0	31.1
FEB 27...	1700	12	642	11.7	97	8.0	6,260	3.5	0.0	900	242	73.1	37.9
MAR 24...	0825	147	646	10.6	95	8.1	3,540	3.0	3.5	600	115	76.1	9.65
APR 24...	0840	18	642	8.3	90	8.4	6,010	9.5	10.5	710	166	72.5	38.7
MAY 21...	0835	14	651	8.5	94	8.2	6,380	13.0	11.5	720	155	80.1	40.4
JUN 18...	0950	384	653	7.7	95	7.7	2,100	21.0	17.5	490	122	43.7	11.2
JUL 29...	0855	6.7	653	6.7	92	8.5	5,950	23.5	22.0	360	58.5	51.4	34.3
AUG 25...	0905	8.1	653	7.4	95	8.3	3,390	25.5	19.0	470	116	42.6	22.4
SEP 22...	0845	11	652	9.8	100	8.3	4,980	8.5	8.5	510	110	57.6	30.2
Date	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Alkalinity, wat flt fxd end lab, mg/L as CaCO ₃ (29801)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/acre-ft (70303)	Residue water, fltrd, tons/d (70302)	Residue on evap. at 180degC wat flt mg/L (70300)	Aluminum, water, unfltrd recover-able, ug/L (01105)	Arsenic water, fltrd, ug/L (01000)
OCT 24...	19	1,080	E295	1,050	2.63	29.2	1,100	--	--	--	3,700	284	0.8
NOV 19...	19	1,090	E372	1,030	2.83	31.0	1,170	--	--	--	3,860	1,020	3.5
DEC 06...	21	1,250	E406	1,130	2.66	98.5	1,200	--	--	--	4,200	629	3.7
JAN 28...	16	908	335	864	2.73	28.7	1,030	3,290	4.64	143	3,410	663	3.7
FEB 27...	16	1,130	E489	1,020	3.18d	34.9	1,410	--	--	--	4,340	903	3.7
MAR 24...	10	575	171	187	0.73	6.75	1,490	2,560	3.63	1,060	2,670	43,700	1.4
APR 24...	17	1,050	288	971	2.61	23.8	1,440	3,940	5.63	201	4,140	137	3.0
MAY 21...	20	1,210	314	1,090	2.4	20.4	14,30	4,220	5.90	164	4,340	404	2.2
JUN 18...	6	305	76	39.2	0.5	6.59	901	1,480	2.07	1,580	1,520	142,000	1.0
JUL 29...	27	1,170	290	1,130	2.6	14.9	10,30	3,660	5.06	67.3	3,720	2,560	3.6
AUG 25...	11	547	232	547	1.5	14.4	692	2,120	3.01	48.4	2,220	660	2.0
SEP 22...	20	1,030	272	855	2.0	19.9	979	3,250	4.31	94.2	3,170	348	1.8

YELLOWSTONE RIVER BASIN

06313400 SALT CREEK NEAR SUSSEX, WY—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Barium, water, unfltrd recover- able, ug/L (01007)	Beryll- ium, water, unfltrd recover- able, ug/L (01012)	Iron, water, fltrd, ug/L (01046)	Mangan- ese, water, fltrd, ug/L (01056)	Selen- ium, water, fltrd, ug/L (01145)	Selen- ium, water, unfltrd ug/L (01147)
OCT 24...	95	<0.18	<50	27.1	<1.5	6.8
NOV 19...	89	E.11	<50	32.2	2.9	4.9
DEC 06...	86	<0.18	<30	132	E.9	4.3
JAN 28...	105	E.11	<30	64.1	3.0	E1.1
FEB 27...	119	<0.18	<50	111	2.7	4.0
MAR 24...	412	3.24	<30	60.4	6.4	7.6
APR 24...	95	<0.18	<30	57.4	--	1.9
MAY 21...	96	<0.18	<24	34.5	E1.1	4.3
JUN 18...	719	7.82	<8	104	3.6	5.0
JUL 29...	109	0.22	<24	5.2	2.0	3.2
AUG 25...	175	<0.12	E13	8.5	2.5	2.2
SEP 22...	106	<0.12	<24	13.7	2.6	3.0

E -- Estimated value

06313500 POWDER RIVER AT SUSSEX, WY

LOCATION.--Lat 43° 41' 44", long 106° 18' 24", in SW $\frac{1}{4}$ SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 13, T. 43 N., R. 79 W., Johnson County, Hydrologic Unit 10090202, on left bank 0.5 mi upstream from bridge on State Highway 192, 0.6 mi west of Sussex, and 2.7 mi downstream from Salt Creek.

DRAINAGE AREA.--3,090 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1938 to June 1940, February 1950 to September 1957, October 1977 to September 1984, October 1985 to September 1998, November 2002 to September 2003.

REVISED RECORDS.--WDR WY-80-1: 1979(M), 1979.

GAGE.--Water-stage recorder. Datum of gage is 4,365.28 ft above NGVD of 1929. Prior to June 30, 1940, nonrecording gage about 500 ft downstream from State Highway 192 at datum 4,363.23 ft. February 8, 1950 to September 30, 1957, water-stage recorder about 600 ft downstream from State Highway 192 at datum 4,362.16 ft. October 1977 to April 8, 1983, water-stage recorder 10 ft downstream from State Highway 192 at datum 4,362.95 ft. April 9, 1983 to October 21, 1987, at site 300 ft upstream at same datum.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of September 30, 1923, reached an elevation of 4,375.75 ft at site about 600 ft downstream from State Highway 192, from information by local resident.

REMARKS.--Records fair except those for August to September and those for estimated daily discharges, which are poor. Numerous small reservoirs and diversions for irrigation of about 17,000 acres upstream from station. U.S. Geological Survey data collection platform with satellite telemetry at station. Results of discharge measurements, in cubic feet per second, made when station was not in operation, are given below:

Oct. 7 . . . 90.8 Oct. 24 . . . 88.9

Nov. 6 . . . 110 Nov. 19 . . . 118

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

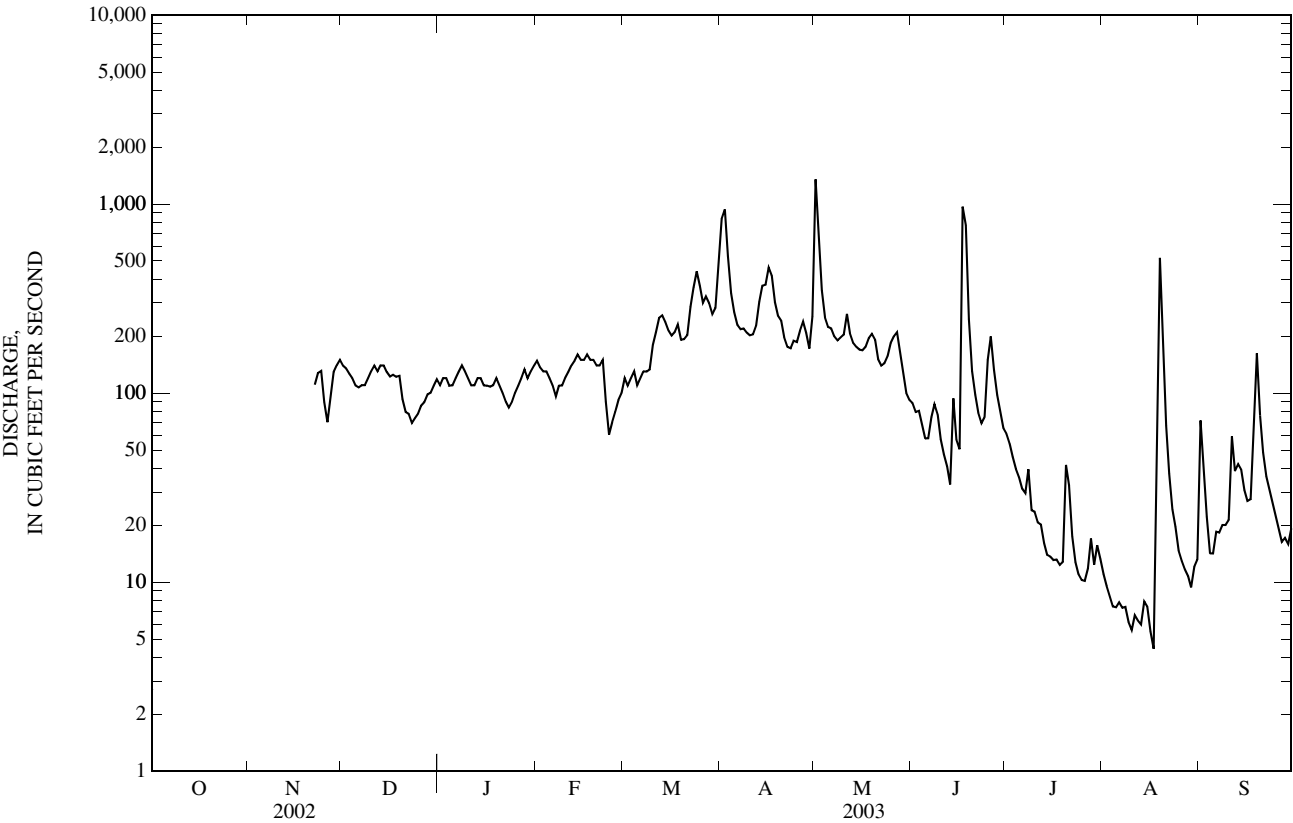
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	e140	e110	149	e120	835	1,350	89	61	11	72
2	---	---	e135	e120	137	e110	938	704	80	54	9.6	44
3	---	---	127	e120	e130	e120	532	350	81	46	8.4	22
4	---	---	e120	e110	e130	e130	337	251	68	40	7.5	14
5	---	---	e110	e110	e120	e110	269	224	58	36	7.4	14
6	---	---	e107	e120	e110	e120	230	220	58	31	7.8	19
7	---	---	e110	e130	e96	e130	218	200	75	30	7.3	18
8	---	---	e110	e140	e110	e130	220	190	88	40	7.4	20
9	---	---	e120	e130	e110	e134	209	198	77	24	6.2	20
10	---	---	e130	e120	e120	e180	202	204	57	24	e5.6	21
11	---	---	e140	e110	e130	e210	204	262	47	21	e6.7	59
12	---	---	e130	e110	e140	e250	227	207	41	20	6.3	39
13	---	---	e140	e120	e148	258	305	184	33	16	6.0	42
14	---	---	e140	e120	e160	238	370	176	94	14	7.9	39
15	---	---	129	e110	e150	215	374	170	57	14	7.4	31
16	---	---	123	e110	e150	202	463	169	51	13	5.5	27
17	---	---	125	e108	e160	211	420	176	968	13	4.4	27
18	---	---	122	e110	e150	231	303	196	772	12	127	65
19	---	---	123	e120	e150	192	257	206	247	13	519	163
20	---	---	93	e110	e140	193	242	191	131	42	172	76
21	---	---	e80	e100	e140	203	197	151	98	33	67	48
22	---	e111	e78	e90	e150	286	176	140	79	18	38	36
23	---	128	e70	e84	e90	361	173	144	69	13	24	31
24	---	131	e74	e90	e60	441	189	157	75	11	20	27
25	---	e90	e78	e100	e70	372	186	184	150	10	15	23
26	---	e70	e86	e110	e80	301	213	199	199	10	13	19
27	---	e96	e90	e120	e92	324	239	210	133	12	12	16
28	---	e130	e98	e133	e100	299	209	161	98	17	11	17
29	---	e140	e100	e120	---	262	172	125	80	12	9.4	16
30	---	e150	e110	e130	---	282	254	100	65	16	12	19
31	---	---	e118	e140	---	509	---	92	---	13	13	---
TOTAL	---	---	3,456	3,555	3,472	7,124	9,163	7,491	4,218	729	1,174.8	1,084
MEAN	---	---	111	115	124	230	305	242	141	23.5	37.9	36.1
MAX	---	---	140	140	160	509	938	1,350	968	61	519	163
MIN	---	---	70	84	60	110	172	92	33	10	4.4	14
AC-FT	---	---	6,850	7,050	6,890	14,130	18,170	14,860	8,370	1,450	2,330	2,150

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1938 - 2003, BY WATER YEAR (WY)*

MEAN	144	128	116	115	169	273	277	570	359	129	57.2	72.6
MAX	838	202	176	177	335	701	553	2,553	1,477	374	125	448
(WY)	(1995)	(1987)	(1995)	(1983)	(1980)	(1987)	(1987)	(1978)	(1995)	(1978)	(1983)	(1982)
MIN	24.2	77.7	79.5	58.6	69.4	110	136	72.0	22.2	20.4	3.54	4.90
(WY)	(1957)	(1953)	(1991)	(1940)	(1939)	(1940)	(1953)	(1992)	(1954)	(1996)	(1939)	(1939)

SUMMARY STATISTICS	FOR 2003 WATER YEAR*		WATER YEARS 1938 - 2003*	
ANNUAL MEAN	--		205	
HIGHEST ANNUAL MEAN	--		486	1978
LOWEST ANNUAL MEAN	--		115	1989
HIGHEST DAILY MEAN	1,350	May 1	14,100	May 23, 1952
LOWEST DAILY MEAN	4.4	Aug 17	1.5	Aug 25, 1939
ANNUAL SEVEN-DAY MINIMUM	6.3	Aug 11	2.6	Aug 23, 1939
MAXIMUM PEAK FLOW	3,250	Jun 17	32,500 ^a	May 23, 1952
MAXIMUM PEAK STAGE	5.94	Jun 17	4,374.76 ^b	May 23, 1952
ANNUAL RUNOFF (AC-FT)	--		148,700	
10 PERCENT EXCEEDS	--		408	
50 PERCENT EXCEEDS	--		128	
90 PERCENT EXCEEDS	--		27	

* For period of operation.
a From rating curve extended above 1,500 ft³/s, on basis of slope-area measurement of peak flow.
b From floodmarks, site and datum then in use.
e Estimated.



06313500 POWDER RIVER AT SUSSEX, WY—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1949-53, 1967-68, 1976 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: January 1983 to September 1984, April to September 2003 (seasonal).

WATER TEMPERATURE: October 1982 to September 1984 April to September 2003 (seasonal).

SUSPENDED-SEDIMENT DISCHARGE: May 1983 to September 1984.

REMARKS.--Specific conductance records excellent April 8, 25, May 9, 22, June 11-20, July 1-4, August 14, 26, 27, September 11-13, 23, 24; good April 9, 10, 26, 27, May 10-13, 23-25, June 21, 22, August 15, 28-31, September 14-20, 25-28; fair April 11, 12, 28, 29, May 14, 15, 26, 27, June 23, August 16, September 1-3, 21, 22, 29, 30; and poor April 13-24, April 30 to May 8, May 16-21, May 28 to June 10, June 24-30, August 17-25, September 4-10. Water temperature records good. Water-temperature records represent water temperature at sensor with 0.2° C.

INSTRUMENTATION.--Water quality monitor for specific conductance and water temperature.

EXTREMES FOR PERIOD OF RECORD.--

SPECIFIC CONDUCTANCE: Maximum recorded, 7,790 microsiemens/cm, August 17, 2003; minimum recorded, 921 microsiemens/cm, April 16, 2003.

WATER TEMPERATURE: Maximum recorded, 31.4° C, August 14, 2003; minimum recorded, 4.4° C, April 8, 2003.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum recorded, 7,790 microsiemens/cm, August 17; minimum recorded, 921 microsiemens/cm, April 16.

WATER TEMPERATURE: Maximum recorded, 31.4° C, August 14; minimum recorded, 4.4° C, April 8.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

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 uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, unfltrd mg/L as CaCO3 (00900)	Calcium, water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)
OCT													
07...	0930	91	654	10.4	101	8.3	2,290	14.0	7.0	570	145	50.7	8.08
24...	1600	89	646	10.4	102	8.4	2,310	12.5	7.0	570	145	50.4	7.95
NOV													
06...	0945	119	654	12.9	105	8.5	2,010	14.0	0.5	570	146	49.5	6.92
19...	1430	118	653	11.9	105	8.4	2,180	17.0	3.5	570	145	50.7	7.05
DEC													
06...	1140	107	652	13.0	105	8.3	2,420	9.5	0.0	630	158	56.1	7.80
18...	0915	117	642	12.9	106	8.3	2,160	1.5	0.0	580	149	50.0	6.87
31...	1700	118	642	10.8	88	8.4	1,870	2.0	0.0	540	138	46.7	6.36
JAN													
17...	1430	108	656	11.7	94	8.3	2,020	9.0	0.0	590	153	50.9	6.82
28...	1030	133	652	12.5	101	8.3	1,980	11.0	0.0	550	144	46.6	6.97
FEB													
13...	1515	148	642	11.3	93	8.2	2,140	7.0	0.0	620	158	53.8	7.94
27...	1520	92	644	11.3	92	8.1	2,430	7.0	0.0	700	180	60.8	7.83
MAR													
10...	0840	134	649	11.9	97	8.1	2,360	8.5	0.0	570	146	49.7	7.31
24...	1000	443	649	10.3	96	8.2	2,630	5.5	5.0	570	140	54.0	7.86
APR													
07...	1010	220	655	11.9	111	8.4	2,150	6.5	5.5	610	153	54.2	6.00
24...	1040	202	645	8.8	95	8.4	1,630	14.0	11.0	430	109	37.4	6.72
MAY													
08...	1225	199	644	9.6	99	8.4	2,070	3.0	9.0	530	132	48.3	6.70
21...	1105	151	653	8.7	98	8.2	1,640	28.0	13.5	380	93.7	34.9	6.16
JUN													
10...	1015	54	647	7.4	91	8.3	2,820	22.5	17.0	630	156	57.9	12.2
19...	1110	234	649	7.8	102	7.9	1,990	26.5	20.0	570	158	41.9	9.63
30...	1545	67	649	6.4	98	8.2	2,950	29.5	28.0	780	206	63.8	10.9
JUL													
17...	1255	13	654	7.9	117	8.0	5,300	38.0	26.5	960	214	103	21.4
29...	1255	12	656	7.0	102	8.3	5,120	31.5	25.5	710	159	76.9	76.5
AUG													
13...	0945	5.2	654	7.5	103	8.2	5,930	35.0	22.5	690	141	82.9	27.3
25...	1105	14	654	7.5	103	8.3	3,020	29.5	23.0	710	189	58.3	15.1
SEP													
10...	0850	18	645	7.7	92	8.2	4,530	9.5	15.0	740	182	70.2	23.4
22...	1050	37	654	9.4	101	8.1	3,070	21.0	11.0	630	168	50.6	14.7

06313500 POWDER RIVER AT SUSSEX, WY—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Sodium adsorp- tion ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Alka- linity, wat flt fxd end lab, mg/L as CaCO ₃ (29801)	Chlor- ide, water, fltrd, mg/L (00940)	Fluor- ide, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of consti- tuents mg/L (70301)	Residue water, fltrd, tons/ acre-ft (70303)	Residue water, fltrd, tons/d (70302)	Residue on evap. at 180degC wat flt mg/L (70300)	Alum- inum, water, unfltrd recover- able, ug/L (01105)	Arsenic water, fltrd, ug/L (01000)
OCT													
07...	5	282	E111	214	0.80	9.14	684	--	--	--	1,620	901	0.7
24...	5	293	E96	238	0.72	8.60	642	--	--	--	1,620	497	0.7
NOV													
06...	4	228	E150	178	0.71	10.6	600	--	--	--	1,430	1,360	1.0
19...	5	263	E164	206	0.69	9.29	626	--	--	--	1,510	608	1.2
DEC													
06...	5	305	E219	241	0.74	12.6	671	--	--	--	1,690	1,080	1.4
18...	5	266	E189	193	0.66	11.2	616	--	--	--	1,510	1,190	1.1
31...	4	213	218	164	0.68	12.8	482	1,190	1.72	404	1,270	E164	1.1
JAN													
17...	4	217	218	180	0.68	13.0	559	1,310	1.93	414	1,420	1,290	1.2
28...	5	244	219	178	0.76	12.2	553	1,320	1.90	500	1,390	980	1.2
FEB													
13...	5	263	E177	197	0.77	12.6	637	--	--	--	1,540	1,310	1.2
27...	5	286	E234	213	0.73	13.3	724	--	--	--	1,770	1,040	1.5
MAR													
10...	6	302	204	190	0.74	11.5	700	1,530	2.18	579	1,600	2,720	1.4
24...	7	374	167	141	0.85	8.31	1,040	1,860	2.66	2,340	1,960	28,000	1.5
APR													
07...	4	250	192	96.8	0.61	8.63	827	1,510	2.24	980	1,650	3,900	1.2
24...	4	191	177	122	0.51	9.05	487	1,070	1.55	622	1,140	2,580	1.2
MAY													
08...	5	259	203	130	0.61	9.52	708	1,420	2.03	801	1,490	3,790	1.4
21...	5	201	158	144	0.5	8.27	467	1,050	1.55	464	1,140	969	0.9
JUN													
10...	7	423	215	276	0.9	11.8	850	1,920	2.68	287	1,970	891	1.4
19...	4	237	93	33.5	0.7	7.49	890	1,430	2.10	978	1,550	60,000	0.9
30...	7	438	200	222	0.9	10.4	1,100	2,170	3.04	405	2,240	6,840	1.1
JUL													
17...	10	703	233	750	1.4	15.0	1,410	3,360	4.93	127	3,630	421	1.7
29...	13	817	187	734	1.8	12.5	1,390	3,380	4.79	114	3,520	906	2.3
AUG													
13...	17	1,020	204	984	2.0	5.34	1,410	3,800	5.46	56.4	4,010	570	2.7
25...	6	370	207	255	0.9	9.68	1,060	2,090	3.08	85.6	2,270	1,230	1.8
SEP													
10...	10	658	198	618	1.5	10.8	1,290	2,970	4.33	155	3,180	608	1.5
22...	8	438	190	308	1.2	11.8	1,010	2,120	3.00	220	2,200	15,100	1.1

06313500 POWDER RIVER AT SUSSEX, WY—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Barium, water, unfltrd recover- able, ug/L (01007)	Beryll- ium, water, unfltrd recover- able, ug/L (01012)	Iron, water, fltrd, ug/L (01046)	Mangan- ese, water, fltrd, ug/L (01056)	Selen- ium, water, fltrd, ug/L (01145)	Selen- ium, water, unfltrd ug/L (01147)
OCT						
07...	58	0.10	<10	47.5	2.2	2.6
24...	54	E.04	<10	85.0	1.7	2.5
NOV						
06...	61	0.09	<10	71.3	2.7	3.2
19...	51	E.05	<10	89.7	3.3	3.3
DEC						
06...	63	0.07	<10	110	3.9	3.8
18...	56	0.10	<10	66.3	4.3	4.1
31...	61	0.09	<50	47.9	2.8	2.1
JAN						
17...	64	0.09	<10	52.6	3.5	2.9
28...	57	0.10	<10	39.6	3.5	2.9
FEB						
13...	73	0.11	<10	32.3	3.5	3.5
27...	69	0.07	<10	70.8	4.2	3.9
MAR						
10...	91	0.31	<10	44.4	4.0	4.0
24...	446	3.33	<10	14.4	8.6	9.2
APR						
07...	103	0.33	<10	18.2	6.9	7.6
24...	72	0.24	<10	5.5	--	2.5
MAY						
08...	78	0.28	<10	15.1	5.5	4.6
21...	49	0.10	3	13.5	1.7	1.7
JUN						
10...	75	E.10	<24	38.5	--	2.7
19...	600	3.93	E4	2.0	7.7	8.5
30...	109	0.44	<24	33.6	--	3.9
JUL						
17...	71	<0.18	<24	152	--	5.1
29...	68	<0.12	<24	105	4.2	4.3
AUG						
13...	61	<0.18	<40	161	7.7	5.4
25...	74	E.09	<24	68.8	5.4	4.0
SEP						
10...	79	<0.12	<40	123	4.2	4.3
22...	207	1.45	<24	26.8	7.0	7.8

E -- Estimated value

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	---	---	---	---	---	---	---	---	---	1,560	1,350	1,440
2	---	---	---	---	---	---	---	---	---	1,440	1,350	1,400
3	---	---	---	---	---	---	---	---	---	1,600	1,440	1,510
4	---	---	---	---	---	---	---	---	---	1,760	1,600	1,690
5	---	---	---	---	---	---	---	---	---	1,870	1,760	1,830
6	---	---	---	---	---	---	---	---	---	1,970	1,870	1,920
7	---	---	---	---	---	---	---	---	---	2,060	1,950	2,010
8	---	---	---	---	---	---	2,050	1,870	1,980	2,270	2,000	2,080
9	---	---	---	---	---	---	1,880	1,710	1,780	2,080	1,830	1,940
10	---	---	---	---	---	---	1,830	1,730	1,790	1,880	1,760	1,810
11	---	---	---	---	---	---	1,850	1,740	1,810	1,760	1,520	1,610
12	---	---	---	---	---	---	1,740	1,470	1,610	1,730	1,690	1,720
13	---	---	---	---	---	---	1,470	1,160	1,270	1,740	1,720	1,730
14	---	---	---	---	---	---	1,160	1,020	1,060	1,750	1,720	1,730
15	---	---	---	---	---	---	1,020	953	986	1,750	1,660	1,700
16	---	---	---	---	---	---	998	921	962	1,660	1,610	1,640
17	---	---	---	---	---	---	1,000	929	953	1,630	1,550	1,590
18	---	---	---	---	---	---	1,200	1,000	1,080	1,590	1,440	1,500
19	---	---	---	---	---	---	1,330	1,200	1,250	1,440	1,350	1,380
20	---	---	---	---	---	---	1,450	1,330	1,390	1,530	1,320	1,410
21	---	---	---	---	---	---	1,660	1,450	1,570	1,660	1,520	1,580
22	---	---	---	---	---	---	1,740	1,660	1,690	1,660	1,480	1,550
23	---	---	---	---	---	---	1,820	1,630	1,720	1,480	1,400	1,440
24	---	---	---	---	---	---	1,720	1,400	1,550	1,490	1,290	1,420
25	---	---	---	---	---	---	1,450	1,210	1,300	1,290	1,100	1,210
26	---	---	---	---	---	---	1,210	1,100	1,140	1,360	1,100	1,200
27	---	---	---	---	---	---	1,120	941	986	1,520	1,180	1,310
28	---	---	---	---	---	---	1,110	979	1,040	1,380	1,230	1,310
29	---	---	---	---	---	---	1,330	1,110	1,200	1,540	1,380	1,470
30	---	---	---	---	---	---	1,520	1,330	1,380	1,690	1,500	1,610
31	---	---	---	---	---	---	---	---	---	1,980	1,680	1,780
MONTH	---	---	---	---	---	---	2,050	921	1,370	2,270	1,100	1,600
	JUNE			JULY			AUGUST			SEPTEMBER		
1	2,030	1,900	1,960	2,840	2,600	2,710	---	---	---	4,380	3,290	3,680
2	2,060	1,950	2,000	2,700	2,590	2,640	---	---	---	3,840	3,580	3,700
3	2,110	1,950	2,020	2,860	2,680	2,760	---	---	---	3,730	3,600	3,680
4	2,320	2,100	2,190	3,120	2,820	2,960	---	---	---	3,960	3,640	3,790
5	2,470	2,320	2,400	---	---	---	---	---	---	4,160	3,900	4,030
6	2,610	2,470	2,550	---	---	---	---	---	---	4,310	4,060	4,180
7	2,700	2,610	2,660	---	---	---	---	---	---	4,360	4,170	4,300
8												

TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	---	---	---	---	---	---	---	---	---	7.7	4.7	6.2
2	---	---	---	---	---	---	---	---	---	13.9	7.3	10.3
3	---	---	---	---	---	---	---	---	---	14.5	10.2	12.4
4	---	---	---	---	---	---	---	---	---	14.8	10.3	12.6
5	---	---	---	---	---	---	---	---	---	12.3	9.0	10.4
6	---	---	---	---	---	---	---	---	---	14.9	8.3	11.5
7	---	---	---	---	---	---	---	---	---	15.2	9.4	12.2
8	---	---	---	---	---	---	12.5	4.4	8.3	12.4	8.1	9.7
9	---	---	---	---	---	---	15.6	6.7	10.9	11.4	7.2	9.1
10	---	---	---	---	---	---	17.3	8.9	12.9	10.1	7.0	8.4
11	---	---	---	---	---	---	17.1	10.1	13.6	14.9	6.5	10.5
12	---	---	---	---	---	---	16.5	10.4	13.5	16.2	9.8	12.9
13	---	---	---	---	---	---	13.9	10.3	12.2	19.2	11.8	15.3
14	---	---	---	---	---	---	15.2	9.2	12.2	21.1	11.9	16.3
15	---	---	---	---	---	---	14.5	10.1	12.2	20.1	13.8	17.2
16	---	---	---	---	---	---	14.1	9.2	11.5	22.3	13.7	17.7
17	---	---	---	---	---	---	13.6	8.6	11.1	18.5	14.2	16.5
18	---	---	---	---	---	---	11.4	8.8	10.2	17.5	11.4	15.0
19	---	---	---	---	---	---	9.8	7.4	8.7	14.5	9.0	11.5
20	---	---	---	---	---	---	15.7	7.7	11.2	17.8	8.8	13.2
21	---	---	---	---	---	---	17.1	8.5	12.7	19.8	11.2	15.5
22	---	---	---	---	---	---	16.9	10.5	13.7	23.6	13.8	18.4
23	---	---	---	---	---	---	14.1	10.9	12.6	24.0	15.8	19.7
24	---	---	---	---	---	---	15.1	10.8	12.8	25.1	16.5	20.6
25	---	---	---	---	---	---	18.4	11.8	14.7	25.6	17.2	21.1
26	---	---	---	---	---	---	17.5	11.8	14.5	25.4	18.3	21.6
27	---	---	---	---	---	---	14.1	9.3	11.8	24.8	18.9	21.8
28	---	---	---	---	---	---	12.3	9.0	10.4	27.0	18.4	22.6
29	---	---	---	---	---	---	13.8	8.9	10.7	28.5	19.6	23.9
30	---	---	---	---	---	---	11.1	6.2	8.8	25.6	19.4	22.2
31	---	---	---	---	---	---	---	---	---	26.5	17.2	21.8
MONTH	---	---	---	---	---	---	18.4	4.4	11.8	28.5	4.7	15.4
	JUNE			JULY			AUGUST			SEPTEMBER		
1	24.0	17.1	20.1	29.3	19.1	24.0	---	---	---	23.4	15.9	19.7
2	21.2	14.6	17.7	28.7	18.8	23.7	---	---	---	22.2	15.7	19.0
3	23.4	13.7	18.5	29.4	17.9	23.3	---	---	---	24.3	14.9	19.4
4	24.5	15.1	19.5	28.0	17.3	22.7	---	---	---	25.6	16.2	20.9
5	18.6	14.5	16.5	---	---	---	---	---	---	24.4	16.5	20.8
6	15.2	11.9	13.7	---	---	---	---	---	---	23.2	17.6	20.4
7	18.7	9.7	14.0	---	---	---	---	---	---	24.0	17.6	20.5
8	23.5	11.9	17.6	---	---	---	---	---	---	22.8	16.6	19.4
9	22.1	15.4	18.8	---	---	---	---	---	---	19.8	13.8	16.8
10	23.2	14.6	19.1	---	---	---	---	---	---	17.3	12.9	14.9
11	26.4	15.8	20.6	---	---	---	---	---	---	19.9	11.6	15.2
12	28.5	16.1	21.9	---	---	---	---	---	---	16.1	10.7	13.4
13	27.7	16.7	20.9	---	---	---	---	---	---	16.0	8.2	12.0
14	26.0	14.3	20.3	---	---	---	31.4	21.5	26.2	18.4	8.4	13.2
15	28.4	17.5	22.2	---	---	---	30.1	20.6	24.7	19.6	9.4	14.6
16	27.6	17.6	21.7	---	---	---	30.1	18.8	23.6	15.9	11.5	14.0
17	24.1	17.2	18.8	---	---	---	27.0	19.5	21.8	13.7	8.2	10.6
18	21.8	17.2	19.4	---	---	---	26.1	18.6	21.3	15.6	6.2	10.7
19	25.0	17.9	21.0	---	---	---	24.5	18.8	21.1	14.2	8.1	11.2
20	21.6	17.6	19.4	---	---	---	25.3	19.4	22.2	16.1	9.5	12.7
21	21.6	15.5	18.4	---	---	---	25.1	18.3	21.7	16.4	9.0	12.6
22	22.2	15.7	18.7	---	---	---	27.0	19.3	22.7	16.9	8.5	12.7
23	17.4	13.4	15.3	---	---	---	26.4	18.6	22.4	17.5	10.2	13.9
24	13.4	10.6	11.7	---	---	---	28.0	18.0	23.0	17.0	11.0	13.8
25	17.3	10.1	13.3	---	---	---	27.7	18.9	23.3	17.8	9.8	13.8
26	20.1	12.5	16.4	---	---	---	27.4	18.0	22.5	17.6	11.2	14.4
27	23.4	15.2	19.2	---	---	---	25.0	18.7	21.4	16.3	9.3	12.9
28	24.6	16.7	20.5	---	---	---	25.7	16.5	20.5	16.6	9.0	12.9
29	26.8	17.0	21.8	---	---	---	20.2	15.2	17.9	13.7	9.6	11.3
30	28.5	18.3	23.2	---	---	---	17.0	14.4	15.2	16.7	9.2	12.7
31	---	---	---	---	---	---	24.1	12.6	18.1	---	---	---
MONTH	28.5	9.7	18.7	29.4	17.3	23.4	31.4	12.6	21.6	25.6	6.2	15.0
YEAR	31.4	4.4	16.5									

06313590 POWDER RIVER ABOVE BURGER DRAW, NEAR BUFFALO, WY

LOCATION.--Lat 44° 08' 40", long 106° 08' 18", in NW $\frac{1}{4}$ SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 8, T.48 N., R.77 W., Johnson County, Hydrologic Unit 10090202, on right bank at bridge on Johnson County Road 204 (Schoonover Road) bridge, 0.2 mi upstream from Burger Draw, and 30.7 mi southeast of Buffalo.

DRAINAGE AREA.--4,290 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.-- June 2003 to September 2003.

GAGE.--Water-stage recorder. Elevation of gage is 4,000 ft above NGVD of 1929, from topographic map.

REMARKS.--Records fair except those for July 27 to August 12 and those for estimated daily discharges, which are poor. Numerous small reservoirs and diversions for irrigation upstream from station.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	142	4.4	11
2	---	---	---	---	---	---	---	---	---	112	2.8	8.2
3	---	---	---	---	---	---	---	---	---	94	2.6	33
4	---	---	---	---	---	---	---	---	---	80	1.9	50
5	---	---	---	---	---	---	---	---	---	67	1.1	33
6	---	---	---	---	---	---	---	---	---	45	0.79	21
7	---	---	---	---	---	---	---	---	---	40	0.77	15
8	---	---	---	---	---	---	---	---	---	224	0.25	10
9	---	---	---	---	---	---	---	---	---	54	0.09	6.8
10	---	---	---	---	---	---	---	---	---	45	0.18	8.7
11	---	---	---	---	---	---	---	---	---	39	0.04	12
12	---	---	---	---	---	---	---	---	e110	33	0.04	10
13	---	---	---	---	---	---	---	---	91	27	0.19	20
14	---	---	---	---	---	---	---	---	93	21	0.14	33
15	---	---	---	---	---	---	---	---	82	18	0.09	32
16	---	---	---	---	---	---	---	---	209	16	0.03	26
17	---	---	---	---	---	---	---	---	376	14	0.31	23
18	---	---	---	---	---	---	---	---	1,100	12	0.11	28
19	---	---	---	---	---	---	---	---	904	12	0.17	26
20	---	---	---	---	---	---	---	---	504	12	236	84
21	---	---	---	---	---	---	---	---	313	9.4	236	124
22	---	---	---	---	---	---	---	---	218	8.2	138	88
23	---	---	---	---	---	---	---	---	171	21	73	62
24	---	---	---	---	---	---	---	---	141	21	48	49
25	---	---	---	---	---	---	---	---	160	13	30	38
26	---	---	---	---	---	---	---	---	154	9.6	22	28
27	---	---	---	---	---	---	---	---	297	16	14	23
28	---	---	---	---	---	---	---	---	267	18	9.8	22
29	---	---	---	---	---	---	---	---	210	8.2	7.5	22
30	---	---	---	---	---	---	---	---	169	6.2	7.9	23
31	---	---	---	---	---	---	---	---	---	6.9	12	---
TOTAL	---	---	---	---	---	---	---	---	---	1,244.5	850.20	969.7
MEAN	---	---	---	---	---	---	---	---	---	40.1	27.4	32.3
MAX	---	---	---	---	---	---	---	---	---	224	236	124
MIN	---	---	---	---	---	---	---	---	---	6.2	0.03	6.8
AC-FT	---	---	---	---	---	---	---	---	---	2,470	1,690	1,920

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2003 - 2003, BY WATER YEAR (WY)

MEAN	---	---	---	---	---	---	---	---	---	40.1	27.4	32.3
MAX	---	---	---	---	---	---	---	---	---	40.1	27.4	32.3
(WY)	---	---	---	---	---	---	---	---	---	(2003)	(2003)	(2003)
MIN	---	---	---	---	---	---	---	---	---	40.1	27.4	32.3
(WY)	---	---	---	---	---	---	---	---	---	(2003)	(2003)	(2003)

06313590 POWDER RIVER ABOVE BURGER DRAW, NEAR BUFFALO, WY—Continued

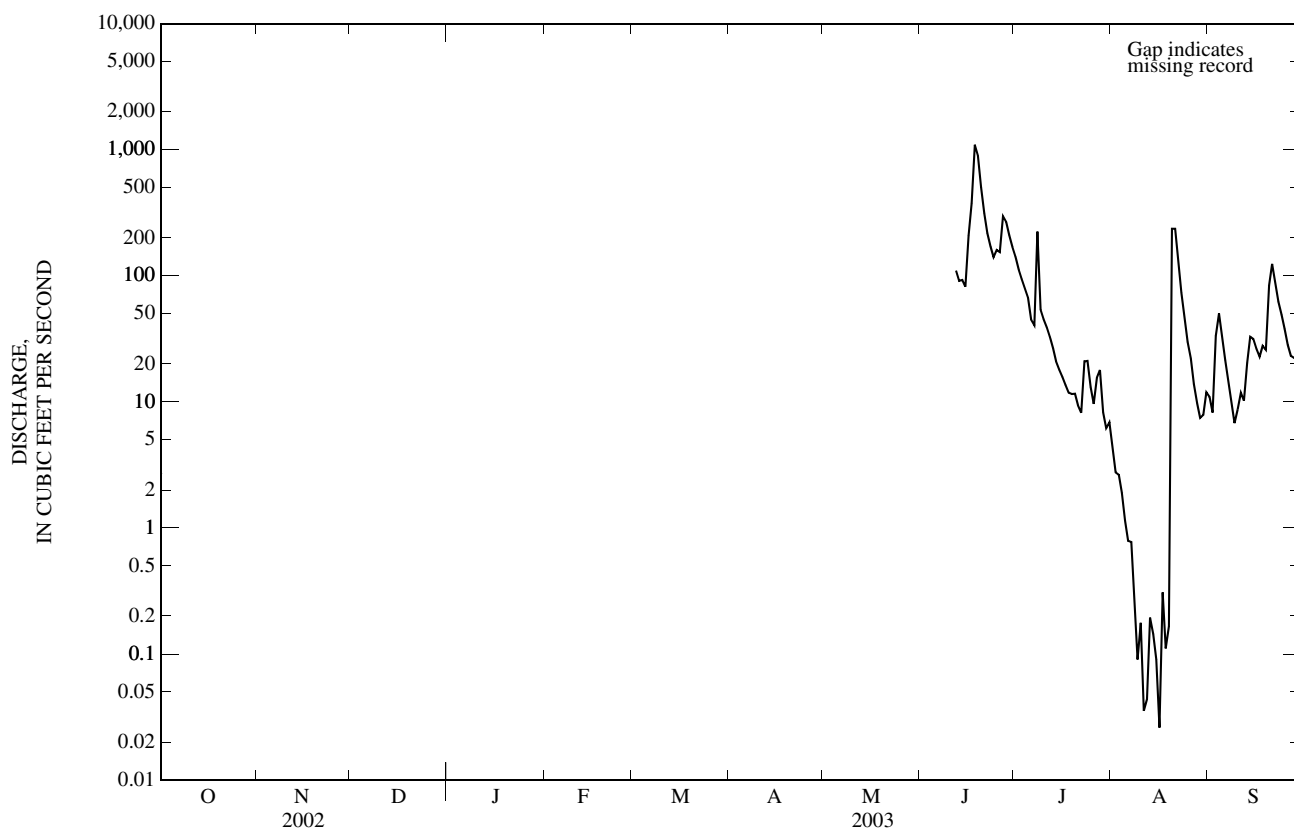
SUMMARY STATISTICS

FOR 2003 WATER YEARS*

HIGHEST DAILY MEAN	1,100	Jun 18
LOWEST DAILY MEAN	0.03	Aug 16
MAXIMUM PEAK FLOW	2,200	Jun 18
MAXIMUM PEAK STAGE	5.54	Jun 18

* For period of operation.

e Estimated.



06313590 POWDER RIVER ABOVE BURGER DRAW, NEAR BUFFALO, WY -- Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--May to September 2003.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

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 unfltrd uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, unfltrd mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)
MAY 06...	1730	266	656	8.4	98	8.3	2,040	12.5	15.0	540	136	48.4	7.23
JUN 16...	1145	235	664	8.2	109	8.1	2,680	25.0	22.0	640	153	61.8	10.7
JUL 16...	1400	17	662	7.0	110	8.2	4,150	39.5	30.5	950	219	97.7	17.6
AUG 12...	1050	0.07	660	6.9	102	8.3	5,310	38.5	27.0	1,300	291	147	18.4
SEP 09...	1050	6.2	657	8.2	98	8.3	4,330	20.0	16.0	860	218	76.0	18.7
Date	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Alkalinity, wat flt fxd end lab, mg/L as CaCO3 (29801)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/acre-ft (70303)	Residue water, fltrd, tons/d (70302)	Residue on evap. at 180degC wat flt mg/L (70300)	Aluminum, water, unfltrd recoverable, ug/L (01105)	Arsenic water, fltrd, ug/L (01000)
MAY 06...	5	258	169	82.0	0.71	8.17	825	1,470	2.13	1,130	1,570	12,900	1.2
JUN 16...	6	362	191	240	0.7	9.75	851	1,800	2.61	1,220	1,920	6,960	0.9
JUL 16...	9	625	160	410	0.8	11.2	1,500	2,970	4.30	145	3,160	680	1.4
AUG 12...	9	770	163	539	0.8	9.59	1,970	3,850	5.57	0.77	4,090	100	1.6
SEP 09...	9	633	122	493	1.2	6.00	1,530	3,050	4.51	55.6	3,320	1,290	1.1
Date					Barium, water, unfltrd recoverable, ug/L (01007)	Beryllium, water, unfltrd recoverable, ug/L (01012)	Iron, water, fltrd, ug/L (01046)	Manganese, water, fltrd, ug/L (01056)	Selenium, water, unfltrd ug/L (01147)				
MAY 06...					127	1.38	<10	3.6	5.6				
JUN 16...					154	0.61	<24	8.3	2.7				
JUL 16...					93	<0.12	<24	14.2	4.0				
AUG 12...					69	<0.18	<40	124	3.0				
SEP 09...					57	E.09	9	30.5	6.2				

E -- Estimated value

06313605 POWDER RIVER BELOW BURGER DRAW, NEAR BUFFALO, WY

LOCATION.--Lat 44° 08'50", long 106° 08'34", in NE $\frac{1}{4}$ NE $\frac{1}{4}$ SW $\frac{1}{4}$ sec.8, T.48 N., R.77 W., Johnson County, Hydrologic Unit 10090202, 20 ft downstream of Burger Draw, 0.4 mi downstream of bridge on county road 204, and 24 mi southeast of Buffalo.

PERIOD OF RECORD.--November 2000 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

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 unfltrd 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, unfltrd mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	
OCT 08...	0840	97	666	9.5	95	8.2	2,380	6.0	9.0	540	135	49.8	8.94	
NOV 05...	1240	83	660	12.3	99	8.4	2,370	9.5	0.5	590	144	55.7	8.70	
DEC 11...	1100	66	656	13.1	105	8.3	2,640	3.0	0.0	670	165	62.1	9.13	
JAN 16...	1400	108	670	13.1	103	8.3	2,710	5.5	0.0	730	184	66.4	9.70	
FEB 12...	1445	118	662	13.3	106	8.3	2,670	3.5	0.0	690	173	62.4	9.62	
MAR 07...	1145	109	650	11.1	90	8.2	2,230	17.0	0.0	560	139	50.2	7.76	
APR 08...	1430	225	665	9.5	99	8.4	2,160	18.5	10.5	600	153	51.6	7.06	
MAY 06...	1540	270	655	8.6	99	8.3	2,050	11.5	14.5	520	132	46.9	7.49	
JUN 16...	0955	237	664	8.2	105	8.2	2,670	23.0	20.0	610	145	61.3	10.8	
JUL 16...	1250	19	662	7.1	109	8.2	4,080	37.5	29.5	970	223	99.8	25.1	
AUG 12...	1140	1.4	661	8.4	120	8.4	3,970	38.5	25.5	260	43.2	36.7	42.6	
SEP 09...	1150	7.5	657	8.0	103	8.3	4,170	22.5	19.5	630	152	59.5	23.3	
Date		Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Alkalinity, wat flt fxd end lab, mg/L as CaCO3 (29801)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/ acre-ft (70303)	Residue water, fltrd, tons/d (70302)	Residue on evap. at 180degC wat flt mg/L (70300)	Aluminum, water, unfltrd recoverable, ug/L (01105)	Arsenic water, fltrd, ug/L (01000)
OCT 08...	5	284	E127	183	0.73	8.08	706	--	--	--	1,630	5,560	0.8	
NOV 05...	5	296	E128	205	0.64	8.56	662	--	--	--	1,590	3,840	0.9	
DEC 11...	6	339	E239	228	0.71	11.1	749	--	--	--	1,810	507	1.1	
JAN 16...	5	334	244	241	0.76	13.0	778	1,770	2.51	538	1,850	826	1.5	
FEB 12...	6	335	271	245	0.81	11.3	795	1,800	2.55	598	1,880	870	0.7	
MAR 07...	5	280	276	199	0.75	11.3	583	1,440	2.01	435	1,480	981	1.0	
APR 08...	5	265	194	90.7	0.69	7.95	853	1,550	2.27	1,010	1,670	8,950	1.1	
MAY 06...	5	259	184	79.5	0.71	7.88	827	1,470	2.14	1,150	1,580	13,600	1.1	
JUN 16...	6	369	201	232	0.7	10.1	831	1,780	2.58	1,210	1,890	3,050	1.1	
JUL 16...	8	601	297	363	0.8	11.7	1,380	2,890	4.06	153	2,990	765	1.4	
AUG 12...	24	904	2,090	52.9	1.3	9.04	116	2,460	3.47	9.64	2,550	558	2.3	
SEP 09...	11	654	578	363	1.1	6.48	1,140	2,750	3.95	58.8	2,910	964	1.3	

06313605 POWDER RIVER BELOW BURGER DRAW, NEAR BUFFALO, WY—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Barium, water, unfltrd recover- able, ug/L (01007)	Beryll- ium, water, unfltrd recover- able, ug/L (01012)	Iron, water, fltrd, ug/L (01046)	Mangan- ese, water, fltrd, ug/L (01056)	Selen- ium, water, unfltrd ug/L (01147)
OCT 08...	124	0.39	<10	E3.0	3.8
NOV 05...	123	0.22	<30	5.9	3.0
DEC 11...	67	<0.12	<30	6.7	3.8
JAN 16...	73	E.10	<30	E4.8	3.3
FEB 12...	80	E.07	<10	4.3	4.7
MAR 07...	76	E.06	<30	E4.7	3.3
APR 08...	191	0.73	<10	3.5	8.3
MAY 06...	123	1.38	<10	3.6	5.5
JUN 16...	110	0.29	<8	1.6	3.5
JUL 16...	184	<0.12	<24	12.6	3.4
AUG 12...	1,010	E.06	E22	6.8	E.8
SEP 09...	357	<0.12	<40	17.1	4.4

E -- Estimated value

LOCATION.--Lat 44° 12' 54", long 106° 06' 41", in NW¹/₄ SE¹/₄ SW¹/₄ sec. 15, T.49 N., R.77 W., Johnson County, Hydrologic Unit 10090202, on left bank 250 ft downstream from bridge on dirt road, 0.80 mi upstream from Interstate Highway 90, 5.3 mi upstream from mouth, and 31 mi east of Buffalo.

PERIOD OF RECORD.--Water years 1987-1989, April 2000 to current year.

[illegible]

YELLOWSTONE RIVER BASIN

06313700 DEAD HORSE CREEK NEAR BUFFALO, WY—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Barium, water, unfltrd recover- able, ug/L (01007)	Beryll- ium, water, unfltrd recover- able, ug/L (01012)	Iron, water, fltrd, ug/L (01046)	Mangan- ese, water, fltrd, ug/L (01056)	Selen- ium, water, unfltrd ug/L (01147)
OCT 08...	--	--	--	--	--
JAN 16...	--	--	--	--	--
APR 08...	86	E.08	<30	6.5	3.5
MAY 06...	--	--	--	--	--
JUN 16...	--	--	--	--	--
JUL 16...	--	--	--	--	--
AUG 12...	--	--	--	--	--
SEP 09...	--	--	--	--	--

E -- Estimated value

06316400 CRAZY WOMAN CREEK AT UPPER STATION, NEAR ARVADA, WY

LOCATION.--Lat 44° 29'28", long 106° 10'38", in NE $\frac{1}{4}$ SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.7, T.52 N., R.77 W., Johnson County, Hydrologic Unit 10090205, on left bank 1.1 mi upstream from Jewell Draw, 5.0 mi upstream from mouth, and 11 mi south of Arvada.

DRAINAGE AREA.--937 mi², approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1963 to September 1970, October 1977 to September 1981, October 2000 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 3,765 ft above NGVD of 1929, from topographic map. U.S. Geological Survey data collection platform with satellite telemetry at station.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Diversions for irrigation of about 12,000 acres upstream from station.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.95	8.1	e13	e8.0	e12	e14	14	37	217	113	14	e0.60
2	1.5	8.8	e16	e9.0	e14	e16	12	59	204	115	11	e0.50
3	2.8	9.1	e17	e10	e11	e18	12	76	196	97	6.9	e0.40
4	3.1	9.4	e15	e11	e9.0	e15	12	53	184	84	5.0	e0.30
5	2.9	11	e14	e9.0	e9.0	e12	11	42	158	75	3.7	e0.20
6	2.8	12	e13	e8.0	e6.0	e16	22	40	133	62	3.0	e0.20
7	2.8	11	e12	e9.0	e8.0	e13	28	51	120	57	2.3	e0.10
8	2.8	15	e12	e11	e10	e11	22	65	110	51	1.9	e0.08
9	2.9	14	e13	e12	e11	e13	17	57	108	44	1.8	e0.06
10	3.1	15	e13	e8.0	e9.0	e16	14	53	116	41	1.5	e3.0
11	3.1	13	e13	e6.0	e9.0	e20	13	59	111	37	1.2	e1.0
12	3.2	12	e12	e8.0	e10	e30	11	50	100	29	1.8	e0.40
13	3.4	13	e13	e10	e12	e50	30	47	94	24	3.4	e0.30
14	3.4	13	e13	e12	e11	e100	154	43	91	19	e0.80	e0.20
15	3.2	12	e14	e8.0	e12	e60	153	52	86	16	e0.70	e5.0
16	3.1	11	e16	e9.0	e15	e40	151	59	84	14	e0.60	10
17	3.1	13	e15	e10	e15	e34	173	68	134	13	e0.50	11
18	3.2	12	e14	e12	e18	e30	147	73	76	10	e0.40	11
19	3.2	13	e12	e10	e21	e40	100	71	85	8.9	e0.30	9.7
20	3.4	13	e10	e9.0	e25	50	74	85	86	7.4	e0.20	8.4
21	3.6	13	e10	e10	e20	56	60	95	158	5.4	e0.10	6.7
22	3.7	14	e9.0	e11	e15	59	47	101	169	4.5	e0.10	7.0
23	3.7	14	e8.0	e12	e12	46	36	96	116	4.6	e3.0	7.2
24	3.9	15	e7.0	e12	e10	44	32	93	94	3.9	2.9	6.5
25	4.0	8.4	e6.0	e11	e12	30	36	97	86	5.1	2.1	7.3
26	3.9	9.2	e5.0	e12	e14	23	43	118	108	5.0	1.4	7.0
27	5.5	13	e7.0	e13	e16	20	46	135	146	4.6	e0.90	6.9
28	9.7	14	e9.0	e12	e18	19	42	158	144	3.5	e0.90	5.7
29	11	16	e8.0	e10	---	16	44	179	122	8.2	e0.80	4.9
30	9.5	e11	e8.0	e9.0	---	15	38	201	105	9.7	e0.80	4.4
31	9.0	---	e7.0	e10	---	14	---	218	---	10	e0.70	---
TOTAL	125.45	366.0	354.0	311.0	364.0	940	1,594	2,631	3,741	981.8	74.70	126.04
MEAN	4.05	12.2	11.4	10.0	13.0	30.3	53.1	84.9	125	31.7	2.41	4.20
MAX	11	16	17	13	25	100	173	218	217	115	14	11
MIN	0.95	8.1	5.0	6.0	6.0	11	11	37	76	3.5	0.10	0.06
AC-FT	249	726	702	617	722	1,860	3,160	5,220	7,420	1,950	148	250

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1963 - 2003, BY WATER YEAR (WY)*

MEAN	15.2	17.8	16.6	13.4	17.4	43.7	33.7	102	197	54.6	15.9	12.5
MAX	39.5	42.1	39.7	26.3	41.3	101	71.6	629	590	183	68.6	54.9
(WY)	(1969)	(1979)	(1979)	(1980)	(1968)	(1978)	(1980)	(1978)	(1967)	(1967)	(1968)	(1968)
MIN	0.097	3.19	8.62	4.14	7.55	11.5	7.29	7.09	3.26	0.13	0.000	0.063
(WY)	(2002)	(2002)	(2002)	(1970)	(1966)	(1981)	(1967)	(2002)	(1966)	(1966)	(1966)	(2001)

06316400 CRAZY WOMAN CREEK AT UPPER STATION, NEAR ARVADA, WY—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1963 - 2003*	
ANNUAL TOTAL	3,408.07		11,608.99		--	
ANNUAL MEAN	9.34		31.8		43.5	
HIGHEST ANNUAL MEAN	--		--		119	
LOWEST ANNUAL MEAN	--		--		8.02	
HIGHEST DAILY MEAN	128	Aug 22	218	May 31	2,030	May 20, 1978
LOWEST DAILY MEAN	0.00 ^c	Many days	0.06 ^c	Sep 9	0.00	Many days, some years
ANNUAL SEVEN-DAY MINIMUM	0.00	Jul 11	0.19	Sep 3	0.00	Some years
MAXIMUM PEAK FLOW	--		234 ^a	Apr 14	15,800 ^b	Jun 15, 1965
MAXIMUM PEAK STAGE	--		6.00 ^c	Mar 13	16.02 ^d	Jun 15, 1965
ANNUAL RUNOFF (AC-FT)	6,760		23,030		31,520	
10 PERCENT EXCEEDS	17		100		86	
50 PERCENT EXCEEDS	7.5		12		15	
90 PERCENT EXCEEDS	0.59		2.2		1.4	

* For period of operation.

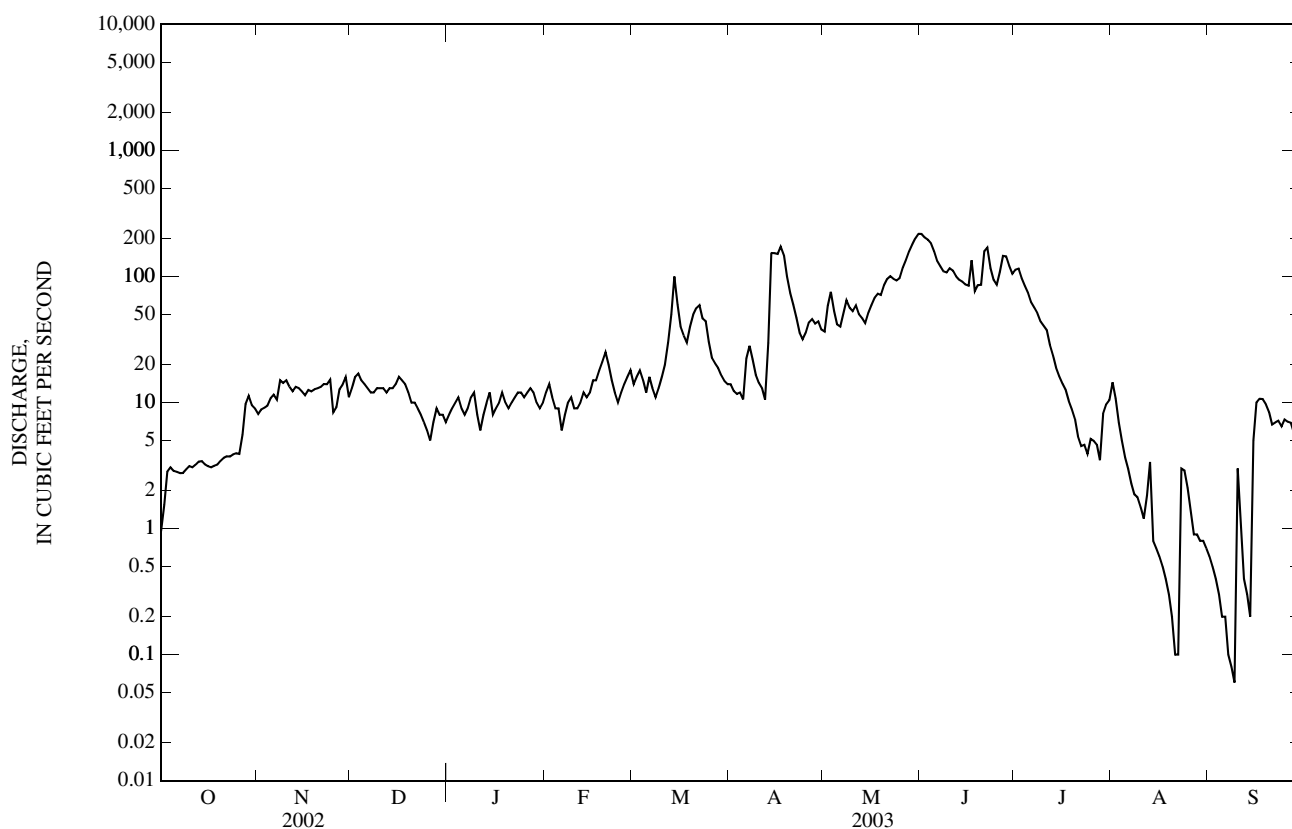
a Gage height, 4.12 ft.

b From rating curve extended above 1,300 ft³/s on basis of slope-area measurement of peak flow.

c Backwater from ice.

d From floodmarks.

e Estimated.



06316400 CRAZY WOMAN CREEK AT UPPER STATION, NEAR ARVADA, WY—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1967 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: July 2001 to current year (seasonal).

WATER TEMPERATURE: July 2001 to current year (seasonal).

REMARKS.--Specific conductance records excellent Oct. 1-8, April 8, 9, April 25 to May 31, June 17 to July 4, July 17-24, July 31 to August 4, August 13-20, 27-31, September 10, 11, 17, 24-30; good April 10-12, June 1-16, July 5-16, 25-30, August 5-12, 21-26, September 1-9, 18-23; fair April 13; and poor April 14-24. Water temperature records good. Water-temperature records represent water temperature at sensor with 0.2° C.

INSTRUMENTATION.--Water quality monitor for specific conductance and water temperature.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum recorded, 3,280 microsiemens/cm, September 4-7, 2001 and July 18, 2002; minimum recorded, 360 microsiemens/cm, April 17, 2003.

WATER TEMPERATURE: Maximum recorded, 31.4° C, August 6, 2001; minimum recorded, 0.0° C, April 11, 12, 2002.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum recorded, 3,200 microsiemens/cm, April 13; minimum recorded, 360 microsiemens/cm, April 17.

WATER TEMPERATURE: Maximum recorded, 30.3° C, August 14; minimum recorded, 5.8° C, October 3.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

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 unfltrd uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, unfltrd mg/L as CaCO3 (00900)	Calcium, water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)
OCT													
08...	1115	2.6	672	8.9	90	8.1	2,140	8.0	10.0	840	179	96.0	8.84
24...	0950	3.7	667	10.3	85	8.1	2,440	6.0	1.5	1,100	214	132	6.73
NOV													
05...	1025	6.8	665	12.7	100	8.4	2,000	8.5	0.0	860	177	102	4.80
18...	1115	7.8	667	13.3	105	8.4	1,510	9.0	0.0	670	144	74.6	3.58
DEC													
05...	1015	12	672	13.9	109	8.3	1,740	-4.0	0.0	750	159	85.7	3.88
18...	1230	14	658	11.0	88	8.4	1,780	2.0	0.0	800	172	89.1	3.74
31...	1400	7.0	655	11.9	96	8.3	2,100	6.0	0.0	900	194	101	4.28
JAN													
16...	1615	8.8	675	12.6	98	8.1	1,630	1.0	0.0	740	159	84.1	3.35
29...	1400	10	666	12.0	95	8.0	1,550	8.0	0.0	670	147	74.0	3.21
FEB													
12...	1715	10	667	10.7	84	8.0	1,470	-1.0	0.0	620	139	67.2	5.98
26...	0950	18	660	11.7	93	7.9	1,440	-2.0	0.0	600	136	63.5	4.55
MAR													
10...	1200	15	662	8.5	67	7.7	1,590	10.0	0.0	690	155	74.1	3.62
24...	1330	46	664	12.1	98	8.0	1,210	8.0	1.0	470	103	50.8	4.19
APR													
08...	1745	21	668	10.2	106	8.4	2,150	18.0	11.0	950	199	110	5.63
24...	1445	31	660	8.5	96	8.3	1,170	16.5	14.0	450	99.1	49.0	5.19
MAY													
07...	1415	52	657	9.2	99	8.4	1,470	12.5	11.5	570	117	68.0	5.18
22...	1345	97	667	8.4	98	8.1	923	23.0	16.0	370	79.7	41.5	3.62
JUN													
06...	0920	134	--	--	--	8.0	488	8.5	14.0	190	43.2	19.0	2.26
16...	1455	84	670	7.5	98	8.2	852	24.5	22.0	340	74.8	36.1	2.98
JUL													
01...	0850	120	663	7.7	99	7.9	570	29.0	20.5	220	51.6	22.4	2.24
16...	1610	14	666	7.2	105	8.2	1,180	39.0	27.5	470	107	50.3	3.72
30...	1735	7.5	668	8.9	128	8.3	1,670	34.0	26.5	720	157	79.0	5.87
AUG													
12...	1355	0.97	666	7.9	116	8.1	2,150	41.5	27.5	840	169	102	7.45
26...	1410	1.3	667	7.1	98	8.0	2,480	36.5	24.0	1,100	235	123	10.8
SEP													
09...	1340	0.06	661	8.5	113	7.9	2,930	24.5	21.5	1,200	268	119	9.45
23...	1215	7.2	--	--	--	8.2	1,830	26.5	13.5	820	166	99.8	6.87

06316400 CRAZY WOMAN CREEK AT UPPER STATION, NEAR ARVADA, WY—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Sodium adsorp- tion ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Alka- linity, wat flt fxd end lab, mg/L as CaCO3 (29801)	Chlor- ide, water, fltrd, mg/L (00940)	Fluor- ide, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of consti- tuents mg/L (70301)	Residue water, fltrd, tons/ acre-ft (70303)	Residue water, fltrd, tons/d (70302)	Residue on evap. at 180degC wat flt mg/L (70300)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)
OCT													
08...	3	177	E176	11.2	0.42	0.72	1,020	--	--	--	1,780	--	--
24...	3	190	E223	10.3	0.33	1.53	1,230	--	--	--	2,140	--	--
NOV													
05...	2	134	E242	9.34	0.33	5.41	906	--	--	--	1,660	--	--
18...	2	104	E214	6.95	0.29	7.62	659	--	--	--	1,260	--	--
DEC													
05...	2	120	E237	8.33	0.30	7.94	720	--	--	--	1,370	--	--
18...	2	133	E243	7.96	0.31	9.66	761	--	--	--	1,460	--	--
31...	2	161	287	9.14	0.34	8.97	926	1,580	2.36	32.7	1,730	--	--
JAN													
16...	2	107	241	10.4	0.29	7.94	685	1,200	1.78	31.2	1,310	--	--
29...	2	105	245	6.22	0.28	8.05	621	1,110	1.67	34.7	1,230	--	--
FEB													
12...	2	104	E238	8.30	0.26	8.29	634	--	--	--	1,190	--	--
26...	2	95.3	E261	7.00	0.24	7.62	612	--	--	--	1,160	--	--
MAR													
10...	2	104	228	7.49	0.27	8.20	624	1,110	1.70	50.7	1,250	--	--
24...	2	74.7	141	5.96	0.22	5.72	494	823	1.23	112	904	--	--
APR													
08...	3	181	222	10.3	0.29	2.86	1,050	1,690	2.57	107	1,890	<0.04	E.05
24...	2	83.2	154	4.43	0.23	8.83	470	813	1.20	74.0	885	--	--
MAY													
07...	2	101	172	8.13	0.24	8.84	631	1,040	1.59	164	1,170	<0.04	<0.06
22...	1	62.5	137	4.90	0.2	12.1	323	610	0.90	174	663	--	--
JUN													
06...	0.8	26.5	90	2.54	<0.2	12.4	150	309	0.47	125	344	--	--
16...	1	50.6	141	3.58	0.2	12.7	295	561	0.83	139	614	<0.04	<0.06
JUL													
01...	0.9	30.1	105	2.74	<0.2	13.5	174	360	0.55	131	403	--	--
16...	2	78.9	180	4.95	0.2	9.92	449	811	1.22	33.9	896	--	--
30...	2	133	197	7.77	0.3	6.93	745	1,250	1.87	27.8	1,380	--	--
AUG													
12...	2	166	211	9.61	0.3	3.38	1,010	1,590	2.49	4.80	1,830	--	--
26...	3	204	201	12.5	0.3	1.42	1,260	1,970	2.95	7.61	2,170	--	--
SEP													
09...	4	280	231	11.6	0.3	5.15	1,500	2,330	3.64	0.43	2,670	--	--
23...	2	133	219	10.3	0.4	2.70	878	1,430	2.13	30.5	1,570	--	--

06316400 CRAZY WOMAN CREEK AT UPPER STATION, NEAR ARVADA, WY—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Nitrite water, fltrd, mg/L as N (00613)	Ortho- phos- phate, water, fltrd, mg/L as P (00671)	Alum- inum, water, unfltrd recover- able, ug/L (01105)	Arsenic water, fltrd, ug/L (01000)	Barium, water, unfltrd recover- able, ug/L (01007)	Beryll- ium, water, unfltrd recover- able, ug/L (01012)	Iron, water, fltrd, ug/L (01046)	Mangan- ese, water, fltrd, ug/L (01056)	Selen- ium, water, unfltrd ug/L (01147)	Sus- pended sediment concentration mg/L (80154)	Sus- pended sediment load, tons/d (80155)
OCT											
08...	--	--	147	0.7	67	<0.06	21	88.8	1.1	--	--
24...	--	--	74	0.7	67	<0.06	43	125	1.5	--	--
NOV											
05...	--	--	123	0.7	43	<0.06	E9	84.1	1.5	--	--
18...	--	--	111	0.7	33	<0.06	10	75.7	1.5	--	--
DEC											
05...	--	--	4	0.7	27	<0.06	E6	58.2	<0.5	--	--
18...	--	--	150	0.6	38	<0.06	10	46.6	1.9	--	--
31...	--	--	E125	0.8	48	<0.06	<50	67.8	2.3	--	--
JAN											
16...	--	--	119	0.8	39	<0.06	E9	52.0	2.0	--	--
29...	--	--	156	0.6	36	E.03	12	63.1	1.8	--	--
FEB											
12...	--	--	239	0.6	43	<0.06	33	75.5	1.2	--	--
26...	--	--	302	0.7	42	<0.06	17	46.2	1.6	--	--
MAR											
10...	--	--	154	0.7	40	<0.06	11	48.5	1.5	--	--
24...	--	--	4,910	0.7	117	0.50	<10	212	1.4	--	--
APR											
08...	<0.008	<0.02	747	0.8	71	0.08	E7	128	1.5	84	4.8
24...	--	--	2,570	0.9	77	0.27	17	32.3	1.3	--	--
MAY											
07...	<0.008	<0.02	2,470	0.9	74	0.27	E7	30.1	1.6	--	--
22...	--	--	5,400	0.9	90	0.65	11	7.5	1.3	690	181
JUN											
06...	--	--	4,020	0.9	73	0.61	38	3.7	0.9	--	--
16...	<0.008	<0.02	3,170	1.2	79	0.33	E6	5.0	0.9	428	97
JUL											
01...	--	--	4,790	1.2	110	0.52	9	1.8	1.0	--	--
16...	--	--	741	1.1	88	0.09	E4	9.8	1.1	--	--
30...	--	--	185	1.2	94	<0.06	E7	39.3	1.5	--	--
AUG											
12...	--	--	240	1.1	114	E.04	10	182	1.6	--	--
26...	--	--	404	1.2	125	E.03	E17	158	1.6	--	--
SEP											
09...	--	--	125	1.0	107	<0.12	E16	693	1.4	--	--
23...	--	--	428	0.8	71	E.05	E7	46.4	1.4	--	--

E -- Estimated value

06316400 CRAZY WOMAN CREEK AT UPPER STATION, NEAR ARVADA, WY—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	2,540	2,320	2,400	---	---	---	---	---	---	---	---	---
2	2,460	2,240	2,330	---	---	---	---	---	---	---	---	---
3	2,600	2,350	2,480	---	---	---	---	---	---	---	---	---
4	2,790	2,510	2,650	---	---	---	---	---	---	---	---	---
5	2,520	2,450	2,480	---	---	---	---	---	---	---	---	---
6	2,450	2,280	2,370	---	---	---	---	---	---	---	---	---
7	2,440	2,170	2,350	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	---	---	---	---
22	---	---	---	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---	---	---	---
27	---	---	---	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	---	---	---	---
29	---	---	---	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	2,790	2,170	2,440	---	---	---	---	---	---	---	---	---
FEBRUARY			MARCH			APRIL			MAY			
1	---	---	---	---	---	---	---	---	1,170	1,120	1,140	
2	---	---	---	---	---	---	---	---	1,180	1,050	1,150	
3	---	---	---	---	---	---	---	---	1,200	1,020	1,090	
4	---	---	---	---	---	---	---	---	1,700	1,200	1,450	
5	---	---	---	---	---	---	---	---	1,700	1,530	1,640	
6	---	---	---	---	---	---	---	---	1,530	1,410	1,440	
7	---	---	---	---	---	---	---	---	1,610	1,410	1,480	
8	---	---	---	---	---	---	---	---	1,940	1,610	1,780	
9	---	---	---	---	---	---	2,210	2,130	2,160	2,000	1,690	1,860
10	---	---	---	---	---	---	2,360	2,210	2,300	1,690	1,580	1,610
11	---	---	---	---	---	---	2,860	2,360	2,590	1,680	1,560	1,610
12	---	---	---	---	---	---	3,100	2,860	3,000	1,750	1,590	1,640
13	---	---	---	---	---	---	3,200	2,190	3,090	1,820	1,750	1,800
14	---	---	---	---	---	---	2,900	447	1,810	1,860	1,680	1,790
15	---	---	---	---	---	---	518	402	472	1,700	1,610	1,650
16	---	---	---	---	---	---	660	399	470	1,780	1,700	1,740
17	---	---	---	---	---	---	600	360	446	1,780	1,580	1,730
18	---	---	---	---	---	---	644	405	505	1,580	1,260	1,390
19	---	---	---	---	---	---	656	571	607	1,320	1,130	1,200
20	---	---	---	---	---	---	770	587	677	1,280	1,100	1,200
21	---	---	---	---	---	---	894	770	853	1,180	918	1,040
22	---	---	---	---	---	---	1,030	894	964	988	846	923
23	---	---	---	---	---	---	1,170	1,020	1,090	894	842	869
24	---	---	---	---	---	---	1,190	1,170	1,180	928	855	890
25	---	---	---	---	---	---	1,310	1,180	1,220	986	928	965
26	---	---	---	---	---	---	1,440	1,310	1,390	998	870	949
27	---	---	---	---	---	---	1,530	1,440	1,470	872	675	767
28	---	---	---	---	---	---	1,550	1,380	1,490	676	558	628
29	---	---	---	---	---	---	1,380	1,180	1,280	558	509	529
30	---	---	---	---	---	---	1,220	1,120	1,180	513	459	478
31	---	---	---	---	---	---	---	---	---	520	420	458
MONTH	---	---	---	---	---	---	3,200	360	1,370	2,000	420	1,250

06316400 CRAZY WOMAN CREEK AT UPPER STATION, NEAR ARVADA, WY—Continued

TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	12.9	8.6	10.5	---	---	---	---	---	---	---	---	---
2	9.0	7.2	8.0	---	---	---	---	---	---	---	---	---
3	10.7	5.8	8.1	---	---	---	---	---	---	---	---	---
4	11.8	8.2	9.6	---	---	---	---	---	---	---	---	---
5	11.7	9.0	10	---	---	---	---	---	---	---	---	---
6	11.0	7.8	9.3	---	---	---	---	---	---	---	---	---
7	12.1	6.9	9.4	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---
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21	---	---	---	---	---	---	---	---	---	---	---	---
22	---	---	---	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---	---	---	---
27	---	---	---	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	---	---	---	---
29	---	---	---	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	12.9	5.8	9.3	---	---	---	---	---	---	---	---	---
FEBRUARY			MARCH			APRIL			MAY			
1	---	---	---	---	---	---	---	---	10.5	6.7	8.3	
2	---	---	---	---	---	---	---	---	14.2	8.0	10.7	
3	---	---	---	---	---	---	---	---	15.2	10.4	12.8	
4	---	---	---	---	---	---	---	---	13.7	11.2	12.1	
5	---	---	---	---	---	---	---	---	12.3	9.8	10.9	
6	---	---	---	---	---	---	---	---	13.4	8.6	10.9	
7	---	---	---	---	---	---	---	---	13.8	9.4	11.6	
8	---	---	---	---	---	---	---	---	12.9	9.5	10.7	
9	---	---	---	---	---	---	14.6	6.8	10.6	11.5	8.3	9.8
10	---	---	---	---	---	---	16.0	9.6	12.8	10.5	7.8	9.1
11	---	---	---	---	---	---	16.4	10.8	13.7	14.3	7.1	10.4
12	---	---	---	---	---	---	16.6	10.8	13.8	17.4	10.2	13.6
13	---	---	---	---	---	---	14.4	11.3	13.1	18.0	13.1	15.6
14	---	---	---	---	---	---	16.2	10.9	13.1	19.8	13.0	16.3
15	---	---	---	---	---	---	15.0	11.6	13.1	20.0	14.4	17.3
16	---	---	---	---	---	---	14.1	10.7	12.2	18.5	15.6	16.7
17	---	---	---	---	---	---	13.1	10.0	11.4	18.2	14.1	16.0
18	---	---	---	---	---	---	12.6	10.3	11.4	17.2	11.3	14.2
19	---	---	---	---	---	---	11.1	9.4	10.2	13.3	9.4	11.2
20	---	---	---	---	---	---	14.0	8.2	10.8	15.0	8.9	11.8
21	---	---	---	---	---	---	15.4	9.1	12.1	16.3	10.8	13.5
22	---	---	---	---	---	---	16.5	10.7	13.6	19.1	13.4	15.9
23	---	---	---	---	---	---	16.4	12.1	14.4	20.5	15.3	17.8
24	---	---	---	---	---	---	15.4	13.0	14.2	22.2	16.1	19.0
25	---	---	---	---	---	---	16.8	11.7	14.2	23.0	17.6	20.2
26	---	---	---	---	---	---	16.2	12.4	14.2	24.2	19.6	21.7
27	---	---	---	---	---	---	14.7	10.2	12.7	23.2	20.3	21.7
28	---	---	---	---	---	---	13.1	9.8	10.8	23.8	19.8	21.8
29	---	---	---	---	---	---	11.0	8.9	9.9	23.7	20.8	22.2
30	---	---	---	---	---	---	10.5	7.6	9.1	22.6	20.5	21.5
31	---	---	---	---	---	---	---	---	---	21.8	19.5	20.5
MONTH	---	---	---	---	---	---	16.8	6.8	12.3	24.2	6.7	15.0

06317000 POWDER RIVER AT ARVADA, WY

LOCATION.--Lat 44° 39'00", long 106° 07'37", in SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec.16, T.54 N., R.77 W., Sheridan County, Hydrologic Unit 10090202, on right bank 0.1 mi downstream from bridge on county road, 0.2 mi southeast of Arvada, and 0.2 mi upstream from Wild Horse Creek.

DRAINAGE AREA.--6,050 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1919 to current year (no winter records in water years 1919-30, 1934). Records for February 16-23, 1930, published in WSP 701, are unreliable and should not be used.

REVISED RECORDS.--WSP 1509: 1921(M), 1923(M), 1924-26, 1927-28(M), 1929, 1930(M), 1931, 1932(M), 1933, 1934(M), 1935-36. See PERIOD OF RECORD.

GAGE.--Water-stage recorder. Elevation of gage is 3,620 ft above NGVD of 1929, from topographic map. Prior to October 24, 1938, non-contributing gage at bridge 0.2 mi upstream at datum 3,621.87 ft. October 24, 1938 to April 27, 1983, at site 0.7 mi upstream at different datum. U.S. Geological Survey data collection platform with satellite telemetry at station.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Numerous small reservoirs and diversions for irrigation of about 29,000 acres upstream from station.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	81	e92	e86	e74	e130	e80	232	406	326	e230	11	e1.8
2	82	e300	e78	e80	e120	e100	365	760	302	e235	16	e1.5
3	84	e900	e68	e90	e110	e110	680	925	294	e207	10	1.1
4	87	e650	e60	e80	e110	e120	e750	617	285	e163	5.2	1.1
5	85	e500	e68	e80	e100	e120	500	416	e253	e153	3.3	1.7
6	88	392	e72	e86	e110	e110	e509	342	e233	e142	1.5	3.1
7	97	235	e80	e90	e110	e100	e444	324	e221	e114	0.71	7.5
8	98	183	e80	e86	e100	e110	e344	339	e219	e191	0.46	5.7
9	96	e177	e82	e80	e96	e110	e296	314	e217	e205	0.29	3.9
10	93	e150	e90	e90	e94	e115	e319	280	e228	e116	e0.20	5.3
11	92	134	e90	e86	e90	e120	e284	274	e216	e98	e0.08	6.3
12	93	e139	e100	e80	e86	e135	e270	267	e201	e71	e0.00	6.3
13	92	e165	e110	e76	e94	e1,100	e249	268	190	102	e0.00	5.7
14	93	e151	e120	e74	e110	e1,700	e321	316	169	54	e0.00	6.2
15	94	e135	e130	e70	e110	e1,300	e443	270	152	47	e0.00	5.0
16	97	e117	e140	e76	e120	775	e516	259	146	34	e0.00	5.4
17	99	e126	e150	e84	e120	409	e522	253	191	26	e0.00	8.4
18	99	e133	e157	e90	e130	395	545	254	317	24	e0.00	10
19	99	e137	e120	e120	e130	333	e488	252	1,110	21	e0.00	10
20	99	e144	e90	e110	e130	308	335	260	e667	19	e0.00	9.6
21	100	120	e84	e110	e140	e330	e301	284	410	14	e0.00	8.6
22	105	115	e78	e120	e125	e317	e314	300	e423	9.7	e50	21
23	105	e120	e64	e110	e140	e289	e284	279	295	7.1	73	71
24	105	e130	e52	e115	e150	266	e236	245	259	5.9	57	72
25	105	e100	e60	e120	e120	e356	e187	236	e256	7.4	39	57
26	104	e50	e62	e125	e92	e411	e200	e283	e228	7.8	e27	42
27	107	e72	e60	e125	e88	373	e288	266	e273	23	e7.7	36
28	e110	e100	e66	e116	e82	323	337	318	e357	12	e7.9	35
29	e100	e90	e68	e120	---	300	366	335	e346	13	e3.6	32
30	e90	e80	e68	e130	---	284	322	e369	e250	10	e0.98	30
31	e84	---	e70	e140	---	e258	---	e354	---	18	e3.5	---
TOTAL	2,963	5,937	2,703	3,033	3,137	11,157	11,247	10,665	9,034	2,379.9	318.42	510.2
MEAN	95.6	198	87.2	97.8	112	360	375	344	301	76.8	10.3	17.0
MAX	110	900	157	140	150	1,700	750	925	1,110	235	73	72
MIN	81	50	52	70	82	80	187	236	146	5.9	0.00	1.1
AC-FT	5,880	11,780	5,360	6,020	6,220	22,130	22,310	21,150	17,920	4,720	632	1,010

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1931 - 2003, BY WATER YEAR (WY)

MEAN	136	129	99.8	90.4	168	391	356	724	736	256	95.9	75.1
MAX	865	419	290	242	567	953	1,107	4,025	3,319	1,703	861	451
(WY)	(1995)	(1999)	(1974)	(1974)	(1972)	(1978)	(1941)	(1978)	(1962)	(1937)	(1941)	(1982)
MIN	0.000	11.4	23.0	15.0	10.0	144	99.0	51.3	30.6	15.8	0.000	0.000
(WY)	(1961)	(1936)	(1950)	(1933)	(1933)	(1961)	(1961)	(1936)	(1954)	(1974)	(1932)	(1932)

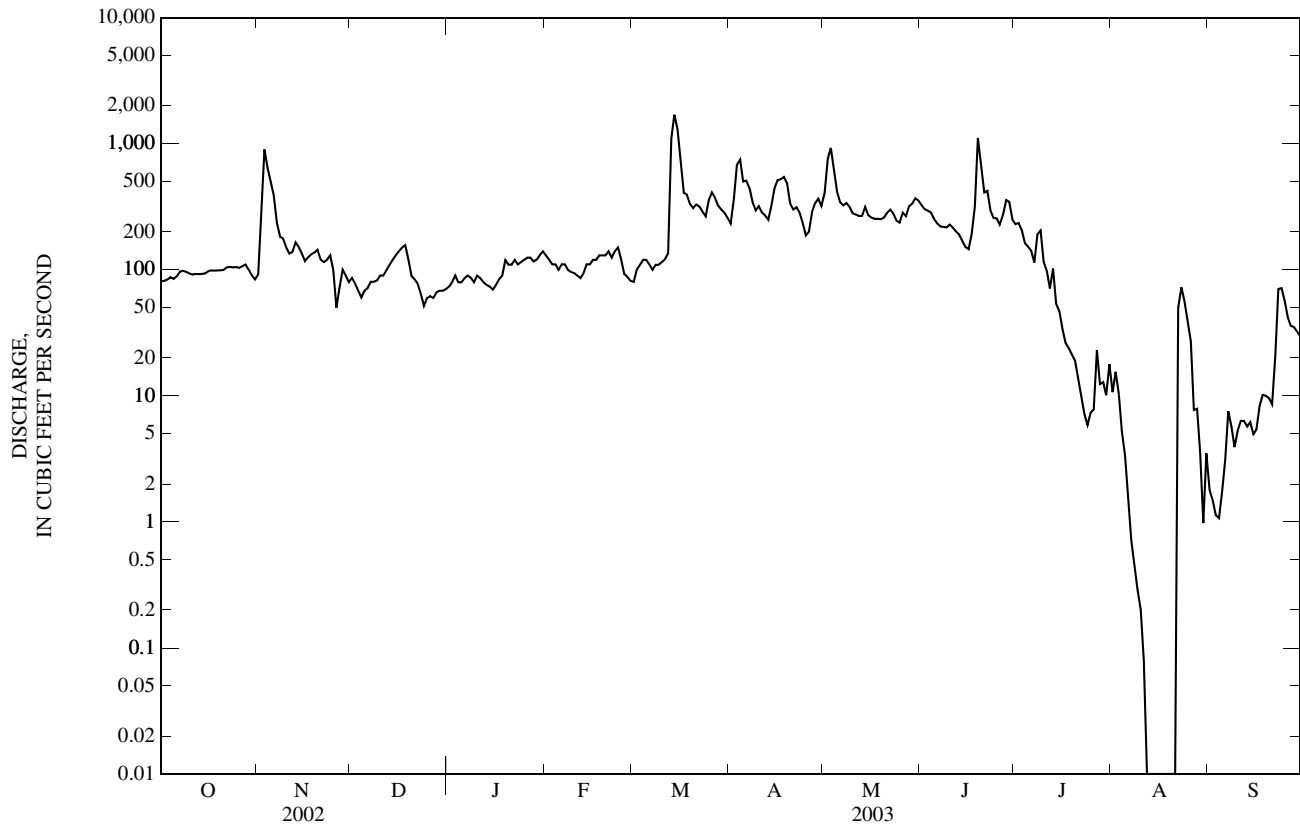
06317000 POWDER RIVER AT ARVADA, WY—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1931 - 2003	
ANNUAL TOTAL	46,155.33		63,084.52		273	
ANNUAL MEAN	126		173		735	
HIGHEST ANNUAL MEAN	--		--		70.3	
LOWEST ANNUAL MEAN	--		--		22,600	
HIGHEST DAILY MEAN	2,600	Aug 29	1,700 ^e	Mar 14	22,600	May 20, 1978
LOWEST DAILY MEAN	0.00	Jul 10, Aug 20	0.00	Aug 12-21	0.00	Many days, some years
ANNUAL SEVEN-DAY MINIMUM	0.06	Jul 5	0.00	Aug 12	0.00	Many days, some years
MAXIMUM PEAK FLOW	--		4,230	Mar 15	100,000 ^a	Sep 29, 1923
MAXIMUM PEAK STAGE	--		5.63	Mar 15	23.70 ^b	Sep 29, 1923
ANNUAL RUNOFF (AC-FT)	91,550		125,100		197,700	
10 PERCENT EXCEEDS	224		355		586	
50 PERCENT EXCEEDS	90		110		130	
90 PERCENT EXCEEDS	8.9		6.3		15	

a About, from rating curve extended above 20,000 ft³/s.

b From floodmarks, site and datum then in use.

c Estimated.



06317000 POWDER RIVER AT ARVADA, WY—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1946-57, 1968 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: March 1949 to September 1957, October 1967 to September 1978.

SUSPENDED-SEDIMENT DISCHARGE: April 1946 to September 1957, October 1967 to September 1971, January 1975 to September 1978, April 1983 to September 1984.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

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 unfltrd uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, unfltrd mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)
OCT													
08...	1440	101	674	9.3	99	8.2	2,510	11.0	12.0	570	139	55.0	8.93
24...	1115	102	670	10.7	91	8.2	2,320	3.5	3.0	570	133	57.1	7.75
NOV													
12...	1115	122	674	12.1	98	8.4	2,210	9.5	1.5	570	137	56.1	7.08
18...	1235	122	672	13.3	109	8.5	2,170	11.5	1.5	560	135	53.9	6.97
DEC													
05...	1215	68	674	13.6	106	8.4	2,630	--	0.0	640	155	62.2	8.19
18...	1430	157	662	12.6	100	8.3	2,310	2.5	0.0	620	150	59.6	7.91
31...	1155	70	660	10.1	81	8.1	3,060	2.5	0.0	800	192	78.4	9.46
JAN													
17...	0855	84	676	12.6	98	8.1	2,530	0.0	0.0	690	170	64.7	8.67
28...	1645	116	673	12.5	98	8.1	2,240	1.0	0.0	620	155	56.9	8.01
FEB													
13...	0900	94	667	12.3	97	8.1	2,250	-7.0	0.0	640	157	59.0	8.20
26...	1240	92	664	12.2	97	8.2	2,270	4.0	0.0	630	159	56.3	7.85
MAR													
10...	1445	115	664	10.2	81	8.0	2,300	13.5	0.0	610	153	55.1	8.04
24...	1515	250	667	10.7	103	8.2	1,990	11.5	7.5	520	130	46.6	6.98
APR													
09...	0915	268	670	11.1	106	8.2	2,110	8.0	7.5	600	152	52.9	6.86
24...	1645	252	664	8.1	94	8.3	1,640	17.5	15.5	460	115	40.8	7.07
MAY													
07...	0855	341	663	9.6	96	8.3	1,890	8.5	9.0	470	118	43.6	7.05
22...	1030	313	673	8.3	95	8.4	1,730	20.0	15.5	450	106	44.4	6.65
JUN													
06...	1330	246	--	--	--	8.2	1,330	11.0	14.0	340	82.4	33.1	5.19
16...	1715	140	673	7.1	98	8.3	1,940	24.0	25.0	500	117	49.6	8.12
JUL													
01...	1125	244	666	7.0	94	8.2	2,120	27.0	23.0	480	126	41.1	8.12
16...	1815	35	670	6.2	93	8.3	2,930	36.0	29.0	780	189	75.2	12.6
30...	1510	8.4	673	6.7	105	8.3	4,220	36.0	31.5	980	211	111	19.9
AUG													
12...	1445	0.00	--	--	--	--	--	--	--	--	--	--	--
26...	1215	24	671	6.6	91	8.2	3,700	35.5	24.0	730	189	61.9	17.3
SEP													
09...	1710	3.8	663	7.3	103	8.4	4,650	29.5	24.5	850	190	90.1	21.0
23...	1025	67	--	--	--	8.1	3,880	22.0	13.0	840	191	88.5	16.5

06317000 POWDER RIVER AT ARVADA, WY—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Sodium adsorp- tion ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Alka- linity, wat flt fxd end lab, mg/L as CaCO ₃ (29801)	Chlor- ide, water, fltrd, mg/L (00940)	Fluor- ide, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of consti- tuents mg/L (70301)	Residue water, fltrd, tons/ acre-ft (70303)	Residue water, fltrd, tons/d (70302)	Residue on evap. at 180degC wat flt mg/L (70300)	Alum- inum, water, unfltrd recover- able, ug/L (01105)	Arsenic water, fltrd, ug/L (01000)
OCT													
08...	6	304	E161	216	0.71	6.98	788	--	--	--	1,740	4,340	0.7
24...	5	294	E116	193	0.55	5.91	723	--	--	--	1,670	3,700	0.4
NOV													
12...	5	294	202	185	0.60	8.31	682	1,490	2.17	525	1,590	5,190	0.8
18...	5	260	196	173	0.60	7.18	699	1,450	2.16	523	1,590	5,490	0.9
DEC													
05...	5	312	E236	238	0.64	8.58	750	--	--	--	1,810	1,340	1.0
18...	5	300	E227	188	0.61	9.79	692	--	--	--	1,660	3,900	0.8
31...	6	384	304	248	0.68	11.6	933	2,040	2.99	415	2,200	E109	1.0
JAN													
17...	5	300	273	213	0.68	10.8	722	1,650	2.53	421	1,860	1,260	1.3
28...	5	274	279	173	0.68	10.6	653	1,500	2.17	499	1,590	830	0.7
FEB													
13...	5	279	276	183	0.63	9.44	708	1,570	2.25	420	1,660	348	0.8
26...	5	277	E267	174	0.58	9.00	749	--	--	--	1,690	604	1.0
MAR													
10...	5	286	242	189	0.67	10.4	642	1,490	2.13	485	1,560	1,110	0.9
24...	5	237	185	142	0.60	7.86	641	1,320	1.92	951	1,410	8,090	1.0
APR													
09...	4	236	168	68.5	0.69	6.67	876	1,500	2.24	1,190	1,650	23,100	1.0
24...	4	194	178	121	0.52	8.28	511	1,100	1.61	807	1,190	7,120	1.0
MAY													
07...	5	245	154	55.6	0.66	7.18	791	1,360	1.99	1,350	1,460	25,000	0.9
22...	4	192	205	101	0.5	8.90	552	1,130	1.65	1,030	1,220	8,290	1.1
JUN													
06...	4	149	136	83.1	0.4	9.44	414	859	1.25	611	920	4,440	1.0
16...	5	246	170	131	0.5	9.92	633	1,300	1.88	522	1,380	2,470	1.3
JUL													
01...	5	263	158	121	0.7	10.0	764	1,430	2.14	1,030	1,570	34,200	1.2
16...	6	416	174	200	0.6	10.3	1,070	2,080	2.93	204	2,150	2,730	1.4
30...	9	642	187	373	0.6	7.60	1,600	3,080	4.40	73.4	3,240	136	1.6
AUG													
12...	--	--	--	--	--	--	--	--	--	--	--	--	--
26...	8	521	192	278	1.3	7.56	1,400	2,590	3.79	181	2,790	48,300	2.0
SEP													
09...	10	685	165	514	0.9	3.83	1,590	3,190	4.75	35.9	3,500	634	1.1
23...	9	577	188	419	1.0	4.50	1,380	2,790	4.06	540	2,980	41,900	0.9

YELLOWSTONE RIVER BASIN

06317000 POWDER RIVER AT ARVADA, WY—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Barium, water, unfltrd recover- able, ug/L (01007)	Beryll- ium, water, unfltrd recover- able, ug/L (01012)	Iron, water, fltrd, ug/L (01046)	Mangan- ese, water, fltrd, ug/L (01056)	Selen- ium, water, unfltrd ug/L (01147)
OCT					
08...	103	0.40	<10	3.4	3.0
24...	79	0.19	<10	5.8	2.6
NOV					
12...	112	0.40	<10	4.6	4.1
18...	105	0.38	<10	3.4	3.9
DEC					
05...	48	0.07	<10	6.1	3.5
18...	83	0.26	<10	4.1	3.5
31...	60	E.06	135	10.9	3.9
JAN					
17...	54	0.08	<10	6.9	3.5
28...	48	0.06	<10	5.3	2.8
FEB					
13...	46	<0.06	<10	6.9	2.9
26...	48	E.05	<10	9.6	3.9
MAR					
10...	56	0.09	<10	5.8	2.9
24...	176	0.74	<10	5.4	3.2
APR					
09...	315	1.97	<10	2.2	8.6
24...	102	0.66	<10	2.0	2.8
MAY					
07...	127	3.15	<10	E.8	6.8
22...	126	0.87	<8	1.7	3.1
JUN					
06...	80	0.64	9	2.1	2.1
16...	73	0.21	<8	1.6	2.2
JUL					
01...	510	3.06	<8	0.7	5.6
16...	101	0.18	<24	3.1	3.4
30...	87	<0.12	<24	8.1	2.3
AUG					
12...	--	--	--	--	--
26...	430	3.87	<24	E1.0	12.8
SEP					
09...	64	E.06	<40	10.3	4.4
23...	383	4.12	<24	1.3	6.8

E -- Estimated value

06317020 WILD HORSE CREEK NEAR ARVADA, WY

LOCATION.--Lat 44° 37' 57", long 106° 01' 53", in NE $\frac{1}{4}$ NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 29, T.54 N., R.76 W., Sheridan County, Hydrologic Unit 10090202, on left bank 1.0 mi upstream from Sheridan County Road 38, 0.4 mi upstream from Middle Prong Wildhorse Creek and 5.0 mi southeast of Arvada.

DRAINAGE AREA.--250 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 2000 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 3,730 ft above NGVD of 1929, from topographic map.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Natural flow of stream affected by numerous small reservoirs and coalbed methane production water.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	0.00	0.00	2.8	e0.15	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00	0.00	2.5	e1.0	0.01	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00	0.00	0.00	1.6	e6.0	0.01	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00	0.00	0.00	e1.4	e1.5	0.01	0.00	0.00	0.00
5	0.00	0.00	0.00	0.00	0.00	0.00	1.3	e0.80	0.01	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	0.87	e0.50	0.03	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	0.00	e1.3	1.6	0.04	0.00	0.00	0.00
8	0.00	0.00	0.00	0.00	0.00	0.00	1.8	3.5	0.03	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	2.2	3.1	0.01	0.00	0.00	0.00
10	0.00	0.00	0.00	0.00	0.00	e0.10	1.5	2.4	0.00	0.00	0.00	0.00
11	0.00	0.00	0.00	0.00	0.00	e0.10	0.89	2.9	0.00	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00	0.00	e1.0	0.48	3.3	0.00	0.00	0.00	0.00
13	0.00	0.00	0.00	0.00	0.00	7.8	0.34	2.4	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.00	7.0	0.24	1.9	0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00	0.00	11	0.11	1.1	0.00	0.00	0.00	0.00
16	0.00	0.00	0.00	0.00	0.00	36	0.07	0.75	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00	e0.05	e25	0.07	0.54	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	e0.01	e13	0.05	0.36	0.00	0.00	0.00	0.00
19	0.00	0.00	0.00	0.00	e0.01	e9.0	e0.04	0.23	0.00	0.00	0.00	0.00
20	0.00	0.00	0.00	0.00	0.00	e12	e0.15	0.14	0.00	0.00	0.00	0.00
21	0.00	0.00	0.00	0.00	0.00	14	0.53	0.10	0.00	0.00	0.00	0.00
22	0.00	0.00	0.00	0.00	0.00	15	0.97	0.06	0.00	0.00	0.00	0.00
23	0.00	0.00	0.00	0.00	0.00	9.3	0.97	0.04	0.00	0.00	0.00	0.00
24	0.00	0.00	0.00	0.00	0.00	e8.1	1.0	0.02	0.00	0.00	0.00	0.00
25	0.00	0.00	0.00	0.00	0.00	5.7	0.55	0.01	0.00	0.00	0.00	0.00
26	0.00	0.00	0.00	0.00	0.00	5.1	0.40	0.01	0.00	0.00	0.00	0.00
27	0.00	0.00	0.00	0.00	0.00	4.6	e0.22	0.01	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	0.00	e3.0	e0.14	0.01	0.00	0.00	0.00	0.00
29	0.00	0.00	0.00	0.00	---	e3.4	e0.08	0.00	0.00	0.00	0.00	0.00
30	0.00	0.00	0.00	0.00	---	4.1	e0.05	0.00	0.00	0.00	0.00	0.00
31	0.00	---	0.00	0.00	---	2.9	---	0.00	---	0.00	0.00	---
TOTAL	0.00	0.00	0.00	0.00	0.07	197.20	24.62	34.43	0.15	0.00	0.00	0.00
MEAN	0.000	0.000	0.000	0.000	0.003	6.36	0.82	1.11	0.005	0.000	0.000	0.000
MAX	0.00	0.00	0.00	0.00	0.05	36	2.8	6.0	0.04	0.00	0.00	0.00
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.00
AC-FT	0.00	0.00	0.00	0.00	0.1	391	49	68	0.3	0.00	0.00	0.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2000 - 2003, BY WATER YEAR (WY)

MEAN	0.000	0.000	0.000	0.008	0.001	2.32	0.35	0.38	0.002	0.000	0.000	0.000
MAX	0.000	0.000	0.000	0.025	0.003	6.36	0.82	1.11	0.005	0.000	0.000	0.000
(WY)	(2001)	(2001)	(2001)	(2001)	(2003)	(2003)	(2003)	(2003)	(2003)	(2000)	(2000)	(2000)
MIN	0.000	0.000	0.000	0.000	0.000	0.027	0.11	0.007	0.000	0.000	0.000	0.000
(WY)	(2001)	(2001)	(2001)	(2002)	(2002)	(2002)	(2002)	(2002)	(2000)	(2000)	(2000)	(2000)

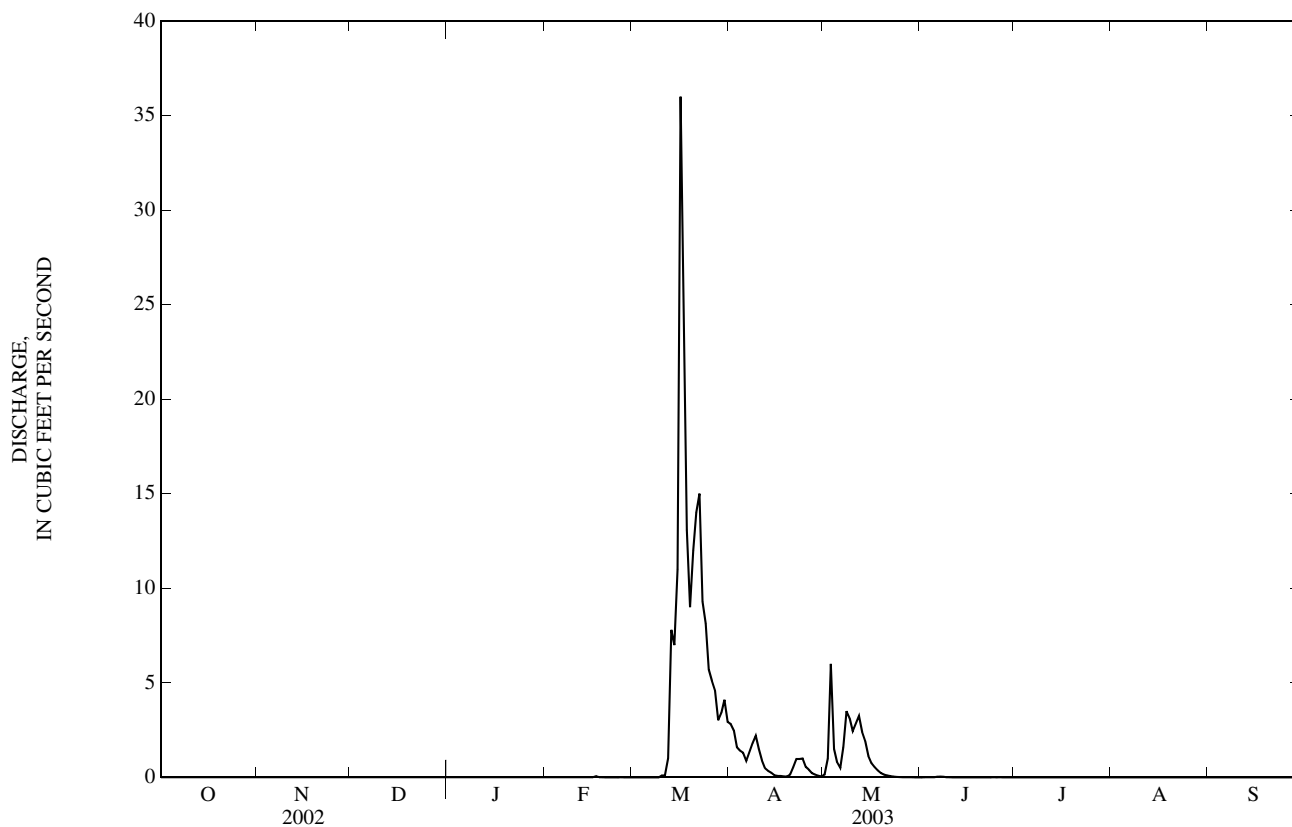
06317020 WILD HORSE CREEK NEAR ARVADA, WY—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 2000 - 2003	
ANNUAL TOTAL	4.32		256.47		--	
ANNUAL MEAN	0.012		0.70		0.26	
HIGHEST ANNUAL MEAN	--		--		0.70 2003	
LOWEST ANNUAL MEAN	--		-		0.012 2002	
HIGHEST DAILY MEAN	0.34	Apr 6	36	Mar 16	36	Mar 16, 2003
LOWEST DAILY MEAN	0.00	Many days	0.00	Many days	0.00	Many days, each year
MAXIMUM PEAK FLOW	--		41 ^a	Mar 16	41 ^a	Mar 16, 2003
MAXIMUM PEAK STAGE	--		2.61 ^b	Mar 10	2.61 ^b	Mar 10, 2003
ANNUAL RUNOFF (AC-FT)	8.6		509		188	
10 PERCENT EXCEEDS	0.02		1.3		0.14	
50 PERCENT EXCEEDS	0.00		0.00		0.00	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

a Gage height, 2.12 ft.

b Backwater from ice.

e Estimated.



WATER-QUALITY RECORDS

PERIOD OF RECORD.--May 2000 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

[illegible]

YELLOWSTONE RIVER BASIN

06317020 WILD HORSE CREEK NEAR ARVADA, WY—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Barium, water, unfltrd recover- able, ug/L (01007)	Beryll- ium, water, unfltrd recover- able, ug/L (01012)	Iron, water, fltrd, ug/L (01046)	Mangan- ese, water, fltrd, ug/L (01056)	Selen- ium, water, unfltrd ug/L (01147)
OCT 08...	--	--	--	--	--
JAN 17...	--	--	--	--	--
MAR 24...	96	E.03	40	20.7	1.2
APR 09...	95	<0.12	43	27.8	2.0
MAY 07...	69	<0.12	53	19.8	1.3
JUN 06...	61	<0.12	131	271	2.6
JUL 16...	--	--	--	--	--
AUG 12...	--	--	--	--	--
SEP 09...	--	--	--	--	--

E -- Estimated value

06320000 ROCK CREEK NEAR BUFFALO, WY

LOCATION.--Lat 44° 27' 22", long 106° 52' 42", in NW $\frac{1}{4}$ NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 29, T.52 N., R.83 W., Johnson County, Hydrologic Unit 10090206, on left bank 300 ft downstream from confluence of North and South Forks and 11.5 mi northwest of Buffalo.

DRAINAGE AREA.--60.0 mi².

PERIOD OF RECORD.--April to August 1941, April to December 1942, May 1943 to November 1944, April 1945 to current year (no winter records since 1971). Monthly discharge only for some periods, published in WSP 1309.

GAGE.--Water-stage recorder. Elevation of gage is 5,280 ft above NGVD of 1929, from topographic map. Prior to January 8, 1944, nonrecording gages 600 ft upstream on North and South Forks at different datums, January 8, 1944 to September 30, 1952, water-stage recorder at present site at datum 0.72 ft lower.

REMARKS.--Records good. Water is imported into drainage basin upstream from station from South Piney Creek. Diversions for irrigation of about 250 acres upstream from station. Result of discharge measurement, in cubic feet per second, made during period when station was not in operation, is given below:

Oct. 4 . . . 8.88

COOPERATION.--Station operated and recorded provided by the Wyoming State Engineer's Office; record reviewed by U.S. Geological Survey.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.6	---	---	---	---	---	6.1	22	192	77	58	32
2	8.8	---	---	---	---	---	9.6	21	150	73	58	24
3	---	---	---	---	---	---	11	24	123	70	58	23
4	---	---	---	---	---	---	7.3	21	104	66	58	23
5	---	---	---	---	---	---	6.6	21	92	63	55	22
6	---	---	---	---	---	---	5.3	21	89	61	52	22
7	---	---	---	---	---	---	4.9	17	90	60	51	22
8	---	---	---	---	---	---	4.5	21	87	59	54	23
9	---	---	---	---	---	---	5.1	18	83	57	53	24
10	---	---	---	---	---	---	8.8	17	86	54	52	32
11	---	---	---	---	---	---	13	16	87	52	49	32
12	---	---	---	---	---	---	18	17	76	50	48	36
13	---	---	---	---	---	---	24	23	78	47	46	37
14	---	---	---	---	---	---	24	30	75	45	45	34
15	---	---	---	---	---	---	31	44	73	45	43	34
16	---	---	---	---	---	---	30	53	74	43	46	33
17	---	---	---	---	---	---	24	67	89	42	54	33
18	---	---	---	---	---	---	20	72	77	37	72	32
19	---	---	---	---	---	---	17	61	77	40	48	24
20	---	---	---	---	---	---	15	52	84	37	43	23
21	---	---	---	---	---	---	16	54	74	34	45	22
22	---	---	---	---	---	---	23	57	66	34	39	22
23	---	---	---	---	---	---	31	84	62	33	39	21
24	---	---	---	---	---	---	30	136	80	35	33	21
25	---	---	---	---	---	4.2	31	175	78	44	33	21
26	---	---	---	---	---	3.7	38	196	79	45	33	20
27	---	---	---	---	---	4.4	34	207	82	45	32	20
28	---	---	---	---	---	4.4	26	215	89	44	33	20
29	---	---	---	---	---	5.0	24	243	96	44	39	11
30	---	---	---	---	---	3.6	26	227	85	43	41	10
31	---	---	---	---	---	4.3	---	204	---	46	42	---
TOTAL	---	---	---	---	---	---	564.2	2,436	2,677	1,525	1,452	753
MEAN	---	---	---	---	---	---	18.8	78.6	89.2	49.2	46.8	25.1
MAX	---	---	---	---	---	---	38	243	192	77	72	37
MIN	---	---	---	---	---	---	4.5	16	62	33	32	10
AC-FT	---	---	---	---	---	---	1,120	4,830	5,310	3,020	2,880	1,490

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1945 - 2003, BY WATER YEAR (WY)*

MEAN	9.23	7.11	5.57	4.58	4.43	4.81	15.4	98.9	144	60.6	40.6	20.3
MAX	20.1	12.7	8.75	6.40	6.57	7.13	46.7	256	352	142	69.2	57.3
(WY)	(1969)	(1969)	(1969)	(1965)	(1969)	(1960)	(1994)	(1978)	(1995)	(1975)	(1968)	(1982)
MIN	3.44	2.74	3.08	1.88	2.27	2.22	4.63	24.7	23.9	28.3	4.22	1.57
(WY)	(1955)	(1955)	(1967)	(1950)	(1957)	(1966)	(1966)	(2001)	(2001)	(1958)	(1954)	(1954)

06320000 ROCK CREEK NEAR BUFFALO, WY—Continued

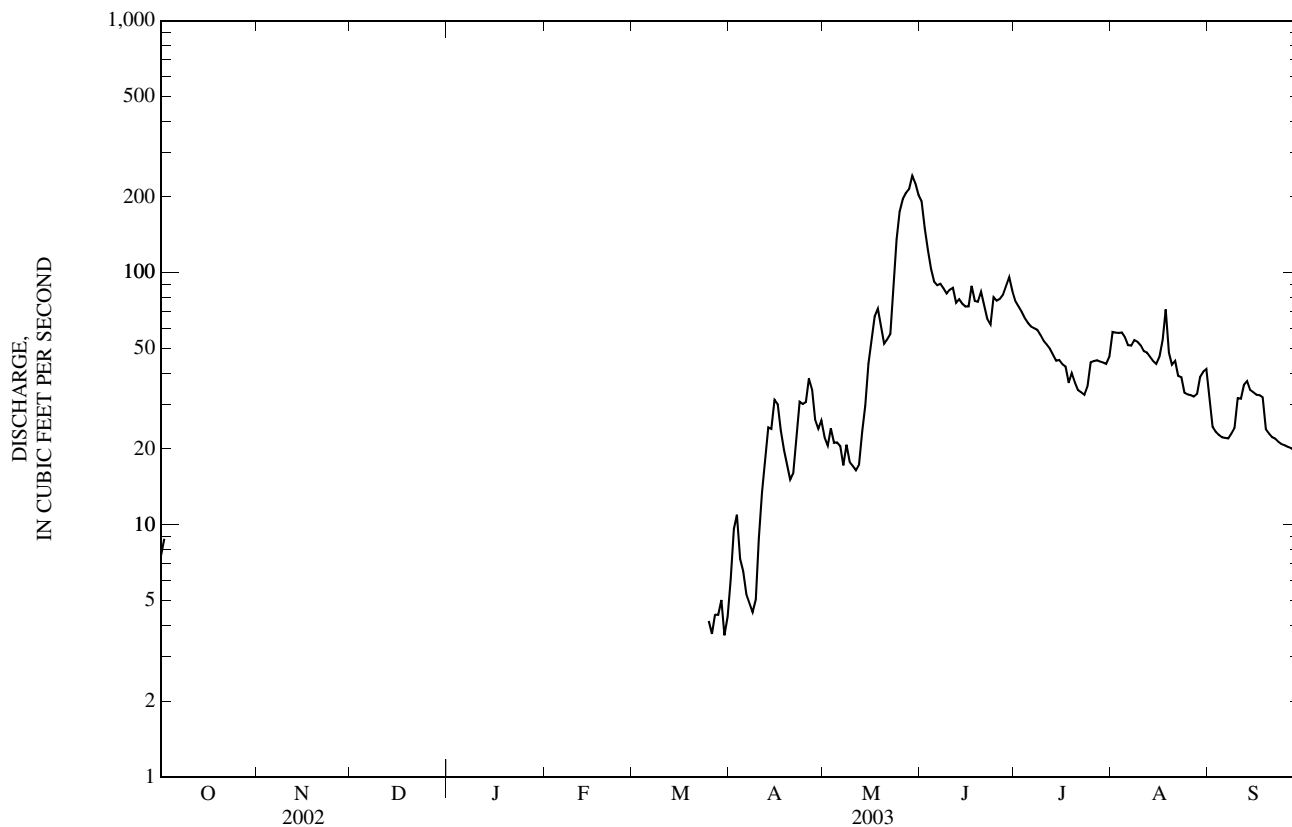
SUMMARY STATISTICS

FOR 2003 WATER YEAR*

WATER YEARS 1945- 2003*

ANNUAL MEAN	--	34.67
HIGHEST ANNUAL MEAN	--	54.7 1963
LOWEST ANNUAL MEAN	--	16.1 1954
HIGHEST DAILY MEAN	243 May 29	1,110 Jun 8, 1997
LOWEST DAILY MEAN	3.6 Mar 30	0.50 Sep 19, 1954
MAXIMUM PEAK FLOW	382 May 29	2,080 ^a Jun 8, 1997
MAXIMUM PEAK STAGE	5.73 May 29	8.80 Jun 8, 1997
ANNUAL RUNOFF (AC-FT)	--	25,120

* For period of operation.

a From rating curve extended above 610 ft³/s.

06320210 CLEAR CREEK ABOVE KUMOR DRAW, NEAR BUFFALO, WY

LOCATION.--Lat 44° 23'21", long 106° 37'23", in NW $\frac{1}{4}$ NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.17, T.51 N., R.81 W., Johnson County, Hydrologic Unit 10090206, 10 ft upstream from bridge on State Highway 16, 0.7 mi upstream from Kumor Draw, and 5 mi northeast of Buffalo.

PERIOD OF RECORD.--January 1993 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

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)	Specif. conductance, wat unfltrd 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, unfltrd mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	
OCT 07...	1145	48	652	13.0	127	8.6	638	20.0	7.5	270	67.4	25.7	2.20	
NOV 19...	1050	31	652	14.9	123	8.7	707	8.0	1.0	300	72.7	28.8	1.96	
DEC 11...	1315	45	646	14.7	119	8.4	729	5.5	0.0	310	77.0	29.4	2.13	
JAN 29...	1600	33	650	12.6	101	8.3	745	2.5	0.0	320	76.0	30.6	2.59	
FEB 26...	1740	28	643	12.1	98	7.9	800	0.0	0.0	350	84.5	32.9	2.15	
MAR 25...	1210	46	650	12.0	106	8.3	946	12.0	3.5	400	93.4	40.6	3.54	
APR 25...	1200	133	648	10.2	103	8.1	237	13.5	8.5	87	21.4	8.18	1.57	
MAY 21...	1330	107	652	9.8	103	8.2	470	25.0	10.5	190	44.5	19.5	2.20	
JUN 17...	1525	181	654	8.2	102	8.1	369	25.5	18.5	150	35.5	14.9	1.90	
JUL 29...	1545	33	655	8.4	115	8.1	505	28.5	23.0	210	51.0	20.7	2.38	
AUG 25...	1340	25	655	9.4	128	8.7	480	30.0	23.0	190	45.6	19.5	2.13	
SEP 22...	1315	64	--	--	--	8.2	435	20.5	11.5	190	46.8	16.9	2.04	
Date		Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Alkalinity, wat flt fxd end lab, mg/L as CaCO3 (29801)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/ acre-ft (70303)	Residue water, fltrd, tons/d (70302)	Residue on evap. at 180degC wat flt mg/L (70300)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)
OCT 07...	0.8	32.0	--	3.17	0.21	8.43	198	--	--	--	443	--	--	--
NOV 19...	0.9	36.2	158	3.54	0.18	8.66	223	470	0.67	41.5	496	E.02	0.06	0.06
DEC 11...	0.9	38.1	E164	3.22	0.19	11.2	223	--	--	--	517	--	--	--
JAN 29...	1	39.6	155	4.66	0.18	11.1	230	488	0.71	46.8	522	--	--	--
FEB 26...	1	41.8	E212	4.62	0.16	12.2	254	--	--	--	575	0.36	0.22	0.22
MAR 25...	1	46.3	179	5.70	0.20	10.6	321	629	0.94	85.5	688	--	--	--
APR 25...	0.5	11.0	58	2.28	<0.17	10.3	53.8	143	0.23	59.6	166	--	--	--
MAY 21...	0.7	20.7	81	2.88	<0.2	11.0	143	292	0.44	94.1	326	<0.04	<0.06	<0.06
JUN 17...	0.6	16.5	72	1.99	<0.2	9.47	103	226	0.34	122	250	--	--	--
JUL 29...	0.7	24.5	106	2.90	<0.2	5.81	143	314	0.45	29.2	328	--	--	--
AUG 25...	0.7	21.6	108	2.78	<0.2	5.31	129	290	0.43	21.2	314	<0.04	<0.06	<0.06
SEP 22...	0.7	21.1	91	3.22	<0.2	9.77	125	279	0.41	51.6	299	--	--	--

06320210 CLEAR CREEK ABOVE KUMOR DRAW, NEAR BUFFALO, WY—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Nitrite water, ftrd, mg/L as N (00613)	Ortho- phos- phate, water, ftrd, mg/L as P (00671)	E coli, modif. m-TEC, water, col/ 100 mL (90902)	E coli, m-TEC MF, water, col/ 100 mL (31633)	Fecal coli- form, M-FC 0.7u MF col/ 100 mL (31625)	Alum- inum, water, unfltrd recover- able, ug/L (01105)	Arsenic water, ftrd, ug/L (01000)	Barium, water, unfltrd recover- able, ug/L (01007)	Beryll- ium, water, unfltrd recover- able, ug/L (01012)	Iron, water, ftrd, ug/L (01046)	Mangan- ese, water, ftrd, ug/L (01056)	Selen- ium, water, unfltrd ug/L (01147)
OCT 07...	--	--	--	--	--	27	0.3	27	<0.06	36	29.8	E.3
NOV 19...	E.004	<0.02	--	E3	E7	12	E.2	33	<0.06	35	45.6	0.5
DEC 11...	--	--	--	--	--	32	E.2	33	<0.06	25	45.7	0.5
JAN 29...	--	--	--	--	--	32	0.3	34	<0.06	23	56.5	0.7
FEB 26...	E.005	0.08	--	E5	E5	31	0.3	39	<0.06	14	72.4	0.6
MAR 25...	--	--	--	--	--	49	0.5	38	<0.06	56	116	0.7
APR 25...	--	--	--	--	--	271	0.3	23	<0.06	52	27.1	<0.5
MAY 21...	<0.008	0.02	73	--	87	153	0.3	25	<0.06	41	30.4	<0.5
JUN 17...	--	--	--	--	--	258	0.4	26	<0.06	34	26.4	E.4
JUL 29...	--	--	--	--	--	25	0.5	26	<0.06	25	14.7	E.4
AUG 25...	<0.008	0.02	39	--	52	28	0.5	27	<0.06	62	28.2	0.6
SEP 22...	--	--	--	--	--	44	0.3	21	<0.06	38	28.9	E.3

E -- Estimated value

06320500 SOUTH PINEY CREEK AT WILLOW PARK, WY

LOCATION.--Lat 44° 27'59", long 107° 02'03", in NW $\frac{1}{4}$ sec.24, T.52 N., R.85 W., Johnson County, Hydrologic Unit 10090206, Bighorn National Forest, on left bank about 300 ft downstream from Willow Park Dam, 1.4 mi upstream from Kearny Creek, and 10 mi southwest of Story.

DRAINAGE AREA.--33.6 mi².

PERIOD OF RECORD.--September 1945 to September 1957 (no winter records prior to 1948), October 1959 to current year (no winter records since 1971).

REVISED RECORDS.--WSP 1309: 1949(M). WSP 1709: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 8,540 ft above NGVD of 1929, from topographic map. Prior to October 1, 1957, at site about 600 ft upstream at different datum. October 1, 1959 to September 30, 1965, at present site at datum 1.00 ft higher.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Some regulation by Cloud Peak Reservoir, capacity, 3,385 acre-ft, and Willow Park Reservoir, capacity, 4,457 acre-ft. Storage began in Willow Park Reservoir in April 1959. Cloud Peak Reservoir enlarged December 1958. Water released from storage in Cloud Peak Reservoir is diverted just downstream from station into Rock Creek basin. Result of discharge measurement, in cubic feet per second, made during period when station was not in operation, is given below:

Oct. 7 . . . 7.77

COOPERATION.--Station operated and record provided by the Wyoming State Engineer's Office; record reviewed by U.S. Geological Survey.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	e360	139	107	81
2	---	---	---	---	---	---	---	---	e380	137	105	77
3	---	---	---	---	---	---	---	---	e295	129	103	77
4	---	---	---	---	---	---	---	---	e198	119	102	77
5	---	---	---	---	---	---	---	---	62	103	99	76
6	---	---	---	---	---	---	---	---	61	96	91	75
7	---	---	---	---	---	---	---	---	47	93	95	73
8	---	---	---	---	---	---	---	---	31	91	100	72
9	---	---	---	---	---	---	---	---	31	91	95	72
10	---	---	---	---	---	---	---	---	31	90	84	71
11	---	---	---	---	---	---	---	---	32	85	79	74
12	---	---	---	---	---	---	---	---	32	82	79	82
13	---	---	---	---	---	---	---	---	32	80	76	82
14	---	---	---	---	---	---	---	---	33	75	75	82
15	---	---	---	---	---	---	---	---	33	72	76	81
16	---	---	---	---	---	---	---	---	35	69	89	81
17	---	---	---	---	---	---	---	---	75	74	107	80
18	---	---	---	---	---	---	---	---	111	82	104	75
19	---	---	---	---	---	---	---	---	127	85	100	68
20	---	---	---	---	---	---	---	---	144	90	95	67
21	---	---	---	---	---	---	---	---	134	91	98	66
22	---	---	---	---	---	---	---	---	119	90	99	65
23	---	---	---	---	---	---	---	---	105	90	96	65
24	---	---	---	---	---	---	---	---	103	96	93	64
25	---	---	---	---	---	---	---	---	91	103	89	63
26	---	---	---	---	---	---	---	---	84	101	87	63
27	---	---	---	---	---	---	---	---	88	100	88	62
28	---	---	---	---	---	---	---	---	107	98	89	53
29	---	---	---	---	---	---	---	---	127	96	93	e21
30	---	---	---	---	---	---	---	---	139	96	94	e7.3
31	---	---	---	---	---	---	---	---	---	102	91	---
TOTAL	---	---	---	---	---	---	---	---	3,247	2,945	2,878	2,052.3
MEAN	---	---	---	---	---	---	---	---	108	95.0	92.8	68.4
MAX	---	---	---	---	---	---	---	---	380	139	107	82
MIN	---	---	---	---	---	---	---	---	31	69	75	7.3
AC-FT	---	---	---	---	---	---	---	---	6,440	5,840	5,710	4,070

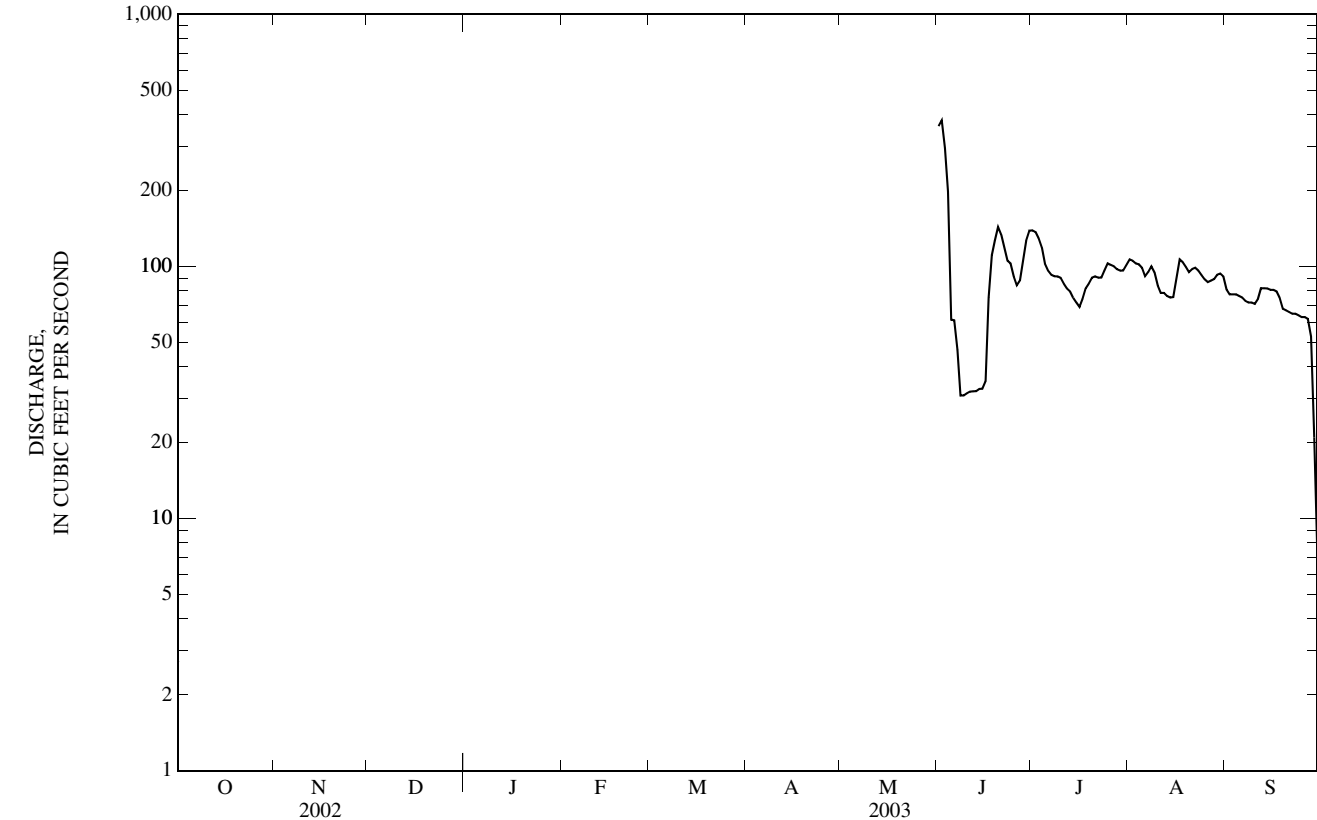
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1947 - 2003, BY WATER YEAR (WY)*

MEAN	15.0	9.77	8.20	6.93	6.21	6.29	10.0	49.5	159	113	86.5	50.1
MAX	26.8	16.8	14.2	12.4	11.7	10.6	27.0	153	332	281	130	118
(WY)	(1962)	(1960)	(1968)	(1968)	(1968)	(1968)	(1949)	(1948)	(1995)	(1975)	(1998)	(1998)
MIN	6.47	0.52	1.94	1.26	1.27	1.58	1.27	2.77	50.1	74.1	30.9	17.0
(WY)	(1967)	(1967)	(1964)	(1964)	(1964)	(1964)	(1960)	(1967)	(2001)	(1956)	(1954)	(1954)

06320500 SOUTH PINEY CREEK AT WILLOW PARK, WY—Continued

SUMMARY STATISTICS	FOR 2003 WATER YEAR*	WATER YEARS 1947 - 2003*
ANNUAL MEAN	--	42.37 ^a
HIGHEST ANNUAL MEAN	--	55.9 1963
LOWEST ANNUAL MEAN	--	27.5 1960
HIGHEST DAILY MEAN	380 ^c Jun 2	1,100 Jun 8, 1997
LOWEST DAILY MEAN	7.3 ^c Sep 30	0.13 ^b May 1, 1989
MAXIMUM PEAK FLOW	Unknown ^c	1,620 ^d Jun 15, 1963
MAXIMUM PEAK STAGE	Unknown ^c	5.68 Jun 15, 1963
ANNUAL RUNOFF (AC-FT)	--	30,700

* For period of operation.
a Unadjusted for regulation by reservoirs.
b Minimum daily, prior to construction of Willow Park Reservoir, 4.5 ft³/s, Mar. 1 to Apr. 5, 1955.
c Sometime during May 25-June 4, highest recorded on June 4 at discharge 249 ft³/s and gage height 3.33 ft.
d From rating curve extended above 360 ft³/s on basis of slope-area measurement of peak flow.
e Estimated.



06323000 PINEY CREEK AT KEARNY, WY

LOCATION.--Lat 44° 32'08", long 106° 49'18", in NE $\frac{1}{4}$ NE $\frac{1}{4}$ SW $\frac{1}{4}$ sec.26, T.53 N., R.83 W., Johnson County, Hydrologic Unit 10090206, on right bank at Kearny, 300 ft northeast of Historical Monument and 2.0 mi upstream from Little Piney Creek.

DRAINAGE AREA.--118 mi².

PERIOD OF RECORD.--September 1902 to June 1906, June to August 1910, May 1911 to July 1917, May 1919 to September 1923 (no winter records), October 1940 to September 1998, October 1998 to current year (no winter record). Monthly discharge only for some periods, published in WSP 1309.

REVISED RECORDS.--WSP 1176: 1944. WSP 1309: 1913(M). WSP 1509: 1906, 1920(M), 1941(M), 1942, 1943(M). WSP 1916: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 4,655.11 ft above NGVD of 1929. September 6, 1902 to June 30, 1906, nonrecording gage at site 50 ft upstream at different datum. May 14, 1911 to July 31, 1917, and May 1, 1919 to September 30, 1923, nonrecording gage at site 50 ft upstream at present datum.

REMARKS.--Records good except those for daily discharges greater than 200 ft³/s, which are fair. Some regulation by Cloud Peak Reservoir, capacity, 3,385 acre-ft, Willow Park Reservoir, capacity, 4,457 acre-ft, and Kearny Lake, capacity, 1,860 acre-ft. Diversion upstream from station from South Piney Creek into Rock Creek basin for irrigation. Diversions upstream from station for irrigation of about 240 acres, of which about 90 acres are downstream from station. Record includes flow in bypass channel (Spring Creek), 300 ft left of main channel. Result of discharge measurement, in cubic feet per second, made during period when station was not in operation, is given below:

Oct. 2 . . . 16.4

COOPERATION.--Station operated and record provided by the Wyoming State Engineer's Office; record reviewed by U.S. Geological Survey.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	62	154	708	128	11	11
2	---	---	---	---	---	---	73	144	722	129	9.9	11
3	---	---	---	---	---	---	71	145	641	134	8.5	14
4	---	---	---	---	---	---	59	143	547	186	8.1	13
5	---	---	---	---	---	---	52	139	372	182	8.2	12
6	---	---	---	---	---	---	49	129	318	158	6.7	11
7	---	---	---	---	---	---	49	124	296	123	4.8	8.9
8	---	---	---	---	---	---	47	135	261	96	5.3	11
9	---	---	---	---	---	---	52	124	246	75	4.5	13
10	---	---	---	---	---	---	64	124	229	73	3.9	33
11	---	---	---	---	---	---	79	118	233	69	5.2	27
12	---	---	---	---	---	---	91	122	214	64	3.2	27
13	---	---	---	---	---	---	99	130	207	61	3.6	23
14	---	---	---	---	---	---	110	146	190	43	3.0	21
15	---	---	---	---	---	---	127	162	180	17	2.3	17
16	---	---	---	---	---	---	137	175	168	13	3.3	15
17	---	---	---	---	---	---	121	217	183	28	10	18
18	---	---	---	---	---	---	122	230	190	28	15	19
19	---	---	---	---	---	---	131	204	190	28	11	17
20	---	---	---	---	---	---	118	190	199	30	9.2	13
21	---	---	---	---	---	---	120	187	182	29	9.6	12
22	---	---	---	---	---	---	134	211	162	30	13	13
23	---	---	---	---	---	---	156	267	136	29	10	16
24	---	---	---	---	---	---	165	353	164	27	9.2	16
25	---	---	---	---	---	---	176	395	151	24	9.2	19
26	---	---	---	---	---	---	194	459	139	23	8.1	18
27	---	---	---	---	---	---	185	459	131	23	8.5	18
28	---	---	---	---	---	---	166	485	126	19	10	19
29	---	---	---	---	---	---	150	610	133	16	11	23
30	---	---	---	---	---	---	165	560	129	14	13	15
31	---	---	---	---	---	---	---	526	---	13	14	---
TOTAL	---	---	---	---	---	---	3,324	7,567	7,747	1,912	252.3	503.9
MEAN	---	---	---	---	---	---	111	244	258	61.7	8.14	16.8
MAX	---	---	---	---	---	---	194	610	722	186	15	33
MIN	---	---	---	---	---	---	47	118	126	13	2.3	8.9
AC-FT	---	---	---	---	---	---	6,590	15,010	15,370	3,790	500	999

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1903 - 2003, BY WATER YEAR (WY)*

	MEAN	30.4	36.1	31.1	27.3	26.3	30.8	70.3	270	367	92.9	30.0	25.3
MAX	85.4	76.9	53.6	44.3	54.4	72.8	204	683	911	413	153	185	
(WY)	(1913)	(1999)	(1977)	(1997)	(1962)	(1972)	(1943)	(1944)	(1995)	(1975)	(1998)	(1923)	
MIN	8.84	13.0	13.4	12.3	10.7	16.7	15.8	43.3	13.4	13.0	7.98	3.47	
(WY)	(1965)	(1955)	(1966)	(1967)	(1960)	(1957)	(1981)	(1985)	(2001)	(1985)	(1980)	(1981)	

06323000 PINEY CREEK AT KEARNY, WY—Continued

SUMMARY STATISTICS

FOR 2003 WATER YEAR*

WATER YEARS 1903 - 2003*

ANNUAL MEAN
HIGHEST ANNUAL MEAN
LOWEST ANNUAL MEAN
HIGHEST DAILY MEAN
LOWEST DAILY MEAN

--
--
--
722 Jun 2
2.3 Aug 15

86.36
168 1944
27.8 1985
1,780 Jun 15, 1963
1.9 Oct 3, 1981,
Sep 14-18,
1985
3,410^a Jun 15, 1963
6.05 Jun 15, 1963
62,560

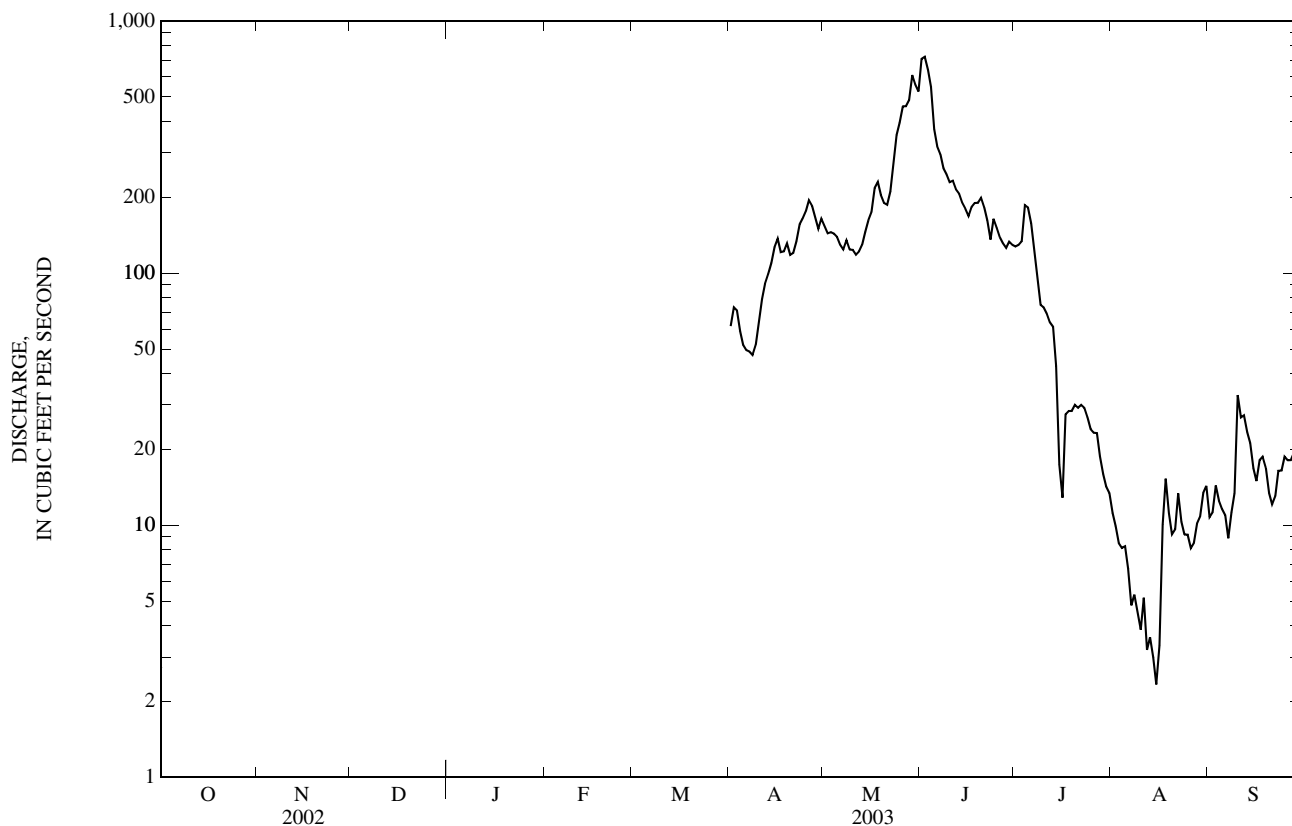
MAXIMUM PEAK FLOW
MAXIMUM PEAK STAGE
ANNUAL RUNOFF (AC-FT)

880 Jun 1
3.93 Jun 1
--

* For period of operation.

a From rating curve extended above 1,800 ft³/s.

e Estimated.



06324000 CLEAR CREEK NEAR ARVADA, WY

LOCATION.--Lat 44°51'18", long 106°04'56", in SE 1/4 sec.36, T.57 N., R.77 W., Sheridan County, Hydrologic Unit 10090206, on right bank 600 ft downstream from Cabin Creek, 1.8 mi upstream from mouth, and 16 mi north of Arvada.

DRAINAGE AREA.--1,110 mi², approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1915 to April 1919 and April 1928 to May 1929 (no winter records), September 1939 to September 1982, January 2003 to September 2003.

REVISED RECORDS.--WSP 1309: 1928(M).

GAGE.--Water-stage recorder. Elevation of gage is 3,506.51 ft above NGVD of 1929, from topographic map. July 21, 1915 to April 30, 1919, nonrecording gage at same site at different datum. April 15, 1928 to May 26, 1929, nonrecording gage at site 0.2 mi upstream at different datum. September 13, 1939 to January 14, 1951, nonrecording gage at present site and datum. U.S. Geological Survey data collection platform with satellite telemetry at station.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Some regulation by Cloud Peak Reservoir, capacity, 3,385 acre-ft, Willow Park Reservoir, capacity, 4,457 acre-ft, Kearny Lake, capacity, 1,860 acre-ft and Lake De Smet, capacity, 135,500 acre-ft. Diversions for irrigation of about 35,000 acres above station. Diversion to Kendrick canal about 4.5 mi upstream.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

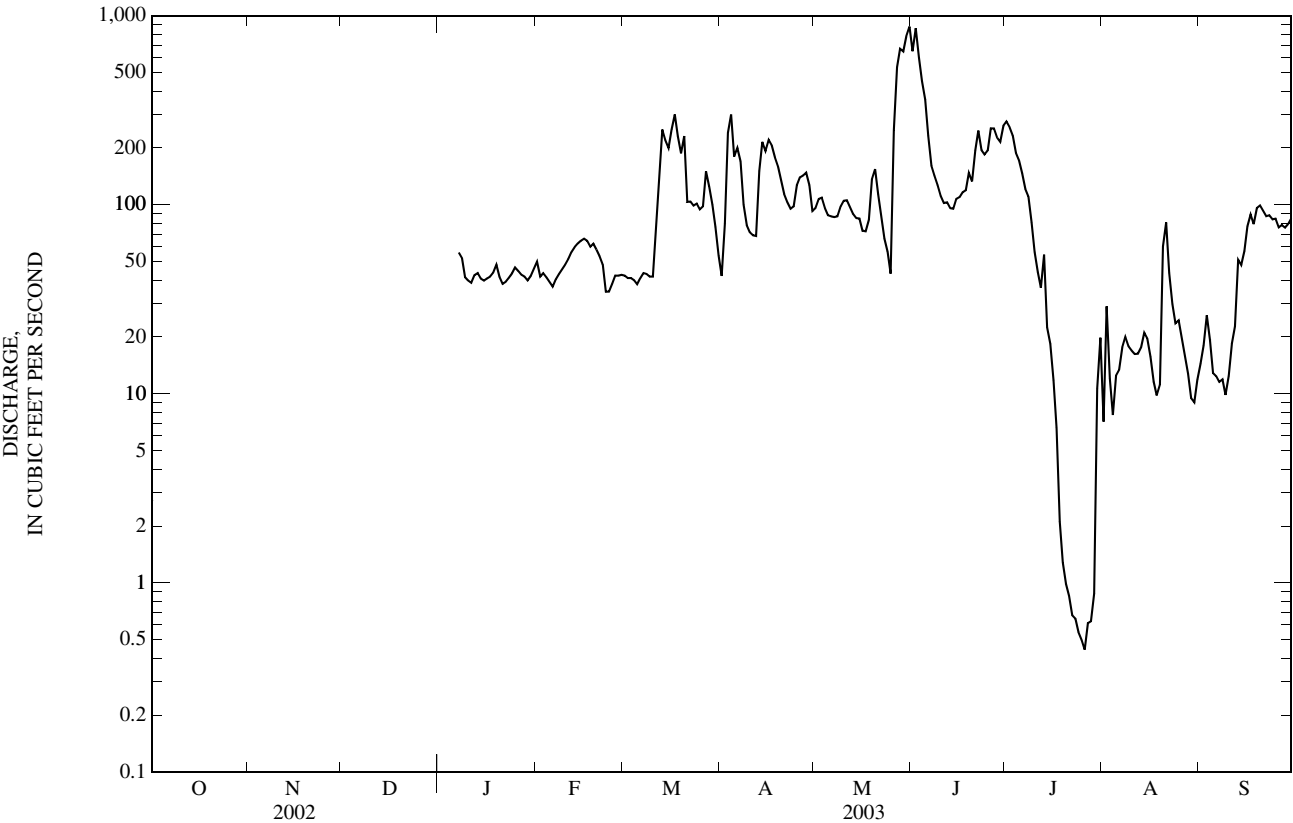
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	e50	e42	e42	96	648	276	7.1	14
2	---	---	---	---	e42	e41	e80	107	859	257	29	18
3	---	---	---	---	e43	e41	e240	109	e600	233	12	26
4	---	---	---	---	e41	e40	e300	96	e450	189	7.7	19
5	---	---	---	---	e39	e38	e180	88	e360	172	13	13
6	---	---	---	---	e37	e41	e200	87	232	147	13	12
7	---	---	---	e56	e40	e44	e170	86	161	121	18	12
8	---	---	---	e52	e43	e43	e100	87	143	111	20	12
9	---	---	---	e41	e46	e42	e78	98	127	81	18	9.9
10	---	---	---	e40	e48	e42	72	105	112	56	17	12
11	---	---	---	e39	e52	e80	69	106	102	44	16	18
12	---	---	---	e42	e56	e150	68	97	103	e36	16	23
13	---	---	---	e44	e60	e250	151	89	96	e54	18	51
14	---	---	---	e41	e62	e220	215	85	95	e22	21	48
15	---	---	---	e40	e64	e200	192	85	108	e18	20	57
16	---	---	---	e41	e66	e250	220	73	110	e12	16	77
17	---	---	---	e42	e64	e300	206	72	116	6.6	12	89
18	---	---	---	e44	e60	230	178	83	120	2.1	9.8	79
19	---	---	---	e48	e62	187	160	136	148	1.3	11	96
20	---	---	---	e42	e58	231	135	154	133	0.99	60	99
21	---	---	---	e38	e54	104	114	114	194	0.85	81	93
22	---	---	---	e39	e48	104	103	86	247	0.67	44	87
23	---	---	---	e41	e35	99	95	66	194	0.65	30	88
24	---	---	---	e43	e35	101	98	56	185	0.55	24	84
25	---	---	---	e47	e38	95	127	43	194	0.50	25	85
26	---	---	---	e45	e42	e98	140	247	253	0.44	20	76
27	---	---	---	e43	e42	e150	143	533	253	0.61	16	78
28	---	---	---	e42	e43	e125	148	669	226	0.63	13	76
29	---	---	---	e40	---	e100	127	647	215	0.88	9.5	79
30	---	---	---	e42	---	e76	93	778	262	11	9.0	85
31	---	---	---	e46	---	e54	---	876	---	20	12	---
TOTAL	---	---	---	---	1,370	3,618	4,244	6,054	7,046	1,876.77	638.1	1,615.9
MEAN	---	---	---	---	48.9	117	141	195	235	60.5	20.6	53.9
MAX	---	---	---	---	66	300	300	876	859	276	81	99
MIN	---	---	---	---	35	38	42	43	95	0.44	7.1	9.9
AC-FT	---	---	---	---	2,720	7,180	8,420	12,010	13,980	3,720	1,270	3,210

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1915 - 2003, BY WATER YEAR (WY)*

MEAN	96.2	105	86.8	71.4	81.7	157	177	434	689	188	63.8	80.0
MAX	246	286	296	292	232	450	436	1,427	2,229	863	256	274
(WY)	(1981)	(1981)	(1981)	(1981)	(1962)	(1943)	(1965)	(1978)	(1944)	(1928)	(1968)	(1915)
MIN	17.5	31.6	25.0	22.8	25.0	37.2	20.4	1.79	9.20	4.79	0.98	2.04
(WY)	(1956)	(1917)	(1917)	(1980)	(1917)	(1982)	(1961)	(1960)	(1954)	(1960)	(1966)	(1955)

SUMMARY STATISTICS	FOR 2003 WATER YEAR*	WATER YEARS 1915-2003*
ANNUAL MEAN	--	182
HIGHEST ANNUAL MEAN	--	408 1944
LOWEST ANNUAL MEAN	--	47.7 1961
HIGHEST DAILY MEAN	876 May 31	4,880 Jun17, 1963
LOWEST DAILY MEAN	0.44 Jul 26	0.00 Many days several years
ANNUAL SEVEN-DAY MINIMUM	--	0.00 several years
MAXIMUM PEAK FLOW	1,110 ^a May 31	9,600 ^b Aug 5, 1954
MAXIMUM PEAK STAGE	4.00 ^c Mar 17	10.45 Aug 5, 1954
ANNUAL RUNOFF (AC-FT)	--	131,600
10 PERCENT EXCEEDS	--	380
50 PERCENT EXCEEDS	--	86
90 PERCENT EXCEEDS	--	21

* For period of operation.
a Gage height, 3.96 ft.
b From rating curve extended above 2,500 ft³/s on basis of slope-area measurement of peak flow.
c Backwater from ice.
e Estimated.



06324000 CLEAR CREEK NEAR ARVADA, WY -- Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1949-54, 1967-92, October 2000 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: April 2003 to September 2003 (seasonal).

WATER TEMPERATURE: April 2003 to September 2003 (seasonal).

INSTRUMENTATION.--Water quality monitor for specific conductance and water temperature.

REMARKS.--Specific conductance records excellent April 10-23, May 8-27, June 7-23, July 2-12, July 31 to August 4, 13-20, August 27 to September 1, September 10-21, 24-30; good May 28 to June 5, June 24 to July 1, July 13-17, 24-30, August 5-12, 21-26, September 2-9, 22, 23; and fair July 6. Water-temperature records represent water temperature at sensor within 0.2° C.

EXTREMES FOR PERIOD OF RECORD.--

SPECIFIC CONDUCTANCE: Maximum recorded, 1,820 microsiemens/cm, July 28, 30, 2003; minimum recorded, 376 microsiemens/cm, May 31, 2003.

WATER TEMPERATURE: Maximum recorded, 33.8° C, July 19, 2003; minimum recorded, 7.6° C, May 11, 2003.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum recorded, 1,820 microsiemens/cm, July 28, 30; minimum recorded, 376 microsiemens/cm, May 31.

WATER TEMPERATURE: Maximum recorded, 33.8° C, July 19; minimum recorded, 7.6° C, May 11.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

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 unfltrd uS/cm 25 deg C (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, unfltrd mg/L as CaCO3 (00900)	Calcium, water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)
OCT													
08...	1715	62	674	10.3	111	8.2	1,090	15.0	13.0	490	114	50.7	4.41
24...	1245	64	672	11.7	103	8.3	1,060	5.5	4.5	460	108	45.6	3.66
NOV													
05...	0840	34	672	12.7	99	8.3	1,340	0.5	0.0	600	141	60.6	4.41
18...	1415	61	673	12.9	106	8.5	1,140	12.0	2.0	510	119	50.8	3.89
DEC													
05...	1400	68	676	14.2	110	8.4	1,260	4.0	0.0	560	129	56.9	4.11
18...	1615	66	666	13.5	106	8.3	1,120	-0.5	0.0	510	119	50.8	3.50
31...	0855	54	664	13.7	108	8.1	1,370	-6.0	0.0	620	144	63.6	4.21
JAN													
17...	1035	42	680	12.7	98	8.2	1,350	1.0	0.0	650	153	65.5	4.40
28...	1440	42	674	11.8	92	7.9	1,290	10.5	0.0	590	139	58.0	4.09
FEB													
13...	1115	60	668	12.2	96	8.1	1,250	6.0	0.0	580	137	58.8	5.27
26...	1445	42	667	12.6	99	8.0	1,440	5.0	0.0	660	158	65.3	5.09
MAR													
10...	1710	42	667	12.2	96	7.8	1,340	10.0	0.0	600	141	60.8	4.27
24...	1820	100	670	10.8	105	8.4	1,100	4.0	8.5	470	109	48.0	6.45
APR													
09...	1230	74	671	9.3	97	8.4	1,200	22.0	11.5	520	117	54.5	5.27
24...	1940	101	668	8.5	98	8.4	755	13.0	15.5	310	72.7	31.6	3.61
MAY													
07...	1135	88	665	9.6	101	8.6	913	17.5	11.5	380	86.9	40.6	3.57
22...	0850	92	675	8.3	94	8.4	699	13.0	15.5	300	70.0	30.2	3.17
JUN													
06...	1645	193	--	--	--	8.1	417	10.5	14.0	170	41.6	15.2	2.21
16...	2015	114	677	7.1	95	8.4	826	22.0	23.5	350	83.6	35.2	3.84
JUL													
01...	1515	261	669	8.0	112	8.3	557	36.5	25.5	220	53.9	21.6	2.39
17...	0845	11	674	6.8	91	8.0	1,170	29.0	23.5	480	101	55.3	4.81
30...	1305	10	675	8.1	115	8.0	1,800	33.0	26.5	800	178	86.5	7.01
AUG													
12...	1615	17	672	8.6	130	8.3	1,330	36.5	30.0	580	119	67.9	8.08
26...	1055	20	674	6.9	90	8.2	1,180	30.5	22.0	520	114	57.3	6.46
SEP													
09...	1545	11	667	8.8	119	8.2	1,410	26.0	23.5	590	128	65.5	6.84
23...	0840	86	--	--	--	8.3	886	12.0	12.0	400	93.7	40.0	3.90

06324000 CLEAR CREEK NEAR ARVADA, WY -- Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Sodium adsorp- tion ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Alka- linity, wat flt fxd end lab, mg/L as CaCO3 (29801)	Chlor- ide, water, fltrd, mg/L (00940)	Fluor- ide, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of consti- tuents mg/L (70301)	Residue water, fltrd, tons/ acre-ft (70303)	Residue water, fltrd, tons/d (70302)	Residue on evap. at 180degC wat flt mg/L (70300)	Alum- inum, water, unfltrd recover- able, ug/L (01105)	Arsenic water, fltrd, ug/L (01000)
OCT													
08...	1	62.0	E162	3.35	0.23	6.00	394	--	--	--	806	210	0.8
24...	1	56.5	E127	2.12	0.18	4.84	381	--	--	--	781	94	0.5
NOV													
05...	1	72.9	E124	3.48	0.22	9.40	495	--	--	--	1,020	113	0.6
18...	1	61.6	E195	3.59	0.22	4.95	414	--	--	--	848	60	0.5
DEC													
05...	1	69.7	E230	4.12	0.20	8.09	436	--	--	--	916	114	0.6
18...	1	61.0	E232	3.09	0.19	7.92	393	--	--	--	865	36	0.4
31...	1	76.8	268	3.96	0.24	9.50	482	945	1.38	148	1,010	E40	0.5
JAN													
17...	1	74.1	261	4.05	0.22	8.58	495	961	1.43	119	1,050	476	0.7
28...	1	75.2	259	3.93	0.22	9.17	457	901	1.31	109	965	314	0.5
FEB													
13...	1	69.3	257	5.39	0.21	9.90	473	913	1.32	157	973	226	0.5
26...	1	83.6	E321	6.00	0.20	8.38	564	--	--	--	1,160	309	0.6
MAR													
10...	1	76.2	255	5.03	0.20	8.78	465	915	1.37	115	1,010	227	0.5
24...	1	59.0	203	4.88	0.17	6.49	397	753	1.11	220	816	189	0.9
APR													
09...	1	67.5	206	3.33	0.22	1.10	447	819	1.22	179	899	268	0.6
24...	1	40.3	157	1.88	<0.17	2.35	247	494	0.74	148	542	417	0.8
MAY													
07...	1	54.3	182	3.68	<0.17	2.47	324	625	0.93	163	685	190	0.6
22...	0.9	37.4	135	3.16	<0.2	6.07	220	451	0.67	122	493	260	0.8
JUN													
06...	0.6	18.6	94	1.54	<0.2	8.89	112	256	0.38	147	282	483	0.6
16...	1	44.3	164	2.66	0.2	5.47	268	542	0.80	182	591	191	1.0
JUL													
01...	0.7	25.5	119	2.31	<0.2	7.16	160	345	0.51	265	376	318	0.8
17...	1	74.2	162	2.96	<0.2	3.92	464	803	1.20	26.2	881	119	0.9
30...	2	126	268	5.32	0.2	11.1	744	1,320	1.96	38.8	1,440	142	1.0
AUG													
12...	2	90.3	159	3.18	0.2	6.84	571	961	1.42	48.0	1,040	240	1.1
26...	1	68.6	172	3.33	0.2	7.38	478	838	1.22	48.4	896	135	1.1
SEP													
09...	2	85.7	180	3.48	0.2	7.06	601	1,010	1.56	34.1	1,150	85	0.9
23...	1	47.6	179	2.85	0.2	5.16	305	606	0.87	148	640	93	0.6

06324000 CLEAR CREEK NEAR ARVADA, WY -- Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Barium, water, unfltrd recover- able, ug/L (01007)	Beryll- ium, water, unfltrd recover- able, ug/L (01012)	Iron, water, fltrd, ug/L (01046)	Mangan- ese, water, fltrd, ug/L (01056)	Selen- ium, water, unfltrd ug/L (01147)
OCT					
08...	31	<0.06	E7	19.1	0.6
24...	31	<0.06	38	17.6	0.7
NOV					
05...	37	<0.06	18	22.2	0.9
18...	31	<0.06	27	17.1	0.8
DEC					
05...	34	<0.06	E7	22.0	0.7
18...	31	<0.06	17	16.4	0.7
31...	41	<0.06	21	24.1	1.0
JAN					
17...	52	E.06	18	55.8	1.0
28...	44	E.04	22	35.1	1.0
FEB					
13...	44	<0.06	36	30.2	0.7
26...	51	E.05	21	41.5	1.1
MAR					
10...	45	<0.06	27	42.2	0.8
24...	41	<0.06	48	69.1	0.8
APR					
09...	42	<0.06	42	38.7	0.6
24...	37	E.05	41	31.7	E.5
MAY					
07...	36	<0.06	38	29.4	E.5
22...	32	E.04	19	20.5	0.7
JUN					
06...	35	0.06	43	23.9	0.5
16...	51	<0.06	15	8.5	0.6
JUL					
01...	34	E.04	11	8.4	E.4
17...	68	<0.06	9	34.7	0.9
30...	77	<0.06	E6	67.4	1.3
AUG					
12...	60	<0.06	E8	22.4	1.0
26...	44	<0.06	11	19.1	1.0
SEP					
09...	43	<0.06	11	25.4	1.0
23...	28	<0.06	19	8.6	0.5

E -- Estimated value

YELLOWSTONE RIVER BASIN

06324000 CLEAR CREEK NEAR ARVADA, WY -- Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	---	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	943	933	938
9	---	---	---	---	---	---	---	---	---	933	882	912
10	---	---	---	---	---	---	1,150	1,070	1,110	882	828	855
11	---	---	---	---	---	---	1,070	1,040	1,060	875	828	853
12	---	---	---	---	---	---	1,050	1,030	1,040	900	875	890
13	---	---	---	---	---	---	1,060	1,010	1,050	916	895	908
14	---	---	---	---	---	---	1,010	784	930	963	911	944
15	---	---	---	---	---	---	784	573	665	955	938	951
16	---	---	---	---	---	---	573	534	550	944	935	940
17	---	---	---	---	---	---	534	524	531	956	932	942
18	---	---	---	---	---	---	524	504	520	960	937	953
19	---	---	---	---	---	---	555	504	525	939	851	909
20	---	---	---	---	---	---	586	555	566	851	743	802
21	---	---	---	---	---	---	637	586	616	743	693	717
22	---	---	---	---	---	---	688	637	661	704	691	697
23	---	---	---	---	---	---	729	688	713	712	692	701
24	---	---	---	---	---	---	---	---	---	760	712	740
25	---	---	---	---	---	---	---	---	---	811	759	787
26	---	---	---	---	---	---	---	---	---	857	630	787
27	---	---	---	---	---	---	---	---	---	630	422	480
28	---	---	---	---	---	---	---	---	---	422	390	399
29	---	---	---	---	---	---	---	---	---	404	394	400
30	---	---	---	---	---	---	---	---	---	401	384	391
31	---	---	---	---	---	---	---	---	---	407	376	387
MONTH	---	---	---	---	---	---	1,150	504	753	963	376	762
	JUNE			JULY			AUGUST			SEPTEMBER		
1	424	387	412	573	537	554	1,330	1,290	1,300	1,400	1,310	1,350
2	414	378	396	542	528	537	1,380	1,200	1,290	1,540	1,400	1,490
3	436	409	422	545	526	535	1,230	1,200	1,210	1,550	1,520	1,540
4	439	426	432	558	542	550	1,270	1,230	1,250	1,560	1,520	1,540
5	427	410	416	578	557	567	1,310	1,250	1,280	1,560	1,520	1,540
6	454	411	424	598	578	587	1,260	1,110	1,180	1,540	1,440	1,490
7	583	454	515	622	598	609	1,200	1,100	1,150	1,450	1,440	1,440
8	673	583	633	650	622	639	1,220	1,180	1,200	1,460	1,440	1,450
9	730	673	704	695	649	671	1,270	1,210	1,240	1,470	1,410	1,450
10	776	730	752	753	695	718	1,270	1,250	1,260	1,450	1,370	1,400
11	830	776	802	811	753	779	1,260	1,240	1,250	1,420	1,370	1,390
12	865	830	851	881	811	847	1,290	1,260	1,270	1,450	1,400	1,430
13	867	863	865	980	881	925	1,290	1,270	1,280	1,580	1,450	1,530
14	882	866	871	1,010	980	995	1,320	1,280	1,300	1,580	1,480	1,520
15	898	875	889	1,020	994	1,000	1,350	1,320	1,340	1,480	1,240	1,370
16	---	---	---	1,080	1,010	1,040	1,390	1,350	1,380	1,240	1,200	1,220
17	---	---	---	1,260	1,080	1,180	1,390	1,370	1,380	1,200	1,040	1,140
18	---	---	---	1,340	1,250	1,300	1,370	1,350	1,360	1,040	984	995
19	772	714	751	1,430	1,340	1,400	1,360	1,340	1,350	997	979	987
20	714	683	689	1,530	1,420	1,460	1,460	1,340	1,380	989	935	971
21	707	677	688	1,550	1,530	1,540	1,680	1,330	1,540	939	920	933
22	704	612	651	1,630	1,550	1,600	1,330	1,100	1,170	930	917	924
23	651	597	620	1,670	1,620	1,640	1,110	1,090	1,100	942	917	930
24	661	651	658	1,720	1,640	1,680	1,130	1,100	1,120	945	918	933
25	674	649	657	1,750	1,690	1,720	1,140	1,110	1,120	941	923	932
26	674	613	647	1,760	1,720	1,740	1,220	1,140	1,180	941	922	931
27	613	588	597	1,790	1,740	1,760	1,270	1,220	1,250	965	933	949
28	602	588	595	1,820	1,780	1,800	1,280	1,270	1,280	960	945	950
29	607	596	602	1,790	1,630	1,740	1,300	1,270	1,290	949	939	945
30	597	573	590	1,820	1,330	1,600	1,330	1,300	1,320	945	934	940
31	---	---	---	1,440	1,290	1,320	1,320	1,300	1,320	---	---	---
MONTH	898	378	634	1,820	526	1,130	1,680	1,090	1,270	1,580	917	1,220
YEAR	1,820	376	1,000									

TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY				MARCH			APRIL			MAY		
1	---	---	---	---	---	---	---	---	---	11.1	7.8	9.2
2	---	---	---	---	---	---	---	---	---	16.5	8.9	12.3
3	---	---	---	---	---	---	---	---	---	16.8	11.8	14.2
4	---	---	---	---	---	---	---	---	---	14.5	11.3	12.9
5	---	---	---	---	---	---	---	---	---	12.0	9.9	10.8
6	---	---	---	---	---	---	---	---	---	13.2	8.5	10.9
7	---	---	---	---	---	---	---	---	---	15.3	10.2	12.4
8	---	---	---	---	---	---	---	---	---	13.1	9.6	11.1
9	---	---	---	---	---	---	---	---	---	11.3	8.6	9.9
10	---	---	---	---	---	---	17.3	11.4	14.0	10.6	8.5	9.5
11	---	---	---	---	---	---	18.9	12.3	15.3	14.6	7.6	10.9
12	---	---	---	---	---	---	18.7	13.4	15.9	18.8	11.3	14.9
13	---	---	---	---	---	---	15.2	13.2	14.2	19.2	14.5	16.7
14	---	---	---	---	---	---	16.5	11.5	14.0	21.1	14.2	17.5
15	---	---	---	---	---	---	17.2	13.0	15.0	22.9	16.3	19.3
16	---	---	---	---	---	---	15.5	12.0	13.9	19.6	16.0	17.6
17	---	---	---	---	---	---	14.8	11.2	13.2	18.4	14.3	16.1
18	---	---	---	---	---	---	14.2	11.7	13.0	16.3	11.5	14.3
19	---	---	---	---	---	---	12.6	10.7	11.6	13.3	9.2	11.3
20	---	---	---	---	---	---	15.7	9.1	12.3	16.1	9.5	12.8
21	---	---	---	---	---	---	17.4	11.5	14.4	17.6	12.8	15.1
22	---	---	---	---	---	---	18.2	12.8	15.4	22.1	15.4	18.2
23	---	---	---	---	---	---	18.4	14.1	16.2	23.6	18.2	20.6
24	---	---	---	---	---	---	16.2	14.3	15.2	25.4	17.6	21.2
25	---	---	---	---	---	---	17.8	12.7	15.0	27.0	18.8	22.7
26	---	---	---	---	---	---	16.9	13.8	15.3	25.4	21.6	23.7
27	---	---	---	---	---	---	15.8	11.6	13.9	24.0	21.5	22.4
28	---	---	---	---	---	---	14.1	10.3	11.9	21.5	18.7	20.2
29	---	---	---	---	---	---	10.3	9.6	9.9	22.0	18.5	20.2
30	---	---	---	---	---	---	9.8	8.5	9.4	21.0	18.5	19.8
31	---	---	---	---	---	---	---	---	---	19.4	17.3	18.4
MONTH	---	---	---	---	---	---	18.9	8.5	13.8	27.0	7.6	15.7
JUNE				JULY			AUGUST			SEPTEMBER		
1	19.7	16.9	18.3	27.1	21.5	24.3	28.7	19.7	23.8	24.3	16.4	20.2
2	18.5	15.6	16.7	27.5	22.8	25.2	28.2	18.9	23.8	22.7	17.1	19.8
3	16.3	14.1	15.2	27.7	22.9	25.3	30.8	22.4	26.0	23.0	16.1	19.6
4	17.6	14.5	15.9	26.6	22.1	24.5	27.5	22.0	24.6	23.5	16.9	20.2
5	16.5	14.5	15.5	26.9	21.7	24.4	28.9	20.9	24.6	24.1	17.3	20.7
6	15.8	13.9	14.8	26.1	21.5	23.8	29.0	21.9	25.2	24.6	18.9	21.5
7	14.5	12.2	13.3	25.7	20.8	23.2	30.0	22.1	25.9	25.8	19.4	22.2
8	19.5	12.1	15.6	27.3	22.2	24.3	29.5	23.4	26.3	24.4	19.1	21.5
9	21.5	17.3	19.0	26.7	21.2	23.8	29.0	22.6	25.6	23.3	16.8	19.7
10	22.6	16.8	19.6	27.7	20.2	23.8	30.0	21.7	25.6	19.0	15.1	16.8
11	24.1	18.7	21.1	27.9	20.4	24.2	30.5	23.3	26.4	18.9	13.9	16.3
12	24.7	18.7	21.5	29.9	21.0	25.4	30.1	23.5	26.4	17.3	13.3	15.3
13	23.5	19.8	21.6	30.3	22.6	26.4	31.1	23.7	27.2	15.2	11.4	13.2
14	25.3	18.8	21.9	29.6	21.3	25.1	30.3	24.4	27.4	17.3	10.6	13.8
15	26.5	21.2	23.7	31.2	21.5	26.0	29.9	24.1	26.8	18.3	12.0	15.2
16	25.7	21.7	23.6	30.6	22.5	26.4	29.8	22.0	25.8	16.3	14.6	15.4
17	26.6	20.3	23.2	30.1	23.0	26.4	25.6	21.2	23.1	14.9	10.9	13.0
18	26.4	21.3	23.6	32.3	22.4	26.6	25.1	18.9	22.0	14.6	9.1	11.6
19	25.8	20.4	23.1	33.8	21.3	26.9	26.8	19.0	22.9	15.2	10.5	12.7
20	24.5	21.3	22.8	32.5	21.3	26.8	25.1	20.4	22.7	15.2	11.7	13.3
21	22.6	20.0	21.3	28.3	20.4	24.6	25.2	19.8	22.4	15.1	10.8	12.7
22	22.7	19.1	21.0	31.7	18.3	24.3	28.4	21.0	24.4	15.8	10.4	12.9
23	20.9	16.4	18.2	32.2	20.3	25.9	28.5	22.0	25.2	16.9	12.0	14.2
24	16.4	13.0	14.4	32.9	20.6	26.6	27.8	21.5	24.8	16.1	12.8	14.2
25	17.2	12.4	14.6	30.9	22.2	26.2	26.7	20.9	23.9	16.4	11.5	13.8
26	19.7	14.7	17.2	29.0	21.3	24.5	26.1	20.2	23.1	14.2	11.9	13.5
27	21.9	17.0	19.5	30.2	19.2	24.5	24.2	20.4	22.2	14.1	9.7	11.9
28	21.1	18.5	19.8	31.0	20.4	25.7	24.5	18.1	21.0	16.6	12.3	14.0
29	24.2	18.2	21.1	28.5	20.9	24.6	20.8	17.9	19.3	15.2	12.5	13.6
30	26.0	20.7	23.3	28.1	18.1	23.4	18.3	16.0	16.6	15.6	11.2	13.1
31	---	---	---	26.0	21.2	23.6	23.9	15.5	19.1	---	---	---
MONTH	26.6	12.1	19.3	33.8	18.1	25.1	31.1	15.5	24.0	25.8	9.1	15.9
YEAR	33.8	7.6	19.3									

06324500 POWDER RIVER AT MOORHEAD, MT

LOCATION.--Lat 45° 03'25", long 105° 52'39", in NE $\frac{1}{4}$ NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec.18, T.9 S., R.48 E., Powder River County, Hydrologic Unit 10090207, on left bank 25 ft downstream from bridge on Powder River, 7.3 mi upstream from Buffalo Creek, and at river mile 183.7.

DRAINAGE AREA.--8,088 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1929 to September 1972, October 1974 to current year. Monthly discharge only for some periods, published in WSP 1309.

REVISED RECORDS.--WSP 1309: 1932(M). WSP 1729: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 3,334.6 ft above NGVD of 1929 (levels by U.S. Army Corps of Engineers). Prior to August 28, 1931, nonrecording gage at site 0.3 mi upstream at different datum. August 28, 1931 to March 21, 1956, water-stage recorder at site 1.2 mi upstream at different datum. March 22 to July 24, 1956, nonrecording gage at site 0.3 mi downstream at different datum. July 25 to September 12, 1956, nonrecording gage at present site and datum. U.S. Geological Survey data collection platform with satellite telemetry at station.

REMARKS.--Records good except those for period of estimated daily discharges, which are poor. Some regulation by three reservoirs in Wyoming with combined usable capacity of 36,800 acre-ft. Diversions for irrigation of about 66,300 acres upstream from station. Station operated and record provided by the Montana District.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	102	e150	e180	e140	e300	e290	357	523	1,230	677	25	15
2	106	e170	e160	e150	e290	e310	314	582	1,310	585	19	15
3	112	e180	e140	e160	e240	e300	695	1,210	1,350	543	27	17
4	120	e200	e130	e160	e210	e300	1,060	1,030	1,110	438	24	24
5	142	e200	e130	e170	e210	e310	911	735	937	341	18	20
6	147	e190	e130	e170	e200	e300	737	528	756	281	20	16
7	144	e200	e130	e160	e180	e300	611	411	594	229	18	15
8	162	e190	e130	e140	e160	e290	538	386	503	206	22	15
9	165	e200	e130	e120	e160	e290	457	435	434	217	23	17
10	162	e190	e130	e100	e180	e300	405	413	368	286	25	23
11	160	e200	e130	e100	e200	e350	350	397	380	202	20	24
12	164	201	e120	e120	e210	e400	340	356	368	136	20	29
13	162	197	e140	e120	e250	e600	344	324	357	101	20	36
14	161	195	e150	e130	e250	e1,000	562	334	318	77	19	58
15	175	194	e150	e130	e240	e1,500	688	399	286	69	20	57
16	171	189	e140	e140	e250	e2,000	908	323	267	62	18	62
17	174	184	e150	e160	e250	1,120	993	305	261	56	15	82
18	179	186	e150	e170	e240	883	952	309	276	50	14	83
19	177	187	e140	e160	e200	723	922	362	862	40	13	90
20	172	189	e120	e140	e170	595	780	426	1,180	33	11	108
21	167	187	e100	e100	e140	530	570	418	879	26	42	107
22	167	187	e90	e90	e100	532	455	434	880	22	48	102
23	190	184	e80	e100	e90	533	455	395	719	19	31	98
24	173	181	e80	e120	e70	475	411	344	639	15	59	124
25	172	e180	e90	e140	e100	471	445	295	644	14	69	132
26	166	e180	e120	e160	e200	730	453	339	633	11	53	128
27	164	e200	e140	e180	e250	737	390	926	537	29	39	116
28	173	e210	e150	e210	e300	618	441	1,060	583	13	28	109
29	173	e210	e140	e240	---	530	432	1,120	594	11	22	98
30	182	e200	e140	e290	---	481	367	1,250	733	14	18	99
31	e170	---	e140	e300	---	416	---	1,410	---	13	16	---
TOTAL	4,954	5,711	4,050	4,770	5,640	18,214	17,343	17,779	19,988	4,816	816	1,919
MEAN	160	190	131	154	201	588	578	574	666	155	26.3	64.0
MAX	190	210	180	300	300	2,000	1,060	1,410	1,350	677	69	132
MIN	102	150	80	90	70	290	314	295	261	11	11	15
AC-FT	9,830	11,330	8,030	9,460	11,190	36,130	34,400	35,260	39,650	9,550	1,620	3,810

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1930 - 2003, BY WATER YEAR (WY)*

MEAN	225	224	159	154	287	612	509	1,050	1,356	462	173	144
MAX	897	660	326	445	1,200	2,290	1,314	5,553	4,131	2,500	1,219	686
(WY)	(1995)	(1999)	(1981)	(1981)	(1930)	(1947)	(1965)	(1978)	(1967)	(1937)	(1941)	(1982)
MIN	16.1	80.0	56.2	27.2	20.9	185	117	82.6	39.5	33.9	0.60	1.28
(WY)	(1955)	(1936)	(1933)	(1950)	(1933)	(2002)	(1961)	(1934)	(1954)	(1961)	(1966)	(1960)

06324500 POWDER RIVER AT MOORHEAD, MT—Continued

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

WATER YEARS 1930 - 2003*

ANNUAL TOTAL	65,085.3	106,000	--	
ANNUAL MEAN	178	290	446	
HIGHEST ANNUAL MEAN	--	--	1,091	1978
LOWEST ANNUAL MEAN	--	--	109	1961
HIGHEST DAILY MEAN	2,580 Aug 30	2,000 ^c Mar 16	27,500	May 20, 1978
LOWEST DAILY MEAN	1.6 Aug 17	11 Jul 26-29, Aug 20	0.00	Jul 15, 1931
ANNUAL SEVEN-DAY MINIMUM	3.2 Aug 14	15 Jul 25	0.00	Sep 4, 1960
MAXIMUM PEAK FLOW	--	Unknown Mar 16	33,000 ^a	May 20, 1978
MAXIMUM PEAK STAGE	--	8.40 ^b Mar 16	17.70 ^c	Mar 21, 1956
ANNUAL RUNOFF (AC-FT)	129,100	210,300	323,300	
10 PERCENT EXCEEDS	300	705	1,040	
50 PERCENT EXCEEDS	165	180	220	
90 PERCENT EXCEEDS	13	23	45	

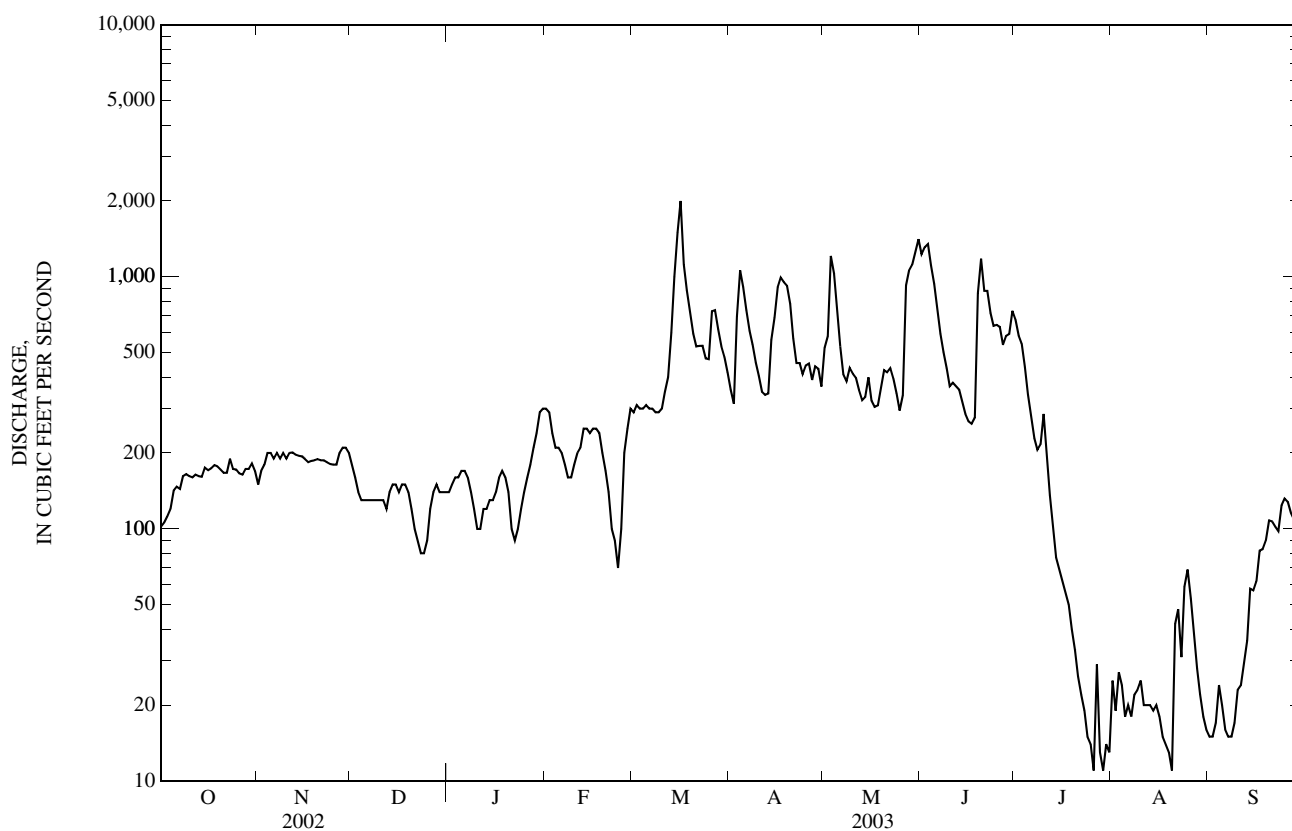
* For period of operation.

a Gage height, 15.24 ft, site and datum then in use.

b Backwater from ice.

c Ice jam, site and datum then in use.

e Estimated.



06324500 POWDER RIVER AT MOORHEAD, WY—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1951-53, 1956-67, 1969-72, 1975-77, 2001 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: July 1986 to November 1989, May 2001 to current year.

WATER TEMPERATURE: February 1951 to September 1953, October 1955 to September 1957, October 1974 to September 1977, March 1978 to September 1981 (seasonal records only), May 2001 to November 1989, May 2001 to current year.

SUSPENDED-SEDIMENT DISCHARGE: October 1974 to September 1977, March 1978 to September 1996 (seasonal records only).

INSTRUMENTATION.--Specific conductance probe installed May 29, 2001.

REMARKS.--Specific conductance records rated fair. Seasonal data collected during open-water conditions; no data for October 31 to November 13 due to ice conditions and probe was removed from November 26 to March 17 for the winter season. Missing data for March 19-23, March 31, April 1, April 28 to May 1, and June 28 to July 1 due to erroneous values. Unpublished records of instantaneous water temperatures and specific conductance are available in files of the Montana District office.

EXTREMES FOR PERIOD OF RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 5,920 microsiemens/cm, July 16, 2002; minimum daily, 642 microsiemens/cm, May 20, 1988.

WATER TEMPERATURE: Maximum daily, 33.0° C, July 14, 1981; minimum daily, 0.0° C, many days during winter.

SEDIMENT CONCENTRATION: Maximum daily mean, 53,500 mg/L, May 27, 1980; minimum daily mean, 3 mg/L, September 16-18, 1996.

SEDIMENT LOAD: Maximum daily, 2,230,000 tons, May 20, 1978; minimum daily, 0.17 tons, August 1, 1988 and September 16, 1996.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum recorded, 3,710 microsiemens/cm, July 16; minimum recorded, 474 microsiemens/cm, June 3.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

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 unfltrd uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, unfltrd mg/L as CaCO ₃ (00900)	Calcium, water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)
OCT													
02...	1130	108	682	8.7	83	8.1	2,140	4.0	8.5	650	156	62.6	7.70
NOV													
20...	1130	189	681	11.7	102	8.3	1,920	18.0	4.5	580	136	58.0	6.05
DEC													
04...	1230	E130	683	11.0	84	8.4	2,010	0.0	0.0	620	140	64.5	6.51
17...	1500	E150	660	11.0	88	8.3	2,080	7.0	0.0	620	139	66.8	6.66
JAN													
08...	1030	E140	683	10.9	84	8.3	1,930	4.0	0.0	650	159	61.2	7.50
21...	1300	E100	677	11.2	87	8.2	2,220	-10.0	0.0	680	162	66.9	7.47
FEB													
05...	1500	E210	762	11.6	80	8.1	1,590	-5.0	0.0	480	116	45.1	6.19
18...	1200	E240	675	10.4	81	7.9	2,010	8.0	0.0	590	139	58.2	7.54
MAR													
06...	1530	E300	671	9.4	74	8.0	2,600	2.0	0.0	710	171	69.5	7.76
17...	1400	1,300	670	11.2	93	7.8	1,160	3.0	2.0	380	95.2	33.7	6.84
APR													
09...	1430	418	673	9.0	99	8.1	2,010	24.0	13.5	600	148	55.2	6.67
22...	1300	438	667	8.6	99	8.1	1,050	20.5	15.5	310	75.5	29.6	5.32
MAY													
05...	1500	703	670	9.1	95	8.6	1,600	8.0	11.5	350	86.6	33.1	6.16
20...	1230	448	681	9.8	104	8.2	1,680	15.0	12.5	500	117	50.3	6.21
JUN													
03...	1600	1,320	675	8.0	96	8.0	483	20.0	18.0	150	38.0	13.3	2.76
16...	1700	275	678	7.0	99	8.4	1,460	24.0	27.0	450	108	44.8	6.62
JUL													
02...	1530	597	672	6.5	94	8.2	1,310	30.0	27.5	340	85.1	31.2	6.02
14...	1500	77	677	7.9	113	8.3	1,520	28.0	27.0	480	122	43.4	7.68
AUG													
05...	0800	18	667	7.4	93	8.0	2,100	21.5	19.5	740	148	90.0	9.79
19...	1300	15	673	8.6	119	8.2	1,680	36.0	25.0	660	133	80.6	9.62
SEP													
03...	1130	17	682	10.1	119	8.3	1,940	22.0	17.5	650	138	74.5	9.83
16...	1130	64	669	9.4	106	8.4	1,710	18.5	14.5	690	151	76.8	9.72

06324500 POWDER RIVER AT MOORHEAD, WY—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Sodium adsorp- tion ratio (00931)	Sodium, water, fltrd, mg/L (00930)	ANC, wat unf fixed end pt, lab, mg/L as CaCO ₃ (90410)	Alka- linity, wat flt fxd end lab, mg/L as CaCO ₃ (29801)	Chlor- ide, water, fltrd, mg/L (00940)	Fluor- ide, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of consti- tuents mg/L (70301)	Residue water, fltrd, tons/ acre-ft (70303)	Residue water, fltrd, tons/d (70302)	Residue on evap. at 180degC wat flt mg/L (70300)	Ammonia + org-N, water, unfltrd mg/L as N (00625)
OCT 02...	4	252	218	156	119	0.54	7.21	801	1,500	2.23	477	1,640	0.83
NOV 20...	4	204	246	190	124	0.51	6.40	646	1,300	1.92	719	1,410	0.57
DEC 04...	4	218	251	191	114	0.45	6.81	684	1,350	2.08	--	1,530	0.36
17...	4	231	287	E187	127	0.44	9.05	695	1,450	2.06	--	1,510	0.47
JAN 08...	4	221	271	264	131	0.50	11.6	623	1,370	1.98	--	1,460	0.34
21...	4	254	306	278	156	0.57	9.87	711	1,540	2.27	--	1,670	0.31
FEB 05...	3	155	226	222	96.9	0.47	7.90	498	1,060	1.55	--	1,140	0.26
18...	4	236	E299	265	123	0.45	8.69	636	1,370	2.00	--	1,470	0.52
MAR 06...	5	281	209	238	160	0.56	9.08	853	1,700	2.54	--	1,870	0.37
17...	2	108	403	149	51.5	0.31	13.7	385				1,120	7.7
APR 09...	4	240	378	170	53.7	0.62	5.76	887	1,500	2.21	1,830	1,620	5.9
22...	2	97.8	221	141	43.1	0.44	6.74	325	669	0.98	856	724	2.8
MAY 05...	5	195	472	130	47.5	0.56	5.63	637	1,090	1.62	2,260	1,190	12
20...	3	172	219	196	70.4	0.5	6.34	606	1,150	1.72	1,530	1,260	1.2
JUN 03...	1	40.9	112	82	15.8	0.2	8.09	127	295	0.44	1,140	321	2.1
16...	3	164	180	169	68.5	0.4	7.83	504	1,010	1.46	798	1,070	0.85
JUL 02...	3	147	204	140	55.9	0.4	9.10	448	868	1.27	1,510	936	3.7
14...	3	143	166	142	45.6	0.5	6.33	596	1,050	1.55	237	1,140	1.4
AUG 05...	4	228	154	153	63.1	0.3	5.94	890	1,530	2.35	84.1	1,730	0.66
19...	2	142	128	127	16.6	0.3	3.23	789	1,250	1.91	56.7	1,400	0.60
SEP 03...	3	192	167	155	42.7	0.4	5.99	819	1,380	2.04	68.7	1,500	0.83
16...	2	142	217	170	29.6	0.3	7.29	733	1,250	1.91	243	1,410	0.75

06324500 POWDER RIVER AT MOORHEAD, WY—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	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)	Ortho- phos- phate, water, fltrd, mg/L as P (00671)	Phos- phorus, water, unfltrd mg/L (00665)	Alum- inum, water, unfltrd recover- able, ug/L (01105)	Arsenic water, fltrd, ug/L (01000)	Arsenic water unfltrd ug/L (01002)	Barium, water, unfltrd recover- able, ug/L (01007)	Beryll- ium, water, unfltrd recover- able, ug/L (01012)	Boron, water, unfltrd recover- able, ug/L (01022)	Cadmium water, unfltrd ug/L (01027)	Chrom- ium, water, unfltrd recover- able, ug/L (01034)
OCT 02...	<0.04	0.103	0.003	<0.007	0.23	2,730	0.9	3	84	0.25	184	0.20	3.2
NOV 20...	E.04	0.115	<0.002	<0.007	0.21	3,580	0.9	2	81	0.33	237	0.20	2.9
DEC 04...	E.04	0.182	E.002	<0.007	0.113	1,320	0.8	E1	49	0.09	186	0.08	1.3
17...	0.05	0.362	0.003	<0.007	0.151	E2130	0.9	E1	68	0.14	204	0.12	2.0
JAN 08...	<0.04	0.381	0.004	<0.007	0.079	1,130	0.8	E1	50	0.08	216	0.07	1.2
21...	<0.04	0.420	0.005	<0.007	0.054	1,720	0.7	E2	57	0.07	235	E.03	1.6
FEB 05...	<0.04	0.360	0.004	<0.007	0.051	670	0.7	<2	37	E.05	161	<0.04	E.7
18...	0.05	0.419	0.006	<0.007	0.093	861	0.9	E1	50	0.08	192	E.03	E.7
MAR 06...	E.04	0.534	0.006	<0.007	0.056	1,020	0.7	<2	56	<0.12	248	<0.07	1.1
17...	0.28	0.413	0.051	--	4.03	29,400	2.1	12	166	3.36	140	2.56	20.6
APR 09...	<0.04	0.756	0.003	E.004	3.00	31,700	1.1	13	413	3.09	222	2.15	31.7
22...	<0.04	0.226	E.002	E.006	1.17	14,900	0.7	12	241	1.41	133	0.85	14.2
MAY 05...	<0.04	0.891	0.005	0.009	5.74	51,300	0.9	20	5,810	6.49	202	3.44	41.2
20...	<0.04	0.067	E.002	E.006	0.52	6,210	0.9	5	96	0.51	167	0.32	5.4
JUN 03...	<0.04	0.125	0.004	E.004	1.06	7,720	0.7	6	114	0.88	63	0.56	7.9
16...	<0.04	<0.022	<0.002	E.005	0.22	2,430	1.2	2	72	0.22	156	0.11	2.0
JUL 02...	<0.04	0.341	E.002	0.010	1.61	20,700	1.2	8	366	2.03	170	0.82	21.4
14...	<0.04	<0.022	<0.002	<0.007	0.35	5,580	1.0	3	105	0.47	175	0.21	4.9
AUG 05...	<0.04	<0.022	<0.002	<0.007	0.043	138	1.2	M	46	<0.06	27	0.05	E.5
19...	<0.04	<0.022	<0.002	<0.007	0.034	218	0.9	3	67	<0.06	184	E.02	<0.8
SEP 03...	<0.04	<0.022	<0.002	<0.007	0.145	2,150	0.9	2	64	0.15	211	0.12	2.1
16...	<0.04	<0.022	<0.002	<0.007	0.114	1,400	1.0	E2	58	0.11	187	0.09	1.5

06324500 POWDER RIVER AT MOORHEAD, WY—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Copper, water, unfltrd recover- able, ug/L (01042)	Iron, water, fltrd, ug/L (01046)	Iron, water, unfltrd recover- able, ug/L (01045)	Lead, water, unfltrd recover- able, ug/L (01051)	Mangan- ese, water, fltrd, ug/L (01056)	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)	Zinc, water, unfltrd recover- able, ug/L (01092)	Suspnd. sedi- ment, sieve diametr percent <.063mm (70331)	Sus- pended sedi- ment concen- tration mg/L (80154)
OCT 02...	10.3	<10	4,890	4.19	4.8	103	--	13.4	2.6	27	99	373
NOV 20...	12.9	<10	5,600	4.52	4.4	99.2	--	15.1	2.9	29	98	405
DEC 04...	7.1	<10	2,080	1.61	15.2	44.5	--	12.0	2.5	12	72	401
17...	8.0	<10	3,530	2.80	E1.1	62.6	--	13.3	2.5	17	95	349
JAN 08...	5.6	<10	1,800	1.49	4.0	37.7	--	11.7	2.3	9	96	229
21...	5.0	<10	1,410	1.27	5.8	27.7	--	8.83	2.6	9	89	278
FEB 05...	6.1	<10	970	0.81	5.1	23.4	--	7.54	2.2	7	90	181
18...	6.9	14	1,540	1.30	14.5	43.3	--	10.3	2.4	9	91	99
MAR 06...	5.7	<30	<20	0.91	7.9	26.2	--	9.66	3.9	8	91	135
17...	81.9	--	60,500	72.7	--	1,900	--	83.9	3.5	286	82	5,660
APR 09...	76.2	<10	56,900	58.2	3.0	1,250	--	83.3	8.2	267	99	4,880
22...	35.7	<10	27,000	26.1	2.0	817	--	35.8	2.9	119	95	1,740
MAY 05...	121	<10	99,800	116	E.8	3,000	0.21	128	6.6	447	96	9,840
20...	18.2	<10	11,500	11.1	2.9	253	--	15.3	3.1	56	90	847
JUN 03...	21.8	20	17,700	18.9	1.5	598	0.04	22.1	1.4	74	30	3,180
16...	13.8	<8	4,000	3.91	1.5	125	--	7.25	2.5	19	96	237
JUL 02...	38.0	<8	41,600	37.8	1.0	643	--	49.0	3.4	175	96	2,690
14...	13.9	E6	9,220	7.91	2.8	152	--	14.1	2.9	37	99	478
AUG 05...	6.1	E5	450	2.97	25.9	16.9	--	1.81	0.5	15	80	54
19...	7.5	<8	400	0.58	11.3	42.5	--	8.02	1.0	4	97	21
SEP 03...	9.9	<8	3,100	2.33	4.4	83.8	--	10.3	2.8	17	99	168
16...	7.8	<8	2,190	1.80	4.3	56.8	--	7.42	1.5	14	99	165

YELLOWSTONE RIVER BASIN

06324500 POWDER RIVER AT MOORHEAD, WY—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Suspended sediment load, tons/d (80155)
OCT	
02...	109
NOV	
20...	207
DEC	
04...	--
17...	--
JAN	
08...	--
21...	--
FEB	
05...	--
18...	--
MAR	
06...	--
17...	19,900
APR	
09...	5,510
22...	2,060
MAY	
05...	18,700
20...	1,020
JUN	
03...	11,300
16...	176
JUL	
02...	4,340
14...	99
AUG	
05...	2.6
19...	.85
SEP	
03...	7.7
16...	29

E -- Estimated value

M -- Presence verified, not quantified

06324500 POWDER RIVER AT MOORHEAD, WY—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	2,240	2,170	2,210	---	---	---	---	---	---	---	---	---
2	2,180	2,130	2,150	---	---	---	---	---	---	---	---	---
3	2,130	2,070	2,110	---	---	---	---	---	---	---	---	---
4	2,080	1,990	2,030	---	---	---	---	---	---	---	---	---
5	2,030	1,980	2,010	---	---	---	---	---	---	---	---	---
6	1,990	1,930	1,960	---	---	---	---	---	---	---	---	---
7	1,930	1,880	1,910	---	---	---	---	---	---	---	---	---
8	1,910	1,850	1,880	---	---	---	---	---	---	---	---	---
9	1,910	1,880	1,890	---	---	---	---	---	---	---	---	---
10	1,920	1,870	1,890	---	---	---	---	---	---	---	---	---
11	1,950	1,860	1,920	---	---	---	---	---	---	---	---	---
12	1,860	1,790	1,820	---	---	---	---	---	---	---	---	---
13	1,810	1,790	1,800	---	---	---	---	---	---	---	---	---
14	1,840	1,810	1,830	---	---	---	---	---	---	---	---	---
15	1,840	1,740	1,790	1,990	1,950	1,970	---	---	---	---	---	---
16	1,790	1,760	1,780	1,960	1,910	1,930	---	---	---	---	---	---
17	1,800	1,740	1,770	1,950	1,920	1,930	---	---	---	---	---	---
18	1,810	1,760	1,790	1,960	1,910	1,940	---	---	---	---	---	---
19	1,810	1,780	1,800	1,970	1,940	1,950	---	---	---	---	---	---
20	1,830	1,800	1,810	1,960	1,920	1,940	---	---	---	---	---	---
21	1,840	1,800	1,820	1,950	1,920	1,930	---	---	---	---	---	---
22	1,830	1,800	1,820	1,970	1,940	1,960	---	---	---	---	---	---
23	---	---	---	1,970	1,940	1,950	---	---	---	---	---	---
24	---	---	---	2,020	1,960	1,970	---	---	---	---	---	---
25	1,900	1,850	1,890	---	---	---	---	---	---	---	---	---
26	1,940	1,890	1,910	---	---	---	---	---	---	---	---	---
27	1,990	1,940	1,960	---	---	---	---	---	---	---	---	---
28	2,000	1,920	1,960	---	---	---	---	---	---	---	---	---
29	1,950	1,900	1,920	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	2,240	1,740	1,900	2,020	1,910	1,950	---	---	---	---	---	---
	FEBRUARY			MARCH			APRIL			MAY		
1	---	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	2,320	2,240	2,280	1,540	1,460	1,500
3	---	---	---	---	---	---	2,410	2,250	2,310	1,710	1,380	1,530
4	---	---	---	---	---	---	2,570	2,380	2,470	2,170	1,710	1,970
5	---	---	---	---	---	---	2,520	2,370	2,440	1,780	1,590	1,640
6	---	---	---	---	---	---	2,560	2,220	2,480	1,650	1,600	1,630
7	---	---	---	---	---	---	2,390	2,060	2,240	1,730	1,640	1,690
8	---	---	---	---	---	---	2,160	2,120	2,140	1,740	1,700	1,730
9	---	---	---	---	---	---	2,140	2,050	2,090	1,830	1,730	1,790
10	---	---	---	---	---	---	2,050	2,010	2,020	1,820	1,720	1,770
11	---	---	---	---	---	---	2,050	2,020	2,030	1,760	1,710	1,730
12	---	---	---	---	---	---	2,120	2,050	2,090	1,820	1,750	1,780
13	---	---	---	---	---	---	2,160	2,020	2,130	1,890	1,820	1,860
14	---	---	---	---	---	---	---	---	---	1,910	1,880	1,900
15	---	---	---	---	---	---	---	---	---	1,960	1,900	1,930
16	---	---	---	---	---	---	---	---	---	1,910	1,870	1,890
17	---	---	---	---	---	---	1,690	1,500	1,600	1,920	1,840	1,880
18	---	---	---	1,370	1,160	1,220	1,560	1,230	1,380	1,900	1,860	1,880
19	---	---	---	---	---	---	1,240	1,080	1,150	1,880	1,750	1,840
20	---	---	---	---	---	---	1,100	1,050	1,080	1,750	1,600	1,670
21	---	---	---	---	---	---	1,090	1,050	1,070	1,610	1,580	1,590
22	---	---	---	---	---	---	1,070	1,060	1,060	1,590	1,550	1,580
23	---	---	---	---	---	---	1,160	1,060	1,110	1,590	1,570	1,580
24	---	---	---	1,870	1,750	1,830	1,300	1,160	1,220	1,570	1,140	1,460
25	---	---	---	1,870	1,800	1,840	1,380	1,300	1,350	1,140	891	962
26	---	---	---	1,940	1,700	1,870	1,450	1,370	1,410	1,110	786	854
27	---	---	---	2,090	1,900	1,960	1,480	1,430	1,460	1,270	847	1,070
28	---	---	---	2,440	2,090	2,320	---	---	---	856	697	791
29	---	---	---	2,420	2,280	2,350	---	---	---	817	697	748
30	---	---	---	2,320	1,920	2,180	---	---	---	769	640	701
31	---	---	---	---	---	---	---	---	---	668	545	605
MONTH	---	---	---	2,440	1,160	1,950	2,570	1,050	1,770	2,170	545	1,520

06324500 POWDER RIVER AT MOORHEAD, WY—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS—Continued
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	608	562	585	---	---	---	3,230	2,860	3,030	2,350	2,210	2,290
2	600	521	565	1,410	1,260	1,320	3,220	2,560	2,930	2,210	2,060	2,120
3	531	474	492	1,350	1,270	1,310	2,560	2,250	2,350	2,060	1,880	1,950
4	595	512	560	1,270	1,190	1,220	2,560	2,270	2,420	1,890	1,680	1,770
5	702	595	646	1,210	1,190	1,200	2,350	2,040	2,120	1,740	1,690	1,720
6	838	702	769	1,220	1,190	1,200	2,160	2,070	2,100	1,760	1,710	1,730
7	999	837	919	1,280	1,220	1,250	2,320	2,160	2,270	1,790	1,750	1,760
8	1,130	999	1,080	1,320	1,270	1,290	2,310	1,970	2,110	1,880	1,750	1,800
9	1,190	1,130	1,160	1,440	1,320	1,360	1,970	1,650	1,800	1,800	1,670	1,750
10	1,260	1,190	1,230	2,180	1,440	1,860	1,650	1,570	1,600	1,760	1,380	1,600
11	1,330	1,260	1,310	2,150	1,890	1,980	1,690	1,610	1,640	1,610	1,410	1,530
12	1,360	1,300	1,310	2,020	1,880	1,960	1,630	1,580	1,610	1,610	1,540	1,580
13	1,460	1,360	1,400	1,910	1,580	1,710	1,660	1,600	1,630	1,910	1,570	1,720
14	1,560	1,460	1,530	1,580	1,510	1,540	1,660	1,600	1,630	1,900	1,770	1,840
15	1,550	1,490	1,510	1,770	1,560	1,670	1,630	1,590	1,610	1,850	1,770	1,810
16	1,510	1,460	1,490	1,870	1,710	1,770	1,630	1,590	1,610	1,850	1,690	1,770
17	1,490	1,450	1,470	2,240	1,870	2,070	1,670	1,620	1,640	1,690	1,380	1,510
18	1,560	1,460	1,490	2,310	1,880	2,170	1,690	1,660	1,670	1,380	1,280	1,320
19	2,110	1,480	1,700	2,440	1,920	2,220	1,740	1,690	1,720	1,360	1,170	1,240
20	2,380	1,720	2,020	2,580	2,440	2,530	1,790	1,740	1,760	1,490	1,360	1,440
21	2,370	2,020	2,200	2,790	2,580	2,650	2,010	1,740	1,860	1,440	1,430	1,440
22	2,040	1,760	1,860	2,900	2,790	2,840	1,740	1,500	1,620	1,440	1,390	1,420
23	1,980	1,510	1,720	2,980	2,900	2,940	1,770	1,620	1,720	1,400	1,300	1,360
24	1,560	1,290	1,430	3,020	2,940	2,990	3,710	1,300	1,870	2,120	1,280	1,460
25	1,290	1,260	1,260	3,090	2,980	3,040	3,580	2,590	2,940	2,340	2,120	2,270
26	1,290	1,230	1,270	3,120	2,880	3,090	2,600	2,450	2,520	2,240	1,960	2,100
27	1,230	1,200	1,210	2,910	1,220	2,000	2,540	2,430	2,480	1,960	1,720	1,850
28	---	---	---	2,600	1,560	1,940	2,940	2,520	2,730	1,720	1,590	1,640
29	---	---	---	3,170	2,600	3,000	2,980	2,830	2,910	1,590	1,520	1,550
30	---	---	---	3,310	3,170	3,260	2,870	2,670	2,800	1,540	1,440	1,480
31	---	---	---	3,310	2,940	3,120	2,670	2,330	2,460	---	---	---
MONTH	2,380	474	1,270	3,310	1,190	2,080	3,710	1,300	2,100	2,350	1,170	1,690
YEAR	3,710	474	1,780									

06324970 LITTLE POWDER RIVER ABOVE DRY CREEK, NEAR WESTON, WY

LOCATION.--Lat 44°55'37", long 105°21'10", in NW $\frac{1}{4}$ SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.13, T.57 N., R.71 W., Campbell County, Hydrologic Unit 10090208, on left bank 3.1 mi upstream from Dry Creek, 5.0 mi south of the Wyoming-Montana State line, and 20 mi north of Weston.

DRAINAGE AREA.--1,237 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1972 to current year.

REVISED RECORDS.--WDR WY-77-1: Drainage area. WDR WY-78-1: 1976(M).

GAGE.--Water-stage recorder. Elevation of gage is 3,410 ft above NGVD of 1929, from topographic map. U.S. Geological Survey data collection platform with satellite telemetry at station.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Diversion upstream from station for irrigation of about 80 acres downstream from station. Flow occasionally affected by contributions from mine dewatering.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.01	e0.01	0.92	e0.90	e1.7	e1.3	32	9.3	1.9	e2.1	0.01	0.02
2	0.01	e0.01	1.0	e1.0	e1.5	e1.2	30	14	2.1	e1.8	0.01	0.02
3	0.01	e0.01	0.99	e1.1	e1.3	1.3	e40	15	1.8	e1.6	0.01	0.02
4	0.01	e0.01	1.2	e1.2	e1.2	1.3	e32	12	2.0	e1.4	0.01	0.02
5	0.01	0.02	1.1	e1.3	e1.1	1.1	e25	15	2.3	e1.2	0.00	0.02
6	0.01	0.06	1.1	e1.4	e0.92	0.98	e20	16	2.7	e1.0	0.00	0.02
7	0.01	0.06	1.2	e1.4	e1.0	1.0	e19	15	3.7	e0.90	0.00	0.02
8	0.01	0.07	1.2	e1.2	e1.0	e0.90	e19	13	4.0	e0.80	0.00	0.02
9	0.01	0.07	1.2	e0.92	e0.94	e0.98	e17	18	5.3	0.30	0.00	0.02
10	0.01	0.05	1.2	e0.64	e1.1	e1.1	e14	19	8.0	0.17	0.01	0.03
11	0.01	0.04	1.2	e0.82	e1.4	1.1	e12	25	8.1	0.13	0.01	0.02
12	0.01	0.07	1.2	e1.2	e1.6	27	e11	50	5.0	0.08	0.01	0.03
13	0.01	0.08	1.3	e1.0	e1.9	e130	e10	48	3.6	0.07	0.01	0.02
14	0.01	0.08	2.6	e0.84	e1.8	e135	e9.0	25	2.7	0.06	0.01	0.02
15	0.01	0.08	2.1	e0.88	e2.1	e119	e8.2	15	17	0.06	0.01	0.03
16	0.01	0.10	1.4	e0.84	e3.2	e106	7.9	9.7	7.7	0.02	0.01	0.03
17	0.01	e0.11	1.3	e0.80	e4.4	e93	6.8	6.9	5.2	0.02	0.01	0.03
18	0.01	0.12	e1.2	e0.76	e5.8	104	6.4	5.7	3.0	0.02	e0.01	0.02
19	0.01	0.13	e1.1	e0.74	e7.0	e110	6.8	5.2	55	0.02	0.01	0.02
20	0.01	0.18	e0.90	e0.72	e10	e91	5.7	4.6	19	0.02	0.01	0.02
21	0.01	0.23	e0.80	e0.71	e7.4	e77	4.8	4.0	6.7	0.01	0.01	0.02
22	0.01	0.27	e0.70	e0.62	e5.0	e75	4.2	3.7	6.2	0.01	0.01	0.02
23	0.01	e0.27	e0.66	e0.70	e3.2	95	3.4	3.1	4.2	0.01	0.01	0.02
24	0.01	0.27	e0.62	e0.84	e2.9	e122	3.6	2.8	2.7	0.01	0.01	0.02
25	0.01	0.29	e0.56	e0.78	e2.6	e118	3.1	2.2	3.6	0.01	0.01	0.01
26	0.01	0.39	0.51	e0.88	e2.3	e105	2.9	1.9	3.0	0.01	0.01	0.02
27	0.01	0.42	0.48	e0.94	1.9	90	3.8	2.1	60	0.01	0.01	0.02
28	0.01	0.55	0.72	e0.98	1.3	76	2.7	1.9	15	0.01	0.02	0.01
29	0.01	0.76	e0.90	e1.1	---	66	3.0	1.6	6.4	0.01	0.02	0.01
30	e0.01	0.71	e0.96	e1.3	---	48	3.7	2.0	3.0	0.01	0.02	0.01
31	e0.01	---	e1.0	e1.5	---	34	---	1.9	---	0.01	0.02	---
TOTAL	0.31	5.52	33.32	30.01	77.56	1,833.26	367.0	368.6	270.9	11.88	0.30	0.61
MEAN	0.010	0.18	1.07	0.97	2.77	59.1	12.2	11.9	9.03	0.38	0.010	0.020
MAX	0.01	0.76	2.6	1.5	10	135	40	50	60	2.1	0.02	0.03
MIN	0.01	0.01	0.48	0.62	0.92	0.90	2.7	1.6	1.8	0.01	0.00	0.01
AC-FT	0.6	11	66	60	154	3,640	728	731	537	24	0.6	1.2

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1973 - 2003, BY WATER YEAR (WY)

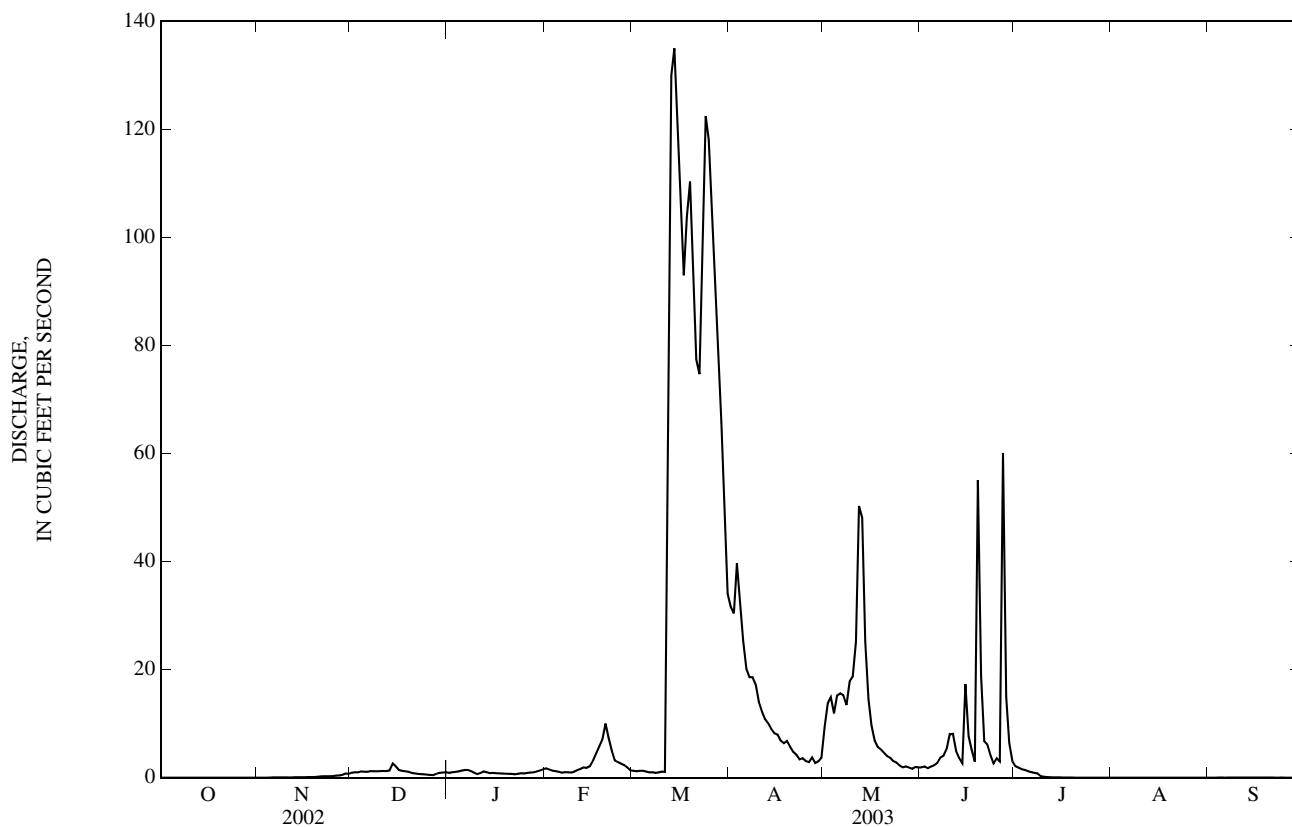
	MEAN	11.0	3.73	2.50	7.84	36.5	60.0	23.4	56.5	27.7	10.7	5.36	3.87
MAX	172	25.4	9.97	89.0	336	613	99.3	703	187	68.8	44.8	60.8	
(WY)	(1995)	(1999)	(1995)	(1974)	(1997)	(1978)	(1999)	(1978)	(1984)	(1982)	(1993)	(1986)	
MIN	0.009	0.015	0.21	0.10	0.46	1.34	0.75	1.04	0.90	0.044	0.000	0.002	
(WY)	(1992)	(1982)	(1982)	(1991)	(1989)	(1981)	(1981)	(1992)	(2002)	(1980)	(1991)	(1991)	

06324970 LITTLE POWDER RIVER ABOVE DRY CREEK, NEAR WESTON, WY—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1973 - 2003	
ANNUAL TOTAL	591.57		2,999.27		--	
ANNUAL MEAN	1.62		8.22		20.7	
HIGHEST ANNUAL MEAN	--		--		127 1978	
LOWEST ANNUAL MEAN	--		--		1.49 1992	
HIGHEST DAILY MEAN	23	Apr 1,8,9	135 ^e	Mar 14	5,000	May 19, 1978
LOWEST DAILY MEAN	0.01	Many days	0.00	Aug 5-9	0.00	Many days, some years
ANNUAL SEVEN-DAY MINIMUM	0.01	Oct 1	0.00	Aug 3	0.00	Many days, some years
MAXIMUM PEAK FLOW	--		142	Mar 14	5,300 ^a	May 19, 1978
MAXIMUM PEAK STAGE	--		4.55	Mar 14	11.63	Mar 20, 1978
ANNUAL RUNOFF (AC-FT)	1,170		5,950		15,000	
10 PERCENT EXCEEDS	3.8		18		34	
50 PERCENT EXCEEDS	0.52		0.98		2.8	
90 PERCENT EXCEEDS	0.02		0.01		0.02	

a Gage height, 11.62 ft.

e Estimated.



06324970 LITTLE POWDER RIVER ABOVE DRY CREEK, NEAR WESTON, WY—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1975-82, 1985 to current year.

REMARKS.--Samples collected for the National Water Quality Assessment Program are included in the special studies section of this report.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

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 unfltrd uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Alkalinity, wat flt fxd end lab, mg/L as CaCO3 (29801)	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)
OCT 17...	1000	0.01	669	10.0	89	8.0	3,030	10.5	4.5	E314	365	445	--
NOV 05...	1200	0.02	672	10.9	102	7.6	3,510	10.5	6.5	E234	393	479	--
DEC 17...	1200	1.2	658	10.6	87	8.0	4,010	6.5	0.5	E373	434	499	14
JAN 21...	1600	0.7	676	8.7	68	7.9	4,470	-10.0	0.0	543	480	586	--
FEB 18...	1500	4.9	673	11.3	88	7.9	2,470	10.0	0.0	324	262	315	--
MAR 26...	1200	112	669	10.7	100	8.1	1,020	14.0	6.5	119	99	122	--
APR 22...	1700	4.4	665	9.7	115	8.1	3,310	17.0	16.2	340	376	447	--
MAY 20...	1500	4.9	679	10.2	115	8.0	2,800	16.0	15.1	327	285	346	--
JUN 16...	1930	6.6	678	8.2	113	8.3	3,090	21.5	25.0	352	291	356	--
JUL 14...	1300	0.05	695	7.2	100	8.0	2,930	31.0	26.5	332	276	336	--
JUL 14...	1600	--	--	--	--	--	--	--	--	--	--	--	--
AUG 19...	1530	0.01	669	6.4	88	8.0	3,390	32.5	24.0	356	--	--	--
SEP 16...	1330	0.03	665	10.2	123	8.3	3,170	23.0	17.0	271	263	316	2

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Chloride, water, fltrd, mg/L (00940)	Sulfate, water, fltrd, mg/L (00945)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	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)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)	Suspended sediment concentration mg/L (80154)	Suspended sediment load, tons/d (80155)
OCT 17...	109	1,240	0.56	<0.04	<0.06	<0.008	<0.02	0.038	117	0.00
NOV 05...	148	1,420	0.37	<0.04	<0.06	<0.008	<0.02	0.020	53	0.00
DEC 17...	81.5	1,790	0.35	E.03	<0.06	<0.008	<0.02	0.016	101	0.33
JAN 21...	118	2,020	0.34	E.02	<0.06	<0.008	<0.02	0.010	98	0.19
FEB 18...	33.9	1,050	0.70	E.02	0.09	E.006	<0.02	0.051	13	0.17
MAR 26...	20.5	353	1.9	<0.04	0.08	<0.008	E.01	0.33	1,210	365
APR 22...	66.2	1,410	--	--	--	--	--	--	211	2.5
MAY 20...	100	1,130	0.97	<0.04	<0.06	<0.008	<0.02	0.061	77	1.0
JUN 16...	90.2	1,270	--	--	--	--	--	--	144	2.6
JUL 14...	99.5	1,210	0.89	<0.04	<0.06	<0.008	<0.02	0.077	131	0.02
JUL 14...	--	--	--	--	--	--	--	--	--	--
AUG 19...	101	1,460	--	--	--	--	--	--	293	0.01
SEP 16...	95.4	1,360	0.35	<0.04	<0.06	<0.008	<0.02	0.034	71	0.01