

06324500 POWDER RIVER AT MOORHEAD, MT

LOCATION.--Lat 45°03'28", long 105°52'39" (NAD 27), in SE $\frac{1}{4}$ NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.18, T.9S., R.48E., 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.--8,086 mi²; Sept. 13, 1956 to Aug. 27, 2001 published as 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; WDR MT-04-01: 2003.

GAGE.--Water-stage recorder. Elevation of gage is 3,350.6 ft (NGVD 29). Prior to Aug. 28, 1931, nonrecording gage at site 0.8 mi downstream at different elevation. Aug. 28, 1931, to Mar. 21, 1956, water-stage recorder at site 0.1 mi upstream at different elevation. Mar. 22 to July 24, 1956, nonrecording gage at site 1.4 mi downstream at different elevation. July 25 to Sept. 12, 1956, nonrecording gage at different site and elevation. Sept. 13, 1956 to Aug. 27, 2001, water-stage recorder during period of gage operation 1.1 mi downstream at different elevation.

REMARKS.--Water-discharge records good except those for 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. U.S. Geological Survey satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Sept. 30, 1923, reached a stage of 19 ft, site and elevation used 1931-56, from information by local residents.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	101	e90	e200	e100	e60	e200	230	137	64	23	163	44
2	95	e80	e200	e90	e55	e300	217	137	59	23	122	43
3	87	e90	e200	e80	e55	e500	222	135	55	25	91	40
4	79	e80	e170	e70	e55	e450	231	147	52	32	80	32
5	72	e70	e150	e40	e55	398	236	151	48	89	58	26
6	70	e75	e200	e45	e50	376	226	135	48	106	49	23
7	73	e75	e200	e50	e60	307	230	128	44	99	43	58
8	73	e80	e190	e60	e60	345	234	119	37	73	39	74
9	70	e90	e160	e60	e55	430	222	120	33	69	35	73
10	64	e100	e150	e55	e50	384	210	136	31	109	30	58
11	59	e110	e140	e55	e45	293	218	179	32	80	28	48
12	55	e100	e130	e55	e50	296	235	172	33	58	22	38
13	60	e100	e150	e50	e55	975	257	164	30	50	25	30
14	64	e100	e170	e50	e60	739	273	152	28	40	22	32
15	74	e100	e170	e50	e70	577	265	146	23	30	19	42
16	73	e100	e160	e50	e80	461	231	133	20	27	16	41
17	77	e100	e150	e50	e90	437	226	147	18	21	14	52
18	80	e110	e150	e50	e100	419	205	135	17	17	11	59
19	82	e120	e150	e50	e100	357	193	131	19	15	9.8	55
20	83	e100	e150	e50	e100	315	189	120	19	13	9.4	60
21	82	e90	e150	e55	e90	306	196	116	25	10	9.3	58
22	81	e70	e150	e55	e90	294	196	112	27	11	7.5	56
23	81	e60	e150	e60	e90	278	199	104	26	14	6.6	68
24	78	e70	e140	e55	e90	266	224	101	23	23	5.0	100
25	76	e80	e150	e50	e100	257	191	100	20	57	7.2	104
26	81	e80	e160	e50	e100	257	179	86	19	292	20	111
27	89	e80	e170	e45	e100	248	165	80	19	736	19	92
28	96	e90	e150	e50	e100	237	151	90	19	552	14	86
29	103	e100	e100	e55	e150	231	149	84	23	434	13	74
30	101	e150	e90	e60	---	240	144	75	21	288	18	67
31	e90	---	e100	e60	---	247	---	69	---	218	25	---
TOTAL	2,449	2,740	4,850	1,755	2,215	11,420	6,344	3,841	932	3,634	1,030.8	1,744
MEAN	79.0	91.3	156	56.6	76.4	368	211	124	31.1	117	33.3	58.1
MAX	103	150	200	100	150	975	273	179	64	736	163	111
MIN	55	60	90	40	45	200	144	69	17	10	5.0	23
AC-FT	4,860	5,430	9,620	3,480	4,390	22,650	12,580	7,620	1,850	7,210	2,040	3,460

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1930 - 2004, BY WATER YEAR (WY)*

MEAN	223	223	159	152	284	608	505	1,037	1,338	458	171	143
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	31.1	33.9	0.60	1.28
(WY)	(1955)	(1936)	(1933)	(1950)	(1933)	(2002)	(1961)	(1934)	(2004)	(1961)	(1966)	(1960)

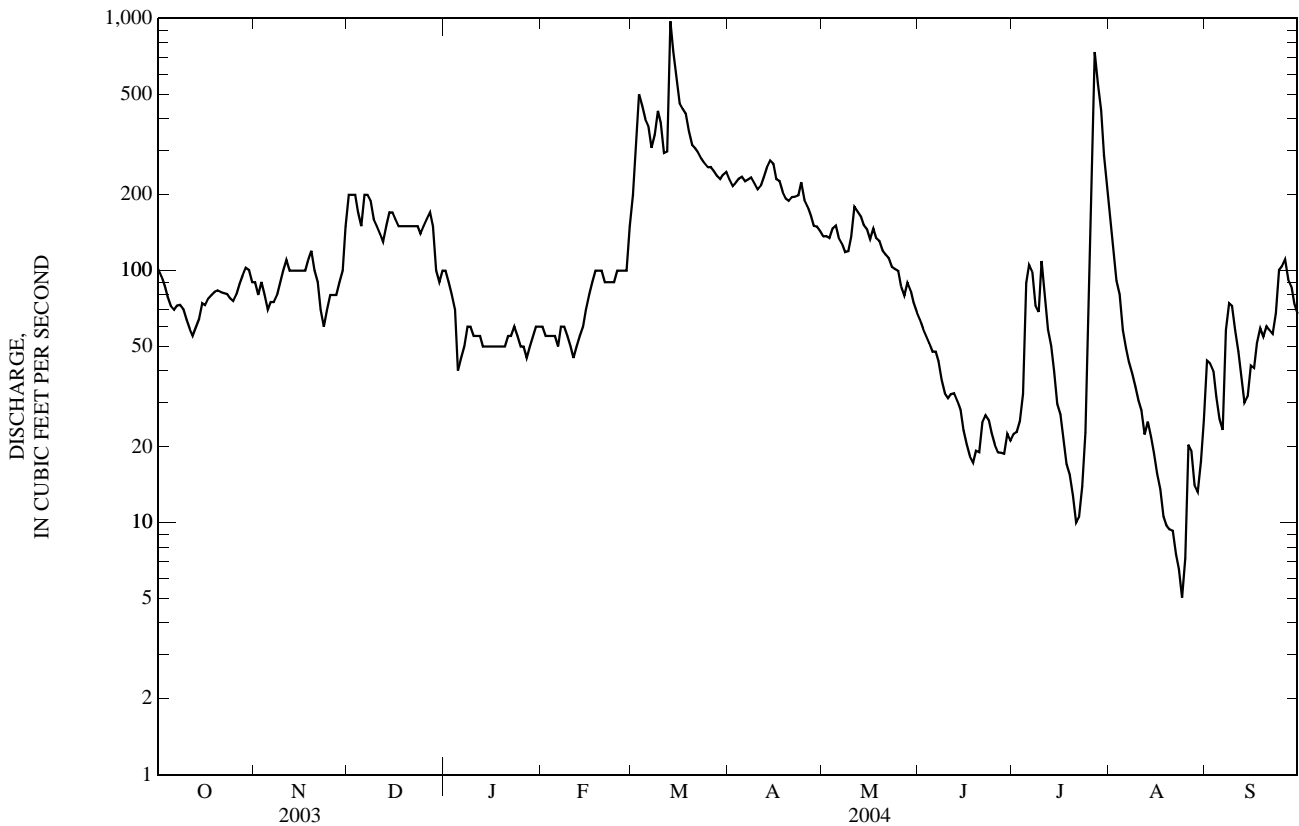
YELLOWSTONE RIVER BASIN

06324500 POWDER RIVER AT MOORHEAD, MT—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1930 - 2004*	
ANNUAL TOTAL	101,324		42,954.8			
ANNUAL MEAN	278		117		442	
HIGHEST ANNUAL MEAN					1,091	1978
LOWEST ANNUAL MEAN					109	1961
HIGHEST DAILY MEAN	2,000	Mar 16	975	Mar 13	27,500	May 20, 1978
LOWEST DAILY MEAN	11	Jul 26	5.0	Aug 24	0.00	Jul 15, 1931
ANNUAL SEVEN-DAY MINIMUM	15	Jul 25	7.8	Aug 19	0.00	Sep 4, 1960
MAXIMUM PEAK FLOW			a1,180	Mar 13	d33,000	May 20, 1978
MAXIMUM PEAK STAGE			b5.18	Nov 21	f17.70	Mar 21, 1956
INSTANTANEOUS LOW FLOW			c4.1	Aug 25	g0.00	Jul 15, 1931
ANNUAL RUNOFF (AC-FT)	201,000		85,200		320,000	
10 PERCENT EXCEEDS	705		238		1,020	
50 PERCENT EXCEEDS	160		81		215	
90 PERCENT EXCEEDS	23		23		45	

*--During period of operation (1930-72, 1975 to current year).

- a--Gage height, 3.97 ft.
- b--Backwater from ice.
- c--Gage height, 1.71 ft.
- d--Gage height, 15.24 ft.
- e--Estimated.
- f--Ice jam, site and datum then in use.
- g--Site and datum then in use.



06324500 POWDER RIVER AT MOORHEAD, MT—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 (seasonal operation).

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).

SUSPENDED-SEDIMENT DISCHARGE: October 1974 to September 1977, March 1978 to September 1996 (seasonal records only).

INSTRUMENTATION.--Specific conductance probe installed May 20, 2001.

REMARKS.--Specific conductance record is rated good. The continuous monitor was seasonally discontinued during winter ice conditions, Nov. 1 to Mar. 10.

No data are available for May 1 to June 21 due to equipment problems. An observer was hired to collect samples approximately twice-weekly during winter period and during period when equipment malfunctioned. Water-quality sample for Sept. 14 was lost in transit to the lab.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE : Maximum daily, 5,920 microsiemens per centimeter ($\mu\text{S}/\text{cm}$), July 16, 2002; minimum daily, 642 $\mu\text{S}/\text{cm}$ at 25.0°C, May 20, 1988.

WATER TEMPERATURE: Maximum daily, 33.0°C, July 14, 1981; minimum daily 0.0°C on many days during winter.

SEDIMENT CONCENTRATION: Maximum daily mean, 53,500 mg/L May 27, 1980; minimum daily mean, 3 mg/L Sept. 16-18, 1996.

SEDIMENT LOAD: Maximum daily, 2,230,000 tons May 20, 1978; minimum daily, 0.17 ton Aug. 1, 1988 and Sept. 16, 1996.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: For period of available record, maximum, 4,170 microsiemens per centimeter ($\mu\text{S}/\text{cm}$), July 5; minimum, 543 $\mu\text{S}/\text{cm}$, Feb. 20.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

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, water unfltrd $\mu\text{S}/\text{cm}$ 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, 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...	1700	79	668	8.8	107	8.7	1,630	28.5	18.0	520	115	56.6	7.39
22...	1230	84	678	10.4	108	8.3	2,140	23.0	11.5	590	122	68.1	8.81
NOV													
03...	1100	E90	673	11.9	93	8.4	2,170	-1.0	0.0	620	136	67.5	8.23
13...	1630	E100	672	10.6	83	8.5	1,820	7.5	0.0	680	156	71.1	7.70
DEC													
03...	1445	E200	674	13.9	108	8.0	1,930	9.0	0.0	740	168	77.5	7.23
16...	1230	E160	676	10.7	83	7.9	1,820	3.0	0.0	640	156	61.0	6.70
JAN													
07...	1400	E50	672	9.7	76	8.4	2,190	-3.0	0.0	740	180	71.5	7.69
21...	1100	E55	680	9.0	69	8.0	1,850	7.5	0.0	620	150	60.2	7.10
FEB													
03...	1330	E55	673	11.4	89	7.7	2,110	-1.0	0.0	670	166	62.4	8.43
24...	1300	E90	671	12.3	96	7.9	1,410	22.0	0.0	450	109	43.8	6.65
MAR													
09...	1230	368	652	12.7	117	8.0	1,790	17.5	5.0	520	128	47.8	7.45
23...	1030	281	669	10.7	102	8.4	1,870	18.5	7.5	550	134	53.4	7.68
APR													
13...	1200	262	672	10.9	112	8.5	1,810	23.0	10.5	520	123	52.4	7.09
20...	1440	194	668	9.9	108	8.4	1,830	15.0	13.0	530	123	53.1	7.18
MAY													
11...	1230	189	663	8.6	103	8.4	2,450	15.5	17.0	560	131	57.4	10.9
17...	1140	150	675	--	--	8.4	1,820	15.0	13.0	460	106	47.4	7.89
JUN													
07...	1130	47	667	7.4	95	8.5	3,370	22.5	20.5	730	151	86.8	14.3
23...	1120	27	682	11.4	135	8.1	3,360	25.5	17.5	790	157	97.5	12.7
JUL													
12...	1300	60	668	8.4	120	8.3	3,050	31.0	26.0	680	150	75.2	13.5
26...	1300	226	670	8.0	111	8.3	1,710	34.0	25.0	720	156	79.2	8.87
AUG													
17...	1115	14	676	7.6	98	8.3	2,330	24.5	21.5	710	140	86.6	11.1
24...	1630	5.1	668	8.2	112	8.4	2,290	30.5	24.0	780	146	102	10.8
SEP													
14...	1230	33	668	9.4	111	8.3	1,220	20.0	16.5	--	--	--	--
27...	1830	94	682	9.5	105	8.5	957	13.5	14.5	400	88.6	42.6	4.36

E--Estimated.

06324500 POWDER RIVER AT MOORHEAD, MT—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Sodium adsorp- tion ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	ANC, wat unf fixed end pt, lab, mg/L as CaCO ₃ (90410)	Alka- linity, water fltrd 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)
OCT													
07...	3	180	42	198	144	73.0	.3	4.52	586	1,110	1.66	260	1,220
22...	5	253	48	--	178	147	.5	5.18	721	1,430	2.11	351	1,550
NOV													
03...	4	247	46	317	211	134	.5	5.92	730	1,460	2.21	E395	1,630
13...	3	194	38	307	219	81.9	.4	9.84	644	1,300	1.90	E377	1,400
DEC													
03...	3	189	35	244	202	100	.4	11.3	672	1,350	1.97	E783	1,450
16...	3	193	39	225	180	114	.5	10.4	590	1,240	1.78	E566	1,310
JAN													
07...	4	227	40	266	221	133	.6	12.5	730	1,500	2.22	E221	1,630
21...	3	200	41	158	166	120	.5	12.3	560	1,210	1.80	E196	1,320
FEB													
03...	4	231	42	292	225	156	.5	12.8	610	1,380	2.07	E226	1,520
24...	3	131	38	200	188	74.6	.4	8.27	436	924	1.34	E240	988
MAR													
09...	4	206	46	307	176	107	.5	8.01	578	1,190	1.72	1,260	1,270
23...	4	214	45	267	208	97.2	.6	5.87	674	1,310	1.89	1,060	1,390
APR													
13...	4	220	47	236	185	123	.5	6.27	564	1,210	1.76	918	1,300
20...	4	217	47	232	194	126	.5	6.37	587	1,240	1.79	689	1,320
MAY													
11...	6	350	57	259	197	221	.8	7.44	774	1,670	2.41	904	1,770
17...	5	222	51	222	188	142	.6	6.57	556	1,200	1.73	515	1,270
JUN													
07...	8	499	59	197	197	307	.7	7.04	1,120	2,310	3.40	317	2,500
23...	7	461	55	179	195	272	.5	5.28	1,240	2,370	3.47	186	2,550
JUL													
12...	7	430	57	190	177	293	.7	5.10	1,030	2,100	3.06	364	2,250
26...	2	117	26	--	178	27.6	.3	7.25	733	1,240	1.90	850	1,390
AUG													
17...	4	256	44	170	167	103	.4	4.07	938	1,640	2.45	68.0	1,800
24...	4	249	40	154	154	63.7	.4	2.31	1,060	1,720	2.57	26.1	1,890
SEP													
14...	--	--	--	--	--	--	--	--	--	--	--	--	--
27...	1	54.6	23	--	170	5.67	.2	4.70	340	643	.97	182	717

E--Estimated.

06324500 POWDER RIVER AT MOORHEAD, MT—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	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)	Total nitro- gen, water unfltrd mg/L (62855)	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)
OCT										
07...	<.04	<.016	E.001	.49	<.006	.125	1,810	.5	E1	57
22...	<.04	<.016	<.002	.53	<.006	.166	3,250	.6	--	79
NOV										
03...	<.04	.118	.002	.97	<.006	.69	8,010	.7	5	169
13...	.04	.237	.002	.84	<.006	.29	4,820	.7	--	100
DEC										
03...	.05	.297	.002	.72	<.006	.168	2,990	.7	<2	78
16...	.06	.424	.002	.77	<.006	.154	2,000	.7	--	66
JAN										
07...	.06	.580	.008	.99	E.004	.113	2,710	.8	2	68
21...	.04	.562	.013	.86	<.006	.107	1,920	.5	--	56
FEB										
03...	--	.542	.013	.90	<.006	.086	1,480	.7	<2	58
24...	.087	.374	.012	.85	E.003	.128	1,830	.7	--	52
MAR										
09...	.071	.410	.008	1.62	E.004	1.37	20,800	.7	9	342
23...	E.010	.296	<.002	1.14	<.007	.91	11,800	.7	--	228
APR										
13...	E.007	<.016	<.002	.64	<.006	.49	6,620	.8	4	141
20...	E.006	.159	E.001	.70	E.003	.38	5,340	.9	--	121
MAY										
11...	.026	.022	E.001	.95	.009	.79	9,440	1.2	6	183
17...	E.007	.104	.002	--	E.003	--	5,750	<.2	--	123
JUN										
07...	E.007	<.016	E.001	.31	<.006	E.03	209	1.2	<2	52
23...	--	--	--	--	--	--	76	.9	--	46
JUL										
12...	E.007	<.016	<.002	.63	<.006	.098	905	1.0	<2	62
26...	<.010	<.016	.003	1.13	<.006	.28	3,550	1.1	--	108
AUG										
17...	.015	<.016	<.002	.56	<.006	.036	422	.8	<2	53
24...	E.007	<.016	<.002	.52	<.006	.019	133	1.0	--	43
SEP										
14...	--	--	--	--	--	--	--	--	--	--
27...	E.005	<.016	<.002	.29	<.006	.017	172	.6	--	28

E--Estimated.

06324500 POWDER RIVER AT MOORHEAD, MT—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Beryllium, 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)	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)
OCT										
07...	.13	199	.10	1.8	9.9	<6	2,690	2.16	5.2	56.3
22...	.22	--	--	--	--	<6	--	--	4.6	--
NOV										
03...	.66	246	.52	10.7	22.1	<6	14,700	12.2	3.8	247
13...	.36	--	--	--	--	E4	--	--	6.3	--
DEC										
03...	.19	225	.14	3.2	12.3	E4	4,210	3.31	5.1	68.2
16...	.19	--	--	--	--	<6	--	--	4.2	--
JAN										
07...	.15	257	.11	1.7	10.9	--	2,760	2.10	9.8	42.1
21...	.12	--	--	--	--	E4	--	--	7.2	--
FEB										
03...	.10	256	.06	1.2	10.9	E4	2,070	1.50	6.2	36.2
24...	.13	--	--	--	--	11	--	--	11.7	--
MAR										
09...	1.62	196	1.06	21.7	39.5	7	35,100	28.8	5.3	557
23...	.94	--	--	--	--	<6	--	--	2.6	--
APR										
13...	.50	212	.36	7.9	16.8	<6	12,600	9.78	2.4	182
20...	.42	--	--	--	--	E4	--	--	4.7	--
MAY										
11...	.71	335	.55	10.8	23.1	<19	25,500	15.1	E1.6	317
17...	.48	--	--	--	--	<6	--	--	1.9	--
JUN										
07...	<.12	449	<.08	.9	11.1	<19	380	.39	8.2	16.5
23...	<.12	--	--	--	--	<19	--	--	10.6	--
JUL										
12...	E.06	467	.08	1.4	12.2	<19	1,800	1.41	9.3	59.6
26...	.34	--	--	--	--	<6	--	--	3.7	--
AUG										
17...	E.03	269	E.04	E.7	8.2	<6	640	.59	7.3	38.0
24...	<.06	--	--	--	--	<19	--	--	18.8	--
SEP										
14...	--	--	--	--	--	--	--	--	--	--
27...	<.06	--	--	--	--	16	--	--	4.4	--

E--Estimated.

06324500 POWDER RIVER AT MOORHEAD, MT—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	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)	Sus- pended sediment, percent <.063mm (70331)	Sus- pended sediment concentration mg/L (80154)	Sus- pended sediment discharge, tons/d (80155)
OCT							
07...	--	8.67	1.3	17	99	183	39
22...	--	--	1.7	--	99	279	63
NOV							
03...	--	23.7	2.7	72	99	936	E227
13...	--	--	1.6	--	98	469	E127
DEC							
03...	--	11.2	2.4	22	94	290	E157
16...	--	--	2.8	--	97	257	E111
JAN							
07...	--	8.76	2.5	18	92	257	E34.7
21...	--	--	2.0	--	93	163	E24.2
FEB							
03...	--	7.37	2.2	12	91	123	E18.3
24...	--	--	1.4	--	98	154	E37.4
MAR							
09...	--	46.6	3.7	148	95	2,190	2,170
23...	--	--	4.0	--	99	1,280	970
APR							
13...	--	17.3	2.3	52	98	671	475
20...	--	--	2.6	--	100	451	236
MAY							
11...	--	25.9	4.2	79	99	1,060	543
17...	--	--	2.3	--	99	626	254
JUN							
07...	<.02	8.48	3.0	7	87	40	5.1
23...	--	--	1.8	--	96	8	.58
JUL							
12...	--	8.90	2.7	10	98	82	13
26...	--	--	2.1	--	98	451	275
AUG							
17...	--	6.34	1.0	5	97	46	1.7
24...	--	--	1.3	--	95	13	.18
SEP							
14...	--	--	--	--	98	16	1.4
27...	--	--	.6	--	--	--	--

E--Estimated.

YELLOWSTONE RIVER BASIN

06324500 POWDER RIVER AT MOORHEAD, MT—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	1,460	1,380	1,420									
2	1,380	1,340	1,360									
3	1,400	1,370	1,390			*2,170			*1,930			*2,120
4	1,450	1,400	1,420			*2,480						
5	1,540	1,450	1,490									
6	1,670	1,540	1,610						*2,140			
7	1,730	1,670	1,680			*2,310						*2,190
8	1,790	1,730	1,760									
9	1,820	1,780	1,800						*1,770			
10	1,850	1,820	1,830									*2,630
11	1,900	1,840	1,880			*2,230						
12	2,050	1,890	1,980						*1,760			
13	2,130	2,050	2,090			*1,820						*2,330
14	2,130	2,090	2,110									
15	2,130	1,960	2,040			*2,360						
16	2,050	1,970	2,010						*1,820			
17	2,060	1,990	2,020									*2,090
18	2,040	2,000	2,020									
19	2,060	2,010	2,030			*1,660						
20	2,120	2,060	2,100						*2,100			
21	2,190	2,120	2,170									*1,850
22	2,180	2,150	2,170									
23	2,230	2,150	2,190			*2,180						
24	2,430	2,230	2,360						*1,960			
25	2,500	2,420	2,460									*1,720
26	2,430	2,260	2,360									
27	2,280	2,250	2,270			*2,020						
28	2,290	2,230	2,260						*2,120			
29	2,240	2,130	2,170									*1,930
30	2,170	2,110	2,140			*1,980						
31	2,140	2,020	2,110									
MONTH	2,500	1,340	1,960									
	FEBRUARY			MARCH			APRIL			MAY		
1							1,980	1,930	1,950	---	---	---
2							*1,560	1,960	1,920	1,940	---	---
3			*2,110					1,940	1,890	1,920	---	---
4								1,900	1,840	1,870	---	---
5							*1,760	1,850	1,800	1,820	---	2,380
6			*1,990					1,860	1,800	1,830	---	2,460
7								1,860	1,840	1,850	---	---
8								1,850	1,780	1,830	---	---
9			*1,980				*1,790	1,840	1,790	1,810	---	---
10				1,830	1,730	1,770	1,790	1,760	1,780	---	---	---
11								1,820	1,720	1,770	---	2,450
12			*1,970					1,850	1,670	1,750	---	2,310
13								2,210	1,740	2,040	---	1,780
14								2,280	2,210	2,260	---	1,710
15								2,220	1,840	2,030	---	1,700
16			*556	1,840	1,590	1,660	1,650	1,620	1,640	---	---	1,810
17				1,630	1,560	1,590	1,700	1,630	1,660	---	---	1,820
18				1,630	1,560	1,600	1,810	1,700	1,740	---	---	1,980
19				1,710	1,620	1,660	1,850	1,810	1,840	---	---	2,070
20			*543	1,810	1,700	1,760	1,860	1,810	1,830	---	---	2,070
21				1,860	1,790	1,820	1,910	1,840	1,870	---	---	2,170
22				1,880	1,850	1,870	2,030	1,900	1,950	---	---	2,240
23				1,930	1,870	1,900	2,050	2,020	2,040	---	---	2,310
24			*1,410	2,000	1,930	1,960	2,080	2,030	2,060	---	---	2,380
25				2,050	2,000	2,020	2,060	1,970	2,010	---	---	2,430
26				2,060	2,020	2,040	1,980	1,870	1,920	---	---	2,610
27			*1,320	2,040	2,010	2,030	1,990	1,870	1,910	---	---	2,680
28				2,020	1,980	1,990	2,070	1,990	2,040	---	---	2,730
29				1,990	1,970	1,990	2,110	2,060	2,090	---	---	2,860
30				2,010	1,960	1,990	2,110	2,060	2,080	---	---	---
31				1,980	1,940	1,960	---	---	---	---	---	3,030
MONTH				2,280	1,560	1,860	2,110	1,620	1,870	---	---	2,270

*--Instantaneous value from USGS or observer samples.

06324500 POWDER RIVER AT MOORHEAD, MT—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS—CONTINUED
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	JUNE			JULY			AUGUST			SEPTEMBER		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	---	---	3,010	4,000	3,910	3,960	1,600	1,560	1,580	1,910	1,630	1,750
2	---	---	3,020	3,970	3,890	3,930	1,840	1,600	1,690	1,630	1,560	1,580
3	---	---	3,090	3,940	3,610	3,780	2,020	1,660	1,910	1,570	1,530	1,550
4	---	---	3,200	3,610	3,320	3,460	2,010	1,960	1,980	1,570	1,490	1,540
5	---	---	3,230	4,170	2,990	3,740	2,170	1,980	2,060	1,500	1,470	1,480
6	---	---	3,320	2,990	2,040	2,250	2,250	2,170	2,220	1,480	1,460	1,470
7	---	---	3,370	2,100	1,920	1,990	2,300	2,180	2,230	1,480	1,390	1,440
8	---	---	3,530	1,980	1,920	1,940	2,320	2,280	2,290	1,550	1,390	1,460
9	---	---	3,640	2,520	1,980	2,260	2,290	2,270	2,280	1,550	1,310	1,450
10	---	---	3,820	2,990	2,120	2,470	2,310	2,260	2,280	1,310	1,250	1,270
11	---	---	3,700	3,240	2,990	3,110	2,330	2,290	2,310	1,260	1,240	1,250
12	---	---	3,640	3,200	2,970	3,080	2,290	2,250	2,270	1,250	1,210	1,220
13	---	---	3,530	2,980	2,470	2,800	2,360	2,270	2,310	1,230	1,200	1,210
14	---	---	3,450	2,470	2,360	2,400	2,350	2,180	2,290	1,260	1,200	1,220
15	---	---	3,560	2,460	2,410	2,430	2,180	2,120	2,130	1,260	1,220	1,230
16	---	---	3,590	2,960	2,460	2,690	2,230	2,120	2,170	1,290	1,240	1,260
17	---	---	3,700	3,080	2,960	3,030	2,320	2,200	2,260	1,410	1,280	1,340
18	---	---	3,770	3,120	3,040	3,070	2,250	2,190	2,220	1,410	1,370	1,390
19	---	---	3,840	3,320	3,120	3,210	2,330	2,240	2,290	1,440	1,360	1,410
20	---	---	3,840	3,500	3,320	3,420	2,330	2,300	2,310	1,360	1,210	1,280
21	---	---	---	3,690	3,500	3,610	2,330	2,300	2,310	1,210	1,190	1,190
22	3,620	3,420	3,470	3,650	3,420	3,530	2,340	2,290	2,310	1,200	1,170	1,190
23	3,420	3,300	3,340	3,420	2,990	3,220	2,340	2,310	2,320	1,170	1,120	1,140
24	3,340	3,180	3,250	3,020	2,610	2,890	2,370	2,320	2,340	1,160	1,080	1,120
25	3,390	3,240	3,300	2,670	2,330	2,480	2,480	2,360	2,410	1,100	996	1,050
26	3,410	3,340	3,380	2,720	1,470	1,870	2,520	2,190	2,410	1,020	968	997
27	3,500	3,390	3,430	2,760	1,480	2,570	2,190	1,870	1,970	1,010	932	962
28	3,650	3,490	3,560	2,540	1,770	2,060	1,900	1,870	1,890	932	894	906
29	3,670	3,570	3,620	1,770	1,600	1,640	1,890	1,870	1,880	919	891	902
30	3,950	3,670	3,830	1,710	1,620	1,670	2,060	1,890	1,960	941	913	929
31	---	---	---	1,640	1,590	1,620	2,080	1,910	2,010	---	---	---
MONTH	3,950	3,180	3,480	4,170	1,470	2,780	2,520	1,560	2,160	1,910	891	1,270

*--Instantaneous value from USGS or observer samples.

YELLOWSTONE RIVER BASIN

06324970 LITTLE POWDER RIVER ABOVE DRY CREEK, NEAR WESTON, WY

LOCATION.--Lat 44°55'37", long 105°21'10", in NW¹/₄ SW¹/₄ 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 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.04	0.03	0.52	e0.20	0.50	e4.0	1.4	0.79	1.00	0.08	e2.1	0.09
2	0.03	0.04	0.66	e0.15	0.45	e3.6	1.4	0.75	0.80	0.07	1.4	0.13
3	0.02	0.04	0.67	e0.18	0.37	e3.8	1.3	0.80	0.65	0.07	0.93	0.15
4	0.02	0.04	0.73	0.16	0.34	e4.0	1.2	0.69	0.59	0.39	0.52	0.15
5	0.01	0.04	0.56	0.14	0.36	e4.4	1.1	0.60	0.52	0.25	0.25	0.17
6	0.01	0.04	e0.50	0.08	0.33	e4.7	0.95	0.53	0.37	0.19	0.17	0.17
7	0.00	0.04	e0.40	0.07	e0.20	e4.9	0.85	0.50	0.35	13	0.13	0.22
8	0.00	0.04	e0.52	0.08	e0.17	e5.0	0.69	0.49	0.26	9.2	0.08	0.23
9	0.00	0.04	e0.60	0.08	e0.22	5.5	1.1	0.41	0.24	4.7	0.05	0.25
10	0.01	0.04	0.63	0.09	e0.24	9.0	1.0	0.48	0.19	2.1	0.04	0.22
11	0.01	0.06	0.65	0.09	e0.22	23	0.79	0.48	0.21	0.69	0.04	0.24
12	0.01	e0.10	0.49	0.09	e0.20	12	0.68	0.43	0.21	0.36	0.04	0.25
13	0.01	0.23	0.46	0.11	e0.18	11	0.67	0.38	0.14	0.14	0.03	0.27
14	0.01	0.32	0.63	0.17	e0.15	9.5	0.58	0.49	0.13	0.05	0.04	0.22
15	0.01	0.32	0.88	0.26	e0.18	7.6	0.63	0.48	0.13	0.03	0.04	0.26
16	0.01	0.34	0.84	0.26	e0.25	5.9	0.55	0.60	0.12	0.02	0.03	0.26
17	0.01	0.27	0.91	0.27	e0.31	5.5	0.57	0.84	0.12	0.01	0.03	0.26
18	0.01	0.25	0.91	0.34	e0.50	6.7	0.67	1.2	0.11	0.01	0.04	0.27
19	0.02	0.28	0.78	0.49	e3.0	6.5	0.76	1.3	0.09	0.01	0.04	0.32
20	0.02	0.40	0.81	0.52	e20	6.9	0.77	0.99	0.10	0.01	0.04	0.37
21	0.02	0.47	0.86	0.51	e50	9.3	1.1	1.0	0.09	0.01	0.04	0.39
22	0.02	0.46	0.75	0.56	e90	11	1.4	1.3	0.09	0.01	0.04	0.40
23	0.02	0.39	0.62	0.65	e40	7.7	1.3	5.7	0.08	0.02	0.04	0.36
24	0.02	e0.30	0.59	0.65	e18	6.3	1.3	4.8	0.08	0.01	0.04	0.36
25	0.03	e0.20	0.60	0.67	e15	5.6	1.1	2.3	0.07	19	0.04	0.37
26	0.02	e0.25	0.62	0.69	e10	4.5	0.94	1.3	0.05	50	0.05	0.48
27	0.02	e0.28	0.73	0.67	e8.0	3.8	0.85	1.3	0.04	9.5	0.05	0.47
28	0.02	0.30	0.69	0.33	e6.0	3.4	0.76	1.3	0.04	4.5	0.07	0.33
29	0.03	0.38	0.54	0.29	5.0	2.7	0.78	1.3	0.05	3.8	0.07	0.52
30	0.04	0.51	e0.30	0.36	---	2.1	0.77	1.3	0.09	e3.3	0.07	0.52
31	0.04	---	e0.25	0.47	---	1.6	---	1.2	---	e2.6	0.08	---
TOTAL	0.54	6.50	19.70	9.68	270.17	201.5	27.96	36.03	7.01	124.13	6.63	8.70
MEAN	0.02	0.22	0.64	0.31	9.32	6.50	0.93	1.16	0.23	4.00	0.21	0.29
MAX	0.04	0.51	0.91	0.69	90	23	1.4	5.7	1.0	50	2.1	0.52
MIN	0.00	0.03	0.25	0.07	0.15	1.6	0.55	0.38	0.04	0.01	0.03	0.09
AC-FT	1.1	13	39	19	536	400	55	71	14	246	13	17

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1973 - 2004, BY WATER YEAR (WY)

MEAN	10.6	3.62	2.44	7.61	35.6	58.3	22.7	54.8	26.8	10.5	5.20	3.76
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	0.01	0.01	0.21	0.10	0.46	1.34	0.75	1.04	0.23	0.04	0.00	0.00
(WY)	(1992)	(1982)	(1982)	(1991)	(1989)	(1981)	(1981)	(1992)	(2004)	(1980)	(1991)	(1991)

SUMMARY STATISTICS

FOR 2003 CALENDAR YEAR

FOR 2004 WATER YEAR

WATER YEARS 1973 - 2004

ANNUAL TOTAL	2,986.86	718.55	
ANNUAL MEAN	8.18	1.96	20.1
HIGHEST ANNUAL MEAN			127
LOWEST ANNUAL MEAN			1.49
HIGHEST DAILY MEAN	135	Mar 14	e90
LOWEST DAILY MEAN	0.00	Many days	0.00
ANNUAL SEVEN-DAY MINIMUM	0.00	Aug 3	0.01
MAXIMUM PEAK FLOW	--		a102
MAXIMUM PEAK STAGE	--		b4.53
ANNUAL RUNOFF (AC-FT)	5,920	1,430	14,570
10 PERCENT EXCEEDS	18	4.7	32
50 PERCENT EXCEEDS	0.84	0.37	2.6
90 PERCENT EXCEEDS	0.01	0.03	0.02

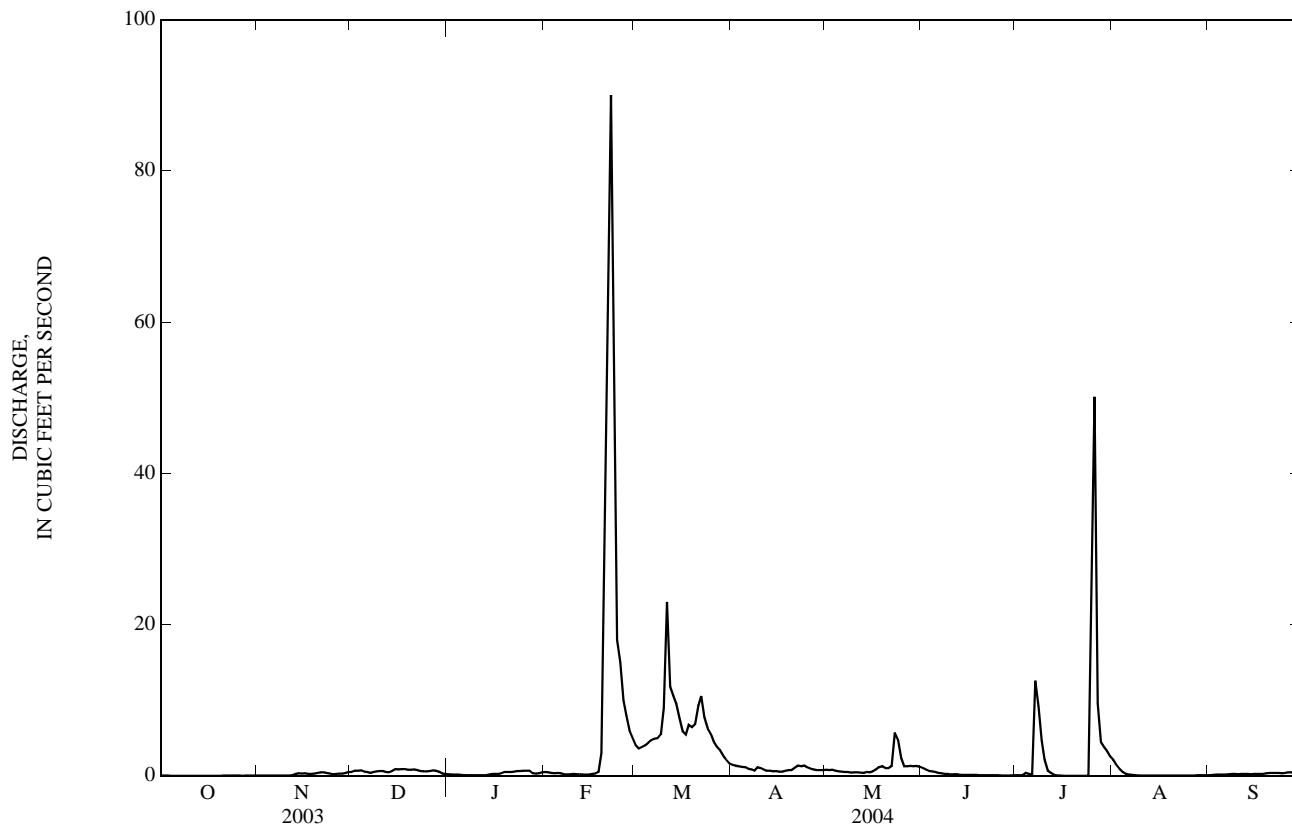
a--Gage height, 4.03 ft.

b--Backwater from ice.

c--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.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

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, water, unfltrd uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, 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	16...	0850	.01	677	6.7	64	7.8	3,400	7.0	8.0	1,000	199	125	17.4
NOV	14...	0800	.37	669	9.0	74	7.7	5,250	0.0	1.0	1,500	276	198	28.2
DEC	16...	1600	.80	674	10.0	78	7.9	3,690	3.0	0.0	1,000	196	127	23.6
JAN	21...	1400	.48	676	9.2	72	7.9	5,210	8.0	0.0	1,600	313	200	33.6
FEB	24...	1500	23	670	11.5	90	7.7	725	12.0	0.0	160	35.5	17.5	10.2
MAR	09...	1630	8.6	669	12.8	115	8.1	1,640	20.0	5.0	370	78.4	42.7	10.9
APR	13...	1500	1.1	670	10.2	118	8.2	3,240	27.0	15.5	840	154	110	19.2
MAY	11...	1630	.50	663	8.7	110	8.2	3,810	12.5	19.0	1,000	186	135	24.4
JUN	07...	1435	.27	666	7.1	102	8.4	3,420	25.5	26.0	760	138	100	20.3
JUL	07...	1300	21	667	6.9	90	8.2	3,600	32.0	21.0	680	111	97.4	20.7
AUG	25...	0945	.04	666	5.7	69	8.1	3,030	22.5	17.5	850	172	101	17.7
SEP	09...	1130	.23	671	8.2	106	8.1	3,340	26.5	21.0	880	164	114	16.9

06324970 LITTLE POWDER RIVER ABOVE DRY CREEK, NEAR WESTON, WY—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004--CONTINUED

Date	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	ANC, wat unfixed end pt, lab, mg/L as CaCO3 (90410)	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)	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)
OCT 16...	7	491	370	--	385	470	--	114	.9	12.7	1,450	--	--
NOV 14...	10	859	456	415	306	373	--	190	.7	9.13	2,560	4,300	6.24
DEC 16...	8	598	--	379	456	556	--	35.2	.9	11.5	1,730	--	--
JAN 21...	11	977	538	533	706	813	24	93.1	1.2	16.2	2,530	4,590	6.16
FEB 24...	3	77.4	98	98	95	116	--	21.9	.3	5.99	214	442	.67
MAR 09...	5	223	206	206	195	234	2	30.9	.5	6.85	595	1,110	1.58
APR 13...	8	507	421	349	--	--	--	40.1	.7	6.60	1,360	2,400	3.43
MAY 11...	8	617	399	387	412	503	--	64.4	.8	4.57	1,710	2,990	4.27
JUN 07...	9	539	331	320	--	--	--	62.9	.8	3.55	1,420	2,470	3.52
JUL 07...	10	602	334	331	311	373	3	40.5	.7	3.07	1,590	2,660	3.80
AUG 25...	6	426	389	377	--	--	--	80.1	.9	10.9	1,210	2,240	3.14
SEP 09...	7	449	332	363	420	512	--	99.2	1.0	10.5	1,380	2,490	3.61

Date	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)	Nitrite water, fltrd, mg/L as N (00613)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)	Aluminum, water, unfltrd recover-able, ug/L (01105)	Arsenic water, fltrd, ug/L (01000)	Arsenic water unfltrd ug/L (01002)	Barium, unfltrd recover-able, ug/L (01007)	Beryllium, water, unfltrd recover-able, ug/L (01012)	Boron, water, unfltrd recover-able, ug/L (01022)
OCT 16...	--	2,690	E.02	<.06	<.008	<.006	.053	526	1.1	<2	44	E.07	158
NOV 14...	4.58	4,580	E.04	<.06	<.008	<.006	.052	366	1.0	<2	41	<.18	258
DEC 16...	--	3,140	<.04	<.06	<.008	<.006	.013	97	1.0	<4	30	<.12	246
JAN 21...	5.87	4,530	<.04	<.06	<.008	<.006	.038	158	1.2	<2	41	<.18	E334
FEB 24...	30.7	495	<.04	.22	.011	.068	.36	4,630	1.0	3	53	.50	55
MAR 09...	27.0	1,160	<.04	<.06	<.008	<.006	.093	876	.5	E2	30	.06	92
APR 13...	7.48	2,520	--	--	--	--	--	239	1.2	E1	52	<.12	204
MAY 11...	4.24	3,140	<.04	<.06	<.008	<.006	.046	600	1.2	<2	51	E.08	225
JUN 07...	1.89	2,590	--	--	--	--	--	415	1.3	<2	47	E.06	197
JUL 07...	160	2,800	<.04	<.06	<.008	<.006	.089	725	1.1	E2	48	.12	213
AUG 25...	.25	2,310	--	--	--	--	--	427	1.4	3	70	<.12	185
SEP 09...	1.65	2,660	<.04	<.06	<.008	<.006	.022	175	1.0	E1	44	<.12	200

E--Estimated.

06324970 LITTLE POWDER RIVER ABOVE DRY CREEK, NEAR WESTON, WY—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004--CONTINUED

Date	Cadmium water, unfltrd ug/L (01027)	Chrom- ium, 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)	Mangan- ese, water, fltrd, ug/L (01056)	Mangan- ese, water, unfltrd recover- able, ug/L (01055)	Nickel, water, unfltrd recover- able, ug/L (01067)	Selen- ium, water, unfltrd ug/L (01147)	Zinc, water, unfltrd recover- able, ug/L (01092)	Sus- pended sediment concentration mg/L (80154)	Sus- pended sediment dis- charge, tons/d (80155)
OCT 16...	<.08	E.6	14.2	<19	930	1.16	774	789	9.46	1.8	11	272	.01
NOV 14...	<.12	<.8	23.6	26	1,330	.97	315	323	12.6	1.2	21	175	.17
DEC 16...	<.08	<.8	16.9	E17	280	.21	146	142	10.5	1.6	10	--	--
JAN 21...	<.12	<.8	30.2	42	350	.24	176	174	13.3	1.6	15	44	.06
FEB 24...	.14	2.6	11.7	115	4,990	9.10	85.5	147	7.63	.7	37	383	24
MAR 09...	E.02	E.6	5.2	17	910	1.21	137	138	4.30	.5	6	51	1.2
APR 13...	<.08	E.6	9.0	<19	470	.67	201	248	7.45	<.8	7	99	.29
MAY 11...	<.08	E.6	9.9	<19	1,020	1.57	325	329	7.61	E.7	9	140	.19
JUN 07...	<.08	E.4	11.7	<19	550	.82	230	244	8.97	1.4	7	101	.07
JUL 07...	<.08	1.1	12.3	<19	1,170	1.64	38.8	122	7.48	1.1	11	96	5.5
AUG 25...	<.08	1.6	12.4	<19	470	.58	176	260	9.54	.9	7	162	.02
SEP 09...	<.08	<.8	15.7	<19	250	.31	113	162	7.05	2.0	6	93	.06

E--Estimated.

06325500 LITTLE POWDER RIVER NEAR BROADUS, MT

LOCATION.--Lat 45°23'25", long 105°18'15" (NAD 27), in NW¼NE¼ sec. 21, T.5 S., R.52 E., Powder River County, Hydrologic Unit 10090208, on left bank 1.5 mi downstream from East Fork, 5.5 mi southeast of Broadus, and 8 mi upstream from mouth.

DRAINAGE AREA.--1,974 mi².

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

GAGE.--None. Elevation of site is 3,020 ft (NGVD 29).

REMARKS.--Data collected from April 2001 to February 2002 at station 06325550, Little Powder River at mouth, near Broadus. Site moved to current location in March 2002. No lab data for sample taken on Sept. 14 because bottles were lost during shipment.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

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, water, unfltrd uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, 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														
08...	0800	1.9	679	9.6	96	8.5	1,670	16.0	10.0	120	29.6	11.1	3.05	
NOV														
14...	1000	3.0	678	12.6	99	8.5	1,620	10.5	.5	120	29.1	11.3	2.60	
DEC														
03...	1700	4.8	682	14.4	111	8.3	2,490	1.0	.0	520	114	56.7	13.7	
JAN														
07...	1045	2.4	682	10.8	83	8.3	1,960	-1.0	.0	220	52.6	21.1	5.26	
FEB														
25...	0745	23	679	13.3	103	7.1	1,250	5.5	.0	300	76.3	26.7	18.2	
MAR														
10...	0800	15	686	--	--	8.1	1,460	.5	1.5	280	66.5	28.5	8.90	
APR														
13...	1730	4.6	677	10.3	120	8.5	2,260	26.0	16.5	330	72.6	35.8	7.80	
MAY														
12...	0800	4.9	682	9.9	97	8.5	2,610	2.5	9.0	450	90.7	55.4	12.5	
JUN														
08...	0700	2.9	682	9.2	108	8.7	2,000	11.5	17.5	170	34.9	21.3	4.67	
JUL														
12...	1600	3.0	680	6.7	98	8.3	1,750	30.5	28.5	120	28.9	12.3	5.70	
AUG														
17...	1400	2.9	682	7.2	90	8.9	1,730	25.0	21.0	150	35.5	15.1	5.29	
SEP														
14...	1500	3.0	677	10.2	118	8.7	1,670	17.0	16.5	--	--	--	--	
Date		Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	Alkalinity, water fltrd 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 (70301)	Residue water, fltrd, tons/acre-ft (70303)	Residue water, fltrd, tons/d (70302)	Ammonia, fltrd, mg/L as N (00608)	Nitrite + nitrate water, fltrd, mg/L as N (00631)
OCT														
08...	14	350	86	388	4.62	.2	9.1	455	1,100	1.49	5.62	<.04	E.011	
NOV														
14...	13	339	86	392	5.93	.2	10.4	435	1,070	1.45	8.65	.05	.045	
DEC														
03...	7	385	61	352	37.6	.6	10.3	942	1,770	2.41	23.0	E.03	.026	
JAN														
07...	11	373	78	401	13.0	.3	12.3	575	1,290	1.76	8.38	.09	.078	
FEB														
25...	4	144	49	175	31.1	.5	10.1	410	823	1.12	51.1	.016	.223	
MAR														
10...	6	247	65	251	15.1	.3	8.1	485	1,010	1.37	40.9	.015	.016	
APR														
13...	10	425	73	359	17.3	.4	7.7	751	1,530	2.08	19.0	E.007	<.016	
MAY														
12...	10	496	70	392	22.8	.4	6.8	998	1,920	2.61	25.4	<.010	<.016	
JUN														
08...	13	397	83	411	9.69	.3	4.4	597	1,320	1.79	10.3	<.010	<.016	
JUL														
12...	14	348	85	400	7.35	.3	12.5	479	1,130	1.54	9.19	.066	.098	
AUG														
17...	12	329	82	397	7.69	.3	8.8	484	1,120	1.53	8.80	<.010	<.016	
SEP														
14...	--	--	--	--	--	--	--	--	--	--	--	--	--	--

E--Estimated.

06325500 LITTLE POWDER RIVER NEAR BROADUS, MT—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Nitrite water, fltrd, mg/L as N (00613)	Total nitrogen, water unfltrd mg/L (62855)	Ortho-phosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)	Arsenic water unfltrd ug/L (01002)	Barium, water, unfltrd recover-able, ug/L (01007)	Boron, water, unfltrd recover-able, ug/L (01022)	Cadmium water, unfltrd ug/L (01027)	Chromium, water, unfltrd recover-able, ug/L (01034)	Copper, water, unfltrd recover-able, ug/L (01042)	Iron, water, unfltrd recover-able, ug/L (01045)
OCT 08...	.002	.37	<.006	.071	3	68	79	.05	1.5	8.0	2,040
NOV 14...	.003	.35	<.006	.045	3	50	68	.05	1.3	7.8	1,630
DEC 03...	.002	.33	<.006	.038	<2	45	131	<.08	2.4	11.1	1,190
JAN 07...	.004	.39	.006	.052	3	45	80	.05	1.0	8.9	1,470
FEB 25...	.010	1.72	.050	.21	3	52	68	.08	1.7	8.9	4,000
MAR 10...	.002	.59	<.006	.081	<2	37	61	.05	1.3	5.7	1,720
APR 13...	<.002	.45	<.006	.085	3	61	95	.06	2.5	7.7	2,630
MAY 12...	E.001	.66	<.006	.114	4	56	130	E.07	2.0	10.0	3,240
JUN 08...	E.001	.28	<.006	.098	5	50	84	.05	2.0	9.4	2,260
JUL 12...	.020	.65	.016	.066	6	64	74	.05	1.3	8.4	740
AUG 17...	<.002	.79	<.006	.180	7	98	94	.14	5.2	11.1	5,640
SEP 14...	--	--	--	--	--	--	--	--	--	--	--

Date	Lead, water, unfltrd recover-able, ug/L (01051)	Manganese, water, unfltrd recover-able, ug/L (01055)	Nickel, water, unfltrd recover-able, ug/L (01067)	Selenium, water, unfltrd ug/L (01147)	Zinc, water, unfltrd recover-able, ug/L (01092)	Suspended sediment, percent <.063mm (70331)	Suspended sediment concentration mg/L (80154)	Suspended sediment discharge, tons/d (80155)
OCT 08...	2.22	84.2	5.48	.8	11	96	107	.55
NOV 14...	1.61	89.5	4.06	<.4	9	94	87	.70
DEC 03...	1.15	89.8	6.75	E.5	13	94	115	1.5
JAN 07...	1.41	84.6	4.42	.9	11	91	115	.75
FEB 25...	3.17	179	6.77	.6	15	99	136	8.4
MAR 10...	1.84	151	4.64	.5	9	96	80	3.2
APR 13...	2.68	214	5.97	E.3	11	93	192	2.4
MAY 12...	3.55	219	7.46	.8	14	90	225	3.0
JUN 08...	2.56	141	5.87	.5	11	99	94	.74
JUL 12...	.71	27.5	5.64	1.1	6	99	25	.20
AUG 17...	6.25	275	8.86	E.3	22	99	248	1.9
SEP 14...	--	--	--	--	--	99	167	1.4

E--Estimated.

06326500 POWDER RIVER NEAR LOCATE, MT

LOCATION.--Lat 46°25'48", long 105°18'34" (NAD 27), in SW¹/₄SW¹/₄SE¹/₄ sec. 23, T.8 N., R.51 E., Custer County, Hydrologic Unit 10090209, on left bank at downstream side of bridge on U.S. Highway 12, 0.1 mi west of Locate, and 25 mi east of Miles City, and at river mile 29.4.

DRAINAGE AREA.--13,068 mi².

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

WATER-DISCHARGE RECORDS

REVISED RECORDS.--WSP 926: 1939. WSP 1309: 1938-39 (M). WSP 1729: Drainage area. WDR MT-04-1: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 2,384.79 ft (NGVD 29) (levels by U.S. Army Corps of Engineers). Prior to July 11, 1947, nonrecording gage at bridge 1.5 mi upstream, and July 11, 1947 to Sept. 30, 1965, water-stage recorder at site near upstream bridge at different elevation. Oct. 1, 1965 to Oct. 4, 1966, nonrecording gage, and Oct. 5, 1966 to Mar. 21, 1978, water-stage recorder at present site and elevation. Mar. 22, 1978 to Apr. 23, 1981, water-stage recorder 1.5 mi upstream at different elevation. Apr. 24 to Aug. 20, 1981, water-stage recorder at present site and elevation, and Aug. 21, 1981 to Sept. 30, 1981, water-stage recorder 1.5 mi upstream at different elevation. Oct. 1, 1981 to Apr. 5, 1995 water-stage recorder at site 1.5 miles downstream at different elevation. Apr. 7, 1995 to present, water-stage recorders located on each bank and used depending on control conditions.

REMARKS.--Water-discharge records fair except those for 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 101,800 acres upstream from station. U.S. Army Corps of Engineers satellite telemeter at station.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	76	81	e80	e80	e60	e70	262	59	65	20	48	2.4
2	75	87	e90	e70	e60	e70	240	63	64	14	66	2.0
3	75	79	e100	e60	e60	e70	271	51	55	10	43	2.8
4	76	67	e90	e50	e60	e75	267	51	42	9.7	218	3.4
5	75	e40	e80	e40	e55	e80	259	34	39	10	229	3.2
6	75	e45	e100	e45	e55	e80	247	30	26	11	133	2.7
7	71	e45	e110	e50	e55	e80	233	29	24	11	86	2.4
8	64	e50	e120	e60	e55	e80	234	27	28	19	69	2.4
9	61	e55	e120	e70	e60	e80	204	20	25	23	69	2.7
10	60	e60	e110	e70	e70	e90	183	17	24	20	58	2.4
11	49	e60	e100	e70	e65	e100	173	18	35	20	39	2.4
12	47	e60	e110	e70	e65	e200	182	17	50	19	28	4.7
13	46	e60	e120	e70	e60	e300	193	21	42	17	21	12
14	47	e60	e120	e70	e65	469	184	20	31	16	14	33
15	47	e55	e110	e70	e65	605	168	18	23	11	8.3	53
16	48	e60	e100	e70	e70	704	158	20	17	8.1	5.3	45
17	48	e65	e110	e70	e70	597	145	37	22	6.6	4.2	29
18	53	e70	e100	e70	e75	529	154	48	12	5.2	3.4	22
19	51	e70	e100	e70	e75	e500	156	57	14	4.1	2.7	19
20	47	e65	e100	e70	e80	e500	139	67	16	4.2	2.5	19
21	47	e60	e100	e70	e75	e450	107	104	15	3.5	3.2	20
22	49	e50	e100	e70	e75	e450	102	70	15	2.8	4.2	17
23	44	e45	e100	e80	e70	e400	96	64	13	2.6	4.5	15
24	37	e50	e100	e75	e75	354	82	118	13	2.6	4.2	14
25	44	e60	e100	e70	e75	350	75	152	13	2.3	3.3	14
26	42	e70	e100	e60	e80	323	98	76	12	2.1	3.1	16
27	38	e80	e100	e50	e80	289	95	78	12	2.0	2.9	e17
28	45	e90	e90	e50	e80	263	77	70	10	3.5	2.7	e17
29	88	e100	e80	e50	e75	271	78	56	9.6	3.1	2.4	e13
30	87	e90	e80	e60	---	285	65	51	11	3.3	2.5	e30
31	71	---	e80	e60	---	277	---	43	---	2.9	2.7	---
TOTAL	1,783	1,929	3,100	1,990	1,965	8,991	4,927	1,586	777.6	289.6	1,183.1	438.5
MEAN	57.5	64.3	100	64.2	67.8	290	164	51.2	25.9	9.34	38.2	14.6
MAX	88	100	120	80	80	704	271	152	65	23	229	53
MIN	37	40	80	40	55	70	65	17	9.6	2.0	2.4	2.0
AC-FT	3,540	3,830	6,150	3,950	3,900	17,830	9,770	3,150	1,540	574	2,350	870

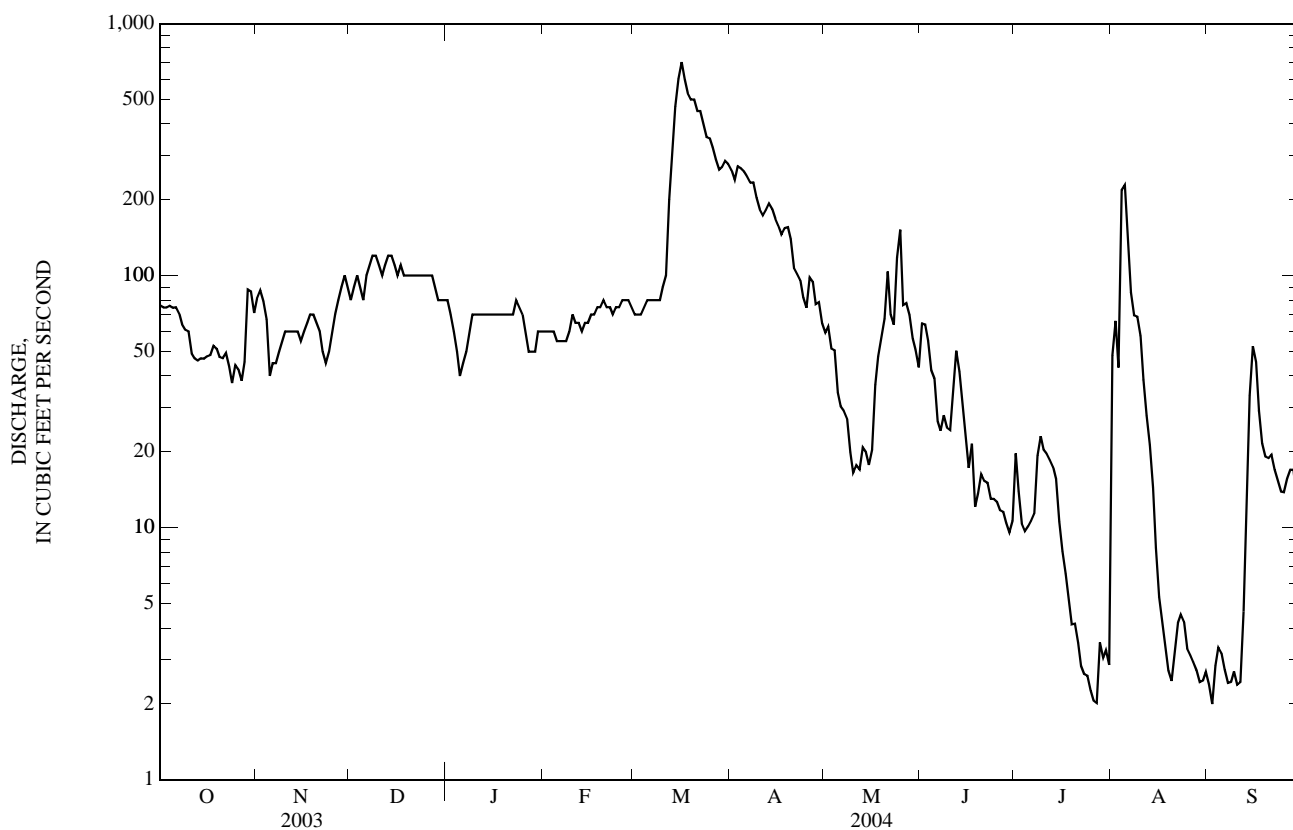
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 2004, BY WATER YEAR (WY)

MEAN	248	217	149	142	425	1,215	732	1,126	1,577	556	210	167
MAX	921	790	417	476	3,850	4,627	3,062	5,970	8,045	2,015	1,096	898
(WY)	(1941)	(1999)	(1942)	(1981)	(1943)	(1972)	(1965)	(1978)	(1944)	(1993)	(1941)	(1941)
MIN	1.77	12.5	12.5	4.53	2.82	80.2	109	51.2	25.9	9.34	1.30	0.19
(WY)	(1961)	(1961)	(1961)	(1950)	(1950)	(1950)	(1961)	(2004)	(2004)	(2004)	(1988)	(1960)

06326500 POWDER RIVER NEAR LOCATE, MT—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1939 - 2004	
ANNUAL TOTAL	93,584.09		28,959.8			
ANNUAL MEAN	256		79.1		564	
HIGHEST ANNUAL MEAN					1,622	1944
LOWEST ANNUAL MEAN					79.1	2004
HIGHEST DAILY MEAN	2,000	Mar 18	704	Mar 16	26,000	Feb 19, 1943
LOWEST DAILY MEAN	0.10	Sep 8	2.0	Jul 27	0.00	Jan 16, 1950
ANNUAL SEVEN-DAY MINIMUM	0.17	Sep 2	2.5	Aug 28	0.00	Jan 16, 1950
MAXIMUM PEAK FLOW			a875	Mar 15	31,000	Feb 19, 1943
MAXIMUM PEAK STAGE			b4.14	Mar 8	b12.20	Mar 16, 1978
INSTANTANEOUS LOW FLOW					c0.00	Many days
ANNUAL RUNOFF (AC-FT)	185,600		57,440		408,300	
10 PERCENT EXCEEDS	694		170		1,310	
50 PERCENT EXCEEDS	130		60		230	
90 PERCENT EXCEEDS	8.7		4.2		39	

a--Gage height, 2.63 ft.
 b--Backwater from ice.
 c--On many days in 1950, 1960-61, and 1998.
 e--Estimated.



WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1948-63, 1975 to September 1994, January 1999 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: January 1951 to September 1962, October 1974 to September 1981, July 1988 to January 1990.

SUSPENDED-SEDIMENT DISCHARGE: October 1974 to September 1984.

REMARKS.--Data for Sept. 15 missing because sample bottles were lost during shipment to the lab.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE (water years 1951-62, 1975-81, 1988-90): Maximum daily, 4,000 microsiemens per centimeter ($\mu\text{S}/\text{cm}$) at 25.0°C, Apr. 1, 1977; minimum daily, 523 $\mu\text{S}/\text{cm}$ at 25.0°C, Mar. 11, 12, 1989.

SEDIMENT CONCENTRATION: Maximum daily mean, 56,800 mg/L May 6, 1975; minimum daily mean, 1.8 mg/L July 30, 1977.

SEDIMENT LOAD: Maximum daily, 906,000 tons May 6, 1975; minimum daily, 1.2 tons July 20, 1981.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

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, water, unfltrd uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, 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 09...	0830	63	692	10.9	108	8.3	1,950	17.0	10.5	570	126	62.6	9.33
NOV 13...	0830	E60	704	11.6	87	8.3	2,640	2.0	0.0	740	161	82.2	9.40
DEC 17...	0900	E110	698	10.2	77	8.2	2,260	8.0	0.0	770	181	76.2	8.68
JAN 22...	1230	E70	702	5.3	40	8.0	2,540	5.5	0.0	830	200	80.0	8.90
FEB 19...	0720	E75	--	--	--	8.4	1,270	4.0	0.0	440	120	34.3	6.13
MAR 23...	1500	E400	689	10.7	109	7.9	1,790	23.0	11.5	520	126	50.6	8.10
APR 14...	1400	186	690	10.0	109	8.4	2,120	22.0	14.5	570	131	59.6	8.13
MAY 13...	0830	19	706	13.5	106	8.4	2,590	4.5	2.0	610	132	68.6	9.26
JUN 09...	0730	26	700	9.8	100	8.8	3,020	13.0	12.0	680	140	79.9	12.2
JUL 14...	0830	16	695	8.3	101	8.3	3,110	28.5	20.0	610	126	72.1	12.2
AUG 19...	0730	3.1	700	9.9	98	8.4	2,860	10.0	10.5	620	135	68.4	13.7
SEP 15...	1630	39	695	8.1	99	8.3	2,290	20.0	20.0	--	--	--	--

Date	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	ANC, water, unfltrd fixed end pt, lab, mg/L as CaCO ₃ (90410)	Alkalinity, water, fltrd 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 water, fltrd, mg/L as N (00608)
OCT 09...	5	254	49	214	179	64.1	.4	7.0	801	1,430	1.95	244	<.04
NOV 13...	5	341	50	305	211	138	.5	8.8	1,020	1,890	2.57	E307	.04
DEC 17...	4	265	43	--	184	131	.5	11.5	809	1,600	2.17	E474	.07
JAN 22...	5	311	45	266	184	152	.5	13.9	910	1,790	2.43	E338	.07
FEB 19...	2	119	37	130	123	42.5	.4	7.9	486	891	1.21	E180	.182
MAR 23...	4	232	49	414	199	67.6	.6	7.8	666	1,280	1.74	E302	E.007
APR 14...	5	281	51	271	189	120	.5	8.2	741	1,460	1.99	735	E.009
MAY 13...	7	391	58	215	265	109	.4	11.5	997	1,880	2.55	96.3	E.005
JUN 09...	8	473	60	225	224	159	.4	11.4	1,160	2,170	2.95	152	E.005
JUL 14...	9	489	63	236	231	131	.5	7.8	1,280	2,260	3.08	97.7	E.005
AUG 19...	8	449	61	--	266	118	.4	12.4	1,190	2,150	2.92	18.0	E.006
SEP 15...	--	--	--	--	--	--	--	--	--	--	--	--	--

E--Estimated.

06326500 POWDER RIVER NEAR LOCATE, MT—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004--CONTINUED

Date	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Total nitrogen, water, unfltrd mg/L (62855)	Ortho-phosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)	Arsenic water unfltrd ug/L (01002)	Barium, water, unfltrd recover-able, ug/L (01007)	Boron, water, unfltrd recover-able, ug/L (01022)	Cadmium water, unfltrd ug/L (01027)	Chromium, water, unfltrd recover-able, ug/L (01034)	Copper, water, unfltrd recover-able, ug/L (01042)	Iron, water, unfltrd recover-able, ug/L (01045)	Lead, water, unfltrd recover-able, ug/L (01051)
OCT 09...	<.016	--	.64	--	.181	E2	80	212	.15	3.2	14.2	4,370	3.36
NOV 13...	.073	E.001	.51	<.006	.054	6	56	270	E.05	1.6	12.1	1,060	.92
DEC 17...	.417	E.001	1.01	<.006	.35	<2	111	215	.24	4.1	13.7	5,660	5.19
JAN 22...	.505	.006	.87	E.003	.101	E1	69	281	E.07	1.3	14.5	2,210	1.53
FEB 19...	.223	.014	.78	E.005	.101	<2	39	105	.10	1.0	6.8	2,300	2.60
MAR 23...	.485	E.001	2.83	E.004	2.98	14	538	205	2.21	41.9	72.4	69,600	58.3
APR 14...	<.016	<.002	.57	<.006	.29	3	109	213	.24	4.6	11.2	6,980	5.19
MAY 13...	E.013	E.001	.23	<.006	.006	<2	33	220	<.08	<.8	5.9	60	<.12
JUN 09...	<.016	E.001	.25	E.003	.005	<2	54	280	<.08	<.8	10.5	120	E.09
JUL 14...	<.016	<.002	.63	<.006	.133	E1	114	300	.08	4.3	15.2	3,700	4.16
AUG 19...	<.016	<.002	.33	<.006	.013	<2	69	315	<.08	E.4	11.2	220	.20
SEP 15...	--	--	--	--	--	--	--	--	--	--	--	--	--

Date	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)	Suspended sediment, percent <.063mm (70331)	Suspended sediment concentration mg/L (80154)	Suspended sediment discharge, tons/d (80155)
OCT 09...	109	--	11.8	2.7	23	99	302	51
NOV 13...	29.5	--	8.09	1.6	13	95	176	E28
DEC 17...	165	--	13.9	3.8	35	96	542	E161
JAN 22...	42.4	--	8.99	2.5	21	90	144	E27
FEB 19...	83.4	--	6.77	1.6	12	99	69	E14
MAR 23...	1,240	--	92.8	4.9	288	97	4,570	E4,940
APR 14...	134	--	11.7	2.1	30	93	397	199
MAY 13...	19.6	--	4.46	E.8	E4	79	42	2.2
JUN 09...	10.9	<.02	7.37	1.8	4	85	64	4.5
JUL 14...	103	--	11.2	1.4	21	99	242	10
AUG 19...	29.0	--	8.71	E.8	5	96	57	.48
SEP 15...	--	--	--	--	--	99	8,320	876

E--Estimated.

YELLOWSTONE RIVER BASIN

06327500 YELLOWSTONE RIVER AT GLENDIVE, MT

LOCATION (REVISED)--Lat 47°06'21", long 104°43'07" (NAD 27), in SE $\frac{1}{4}$ NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 35, T. 16N., R. 55E., Dawson County, Hydrologic Unit 10100004, on right bank at City of Glendive water treatment plant, 50 feet downstream from Bell Street Bridge, and at river mile 92.4.

DRAINAGE AREA--65,900 mi².

PERIOD OF RECORD--October 1897 to December 1910, October 1931 to September 1934, October 2002 to current year.

GAGE--Water-stage recorder. Elevation of gage is 1,881.3 ft (NGVD 29) from City of Glendive. October 1897 to December 1910, October 1931 to September 1934 nonrecording gage at different datum.

REMARKS--Records good except those for estimated daily discharges, which are poor. Some regulation on tributary streams, notably Bighorn Lake, usable capacity 1,312,000 acre-ft, on the Bighorn River and other tributary streams in Wyoming and Montana. Diversions for irrigation of about 1,200,000 acres upstream of station. U.S. Geological Survey satellite telemeter at station. Several observations of water temperature and specific conductance were obtained during the year.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3,970	e4,700	e4,400	e3,100	e4,200	e4,700	5,180	4,790	9,100	16,300	5,730	4,500
2	3,940	e4,700	e4,500	e2,800	e4,000	e4,700	5,010	5,160	11,100	15,500	5,580	4,070
3	4,030	e4,700	e4,700	e2,700	e4,000	e4,800	5,080	6,070	10,000	15,700	5,510	3,940
4	4,190	e4,500	e4,700	e2,500	e4,200	e4,900	5,020	6,110	8,510	16,300	5,560	3,740
5	4,200	e4,300	e4,700	e2,300	e4,400	e5,000	5,260	5,150	7,420	15,700	5,510	3,640
6	4,190	e4,200	e4,700	e2,100	e4,400	e5,100	5,600	4,870	6,830	15,200	5,710	3,800
7	4,120	e4,100	e4,700	e2,000	e4,400	e5,300	5,620	4,920	7,460	15,500	5,200	4,330
8	4,090	e4,000	e4,600	e2,000	e4,400	e5,500	5,600	6,480	11,000	17,100	5,090	4,480
9	4,060	e4,200	e4,600	e2,100	e4,500	e5,600	5,530	9,670	15,900	16,000	5,050	4,410
10	4,000	e3,900	e4,600	e2,200	e4,500	e5,700	5,820	12,700	19,300	14,400	4,730	4,250
11	3,980	e4,200	e4,800	e2,400	e4,500	e5,500	6,260	13,500	20,200	14,100	4,520	4,190
12	3,960	e4,500	e4,900	e3,200	e4,500	e5,700	6,610	13,800	23,400	13,200	4,390	4,150
13	4,000	e4,400	e4,900	e4,300	e4,500	e5,900	6,870	13,400	30,900	12,300	4,130	4,250
14	4,200	e4,700	e4,900	e4,900	e4,300	e6,000	6,830	12,300	28,400	11,500	3,750	4,380
15	4,390	e4,700	e4,500	e5,000	e4,100	e5,800	6,440	12,000	24,000	10,500	3,460	4,530
16	4,410	e4,500	e4,700	e5,000	e4,000	e5,700	6,250	10,800	20,400	9,650	3,290	4,590
17	4,370	e4,500	e4,800	e5,000	e4,100	e5,800	6,300	9,480	17,900	8,980	3,100	4,610
18	4,530	e4,600	e5,000	e5,000	e4,200	e5,600	6,400	8,600	16,600	8,480	2,760	4,560
19	4,500	e4,800	e5,000	e5,000	e4,300	e5,700	7,000	7,840	16,000	8,150	2,740	4,880
20	4,370	4,880	e5,000	e5,000	e4,500	e5,500	6,930	7,340	15,200	7,770	2,720	5,230
21	4,260	5,100	e4,900	e5,000	e4,700	5,400	6,730	7,280	14,400	7,220	2,550	5,260
22	4,460	e5,100	e5,100	e5,000	e4,700	5,330	6,480	7,230	14,000	6,980	2,540	5,470
23	4,720	e5,100	e5,100	e5,000	e4,700	5,410	6,340	7,590	13,900	7,340	2,700	5,590
24	4,380	e5,100	e5,100	e5,100	e4,700	5,370	6,130	8,320	13,500	7,750	2,880	5,760
25	4,360	e4,500	e5,300	e5,100	e4,700	e5,600	5,830	9,370	13,300	7,350	2,820	6,060
26	4,050	e4,200	e5,100	e5,100	e4,700	4,940	5,780	10,400	13,600	7,340	2,690	5,920
27	4,130	e4,300	e4,900	e5,100	e4,700	5,140	5,290	11,100	15,000	7,150	2,750	5,750
28	4,440	e4,100	e5,000	e5,100	e4,700	5,030	5,100	10,200	16,600	6,690	2,690	5,520
29	4,770	e4,100	e5,000	e5,000	e4,700	5,290	5,210	9,000	17,200	6,460	3,080	5,620
30	e4,600	e4,300	e4,300	e4,900	---	5,480	4,880	8,120	17,000	6,130	3,500	5,710
31	e4,700	---	e3,600	e4,600	---	5,490	---	7,640	---	6,050	4,570	---
TOTAL	132,370	134,980	148,100	123,600	128,300	166,980	177,380	271,230	468,120	338,790	121,300	143,190
MEAN	4,270	4,499	4,777	3,987	4,424	5,386	5,913	8,749	15,600	10,930	3,913	4,773
MAX	4,770	5,100	5,300	5,100	4,700	6,000	7,000	13,800	30,900	17,100	5,730	6,060
MIN	3,940	3,900	3,600	2,000	4,000	4,700	4,880	4,790	6,830	6,050	2,540	3,640
AC-FT	262,600	267,700	293,800	245,200	254,500	331,200	351,800	538,000	928,500	672,000	240,600	284,000

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1898 - 2004, BY WATER YEAR (WY)*

MEAN	6,483	5,483	4,580	4,471	4,600	8,607	9,371	20,960	45,710	28,560	10,960	7,609
MAX	9,503	7,390	6,670	5,700	5,940	18,790	23,500	44,700	74,220	72,000	24,110	12,100
(WY)	(1909)	(1902)	(1898)	(1904)	(1902)	(1910)	(1899)	(1901)	(1909)	(1899)	(1907)	(1909)
MIN	4,270	4,200	2,924	3,268	3,361	5,040	4,374	8,749	12,950	4,054	2,785	2,856
(WY)	(2004)	(1900)	(1932)	(1932)	(1933)	(1899)	(1905)	(2004)	(1934)	(1934)	(1934)	(1934)

SUMMARY STATISTICS

FOR 2003 CALENDAR YEAR

FOR 2004 WATER YEAR

WATER YEARS 1898 - 2004*

ANNUAL TOTAL	2,962,670	2,354,340		
ANNUAL MEAN	8,117	6,433	13,200	
HIGHEST ANNUAL MEAN			19,610	1899
LOWEST ANNUAL MEAN			6,061	1934
HIGHEST DAILY MEAN	53,000	Jun 4	30,900	Jun 13
LOWEST DAILY MEAN	2,200	Mar 12	2,000	Jan 7, 8
ANNUAL SEVEN-DAY MINIMUM	2,800	Jan 12	2,160	Jan 5
MAXIMUM PEAK FLOW			a32,200	Jun 13
MAXIMUM PEAK STAGE			b48.76	Dec 1
INSTANTANEOUS LOW FLOW				d1,060
ANNUAL RUNOFF (AC-FT)	5,876,000	4,670,000	9,560,000	
10 PERCENT EXCEEDS	17,600	13,200	34,200	
50 PERCENT EXCEEDS	4,700	5,000	6,600	
90 PERCENT EXCEEDS	3,300	3,950	4,100	

*--During periods of operation (October 1897 to December 1910, October 1931 to September 1934, October 2002 to current year).

a--Gage height, 47.33 ft.

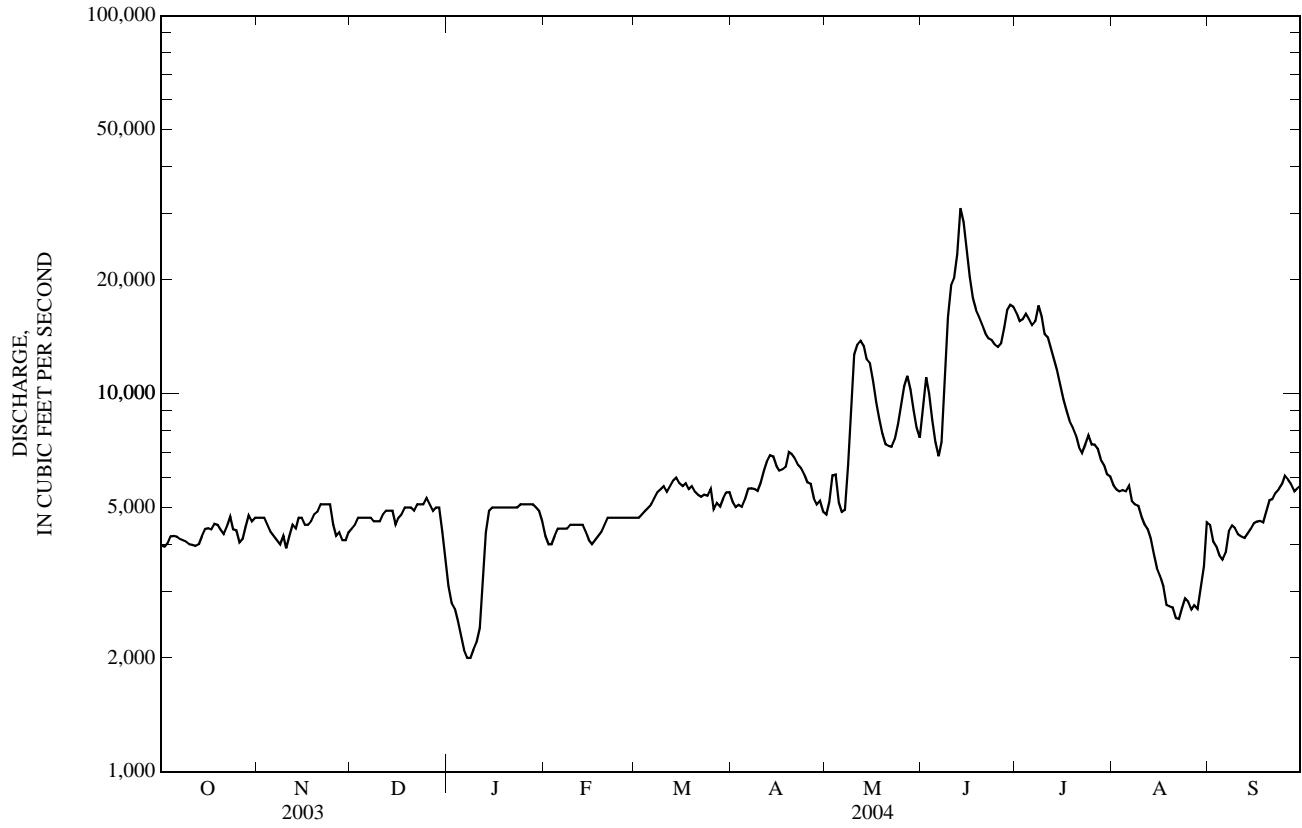
b--Backwater from ice.

c--Observed, gage height, 12.70 ft, datum then in use.

d--Observed.

e--Estimated.

06327500 YELLOWSTONE RIVER AT GLENDIVE, MT—Continued



YELLOWSTONE RIVER BASIN

06329500 YELLOWSTONE RIVER NEAR SIDNEY
(National Water-Quality Assessment Program)

LOCATION.--Lat 47°40'42", long 104°09'22" (NAD 27), in SW¹/₄NE¹/₄SW¹/₄ sec.9, T.22 N., R.59 E., Richland County, Hydrologic Unit 10100004, on left bank at Montana-Dakota Utilities Company powerplant, 0.2 mi downstream from bridge on State Highway 23, 2.5 mi south of Sidney, 3.0 mi downstream from Fox Creek, and at river mile 29.2.

DRAINAGE AREA.--69,083 mi². Area at site 4.5 mi upstream, 68,812 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1910 to September 1931 (published as "at Intake"), October 1933 to current year. If monthly figures of diversions to Lower Yellowstone Canal at Intake are added to records at this site, records equivalent to those published as Yellowstone River at Glendive (1898-1910, 1931-34) can be obtained. Monthly discharge only for some periods, published in WSP 1309. Monthly figures of diversions into Lower Yellowstone Canal prior to 1951 published in WSP 1309, 1951-60 published in WSP 1729, 1961-65 published in WSP 1916, 1966-70 published in WSP 2116, and 1971 to current year are published in annual reports.

REVISED RECORDS.--WDR MT-04-1: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 1,881.3 ft (NGVD 29) (levels by U.S. Army Corps of Engineers). Jan. 1, 1911, to Sept. 30, 1931, nonrecording gage at site 32 miles upstream at different elevation. Apr. 9, 1934, water-stage recorder at two sites within 500 ft of highway bridge 0.2 mi upstream and May 17, 1945, to Apr. 3, 1952, nonrecording gage on same bridge at elevation 1.36 ft higher. Apr. 4, 1952, to Nov. 19, 1967, water-stage recorder at site 4.5 mi upstream at different elevation.

REMARKS.--Water-discharge records good except those for estimated daily discharges, which are poor. Flow regulated to some extent by Bighorn Lake, usable capacity, 1,312,000 acre-ft, on the Bighorn River and on other tributary streams in Wyoming and Montana. Diversion for irrigation of about 1,250,000 acres upstream from station. Lower Yellowstone Project Main Canal diverts from left bank in NW¹/₄ sec.36, T.18 N., R.56 E., at Lower Yellowstone diversion dam at Intake about 36.6 mi upstream for irrigation of about 52,000 acres of which about one-third lies upstream from station. U. S. Army Corps of Engineers satellite telemeter at station.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3,940	4,950	e4,000	e3,400	e3,000	e4,800	5,280	2,890	7,100	14,200	4,670	3,720
2	3,940	e5,000	e4,400	e3,000	e2,600	e4,800	5,170	2,700	9,150	13,700	4,490	3,590
3	3,930	e5,000	e4,600	e2,800	e2,400	e4,800	5,020	2,790	9,950	13,100	4,350	3,270
4	4,000	e5,000	e4,800	e2,700	e2,600	e4,800	4,860	3,590	8,970	13,600	4,460	3,060
5	4,110	e4,400	e4,800	e2,600	e3,200	e4,900	4,830	3,100	7,670	13,400	4,410	2,890
6	4,110	e3,800	e4,800	e2,500	e4,500	e5,000	5,080	2,430	6,770	13,100	4,590	2,910
7	4,090	e3,700	e4,800	e2,400	e4,500	e5,100	5,400	2,030	6,470	12,900	4,590	3,120
8	4,050	e3,500	e4,800	e2,200	e4,500	e5,400	5,550	1,890	7,510	14,500	4,300	3,490
9	4,030	e3,700	e4,700	e2,100	e4,500	e5,600	5,410	3,330	11,400	14,600	4,340	3,660
10	3,950	e4,000	e4,700	e2,100	e4,600	e5,800	5,480	6,440	15,200	13,400	4,170	3,610
11	3,910	e4,300	e4,700	e2,100	e4,600	e6,000	5,770	8,320	17,700	12,300	3,880	3,510
12	3,870	e4,500	e4,500	e2,300	e4,600	e5,800	6,130	9,010	17,600	12,900	3,640	3,540
13	3,850	e4,600	e4,400	e2,600	e4,600	e6,000	6,580	9,090	22,500	11,100	3,350	3,660
14	3,990	e4,400	e5,000	e3,000	e4,600	e6,100	6,810	8,440	24,900	10,400	3,050	3,930
15	4,100	e4,800	e5,000	e4,000	e4,400	e6,200	6,490	7,980	21,700	9,490	2,740	4,060
16	4,260	e4,800	e4,600	e5,200	e4,300	e6,000	6,020	7,890	18,900	8,420	2,520	4,270
17	4,310	e4,600	e4,700	e5,200	e4,200	e6,000	5,870	6,780	16,600	7,600	2,170	4,330
18	4,450	e4,600	e4,800	e5,200	e4,300	e5,900	5,770	5,980	14,900	6,860	1,960	4,420
19	4,490	e4,700	e5,100	e5,200	e4,400	e6,000	6,000	5,440	14,300	6,390	1,780	4,390
20	4,480	e4,800	e5,100	e5,200	e4,500	e5,800	6,280	5,070	13,800	6,070	1,660	4,810
21	4,420	e4,700	e5,100	e5,200	e4,600	e5,700	6,040	4,790	13,100	5,740	1,540	5,220
22	4,390	e3,500	e5,200	e5,200	e4,800	e5,600	5,670	5,040	12,600	5,340	1,480	5,310
23	4,540	e3,000	e5,200	e5,200	e4,800	e5,700	5,460	5,150	12,300	5,120	1,510	5,570
24	4,740	e2,500	e5,200	e5,200	e4,800	5,720	5,310	5,900	12,000	5,640	1,680	5,830
25	4,550	e3,000	e5,200	e5,200	e4,800	5,540	5,130	6,940	11,500	5,810	1,890	6,070
26	4,400	e3,200	e5,300	e5,300	e4,800	5,470	4,640	7,760	11,500	5,570	1,870	6,300
27	4,310	e3,600	e5,200	e5,300	e4,800	5,280	3,870	8,970	12,000	5,540	1,960	6,170
28	4,400	e3,300	e5,100	e5,300	e4,800	5,140	3,680	9,330	13,500	5,480	1,870	5,970
29	4,580	e3,400	e5,100	e5,300	e4,800	5,180	3,490	9,250	14,500	5,210	1,900	5,850
30	4,860	e3,500	e4,700	e5,000	---	5,330	3,110	7,940	14,600	4,930	2,200	5,930
31	5,140	---	e3,800	e3,700	---	5,370	---	7,160	---	4,760	2,660	---
TOTAL	132,190	122,850	149,400	121,700	123,900	170,830	160,200	183,420	400,690	287,170	91,680	132,460
MEAN	4,264	4,095	4,819	3,926	4,272	5,511	5,340	5,917	13,360	9,264	2,957	4,415
MAX	5,140	5,000	5,300	5,300	4,800	6,200	6,810	9,330	24,900	14,600	4,670	6,300
MIN	3,850	2,500	3,800	2,100	2,400	4,800	3,110	1,890	6,470	4,760	1,480	2,890
AC-FT	262,200	243,700	296,300	241,400	245,800	338,800	317,800	363,800	794,800	569,600	181,800	262,700

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1911- 2004, BY WATER YEAR (WY)*

MEAN	8,227	7,290	5,925	5,691	6,812	10,860	10,230	18,090	38,440	22,730	8,596	7,082
MAX	29,130	12,150	9,594	13,110	17,750	25,980	39,160	38,100	77,280	55,000	20,470	16,000
(WY)	(1924)	(1924)	(1976)	(1925)	(1971)	(1972)	(1924)	(1928)	(1918)	(1917)	(1912)	(1941)
MIN	3,726	3,700	3,019	2,0875	2,702	3,235	2,821	5,409	11,580	3,311	1,602	2,389
(WY)	(1922)	(1922)	(1961)	(1937)	(1936)	(2002)	(19861)	(1961)	(1919)	(1919)	(1961)	(1934)

06329500 YELLOWSTONE RIVER NEAR SIDNEY—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1961 - 2004*	
ANNUAL TOTAL	2,758,240		2,076,490			
ANNUAL MEAN	7,557		5,673		12,510	
HIGHEST ANNUAL MEAN					21,250	
LOWEST ANNUAL MEAN					5,673	
HIGHEST DAILY MEAN	48,400	Jun 5	24,900	Jun 14	142,000	Jun 21, 1921
LOWEST DAILY MEAN	1,720	Aug 30	1,480	Aug 22	570	May 17, 1961
ANNUAL SEVEN-DAY MINIMUM	1,800	Aug 26	1,650	Aug 19	1,010	Aug 8, 1961
MAXIMUM PEAK FLOW			25,800		a159,000	
MAXIMUM PEAK STAGE			9.99		b24.03	
INSTANTANEOUS LOW FLOW					c470	
ANNUAL RUNOFF (AC-FT)	5,471,000		4,119,000		9,065,000	
10 PERCENT EXCEEDS	17,300		10,100		28,000	
50 PERCENT EXCEEDS	4,700		4,800		8,000	
90 PERCENT EXCEEDS	2,880		2,800		4,040	

SUMMARY STATISTICS	WATER YEARS 1911 - 1965**		WATER YEARS 1967 - 2004***	
ANNUAL MEAN	12,890		12,100	
HIGHEST ANNUAL MEAN	21,250	1924	19,150	1997
LOWEST ANNUAL MEAN	5,814	1934	5,673	2004
HIGHEST DAILY MEAN	142,000	Jun 21, 1921	104,000	May 23, 1978
LOWEST DAILY MEAN	570	May 17, 1961	800	Jan 2, 1989
ANNUAL SEVEN-DAY MINIMUM	1,010	Aug 8, 1961	1,060	Aug 23, 2001
MAXIMUM PEAK FLOW	a159,000	Jun 21, 1921	d111,000	May 23, 1978
MAXIMUM PEAK STAGE	b21.85	Mar 22, 1947	b24.03	Mar 6, 1994
INSTANTANEOUS LOW FLOW	c470	May 17, 1961		
ANNUAL RUNOFF (AC-FT)	9,341,000		8,763,000	
10 PERCENT EXCEEDS	29,900		26,000	
50 PERCENT EXCEEDS	7,690		8,500	
90 PERCENT EXCEEDS	3,820		4,550	

*--During period of operation 1911-31, 1934 to current year. Published as "At Intake" 1911-31.

**--Prior to Bighorn Lake reaching operational level.

***--After Bighorn Lake reached operational level.

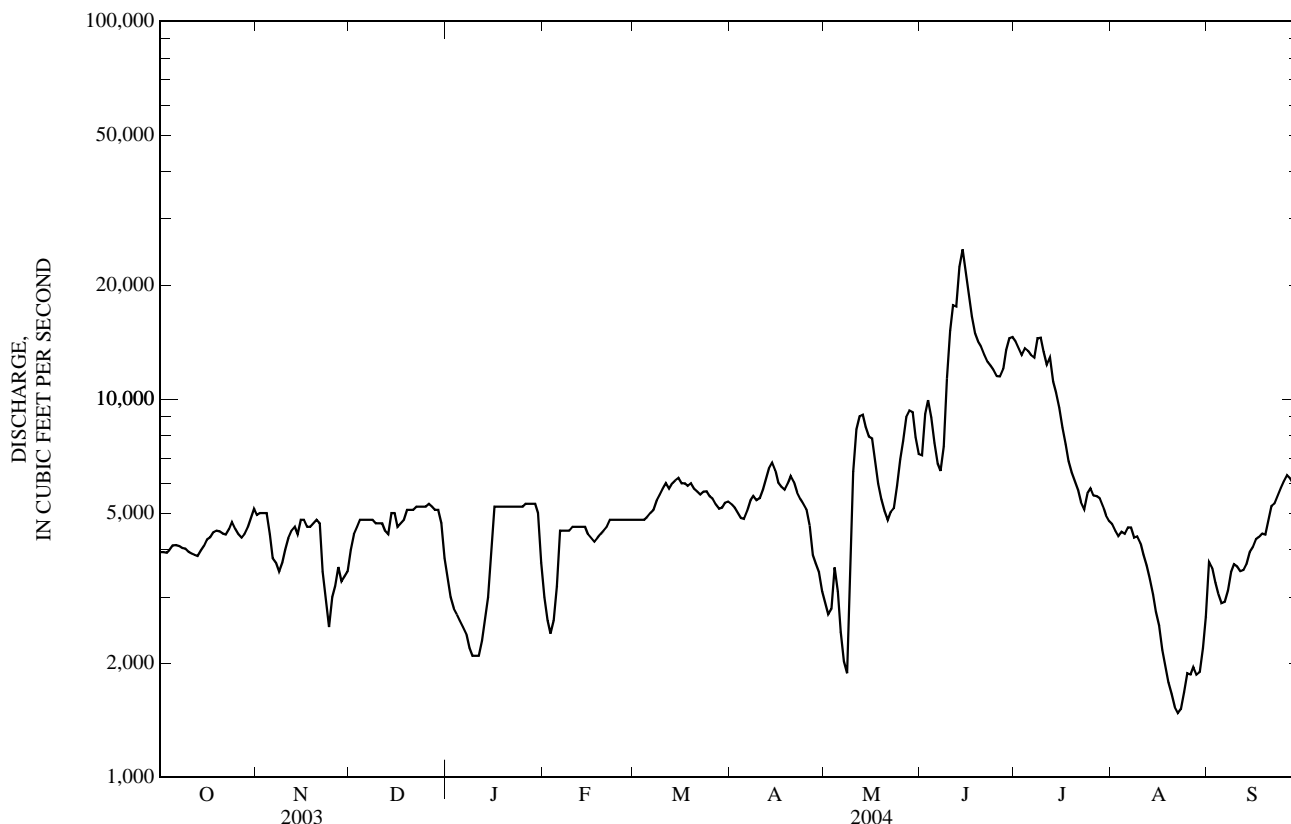
a--Gage height, 12.60 ft, site and datum then in use.

b--Backwater from ice.

c--Gage height, 2.73 ft, site and datum then in use.

d--Gage height, 20.02 ft.

e--Estimated.



WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1948 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1964 to September 1981.

WATER TEMPERATURE: January 1951 to September 1985.

SUSPENDED-SEDIMENT DISCHARGE: October 1971 to September 1981, October 1982 to September 1991, seasonal records (March to November) only from October 1991 to current year.

REMARKS.--Daily sediment records rated good except for several periods of storm runoff, which are rated poor. Daily sediment data collected during open water; no data available during ice effect from Dec. 1 to Mar. 17. Water-quality samples were collected this year as part of the National Water-Quality Assessment Program (NAWQA) for the Yellowstone River study unit under the direction of the Wyoming District. The daily sediment record is a Corps of Engineers program.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 1,220 microsiemens per centimeter ($\mu\text{S}/\text{cm}$) at 25.0°C, Apr. 6, 1979; minimum daily, 261 $\mu\text{S}/\text{cm}$ at 25.0°C, June 4, 1966.

WATER TEMPERATURE: Maximum, 29.0°C July 23, 1960; minimum, 0.0°C on many days during winter.

SEDIMENT CONCENTRATION: Maximum daily mean, 26,800 mg/L May 8, 1975; minimum daily mean, 8 mg/L Jan. 9, 1973.

SEDIMENT LOAD: Maximum daily, 3,030,000 tons May 8, 1975; minimum daily, 63 tons Jan. 2, 1989.

EXTREMES FOR CURRENT YEAR.--

SEDIMENT CONCENTRATION (seasonal records): Maximum daily mean, 2,560 mg/L, June 13; minimum daily mean, 12 mg/L, Oct. 14-16.

SEDIMENT LOAD (seasonal records): Maximum daily, 171,000 tons, June 14; minimum daily, 82 tons, May 8.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

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, water, unfltrd $\mu\text{S}/\text{cm}$ 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Alkalinity, water, fltrd fxd end lab, mg/L as CaCO_3 (29801)	Alkalinity, water, fltrd inc tit field, mg/L as CaCO_3 (39086)	Bicarbonate, wat flt incrm. titr., mg/L field, (00453)	Carbonate, wat flt incrm. titr., mg/L field, (00452)
OCT													
06...	1850	4,090	--	--	--	--	724	--	15.0	--	--	--	--
09...	1200	4,040	705	8.9	93	8.4	692	25.5	14.0	160	124	146	2
NOV													
12...	1330	E4,500	721	11.9	86	8.1	725	-5	.0	181	170	207	--
DEC													
17...	1230	E4,700	711	12.1	89	8.2	763	4.0	.0	186	192	234	--
JAN													
22...	1600	E5,200	712	10.7	79	8.2	765	2.0	.0	177	174	212	--
FEB													
25...	1245	E4,800	709	12.4	91	7.6	670	7.0	.0	151	151	184	--
MAR													
24...	0800	5,700	705	11.5	96	7.9	859	13.0	4.5	174	167	204	--
APR													
05...	1230	4,820	--	--	--	--	824	--	12.0	--	--	--	--
MAY													
13...	1030	9,020	--	--	--	--	379	--	8.5	--	--	--	--
25...	0800	6,680	696	9.7	98	8.6	578	6.5	11.5	127	126	134	10
JUN													
14...	1345	24,900	--	--	--	--	309	--	17.5	--	--	--	--
15...	1700	20,900	713	9.1	102	7.9	330	16.0	17.5	79	72	87	--
28...	1015	13,300	--	--	--	--	370	--	20.0	--	--	--	--
JUL													
15...	1530	9,310	705	8.1	107	8.2	372	33.5	25.5	100	93	111	1
AUG													
03...	1430	4,360	--	--	--	--	553	--	22.5	--	--	--	--
30...	0900	2,120	712	8.7	100	8.3	772	17.5	18.5	182	167	196	4
SEP													
08...	1700	3,550	711	9.5	109	8.5	643	26.5	18.5	162	155	162	11
23...	1400	5,590	--	--	--	--	701	--	15.5	--	--	--	--

06329500 YELLOWSTONE RIVER NEAR SIDNEY—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Chloride, water, fltrd, mg/L (00940)	Sulfate water, fltrd, mg/L (00945)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water, fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Total nitrogen, water, unfltrd mg/L (62855)	Ortho-phosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)	Suspended sediment, percent <.063mm (70331)	Suspended sediment concentration mg/L (80154)	Suspended sediment discharge, tons/d (80155)
OCT 06...	--	--	--	--	--	--	--	--	80	18	199
09...	11.4	179	<.04	<.06	<.008	.23	<.006	.018	83	14	153
NOV 12...	10.8	183	.05	.50	E.005	.75	<.006	.040	60	57	E693
DEC 17...	12.4	204	E.03	.51	E.004	.69	<.006	.018	98	16	E203
JAN 22...	11.5	187	.06	.57	E.006	.81	<.006	.025	73	23	E323
FEB 25...	10.6	170	E.03	.49	.008	1.08	E.003	.101	97	134	E1,740
MAR 24...	16.7	252	<.04	.41	.008	1.48	<.006	.92	96	1,280	19,800
APR 05...	--	--	--	--	--	--	--	--	93	142	1,850
MAY 13...	--	--	--	--	--	--	--	--	64	255	6,210
25...	9.86	147	E.02	<.06	<.008	.18	<.006	.27	95	440	7,940
JUN 14...	--	--	--	--	--	--	--	--	77	2,230	150,000
15...	3.99	67.1	<.04	.34	.027	1.91	.020	1.11	88	1,430	80,600
28...	--	--	--	--	--	--	--	--	45	241	8,650
JUL 15...	5.48	74.8	<.04	.12	<.008	.70	E.004	.27	93	523	13,100
AUG 03...	--	--	--	--	--	--	--	--	94	33	388
30...	11.0	208	<.04	<.06	<.008	.33	<.006	.037	99	29	166
SEP 08...	8.73	156	<.04	<.06	<.008	.40	<.006	.048	95	43	412
23...	--	--	--	--	--	--	--	--	97	188	2,840

Date	Time	2,6-Di-ethyl-aniline water fltrd 0.7u GF (82660)	CIAT, water, fltrd, ug/L (04040)	Aceto-chlor, water, fltrd, ug/L (49260)	Ala-chlor, water, fltrd, ug/L (46342)	alpha-HCH, water, fltrd, ug/L (34253)	Atra-zine, water, fltrd, ug/L (39632)	Azin-phos-methyl, water, fltrd 0.7u GF (82686)	Ben-flur-alin, water, fltrd 0.7u GF (82673)	Butyl-ate, water, fltrd, ug/L (04028)	Car-baryl, water, fltrd 0.7u GF (82680)	Carbo-furan, water, fltrd 0.7u GF (82674)	Chlor-pyrifos water, fltrd, ug/L (38933)
NOV 12...	1330	<.006	<.006	<.006	<.005	<.005	E.005	<.050	<.010	<.004	<.041	<.020	<.005
JAN 22...	1600	<.006	<.006	<.006	<.005	<.005	E.007	<.050	<.010	<.004	<.041	<.020	<.005
MAR 24...	0800	<.006	<.006	<.006	<.005	<.005	<.007	<.050	<.010	<.004	<.041	<.020	<.005
MAY 25...	0800	<.006	<.006	.006	<.005	<.005	E.006	<.050	<.010	<.004	<.041	<.020	<.005
JUN 15...	1700	<.006	<.006	<.006	<.005	<.005	<.007	<.050	<.010	<.004	<.041	<.024	<.005
JUL 15...	1530	<.006	<.006	<.006	<.005	<.005	<.010	<.050	<.010	<.004	<.041	<.020	<.005
AUG 30...	0900	<.006	<.006	<.006	<.005	<.005	E.005	<.050	<.010	<.004	<.041	<.020	<.005
SEP 08...	1700	<.006	<.006	<.006	<.005	<.005	<.010	<.050	<.010	<.004	<.041	<.020	<.005

E--Estimated.

06329500 YELLOWSTONE RIVER NEAR SIDNEY—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	cis-Permethrin water fltrd 0.7u GF (82687)	Cyanazine, water, fltrd, ug/L (04041)	DCPA, water fltrd 0.7u GF (82682)	Desulf-inyl fipronil, water, fltrd, ug/L (62170)	Diazinon, water, fltrd, ug/L (39572)	Diazinon-d10 surrog. wat flt 0.7u GF percent recovery (91063)	Dieldrin, water, fltrd, ug/L (39381)	Disulfoton, water, fltrd 0.7u GF (82677)	EPTC, water, fltrd 0.7u GF (82668)	Ethalfuralin, water, fltrd 0.7u GF (82663)	Ethoprop, water, fltrd 0.7u GF (82672)	Desulf-inyl-fipronil amide, wat flt ug/L (62169)	Fipronil sulfide water, fltrd, ug/L (62167)
NOV 12...	<.006	<.018	<.003	<.012	<.005	101	<.009	<.02	<.004	<.009	<.005	<.029	<.013
JAN 22...	<.006	<.018	<.003	<.012	<.005	124	<.009	<.02	<.004	<.009	<.005	<.029	<.013
MAR 24...	<.006	<.018	<.003	<.012	<.005	119	<.009	<.02	<.200	<.009	<.005	<.029	<.013
MAY 25...	<.006	<.018	<.003	<.012	<.005	127	<.009	<.02	--	<.009	<.005	<.029	<.013
JUN 15...	<.006	<.018	<.003	<.012	<.005	101	<.009	<.02	<.005	<.009	<.005	<.029	<.013
JUL 15...	<.006	<.018	<.003	<.012	<.005	104	<.009	<.02	<.004	<.009	<.005	<.029	<.013
AUG 30...	<.006	<.018	<.003	<.012	<.005	111	<.009	<.02	<.036	<.009	<.005	<.029	<.013
SEP 08...	<.006	<.018	<.003	<.012	<.005	103	<.009	<.02	<.004	<.009	<.005	<.029	<.013

Date	Fipronil sulfone water, fltrd, ug/L (62168)	Fipronil, water, fltrd, ug/L (62166)	Fonofos water, fltrd, ug/L (04095)	Lindane water, fltrd, ug/L (39341)	Linuron water fltrd 0.7u GF (82666)	Malathion, water, fltrd, ug/L (39532)	Methyl parathion, water, fltrd 0.7u GF (82667)	Metolachlor, water, fltrd, ug/L (39415)	Metribuzin, water, fltrd, ug/L (82630)	Molinate, water, fltrd 0.7u GF (82671)	Napropamide, water, fltrd 0.7u GF (82684)	p,p'-DDE, water, fltrd, ug/L (34653)
NOV 12...	<.024	<.016	<.003	<.004	<.035	<.027	<.015	<.013	<.006	<.003	<.007	<.003
JAN 22...	<.024	<.016	<.003	<.004	<.035	<.027	<.015	E.007	<.006	<.003	<.007	<.003
MAR 24...	<.024	<.016	<.003	<.004	<.035	<.027	<.015	<.013	<.006	<.003	<.007	<.005
MAY 25...	<.024	<.016	<.003	<.004	<.035	<.027	<.015	.017	<.006	<.050	<.007	<.003
JUN 15...	<.024	<.016	<.003	<.004	<.035	<.027	<.015	E.008	<.006	<.003	<.007	<.003
JUL 15...	<.024	<.016	<.003	<.004	<.035	<.027	<.015	.021	<.006	<.003	<.007	<.003
AUG 30...	<.024	<.016	<.003	<.004	<.035	<.027	<.015	.022	<.006	<.003	<.007	<.003
SEP 08...	<.024	<.016	<.003	<.004	<.035	<.027	<.015	.019	<.006	<.003	<.007	<.003

Date	Parathion, water, fltrd, ug/L (39542)	Pebulate, water, fltrd 0.7u GF (82669)	Pendimethalin, water, fltrd 0.7u GF (82683)	Phorate water fltrd 0.7u GF (82664)	Prometon, water, fltrd, ug/L (04037)	Propylamide, water, fltrd 0.7u GF (82676)	Propachlor, water, fltrd, ug/L (04024)	Propanil, water, fltrd 0.7u GF (82679)	Propargite, water, fltrd 0.7u GF (82685)	Simazine, water, fltrd, ug/L (04035)
NOV 12...	<.010	<.004	<.022	<.011	<.01	<.004	<.025	<.011	<.02	<.005
JAN 22...	<.010	<.004	<.022	<.011	.01	<.004	<.025	<.011	<.02	<.005
MAR 24...	<.010	<.004	<.022	<.011	<.01	<.004	<.025	<.011	<.02	<.005
MAY 25...	<.010	<.004	<.022	<.011	.01	<.004	<.025	<.011	<.02	<.005
JUN 15...	<.010	<.004	<.022	<.011	<.01	<.004	<.025	<.011	<.02	<.005
JUL 15...	<.010	<.004	<.022	<.011	<.01	<.004	<.025	<.011	<.02	<.005
AUG 30...	<.010	<.004	<.022	<.011	<.01	<.004	<.025	<.011	<.02	<.005
SEP 08...	<.010	<.004	<.022	<.011	<.01	<.004	<.025	<.011	<.02	<.005

E--Estimated.

06329500 YELLOWSTONE RIVER NEAR SIDNEY—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004--CONTINUED

Date	Time	Tebu- thiuron water fltrd 0.7u GF ug/L (82670)	Terba- cil, water, fltrd 0.7u GF ug/L (82665)	Terbu- fos, water, fltrd 0.7u GF ug/L (82675)	Thio- bencarb water fltrd 0.7u GF ug/L (82681)	Tri- allate, water, fltrd 0.7u GF ug/L (82678)	Tri- flur- alin, water, fltrd 0.7u GF ug/L (82661)	Instan- taneous dis- charge, cfs (00061)	Bed sediment, percent <.063mm (80164)	Bed sediment, percent <.125mm (80165)	Bed sediment, percent <.25mm (80166)	Bed sediment, percent <.5 mm (80167)	Bed sediment, percent <1 mm (80168)	Bed sediment, percent <2 mm (80169)	Bed sediment, percent <4 mm (80170)	Bed sediment, percent <8 mm (80171)	Bed sediment, percent <16 mm (80172)	
																		NOV 12...
JAN 22...		<.02	<.034	<.02	<.010	<.002	<.009											
MAR 24...		<.02	E.036	<.02	<.010	<.002	<.009											
MAY 25...		<.02	<.150	<.02	<.010	.008	<.009											
JUN 15...		<.02	<.034	<.02	<.010	.005	<.009											
JUL 15...		<.02	<.034	<.02	<.010	<.002	<.009											
AUG 30...		<.02	<.034	<.02	<.010	<.002	<.009											
SEP 08...		<.02	<.034	<.02	<.010	<.002	<.009											
OCT 06...	1850	4,090	<1	2	55	68	69	70	73	83	100							
APR 05...	1230	4,820	8	61	95	96	96	96	97	100	--							
MAY 13...	1030	9,020	<1	2	87	90	90	90	90	93	100							
JUN 14...	1345	24,900	<1	8	95	100	--	--	--	--	--							
JUN 28...	1015	13,300	<1	1	91	96	96	96	96	96	100							
AUG 03...	1430	4,360	<1	<1	29	91	94	95	96	100	--							
SEP 23...	1400	5,590	<1	<1	45	98	99	100	--	--	--							

E--Estimated.

YELLOWSTONE RIVER BASIN

06329500 YELLOWSTONE RIVER NEAR SIDNEY—Continued

SUSPENDED-SEDIMENT (SEASONAL)
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Day	Mean concentration (mg/l)		Load (tons/day)		Mean concentration (mg/l)		Load (tons/day)		Mean concentration (mg/l)		Load (tons/day)		Mean concentration (mg/l)		Load (tons/day)	
	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER				
1	23	245	545	7,280												
2	20	213	468	6,320												
3	19	202	390	5,260												
4	18	194	318	4,290												
5	19	211	259	3,080												
6	18	200	220	2,260												
7	18	199	190	1,900												
8	20	219	180	1,700												
9	21	229	202	2,020												
10	18	192	235	2,540												
11	16	169	135	1,570												
12	14	146	62	753												
13	13	135	64	795												
14	12	129	65	772												
15	12	133	65	842												
16	12	138	64	829												
17	13	151	67	832												
18	15	180	92	1,140										875	13,900	
19	18	218	119	1,510										1,000	16,200	
20	22	266	108	1,400										1,080	16,900	
21	21	251	96	1,220										1,160	17,900	
22	17	202	87	822										1,420	21,500	
23	21	257	85	689										1,310	20,200	
24	25	320	84	567										1,260	19,500	
25	24	295	82	664										859	12,800	
26	23	273	74	639										575	8,490	
27	30	349	62	603										470	6,700	
28	40	475	55	490										358	4,970	
29	59	730	53	487										293	4,100	
30	164	2,150	52	491										252	3,630	
31	555	7,700	---	---										216	3,130	
TOTAL	---	16,771	---	53,765										---	169,920	
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER					
1	182	2,590	24	187	197	3,780	368	14,100	40	504	76	763				
2	165	2,300	20	146	370	9,140	448	16,600	36	436	55	533				
3	142	1,920	20	151	365	9,810	575	20,300	33	388	45	397				
4	118	1,550	28	271	338	8,190	410	15,100	32	385	44	364				
5	126	1,640	20	167	160	3,310	275	9,950	41	488	43	336				
6	110	1,510	18	118	135	2,470	279	9,870	1,840	22,800	42	330				
7	117	1,710	18	99	98	1,710	442	15,400	1,940	24,000	41	345				
8	112	1,680	16	82	113	2,290	1,600	62,600	1,700	19,700	42	396				
9	85	1,240	42	378	518	15,900	1,500	59,100	1,020	12,000	45	445				
10	73	1,080	116	2,020	1,340	55,000	530	19,200	285	3,210	46	448				
11	71	1,110	268	6,020	1,920	91,800	482	16,000	222	2,330	44	417				
12	85	1,410	330	8,030	2,050	97,400	540	18,800	199	1,960	42	401				
13	108	1,920	283	6,950	2,560	156,000	425	12,700	188	1,700	41	405				
14	122	2,240	207	4,720	2,540	171,000	278	7,810	168	1,380	62	658				
15	95	1,660	155	3,340	1,520	89,100	380	9,740	108	799	221	2,420				
16	66	1,070	133	2,830	1,080	55,100	255	5,800	62	422	446	5,140				
17	54	856	84	1,540	645	28,900	193	3,960	52	305	367	4,290				
18	53	826	65	1,050	533	21,400	156	2,890	46	243	375	4,480				
19	54	875	53	778	490	18,900	113	1,950	39	187	297	3,520				
20	66	1,120	41	561	480	17,900	79	1,290	34	152	214	2,780				
21	56	913	36	466	310	11,000	61	945	31	129	152	2,140				
22	44	674	49	667	228	7,760	57	822	30	120	158	2,270				
23	41	604	61	848	230	7,640	51	705	30	122	184	2,770				
24	40	573	373	5,940	246	7,970	61	929	31	141	158	2,490				
25	36	499	367	6,880	205	6,370	63	988	34	174	132	2,160				
26	34	426	568	11,900	217	6,740	61	917	37	187	114	1,940				
27	34	355	660	16,000	302	9,780	58	868	38	201	93	1,550				
28	39	388	566	14,300	288	10,500	55	814	39	197	76	1,230				
29	33	311	667	16,700	360	14,100	52	731	34	174	58	916				
30	25	210	559	12,000	529	20,900	49	652	31	184	52	833				
31	---	---	215	4,160	---	---	45	578	45	323	---	---				
TOTAL	---	35,260	---	129,299	---	961,860	---	332,109	---	95,341	---	47,167				

06334500 LITTLE MISSOURI RIVER AT CAMP CROOK, SD

LOCATION.--Lat 45°32'53", long 103°58'16" (revised), in SW $\frac{1}{4}$ sec.2, T.18 N., R.1 E., Harding County, Hydrologic Unit 10110201, on left bank 15 ft upstream from bridge on State Highway 20 at east edge of Camp Crook.

DRAINAGE AREA.--1,970 mi², approximately.

PERIOD OF RECORD.--September 1903 to November 1906, May 1956 to current year. Monthly discharge only for some periods, published in WSP 1309.

REVISED RECORDS.--WSP 1309: 1904. WSP 1729: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 3,108.98 ft above NGVD of 1929. Sept. 2, 1903, to Nov. 30, 1906, nonrecording gage at site 0.5 mi upstream at different datum. May 1956 to Oct. 8, 1957, nonrecording gage at site 15 ft downstream, and Oct. 9, 1957, to Sept. 30, 1976, water-stage recorder at present site both at datum 2.00 ft higher.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Small diversions upstream from station for irrigation. Satellite data-collection platform at station. Water temperature and specific conductance measured during the year are compiled in the Miscellaneous Temperature Measurements and Field Determinations section.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of 1952 reached a stage of about 18 ft, present datum, from local residents.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.6	e6.6	e5.0	e3.3	e1.2	217	7.9	3.6	27	1.7	0.06	3.5
2	1.4	e6.3	e4.9	e3.1	e1.2	215	7.1	3.6	24	33	3.9	2.3
3	1.4	e6.2	e4.9	e2.4	e1.3	231	6.4	4.5	13	18	84	2.3
4	1.4	e6.1	e4.8	e1.9	e1.2	197	5.9	4.8	5.2	9.5	132	2.7
5	1.4	e6.0	e4.6	e1.7	e1.0	159	6.1	5.0	2.9	13	321	3.7
6	1.6	e5.9	e4.6	e1.5	e0.90	142	4.9	4.6	1.5	14	783	4.1
7	1.7	e5.8	e4.6	e1.4	e1.0	113	4.0	3.7	4.3	8.9	308	2.1
8	1.7	e5.6	e4.6	e1.4	e1.1	128	3.9	3.8	3.0	49	118	1.5
9	2.1	e5.5	e4.5	e1.5	e1.1	153	3.9	3.3	1.3	683	82	1.1
10	2.4	e5.1	e4.4	e1.6	e1.2	173	3.9	2.8	2.3	416	72	0.89
11	2.3	e4.9	e4.3	e1.7	e1.2	262	3.7	2.8	3.2	180	54	0.88
12	3.0	e4.7	e4.4	e1.8	e1.2	146	3.5	2.8	2.6	93	40	0.82
13	3.1	e4.5	e4.7	e1.9	e1.2	234	3.8	2.8	2.2	53	31	1.2
14	3.5	e4.3	e4.6	e1.9	e1.3	145	4.0	2.9	2.1	36	24	1.7
15	4.0	e4.4	e4.5	e1.9	e1.3	91	4.0	2.8	2.9	19	18	3.6
16	4.7	e4.5	e4.7	e1.9	e1.4	80	3.9	3.6	2.1	11	14	11
17	5.0	4.9	e4.8	e1.8	e1.6	77	4.4	6.5	1.9	7.0	13	3.8
18	4.7	4.9	e4.8	e1.7	e1.8	57	4.2	20	2.1	3.3	10	1.9
19	4.4	4.8	e4.7	e1.7	e2.0	43	4.0	8.9	2.0	1.9	8.8	0.90
20	4.1	4.7	e4.6	e1.8	e3.0	35	4.0	5.4	1.9	2.6	6.9	1.0
21	4.9	e4.7	e4.6	e1.9	e4.0	30	4.1	6.1	2.0	0.29	5.7	1.3
22	5.3	e4.7	e4.3	e2.0	e7.0	27	3.9	5.2	2.1	0.22	5.0	1.4
23	6.1	e4.7	e4.1	e1.9	e25	29	4.2	5.1	1.5	1.7	6.4	1.2
24	5.9	e4.7	e3.9	e1.7	e100	23	4.1	4.6	1.0	1.2	14	0.88
25	6.6	e4.7	e3.9	e1.4	e90	20	3.4	46	0.99	0.61	6.3	0.69
26	7.1	e4.6	e3.8	e1.3	118	17	3.4	397	0.89	0.34	4.1	0.61
27	7.6	e4.5	e3.7	e1.2	245	18	3.5	214	0.62	0.19	3.2	0.65
28	7.2	e4.5	e3.6	e1.0	223	18	3.7	94	0.53	0.16	2.9	0.74
29	e7.0	e4.6	e3.6	e1.1	336	14	3.8	64	0.52	0.12	2.9	0.93
30	e6.9	e5.0	e3.5	e1.1	---	12	3.9	44	0.49	0.10	8.0	1.2
31	e6.8	---	e3.4	e1.1	---	9.8	---	31	---	0.08	5.7	---
TOTAL	126.9	152.4	135.4	53.6	1,175.20	3,115.8	131.5	1,009.2	118.14	1,657.91	2,187.86	60.59
MEAN	4.09	5.08	4.37	1.73	40.5	101	4.38	32.6	3.94	53.5	70.6	2.02
MAX	7.6	6.6	5.0	3.3	336	262	7.9	397	27	683	783	11
MIN	1.4	4.3	3.4	1.0	0.90	9.8	3.4	2.8	0.49	0.08	0.06	0.61
AC-FT	252	302	269	106	2,330	6,180	261	2,000	234	3,290	4,340	120

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1904 - 1905, 1957 - 2004, BY WATER YEAR (WY)

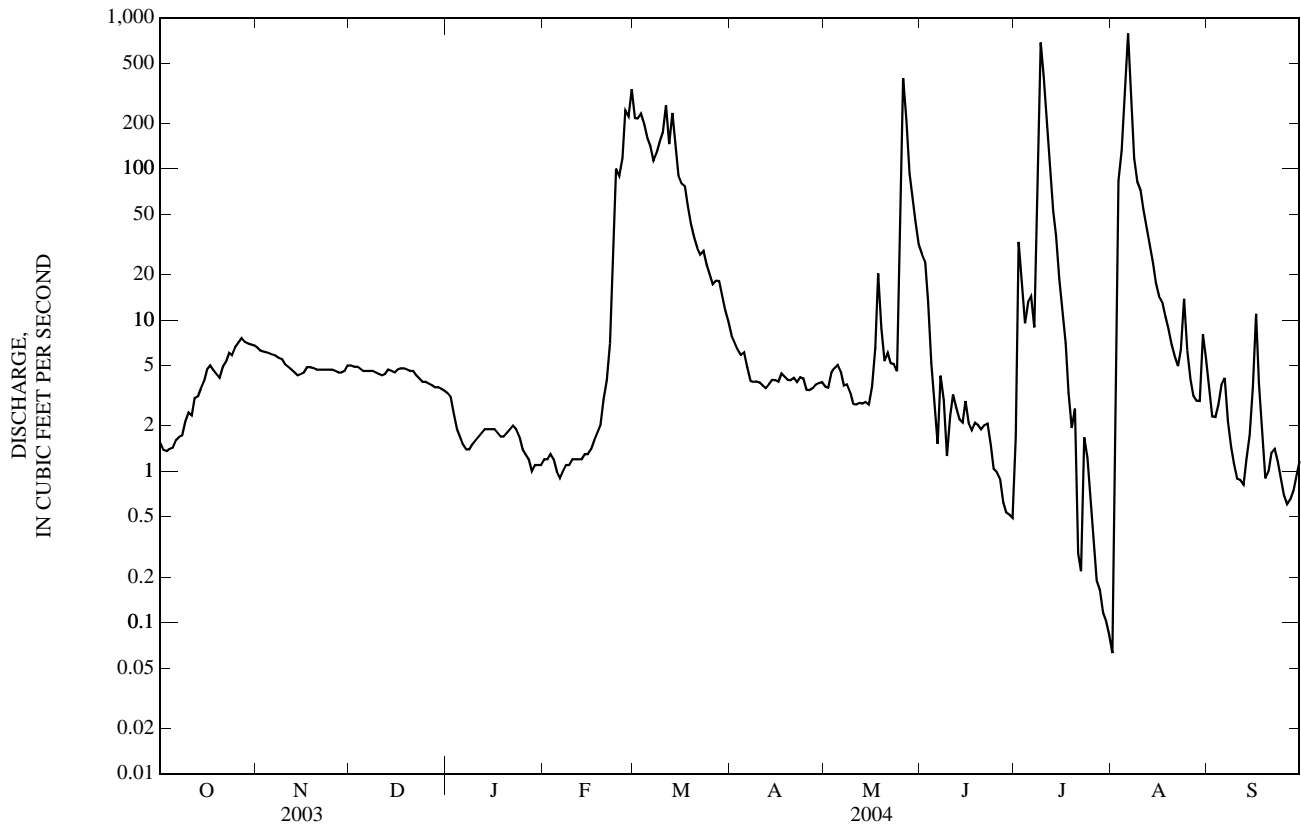
MEAN	55.1	12.6	6.70	7.31	81.6	336	199	325	249	94.2	41.0	29.5
MAX	876	103	34.9	59.7	1,112	2,121	1,198	1,894	1,107	961	537	244
(WY)	(1972)	(1972)	(1972)	(1974)	(1996)	(1978)	(1971)	(1978)	(1967)	(1905)	(1906)	(1905)
MIN	0.29	0.00	0.00	0.00	0.00	1.95	1.97	1.12	0.11	0.00	0.00	0.61
(WY)	(1905)	(1905)	(1905)	(1905)	(1969)	(1992)	(1981)	(1992)	(1961)	(1961)	(1904)	(1958)

LITTLE MISSOURI RIVER BASIN

06334500 LITTLE MISSOURI RIVER AT CAMP CROOK, SD—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1904-1905, 1957-2004	
ANNUAL TOTAL	4,170.76		9,924.50		a120	
ANNUAL MEAN	11.4		27.1		492	
HIGHEST ANNUAL MEAN					4.68 1978	
LOWEST ANNUAL MEAN					b0.00 1961	
HIGHEST DAILY MEAN	400	Mar 20	783	Aug 6	8,560	Mar 24, 1978
LOWEST DAILY MEAN	0.39	Aug 26	0.06	Aug 1	b0.00	Jul 31, 1904
ANNUAL SEVEN-DAY MINIMUM	0.44	Aug 12	0.15	Jul 26	0.00	Jul 31, 1904
MAXIMUM PEAK FLOW			1,020	Aug 6	9,420	Mar 24, 1978
MAXIMUM PEAK STAGE			6.89	Aug 6	16.90	Mar 24, 1978
ANNUAL RUNOFF (AC-FT)	8,270		19,690		87,040	
10 PERCENT EXCEEDS	19		78		226	
50 PERCENT EXCEEDS	4.0		4.1		10	
90 PERCENT EXCEEDS	0.63		1.1		1.2	

a--Median of annual mean discharges, 98 ft³/s.
 b--No flow at times in some years.
 c--Estimated.



06336600 BEAVER CREEK NEAR TROTTERS, ND

LOCATION.--Lat 47°09'47", long 103°59'32", in SW $\frac{1}{4}$ SW $\frac{1}{4}$ NE $\frac{1}{4}$ sec.33, T.143 N., R.105 W., Golden Valley County, Hydrologic Unit 10110204, on left bank 100 ft upstream from bridge on county road, 2.4 mi east of Montana-North Dakota State line, 13 mi southwest of Trotters, 17 mi north of Beach, 20 mi upstream from Elk Creek, and 27 mi above mouth.

DRAINAGE AREA.--616 mi².

PERIOD OF RECORD.--October 1977 to current year (seasonal records only since 1984).

REVISED RECORDS.--1982: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 2,371.96 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair except for periods where discharge is less than 1.0 ft³/s and for estimated daily discharges, which are poor.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, about 1,100 ft³/s, gage height, 14.48 ft, from floodmark; minimum daily discharge, 0.04 ft³/s, Sept. 11-12.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1					e1.0	e2.3	27	9.4	4.4	0.75	0.27	0.15
2					e1.0	e2.0	25	9.3	4.2	0.74	0.34	0.13
3					e1.1	e2.0	23	9.1	3.9	1.2	0.35	0.13
4					e1.1	e2.0	21	9.0	3.6	0.98	0.41	0.14
5					e1.1	e2.0	20	8.9	3.4	0.85	0.41	0.15
6					e1.1	e69	19	8.6	3.0	1.1	0.36	0.16
7					e1.1	e132	18	8.4	2.6	1.1	0.30	0.14
8					e1.1	e236	17	8.2	2.5	1.3	0.40	0.12
9					e1.1	e502	16	8.0	2.5	1.2	0.43	0.09
10					e1.1	e1,000	15	7.7	2.6	1.2	0.40	0.05
11					e1.1	e720	14	7.7	2.6	1.1	0.36	0.04
12					e1.1	e800	14	7.7	2.7	0.97	0.30	0.04
13					e1.1	e570	13	7.7	2.6	0.70	0.27	0.07
14					e1.1	e490	13	7.4	2.5	0.56	0.30	0.12
15					e1.1	e280	12	7.3	2.1	0.53	0.34	0.14
16					e1.3	e190	12	6.9	2.0	0.51	0.31	0.13
17					e1.4	e160	12	6.6	1.9	0.37	0.28	0.19
18					e1.4	e130	12	6.3	1.7	0.27	0.28	0.20
19					e1.4	107	12	6.3	1.8	0.24	0.37	0.21
20					e1.4	86	12	5.7	1.7	0.51	0.36	0.21
21					e1.5	72	12	4.7	1.5	0.53	0.46	0.19
22					e1.7	66	11	4.9	1.4	0.40	0.30	0.14
23					e2.2	64	11	5.1	1.5	0.38	0.19	0.17
24					e2.8	60	11	5.7	1.6	0.35	0.17	0.15
25					e3.4	52	10	6.0	1.4	0.32	0.17	0.20
26					e3.2	45	10	5.8	1.3	0.29	0.17	0.26
27					e2.7	40	10	5.2	1.6	0.27	0.17	0.24
28					e2.5	36	9.8	5.2	0.92	0.26	0.18	0.21
29					e2.3	32	9.7	4.9	0.74	0.28	0.18	0.18
30					---	29	9.5	4.8	0.84	0.28	0.19	0.14
31					---	28	---	4.4	---	0.30	0.19	---
TOTAL					45.5	6,024.3	431.0	212.9	67.10	19.84	9.21	4.49
MEAN					1.57	194	14.4	6.87	2.24	0.64	0.30	0.15
MAX					3.4	1,000	27	9.4	4.4	1.3	0.46	0.26
MIN					1.0	2.0	9.5	4.4	0.74	0.24	0.17	0.04
AC-FT					90	11,950	855	422	133	39	18	8.9

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1978 - 2004, BY WATER YEAR (WY)

	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
MEAN	1.10	2.62	2.59	4.40	26.5	122	45.7	15.3	17.8	10.1	2.04	0.68															
MAX	3.29	6.34	5.13	14.7	141	609	406	50.2	125	64.2	18.4	4.72															
(WY)	(1983)	(1983)	(1979)	(1983)	(1983)	(1978)	(1979)	(1999)	(1982)	(1997)	(1993)	(1986)															
MIN	0.01	0.01	0.03	0.00	0.00	1.21	1.11	1.05	0.12	0.00	0.00	0.00															
(WY)	(1982)	(1982)	(1982)	(1982)	(1989)	(1991)	(1991)	(1981)	(1992)	(1988)	(1985)	(1981)															

SUMMARY STATISTICS

WATER YEARS 1978 - 2004

ANNUAL MEAN	33.3
HIGHEST ANNUAL MEAN	79.7 1978
LOWEST ANNUAL MEAN	2.77 1981
HIGHEST DAILY MEAN	2,500 Mar 22 1978
LOWEST DAILY MEAN	0.00 Aug 1 1981
ANNUAL SEVEN-DAY MINIMUM	0.00 Aug 10 1981
MAXIMUM PEAK FLOW	2,720 Mar 29 1978
MAXIMUM PEAK STAGE	19.27 Mar 22 1978
ANNUAL RUNOFF (AC-FT)	24,110
10 PERCENT EXCEEDS	51
50 PERCENT EXCEEDS	2.8
90 PERCENT EXCEEDS	0.03

e--Estimated.

LITTLE MISSOURI RIVER BASIN
06336600 BEAVER CREEK NEAR TROTTERS, ND—Continued

