06187500 Tower Creek at Tower Falls, Yellowstone National Park, Wyo.
Site Number 138

LOCATION.--Lat 44°54', long 110°23' (NAD 27), just upstream from Tower Falls, 0.25 mi upstream from mouth and 2 mi southeast of Camp Roosevelt.
DRAINAGE AREA.--50.4 mi^2.
PERIOD OF RECORD.--20 years (1923-43).
GAGE.--Staff gage. Altitude of gage is 6,400 ft (NGVD 29, from topographic map). Prior to Sept. 26, 1931, staff gage at site 25 ft downstream at datum 2.22 ft lower. Sept. 26, 1931, to July 11, 1933, staff gage at site 75 ft downstream at different datum. July 12, 1933, to Oct. 13, 1934, staff gage at described site and datum 0.50 ft higher.
REMARKS.--No diversion or regulation upstream from station.

Magnitude and probability of annual low flow
based on 19 years of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	14	11	9.3	7.8	--	--
3	14	12	10	9.4	--	--
7	14	12	11	9.7	--	--
14	14	12	11	9.8	--	--
30	15	12	11	9.9	--	--
60	16	13	12	11	--	--
90	17	15	13	12	--	--
120	18	16	14	13	--	--
183	21	18	17	16	--	--

Magnitude and probability of seasonal low flow from
March-June based on 20 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	16	13	10	8.4	--	--
3	16	13	11	10	--	--
7	16	13	12	10	--	--
14	16	13	12	11	--	--
30	17	14	12	11	--	--

Magnitude and probability of seasonal low flow from
November-February based on 20 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	15	13	11	10	--	--
3	15	13	11	10	--	--
7	15	13	11	10	--	--
14	15	13	11	10	--	--
30	16	13	11	10	--	--

Duration of daily mean flows based on 20 years of record

Discharge, in ft^3/s, which was equaled or exceeded for indicated percent of time							
99%	98%	95%	90%	80%	70%	60%	50%
10	11	13	15	18	20	22	25
40%	30%	20%	15%	10%	5%	2%	1%
29	35	53	71	110	187	302	374

Magnitude and probability of annual high flow
based on 20 years of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2	5	10	25	50	100
	50%	20%	10%	4%	2%	1%
1	324	474	566	672	--	--
3	300	438	524	624	--	--
7	263	394	483	598	--	--
15	230	351	438	555	--	--
30	194	292	362	457	--	--
60	142	210	260	331	--	--
90	110	159	196	248	--	--

Magnitude and probability of seasonal low flow from
July-October based on 20 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	22	19	18	17	--	--
3	22	19	18	17	--	--
7	23	20	18	17	--	--
14	23	20	19	18	--	--
30	24	21	19	18	--	--

Monthly and annual mean discharges

Month	Maximum (ft^3/s)	Minimum (ft^3/s)	Mean (ft^3/s)	Standard deviation (ft^3/s)	Years of record
October	36	18	25	4.9	21
November	44	16	22	6.0	20
December	25	14	19	3.4	20
January	22	12	17	3.3	20
February	20	10	16	3.3	20
March	22	10	16	3.1	20
April	39	12	26	7.8	20
May	278	46	104	57	21
June	397	46	185	96	21
July	261	25	74	52	21
August	61	20	34	9.4	21
September	40	19	27	5.3	22
Annual	85	26	47	16	20

06187950 Soda Butte Creek near Lamar Ranger Station, Yellowstone National Park, Wyo.
Site Number 139

LOCATION.--Lat 44°52'06", long 110°09'53" (NAD 27), 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 mi^2.
PERIOD OF RECORD.--October 1988 to current year (2002).
GAGE.--Water-stage recorder. Altitude of gage is 6,630 ft (NGVD 29).
REMARKS.--No regulation or diversion upstream from station. U.S. Geological Survey satellite telemeter at station.

Magnitude and probability of annual low flow
based on 13 years of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	17	14	13	12	--	--
3	18	15	14	12	--	--
7	19	16	15	14	--	--
14	21	18	16	15	--	--
30	22	19	18	17	--	--
60	25	21	19	18	--	--
90	26	22	20	18	--	--
120	28	24	22	20	--	--
183	36	31	28	26	--	--

Magnitude and probability of seasonal low flow from
March-June based on 14 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	19	15	14	13	--	--
3	20	16	14	13	--	--
7	20	17	15	14	--	--
14	21	19	17	16	--	--
30	23	20	19	18	--	--

Magnitude and probability of seasonal low flow from
November-February based on 13 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	18	15	13	12	--	--
3	19	15	14	12	--	--
7	20	17	15	14	--	--
14	21	18	17	16	--	--
30	22	19	18	17	--	--

Duration of daily mean flows based on 14 years of record

Discharge, in ft^3/s, which was equaled or exceeded for indicated percent of time							
99%	98%	95%	90%	80%	70%	60%	50%
14	16	18	21	26	29	33	43
40%	30%	20%	15%	10%	5%	2%	1%
59	91	200	334	493	702	974	1,100

Magnitude and probability of annual high flow
based on 14 years of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2	5	10	25	50	100
	50%	20%	10%	4%	2%	1%
1	1,150	1,500	1,750	2,070	--	--
3	1,050	1,370	1,590	1,880	--	--
7	928	1,220	1,440	1,720	--	--
15	851	1,110	1,280	1,510	--	--
30	747	926	1,040	1,170	--	--
60	595	716	785	863	--	--
90	470	559	605	655	--	--

Magnitude and probability of seasonal low flow from
July-October based on 13 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	34	27	24	21	--	--
3	36	30	26	23	--	--
7	38	33	30	28	--	--
14	39	34	32	31	--	--
30	44	37	35	33	--	--

Monthly and annual mean discharges

Month	Maximum (ft^3/s)	Minimum (ft^3/s)	Mean (ft^3/s)	Standard deviation (ft^3/s)	Years of record
October	69	28	44	9.9	14
November	40	21	32	6.0	14
December	31	16	25	4.9	14
January	33	17	25	4.9	14
February	32	16	24	5.0	14
March	32	17	24	4.3	14
April	127	32	62	29	14
May	580	217	406	103	14
June	1,250	338	690	232	14
July	446	106	291	110	14
August	162	51	96	30	14
September	92	36	58	14	14
Annual	204	96	148	28	14

06188000 Lamar River near Tower Falls Ranger Station, Yellowstone National Park, Wyo.
Site Number 140

LOCATION.--Lat 44°55'40", long 110°23'35" (NAD 27), 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 mi^2.

PERIOD OF RECORD.--September 1922, April 1923 to September 1969, May 1985 to September 1986 (seasonal records only), October 1988 to current year (2002).

GAGE.--Water-stage recorder. Altitude of gage is 6,000 ft (NGVD 29). Prior to Sept. 16, 1925, nonrecording gage and Sept. 16, 1925, to July 29, 1927, water-stage recorder at same site at datum 1.00 ft higher. July 29, 1927, to Sept. 30, 1969, water-stage recorder at same site and datum. May 1985 to September 1986, nonrecording gage at same site and datum.

REMARKS.--No regulation or diversion upstream from station. U.S. Geological Survey satellite telemeter at station.

Magnitude and probability of annual low flow
based on 58 years of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	81	66	59	53	47	43
3	83	70	64	59	54	51
7	85	74	69	65	60	57
14	88	77	72	69	65	62
30	92	81	76	72	69	66
60	100	88	83	79	75	73
90	106	93	87	83	79	77
120	118	101	94	88	83	80
183	149	123	113	105	98	94

Magnitude and probability of seasonal low flow from
March-June based on 60 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	97	79	70	62	54	48
3	97	81	74	68	61	57
7	99	84	77	71	66	62
14	101	86	79	74	69	65
30	107	90	83	78	73	70

Magnitude and probability of seasonal low flow from
November-February based on 60 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	85	69	61	56	50	46
3	87	72	66	61	56	53
7	89	77	71	67	63	60
14	92	80	75	71	67	65
30	95	83	78	75	71	69

Duration of daily mean flows based on 60 years of record

Discharge, in ft^3/s, which was equaled or exceeded for indicated percent of time							
99%	98%	95%	90%	80%	70%	60%	50%
68	71	79	92	110	127	157	189
40%	30%	20%	15%	10%	5%	2%	1%
259	430	1,110	1,930	2,990	4,520	6,590	8,040

Magnitude and probability of annual high flow
based on 60 years of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2	5	10	25	50	100
	50%	20%	10%	4%	2%	1%
1	7,600	9,700	11,000	12,700	13,800	15,000
3	7,060	9,070	10,400	12,000	13,300	14,500
7	6,400	8,290	9,540	11,100	12,300	13,500
15	5,560	7,280	8,430	9,910	11,000	12,200
30	4,780	6,130	7,010	8,130	8,950	9,780
60	3,690	4,630	5,230	5,970	6,510	7,050
90	2,830	3,540	3,970	4,490	4,850	5,210

Magnitude and probability of seasonal low flow from
July-October based on 59 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	148	120	109	101	93	88
3	152	124	112	104	96	92
7	157	127	116	108	100	96
14	165	133	121	112	104	100
30	178	142	129	119	111	106

Monthly and annual mean discharges

Month	Maximum (ft^3/s)	Minimum (ft^3/s)	Mean (ft^3/s)	Standard deviation (ft^3/s)	Years of record
October	485	109	213	87	60
November	330	88	157	50	60
December	202	76	120	26	60
January	200	72	106	22	60
February	171	70	102	20	60
March	204	68	113	28	60
April	1,680	106	465	341	60
May	6,880	970	2,850	1,120	63
June	9,040	1,410	4,260	1,590	63
July	3,260	344	1,350	695	63
August	886	173	352	135	63
September	518	115	229	82	64
Annual	1,530	525	867	215	60

06189000 Blacktail Deer Creek near Mammoth, Yellowstone National Park, Wyo.
Site Number 141

LOCATION.--Lat 44°56'50", long 110°35'07" (NAD 27), Yellowstone National Park, Hydrologic Unit 10070001, on left bank 0.6 mi upstream from East Fork, 0.7 mi upstream from culvert on Mammoth-Tower Falls highway, and 6.0 mi southeast of Mammoth.
DRAINAGE AREA.--15.0 mi^2.
PERIOD OF RECORD.--December 1937 to October 1945, October 1988 to September 1993 (discontinued).
GAGE.--Water-stage recorder. Altitude of gage is 6,680 ft (NGVD 29, from topographic map). December 1937 to October 1945, water-stage recorder and Cippoletti weir at site 300 ft downstream at different datum.
REMARKS.--No diversion or regulation upstream from station.

Magnitude and probability of annual low flow
based on 11 years of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	1.3	0.95	0.78	0.66	--	--
3	1.4	1.0	.88	.77	--	--
7	1.4	1.1	1.0	.92	--	--
14	1.5	1.2	1.1	.98	--	--
30	1.5	1.3	1.1	1.1	--	--
60	1.7	1.4	1.3	1.2	--	--
90	1.8	1.5	1.3	1.2	--	--
120	2.1	1.6	1.4	1.2	--	--
183	2.5	2.0	1.7	1.5	--	--

Magnitude and probability of seasonal low flow from
March-June based on 13 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	1.6	1.3	1.2	1.1	--	--
3	1.6	1.3	1.2	1.1	--	--
7	1.6	1.3	1.2	1.1	--	--
14	1.7	1.3	1.2	1.1	--	--
30	1.9	1.4	1.3	1.1	--	--

Magnitude and probability of seasonal low flow from
November-February based on 12 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	1.4	1.0	0.82	0.68	--	--
3	1.4	1.1	.92	.79	--	--
7	1.5	1.2	1.1	.95	--	--
14	1.6	1.3	1.1	1.0	--	--
30	1.6	1.4	1.2	1.1	--	--

Duration of daily mean flows based on 12 years of record

Discharge, in ft^3/s, which was equaled or exceeded for indicated percent of time							
99%	98%	95%	90%	80%	70%	60%	50%
1.0	1.1	1.2	1.5	1.8	2.2	2.6	3.2
40%	30%	20%	15%	10%	5%	2%	1%
4.0	5.6	11	17	23	35	57	78

Magnitude and probability of annual high flow
based on 12 years of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2	5	10	25	50	100
	50%	20%	10%	4%	2%	1%
1	62	104	138	--	--	--
3	57	94	124	--	--	--
7	51	86	114	--	--	--
15	44	72	95	--	--	--
30	37	57	74	--	--	--
60	30	43	53	--	--	--
90	24	34	41	--	--	--

Magnitude and probability of seasonal low flow from
July-October based on 12 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	2.1	1.6	1.4	1.3	--	--
3	2.3	1.8	1.6	1.4	--	--
7	2.5	1.9	1.7	1.5	--	--
14	2.6	2.1	1.8	1.6	--	--
30	2.9	2.3	2.0	1.7	--	--

Monthly and annual mean discharges

Month	Maximum (ft^3/s)	Minimum (ft^3/s)	Mean (ft^3/s)	Standard deviation (ft^3/s)	Years of record
October	4.8	1.7	3.2	1.0	13
November	3.9	1.3	2.6	.83	12
December	3.3	1.2	2.0	.59	13
January	2.3	1.3	1.8	.37	13
February	2.3	1.2	1.7	.39	13
March	3.3	1.2	2.0	.65	13
April	28	2.5	10	7.9	13
May	78	14	31	21	13
June	65	13	28	13	13
July	29	4.7	11	6.3	13
August	8.1	1.9	4.5	1.7	13
September	4.8	1.9	3.3	.82	13
Annual	14	4.2	8.6	3.0	12

06190500 Gardner River at Mammoth, Yellowstone National Park, Wyo.
Site Number 142

LOCATION.--Lat 44°59'00", long 110°41'00" (NAD 27), 0.25 mi downstream from footbridge on Mount Everts trail, 0.5 mi upstream from Boiling River (formerly Hot River), 0.9 mi northeast of Mammoth, and 3.75 mi (revised) upstream from mouth.
DRAINAGE AREA.--200 mi^2.
PERIOD OF RECORD.--15 years (1923-38).
GAGE.--Water-stage recorder. Altitude of gage is 5,680 ft (NGVD 29, from topographic map). Prior to June 10, 1927, staff gage at site 0.25 mi upstream at different datum. June 10 to July 29, 1927, staff gage at described site and datum.
REMARKS.--No diversion or regulation upstream from station. Records not equivalent to those for station near Mammoth, 1.25 mi downstream.

Magnitude and probability of annual low flow
based on 15 years of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	57	51	47	45	--	--
3	61	54	50	48	--	--
7	63	55	52	49	--	--
14	63	56	52	49	--	--
30	64	57	53	50	--	--
60	69	61	57	54	--	--
90	71	63	59	56	--	--
120	74	64	61	58	--	--
183	81	70	65	62	--	--

Magnitude and probability of seasonal low flow from
March-June based on 16 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	62	54	51	48	--	--
3	64	57	53	51	--	--
7	65	58	54	52	--	--
14	66	58	55	53	--	--
30	69	60	57	54	--	--

Magnitude and probability of seasonal low flow from
November-February based on 15 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	60	53	50	47	--	--
3	64	56	53	50	--	--
7	66	57	53	50	--	--
14	66	58	53	50	--	--
30	67	58	54	51	--	--

Duration of daily mean flows based on 15 years of record

Discharge, in ft^3/s, which was equaled or exceeded for indicated percent of time							
99%	98%	95%	90%	80%	70%	60%	50%
47	49	52	59	69	77	84	92
40%	30%	20%	15%	10%	5%	2%	1%
109	128	197	274	375	559	796	1,020

Magnitude and probability of annual high flow
based on 15 years of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2	5	10	25	50	100
	50%	20%	10%	4%	2%	1%
1	827	1,200	1,460	1,820	--	--
3	783	1,110	1,350	1,660	--	--
7	713	1,020	1,250	1,550	--	--
15	646	932	1,130	1,410	--	--
30	567	803	968	1,190	--	--
60	459	627	736	872	--	--
90	368	496	579	682	--	--

Magnitude and probability of seasonal low flow from
July-October based on 16 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	79	67	62	59	--	--
3	80	69	64	60	--	--
7	83	71	66	62	--	--
14	85	73	68	64	--	--
30	89	75	70	66	--	--

Monthly and annual mean discharges

Month	Maximum (ft^3/s)	Minimum (ft^3/s)	Mean (ft^3/s)	Standard deviation (ft^3/s)	Years of record
October	132	72	97	21	17
November	153	65	87	23	15
December	104	59	78	14	15
January	98	55	71	11	15
February	90	50	69	13	15
March	90	52	71	12	16
April	180	69	114	40	16
May	977	201	407	189	16
June	1,070	161	518	241	16
July	409	89	217	94	16
August	185	71	116	34	16
September	146	70	101	23	17
Annual	246	106	161	41	15

06191000 Gardner River near Mammoth, Yellowstone National Park, Wyo.
Site Number 143

LOCATION.--Lat 44°59'33", long 110°41'26" (NAD 27), 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 Boiling River (formerly Hot River), 1.5 mi north of Mammoth, and at river mile 2.9.
DRAINAGE AREA.--202 mi^2.
PERIOD OF RECORD.--October 1938 to September 1972, April l984 to current year (2002). Prior to October 1959, published as "Gardiner River near Mammoth."
REVISED RECORDS.--WSP 1729: Drainage area.
GAGE.--Water-stage recorder. Altitude of gage is 5,623.97 ft (NGVD 29, levels by National Park Service).
REMARKS.--No regulation or diversion upstream from station. U.S. Geological Survey satellite telemeter at station.

Magnitude and probability of annual low flow based on 50 years of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	72	64	60	57	54	52
3	79	70	66	63	59	57
7	83	75	71	68	64	62
14	85	78	75	72	70	68
30	87	81	78	76	74	73
60	92	84	81	79	77	76
90	96	88	84	81	78	76
120	100	91	87	83	80	78
183	111	99	93	89	85	82

Magnitude and probability of seasonal low flow from March-June based on 52 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	81	73	69	66	63	62
3	85	77	74	71	68	67
7	88	80	77	75	72	71
14	89	82	79	77	74	73
30	92	84	81	79	77	75

Magnitude and probability of seasonal low flow from November-February based on 51 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	74	65	60	57	54	52
3	81	71	67	64	60	58
7	86	76	72	69	65	63
14	88	80	76	73	70	68
30	91	83	80	77	75	73

Duration of daily mean flows based on 52 years of record

Discharge, in ft^3/s, which was equaled or exceeded for indicated percent of time							
99%	98%	95%	90%	80%	70%	60%	50%
67	69	74	82	96	106	115	125
40%	30%	20%	15%	10%	5%	2%	1%
145	177	259	359	519	759	1,070	1,310

Magnitude and probability of annual high flow based on 52 years of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2	5	10	25	50	100
	50%	20%	10%	4%	2%	1%
1	1,120	1,440	1,620	1,820	1,940	2,060
3	1,060	1,370	1,550	1,750	1,880	2,000
7	979	1,290	1,460	1,660	1,790	1,910
15	876	1,170	1,340	1,550	1,700	1,840
30	776	1,030	1,190	1,390	1,530	1,660
60	622	818	939	1,080	1,180	1,280
90	502	650	740	845	918	988

Magnitude and probability of seasonal low flow from July-October based on 51 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	113	99	93	88	82	79
3	116	102	96	91	85	82
7	118	104	98	93	87	84
14	121	106	99	94	88	84
30	125	109	102	96	90	86

Monthly and annual mean discharges

Month	Maximum (ft^3/s)	Minimum (ft^3/s)	Mean (ft^3/s)	Standard deviation (ft^3/s)	Years of record
October	176	95	127	20	52
November	151	86	113	16	52
December	135	79	103	12	52
January	134	78	97	13	52
February	128	75	93	10	52
March	128	75	94	11	52
April	304	84	141	47	53
May	1,070	283	510	163	53
June	1,350	212	715	285	53
July	662	133	303	125	53
August	236	103	162	36	53
September	190	93	137	23	53
Annual	324	138	217	47	52

06191500 Yellowstone River at Corwin Springs, Mont.
Site Number 144

LOCATION.--Lat 45°06'43", long 110°47'37" (NAD 27), in NW¼SE¼NW¼ 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.--2,619 mi^2.

PERIOD OF RECORD.--August 1889 to November 1893, published as "at Horr," September 1910 to current year (2002). 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. Altitude of gage is 5,079.09 ft (NGVD 29). Aug. 12, 1889, to Nov. 4, 1893, nonrecording gages at site 2 mi upstream at different datums. Sept. 2, 1910, to Apr. 19, 1935, nonrecording gages on bridge at present datum.

REMARKS.--Natural storage in Yellowstone Lake. Diversions for irrigation of about 960 acres of which 40 acres lie downstream from station. U.S. Geological Survey satellite telemeter at station.

Magnitude and probability of annual low flow based on 91 years of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	641	515	458	415	371	344
3	660	532	474	430	386	358
7	686	556	497	452	406	377
14	713	582	521	475	427	398
30	750	609	543	492	439	406
60	808	664	594	540	483	448
90	870	719	647	591	531	494
120	944	783	706	647	585	546
183	1,210	991	888	808	723	671

Magnitude and probability of seasonal low flow from March-June based on 92 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	799	647	570	510	446	405
3	821	664	586	523	456	414
7	844	687	606	543	474	431
14	866	708	627	563	494	450
30	922	757	671	601	525	477

Magnitude and probability of seasonal low flow from November-February based on 92 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	685	546	481	431	380	348
3	706	565	499	449	397	364
7	735	592	524	473	419	385
14	764	618	549	496	441	406
30	792	642	570	514	455	419

Duration of daily mean flows based on 92 years of record

Discharge, in ft^3/s, which was equaled or exceeded for indicated percent of time							
99%	98%	95%	90%	80%	70%	60%	50%
507	552	631	762	897	1,030	1,210	1,440
40%	30%	20%	15%	10%	5%	2%	1%
1,900	2,750	4,670	6,320	8,590	11,800	16,000	19,200

Magnitude and probability of annual high flow based on 92 years of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2	5	10	25	50	100
	50%	20%	10%	4%	2%	1%
1	16,500	21,000	23,600	26,600	28,600	30,500
3	15,600	20,000	22,700	25,900	28,100	30,300
7	14,500	18,900	21,700	25,000	27,300	29,700
15	13,300	17,400	20,000	23,200	25,500	27,800
30	12,000	15,500	17,700	20,200	22,000	23,700
60	9,950	12,500	14,100	15,800	17,000	18,100
90	8,220	10,300	11,400	12,800	13,700	14,500

Magnitude and probability of seasonal low flow from July-October based on 91 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	1,270	1,030	921	836	748	693
3	1,290	1,050	937	850	760	704
7	1,320	1,080	960	871	778	720
14	1,360	1,110	992	902	809	751
30	1,460	1,180	1,040	945	842	779

Monthly and annual mean discharges

Month	Maximum (ft^3/s)	Minimum (ft^3/s)	Mean (ft^3/s)	Standard deviation (ft^3/s)	Years of record
October	2,430	782	1,500	381	92
November	2,060	702	1,180	272	92
December	1,420	551	961	196	92
January	1,360	448	848	197	92
February	1,340	411	836	191	92
March	1,380	412	920	184	92
April	3,540	576	1,560	555	92
May	13,600	2,580	6,140	2,020	92
June	22,500	4,240	11,600	3,800	92
July	13,300	2,020	6,770	2,690	92
August	5,690	1,320	3,160	990	92
September	3,210	938	1,930	496	93
Annual	5,160	1,900	3,120	683	92

06192500 Yellowstone River near Livingston, Mont.
Site Number 145

LOCATION.--Lat 45°35'50", long 110°33'55" (NAD 27), in NE¼NW¼NW¼ sec.12, T.3 S., R.9 E., Park County, Hydrologic Unit 10070002, on right bank 50 ft downstream from bridge on Montana Secondary Highway 540, 2 mi downstream from Suce Creek, 4 mi south of Livingston, and at river mile 501.4.

DRAINAGE AREA.--3,551 mi^2.

PERIOD OF RECORD.--May 1897 to December 1905, August 1928 to September 1932, October 1937 to current year (2002). Monthly discharge only for some periods, published in WSP 1309.

REVISED RECORDS.--WSP 1309: 1899. WSP 1509: 1902. WSP 1629: Drainage area.

GAGE.--Water-stage recorder. Altitude of gage is 4,542.49 ft (NGVD 29). May 2, 1897, to Dec. 31, 1905, nonrecording gage on highway bridge at different datum. Aug. 23, 1928, to Sept. 30, 1932, and Mar. 14, 1938, to Feb. 3, 1951, nonrecording gage on highway bridge at present datum.

REMARKS.--Diversions for irrigation of about 24,200 acres of which about 2,000 acres lie downstream from station. U.S. Geological Survey satellite telemeter at station.

Magnitude and probability of annual low flow based on 73 years of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	877	737	672	622	569	536
3	918	776	709	656	601	566
7	977	834	767	714	659	624
14	1,030	892	827	777	724	691
30	1,090	946	878	826	771	736
60	1,160	1,010	943	887	827	789
90	1,260	1,090	1,010	951	885	843
120	1,360	1,180	1,090	1,030	958	913
183	1,650	1,400	1,280	1,180	1,080	1,020

Magnitude and probability of seasonal low flow from March-June based on 75 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	1,110	941	856	789	717	671
3	1,140	974	890	823	751	704
7	1,190	1,030	946	882	813	769
14	1,210	1,070	997	941	881	843
30	1,270	1,120	1,050	998	939	902

Magnitude and probability of seasonal low flow from November-February based on 74 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	907	757	687	632	575	539
3	953	800	726	668	606	568
7	1,020	860	784	723	659	618
14	1,080	917	840	780	717	676
30	1,140	972	892	829	762	719

Duration of daily mean flows based on 75 years of record

Discharge, in ft^3/s, which was equaled or exceeded for indicated percent of time							
99%	98%	95%	90%	80%	70%	60%	50%
787	832	965	1,130	1,280	1,440	1,670	1,960
40%	30%	20%	15%	10%	5%	2%	1%
2,340	3,160	5,260	7,200	9,860	14,000	18,500	22,200

Magnitude and probability of annual high flow based on 75 years of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2	5	10	25	50	100
	50%	20%	10%	4%	2%	1%
1	19,200	24,000	26,700	29,600	31,600	33,400
3	18,200	23,000	25,800	29,000	31,200	33,200
7	16,900	21,600	24,400	27,800	30,100	32,300
15	15,400	19,800	22,400	25,500	27,700	29,800
30	13,800	17,600	19,900	22,500	24,400	26,200
60	11,300	14,300	16,000	18,000	19,500	20,800
90	9,340	11,600	13,000	14,500	15,600	16,600

Magnitude and probability of seasonal low flow from July-October based on 74 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	1,770	1,480	1,340	1,230	1,120	1,040
3	1,800	1,500	1,360	1,250	1,140	1,060
7	1,830	1,530	1,380	1,270	1,150	1,080
14	1,870	1,550	1,400	1,290	1,170	1,090
30	1,960	1,620	1,460	1,340	1,210	1,130

Monthly and annual mean discharges

Month	Maximum (ft^3/s)	Minimum (ft^3/s)	Mean (ft^3/s)	Standard deviation (ft^3/s)	Years of record
October	3,120	1,130	2,020	434	76
November	2,600	1,100	1,680	314	76
December	1,980	930	1,390	226	76
January	1,760	727	1,220	223	75
February	1,730	763	1,210	217	75
March	1,800	899	1,290	189	75
April	3,850	1,170	1,940	587	75
May	13,000	2,750	6,930	2,190	75
June	27,100	5,000	13,300	4,190	75
July	15,000	2,750	7,650	2,960	75
August	5,730	1,710	3,600	1,030	76
September	3,810	1,280	2,390	565	76
Annual	6,120	2,400	3,730	763	75

06193000 Shields River near Wilsall, Mont.
Site Number 146

LOCATION.--Lat 46°09'09", long 110°35'13" (NAD 27), in SE¼NW¼ sec.34, T.5 N., R.9 E., Park County, on left bank 11 mi northeast of Wilsall and 12 mi upstream from Flathead Creek.
DRAINAGE AREA.--87.8 mi^2 (revised).
PERIOD OF RECORD.--23 years (1935-57).
GAGE.--Wire-weight gage. Altitude of gage is 5,590 ft (NGVD 29, by barometer). May 10, 1935, to Oct. 12, 1942, staff gage at site 800 ft downstream at different datum. Oct. 13, 1942, to May 21, 1948, staff gage at present site and datum.
REMARKS.--Diversions for irrigation of 3,100 acres, of which 830 acres lie downstream from station.

Magnitude and probability of annual low flow based on 21 years of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	5.5	4.5	4.0	3.7	--	--
3	5.7	4.6	4.1	3.7	--	--
7	6.3	5.0	4.4	3.9	--	--
14	7.5	5.7	4.9	4.3	--	--
30	9.0	6.8	5.7	4.9	--	--
60	10	7.7	6.4	5.4	--	--
90	12	8.5	7.1	6.0	--	--
120	13	9.4	7.7	6.5	--	--
183	14	10	9.0	8.0	--	--

Magnitude and probability of seasonal low flow from March-June based on 22 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	7.4	5.6	4.7	4.1	--	--
3	7.7	5.7	4.8	4.2	--	--
7	8.4	6.4	5.4	4.7	--	--
14	9.5	7.2	6.1	5.2	--	--
30	11	8.8	7.4	6.4	--	--

Magnitude and probability of seasonal low flow from November-February based on 22 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	6.4	4.6	4.0	3.7	--	--
3	6.7	4.7	4.1	3.7	--	--
7	7.1	5.0	4.4	4.0	--	--
14	8.1	5.8	5.0	4.3	--	--
30	9.2	6.9	5.8	4.9	--	--

Duration of daily mean flows based on 22 years of record

Discharge, in ft^3/s, which was equaled or exceeded for indicated percent of time							
99%	98%	95%	90%	80%	70%	60%	50%
4.2	4.8	6.2	7.6	10	13	15	18
40%	30%	20%	15%	10%	5%	2%	1%
22	32	73	121	178	296	447	527

Magnitude and probability of annual high flow based on 22 years of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2	5	10	25	50	100
	50%	20%	10%	4%	2%	1%
1	503	761	965	1,260	--	--
3	464	690	863	1,110	--	--
7	410	597	734	922	--	--
15	354	520	639	798	--	--
30	295	433	530	656	--	--
60	236	325	384	457	--	--
90	182	249	293	348	--	--

Magnitude and probability of seasonal low flow from July-October based on 22 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	9.8	6.5	5.1	4.1	--	--
3	10	6.8	5.4	4.4	--	--
7	11	7.2	5.7	4.7	--	--
14	11	7.8	6.5	5.5	--	--
30	12	8.7	7.2	6.2	--	--

Monthly and annual mean discharges

Month	Maximum (ft^3/s)	Minimum (ft^3/s)	Mean (ft^3/s)	Standard deviation (ft^3/s)	Years of record
October	63	7.6	19	12	22
November	36	3.8	16	6.6	22
December	26	4.5	13	4.7	22
January	18	5.0	11	3.5	22
February	18	4.4	10	3.8	22
March	17	6.2	12	2.8	22
April	184	14	61	42	22
May	441	65	221	97	23
June	656	80	242	141	23
July	184	19	63	37	23
August	48	7.3	21	9.4	23
September	38	6.7	16	7.7	23
Annual	105	33	60	20	22

06193500 Shields River at Clyde Park, Mont.
Site Number 147

LOCATION.--Lat 45°53'08", long 110°37'05" (NAD 27), in NW¼NW¼ sec.33, T.2 N., R.9 E., Park County, on right bank just downstream from highway bridge, 0.3 mi west of Clyde Park, 2 mi upstream from Brackett Creek, and at river mile 14.2.

DRAINAGE AREA.--543 mi^2.

PERIOD OF RECORD.--38 years. March 1921 to September 1923, April 1929 to December 1932, February 1934 to September 1967 (discontinued). Monthly discharge only for some periods, published in WSP 1309.

REVISED RECORDS.--WSP 1309: 1922, 1948(M). WSP 1729: Drainage area.

GAGE.--Water-stage recorder. Altitude of gage is 4,780 ft (NGVD 29, from topographic map). Mar. 31, 1921, to Sept. 30, 1923, nonrecording gage at present site at different datum. Apr. 27, 1929, to Jan. 5, 1951, nonrecording gage at present site and datum.

REMARKS.--Diversions for irrigation of about 19,500 acres, of which 500 acres lie downstream from station.

Magnitude and probability of annual low flow based on 36 years of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	18	8.4	5.2	3.3	1.9	--
3	19	8.9	5.4	3.4	1.9	--
7	20	9.6	5.9	3.7	2.1	--
14	22	11	6.7	4.3	2.4	--
30	27	13	7.9	5.0	2.8	--
60	33	17	11	6.9	4.0	--
90	39	21	14	9.9	6.3	--
120	46	27	20	15	10	--
183	51	33	25	20	15	--

Magnitude and probability of seasonal low flow from March-June based on 39 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	33	22	17	13	10	--
3	35	24	19	15	11	--
7	38	28	24	21	18	--
14	45	33	29	26	23	--
30	79	51	41	35	29	--

Magnitude and probability of seasonal low flow from November-February based on 38 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	25	18	15	12	10	--
3	27	19	16	13	11	--
7	30	21	18	15	13	--
14	33	24	20	17	14	--
30	38	28	23	20	17	--

Duration of daily mean flows based on 38 years of record

Discharge, in ft^3/s, which was equaled or exceeded for indicated percent of time							
99%	98%	95%	90%	80%	70%	60%	50%
5.2	9.3	18	26	36	44	54	65
40%	30%	20%	15%	10%	5%	2%	1%
84	120	216	309	448	678	982	1,180

Magnitude and probability of annual high flow based on 38 years of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2	5	10	25	50	100
	50%	20%	10%	4%	2%	1%
1	1,020	1,590	2,010	2,580	3,030	--
3	934	1,420	1,740	2,170	2,480	--
7	837	1,220	1,470	1,770	1,980	--
15	724	1,060	1,270	1,520	1,690	--
30	611	902	1,090	1,310	1,470	--
60	500	736	887	1,070	1,200	--
90	411	603	725	874	981	--

Magnitude and probability of seasonal low flow from July-October based on 39 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	19	8.5	5.4	3.5	2.0	--
3	20	9.0	5.7	3.5	2.1	--
7	22	9.7	6.1	4.0	2.2	--
14	24	11	6.8	4.5	2.5	--
30	29	13	8.1	5.3	2.9	--

Monthly and annual mean discharges

Month	Maximum (ft^3/s)	Minimum (ft^3/s)	Mean (ft^3/s)	Standard deviation (ft^3/s)	Years of record
October	199	16	70	38	39
November	136	22	66	23	39
December	130	17	53	22	39
January	99	16	45	17	38
February	201	19	57	38	39
March	348	33	103	65	39
April	820	62	252	162	40
May	1,260	48	485	252	41
June	1,320	63	507	305	41
July	318	9.6	133	89	41
August	158	3.1	47	37	41
September	187	4.3	54	39	41
Annual	352	46	159	66	38

06194000 Brackett Creek near Clyde Park, Mont.
Site Number 148

LOCATION.--Lat 45°52'00", long 110°40'10" (NAD 27), in SE¼NE¼ sec.1, T.1 N., R.8 E., Park County, near right bank on upstream side of private bridge, 3.5 mi southwest of Clyde Park and 4 mi upstream from mouth.
DRAINAGE AREA.--57.9 mi^2 (revised).
PERIOD OF RECORD.--25 years (1921-23, 1934-57).
GAGE.--Wire-weight gage. Altitude of gage is 4,930 ft (NGVD 29, from topographic map). Mar. 30, 1921, to Sept. 30, 1923, staff gage at site 0.75 mi upstream at different datum. Apr. 5, 1934, to May 24, 1949, staff gage and May 25, 1949, to Dec. 14, 1953, wire-weight gage at site 25 ft upstream at present datum.

Magnitude and probability of annual low flow based on 23 years of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	2.5	1.3	0.90	0.63	--	--
3	2.9	1.8	1.3	1.0	--	--
7	3.4	2.4	1.9	1.6	--	--
14	4.0	2.8	2.3	1.9	--	--
30	4.8	3.3	2.7	2.2	--	--
60	5.8	3.9	3.2	2.7	--	--
90	6.2	4.4	3.8	3.3	--	--
120	6.9	5.0	4.3	3.8	--	--
183	7.9	5.7	4.9	4.3	--	--

Magnitude and probability of seasonal low flow from March-June based on 25 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	4.3	2.8	2.0	1.5	1.1	--
3	4.6	3.2	2.6	2.1	1.7	--
7	5.3	3.9	3.3	2.8	2.3	--
14	6.2	4.6	3.8	3.2	2.5	--
30	9.3	6.0	4.7	3.8	2.9	--

Magnitude and probability of seasonal low flow from November-February based on 25 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	3.3	1.8	1.2	0.77	0.46	--
3	3.6	2.1	1.6	1.2	.80	--
7	4.0	2.6	2.1	1.7	1.4	--
14	4.4	3.0	2.5	2.1	1.7	--
30	5.0	3.4	2.8	2.3	1.9	--

Duration of daily mean flows based on 25 years of record

Discharge, in ft^3/s, which was equaled or exceeded for indicated percent of time							
99%	98%	95%	90%	80%	70%	60%	50%
2.0	2.3	3.1	4.4	5.8	7.2	8.8	11
40%	30%	20%	15%	10%	5%	2%	1%
14	21	40	57	82	118	171	211

Magnitude and probability of annual high flow based on 25 years of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2	5	10	25	50	100
	50%	20%	10%	4%	2%	1%
1	187	303	395	529	643	--
3	169	269	348	463	559	--
7	152	234	294	378	446	--
15	132	197	242	302	348	--
30	114	167	202	246	279	--
60	95	133	157	185	204	--
90	77	108	127	150	166	--

Magnitude and probability of seasonal low flow from July-October based on 25 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	6.2	3.4	2.3	1.5	0.94	--
3	6.5	3.7	2.5	1.7	1.1	--
7	6.8	3.9	2.7	1.9	1.2	--
14	7.3	4.2	2.9	2.0	1.3	--
30	8.1	4.8	3.3	2.3	1.5	--

Monthly and annual mean discharges

Month	Maximum (ft^3/s)	Minimum (ft^3/s)	Mean (ft^3/s)	Standard deviation (ft^3/s)	Years of record
October	24	4.2	10	4.5	25
November	20	2.1	9.5	4.4	25
December	18	2.4	7.8	4.1	25
January	16	2.5	6.6	3.2	25
February	17	2.6	6.7	3.3	25
March	22	2.6	10	4.9	25
April	105	14	46	26	27
May	230	15	102	51	27
June	214	12	77	42	27
July	64	5.6	28	15	27
August	31	1.7	11	6.6	27
September	16	2.1	9.8	3.8	27
Annual	55	9.3	28	10	25

06195600 Shields River near Livingston, Mont.
Site Number 149

LOCATION.--Lat 45°44'18", long 110°28'45" (NAD 27), in NE¼SE¼NW¼ sec.22, T.1 S., R.10 E., Park County, Hydrologic Unit 10070003, on right bank 0.2 mi downstream from private road bridge, 6.5 mi northeast of Livingston, and at river mile 2.0.
DRAINAGE AREA.--852 mi^2.
PERIOD OF RECORD.--October 1978 to current year (2002).
GAGE.--Water-stage recorder. Altitude of gage is 4,420 ft (NGVD 29). Oct. 1, 1978, to Aug. 12, 1980, water-stage recorder at site 0.2 mi upstream at datum 7.89 ft higher.
REMARKS.--Diversions for irrigation of about 32,000 acres upstream from station. National Weather Service satellite telemeter at station.

Magnitude and probability of annual low flow
based on 23 years of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	50	37	30	25	--	--
3	53	39	32	26	--	--
7	60	43	35	29	--	--
14	68	48	39	31	--	--
30	75	53	42	34	--	--
60	84	58	46	37	--	--
90	93	66	53	43	--	--
120	104	76	62	51	--	--
183	114	85	71	61	--	--

Magnitude and probability of seasonal low flow from
March-June based on 24 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	85	63	54	47	--	--
3	91	67	56	49	--	--
7	99	72	61	53	--	--
14	120	86	72	62	--	--
30	149	103	87	76	--	--

Magnitude and probability of seasonal low flow from
November-February based on 23 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	56	46	42	39	--	--
3	61	50	45	42	--	--
7	67	57	52	48	--	--
14	76	64	58	54	--	--
30	85	71	64	59	--	--

Duration of daily mean flows based on 24 years of record

Discharge, in ft^3/s, which was equaled or exceeded for indicated percent of time							
99%	98%	95%	90%	80%	70%	60%	50%
35	43	56	70	87	104	121	143
40%	30%	20%	15%	10%	5%	2%	1%
172	222	353	488	705	1,080	1,610	2,050

Magnitude and probability of annual high flow
based on 24 years of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2	5	10	25	50	100
	50%	20%	10%	4%	2%	1%
1	1,640	2,610	3,340	4,360	--	--
3	1,520	2,400	3,020	3,820	--	--
7	1,350	2,090	2,570	3,160	--	--
15	1,140	1,740	2,130	2,600	--	--
30	950	1,480	1,830	2,240	--	--
60	735	1,170	1,460	1,850	--	--
90	619	987	1,240	1,570	--	--

Magnitude and probability of seasonal low flow from
July-October based on 23 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	74	44	33	25	--	--
3	77	46	34	27	--	--
7	80	49	37	29	--	--
14	85	52	39	32	--	--
30	94	57	43	34	--	--

Monthly and annual mean discharges

Month	Maximum (ft^3/s)	Minimum (ft^3/s)	Mean (ft^3/s)	Standard deviation (ft^3/s)	Years of record
October	275	52	150	59	24
November	195	74	134	33	24
December	145	74	109	23	24
January	224	56	103	38	24
February	363	60	125	75	24
March	461	77	177	95	24
April	627	145	370	154	24
May	1,960	198	815	457	24
June	2,260	152	772	514	24
July	1,140	54	323	270	24
August	677	26	134	129	24
September	388	31	134	76	24
Annual	610	114	279	128	24

06197000 Big Timber Creek near Big Timber, Mont.
Site Number 150

LOCATION.--Lat 45°57'15", long 110°01'45"' (NAD 27), in SW¼ NE¼ sec.6, T.2 N., R.14 E., Sweet Grass County, 3 mi downstream from confluence of North and South Forks and 9 mi northeast of Big Timber.

DRAINAGE AREA.--74.9 mi^2.

PERIOD OF RECORD.--11 years (1912-16, 1917-24).

GAGE.--Staff gage Altitude of gage is 4,680 ft (NGVD 29, from topographic map). Prior to Apr. 5, 1918, wire-weight gages at sites 1.5 mi downstream at different datum. Apr. 5, 1918, to Apr. 15, 1921, wire-weight gages at sites within 500 ft downstream at different datum.

REMARKS.--Diversions for irrigation of about 5,000 acres upstream from station.

Magnitude and probability of annual low flow
based on 9 years of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	--	--	--	--	--	--
3	--	--	--	--	--	--
7	--	--	--	--	--	--
14	--	--	--	--	--	--
30	--	--	--	--	--	--
60	--	--	--	--	--	--
90	--	--	--	--	--	--
120	--	--	--	--	--	--
183	--	--	--	--	--	--

Magnitude and probability of seasonal low flow from
March-June based on 11 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	14	7.5	5.2	3.7	--	--
3	15	9.4	7.4	6.0	--	--
7	17	12	9.6	8.4	--	--
14	18	13	11	9.2	--	--
30	20	14	11	9.8	--	--

Magnitude and probability of seasonal low flow from
November-February based on 11 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	13	9.9	8.8	7.9	--	--
3	13	11	9.3	8.1	--	--
7	14	11	9.3	8.2	--	--
14	15	11	9.4	8.3	--	--
30	15	11	9.5	8.4	--	--

Duration of daily mean flows based on 11 years of record

Discharge, in ft^3/s, which was equaled or exceeded for indicated percent of time							
99%	98%	95%	90%	80%	70%	60%	50%
8.4	8.8	9.8	12	17	21	26	32
40%	30%	20%	15%	10%	5%	2%	1%
43	60	103	151	223	323	443	530

Magnitude and probability of annual high flow
based on 11 years of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2	5	10	25	50	100
	50%	20%	10%	4%	2%	1%
1	612	885	1,060	--	--	--
3	529	752	900	--	--	--
7	456	637	763	--	--	--
15	398	544	638	--	--	--
30	356	461	507	--	--	--
60	287	357	380	--	--	--
90	230	288	308	--	--	--

Magnitude and probability of seasonal low flow from
July-October based on 11 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	15	8.8	4.6	0.00	--	--
3	16	9.4	5.3	.00	--	--
7	17	10	7.8	6.0	--	--
14	19	12	10	8.4	--	--
30	23	16	13	12	--	--

Monthly and annual mean discharges

Month	Maximum (ft^3/s)	Minimum (ft^3/s)	Mean (ft^3/s)	Standard deviation (ft^3/s)	Years of record
October	59	12	31	14	12
November	32	10	24	7.2	12
December	43	10	20	9.3	11
January	34	10	17	7.4	11
February	25	9.0	17	5.8	11
March	48	10	23	11	11
April	69	19	48	15	12
May	226	88	145	46	12
June	529	56	310	119	12
July	329	37	176	87	12
August	97	25	56	23	13
September	83	16	35	18	13
Annual	108	40	77	22	11

06197500 Boulder River near Contact, Mont.
Site Number 151

LOCATION.--Lat 45°33'17", long 110°12'00" (NAD 27), in NW¼SE¼SE¼ sec.23, T.3 S., R.12 E., Sweet Grass County, Hydrologic Unit 10070002, on left bank 0.5 mi downstream from Natural Bridge and Falls, 3.4 mi north of Contact, 9.5 mi southeast of McLeod, 9.7 mi upstream from East Boulder River, and at river mile 32.4.

DRAINAGE AREA.--226 mi^2.

PERIOD OF RECORD.--May 1910 to October 1912, April 1913 to September 1916 (no winter records), April to August 1929, October 1950 to September 1969, September 1970 to September 1974, August 1981 to September 1983 (discontinued). Monthly discharge only January to March 1912, published in WSP 1309, and February, March 1955, published in WSP 1729.

REVISED RECORDS.--WSP 1509: 1910-11, 1915 (M). WSP 1916: 1955.

GAGE.--Water-stage recorder. Altitude of gage is 4,930 ft (NGVD 29, from topographic map). Prior to July 15, 1951, non-recording gages at site 2.7 mi downstream at different datum.

REMARKS.--Diversions for irrigation of about 10 acres.

Magnitude and probability of annual low flow based on 24 years of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	42	34	30	26	--	--
3	44	39	36	34	--	--
7	48	43	40	38	--	--
14	50	45	42	40	--	--
30	52	48	45	44	--	--
60	57	52	49	48	--	--
90	64	57	54	52	--	--
120	70	62	58	56	--	--
183	91	78	72	68	--	--

Magnitude and probability of seasonal low flow from March-June based on 27 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	47	38	32	28	23	--
3	49	42	39	36	33	--
7	51	45	42	40	37	--
14	53	47	44	42	39	--
30	55	50	47	45	42	--

Magnitude and probability of seasonal low flow from November-February based on 27 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	43	37	34	32	30	--
3	48	41	38	35	31	--
7	53	46	41	38	32	--
14	56	49	44	41	33	--
30	58	51	46	44	34	--

Duration of daily mean flows based on 27 years of record

Discharge, in ft^3/s, which was equaled or exceeded for indicated percent of time							
99%	98%	95%	90%	80%	70%	60%	50%
36	44	48	53	62	75	90	121
40%	30%	20%	15%	10%	5%	2%	1%
168	257	590	892	1,340	2,040	2,810	3,170

Magnitude and probability of annual high flow based on 27 years of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2	5	10	25	50	100
	50%	20%	10%	4%	2%	1%
1	3,220	3,850	4,260	4,790	5,180	--
3	3,010	3,630	4,050	4,580	4,990	--
7	2,780	3,380	3,760	4,240	4,590	--
15	2,460	3,000	3,340	3,750	4,060	--
30	2,080	2,490	2,750	3,060	3,280	--
60	1,580	1,850	2,010	2,200	2,320	--
90	1,220	1,430	1,540	1,660	1,740	--

Magnitude and probability of seasonal low flow from July-October based on 29 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	96	72	61	54	46	--
3	99	76	66	58	51	--
7	102	80	71	64	57	--
14	106	85	76	70	64	--
30	115	92	84	78	72	--

Monthly and annual mean discharges

Month	Maximum (ft^3/s)	Minimum (ft^3/s)	Mean (ft^3/s)	Standard deviation (ft^3/s)	Years of record
October	222	83	133	43	31
November	137	67	94	21	29
December	94	42	73	13	27
January	80	30	61	9.8	27
February	73	35	57	7.5	27
March	70	42	56	7.2	27
April	248	53	101	50	29
May	1,240	288	679	256	32
June	3,120	1,250	1,930	463	33
July	2,000	282	994	397	33
August	542	131	277	104	33
September	301	103	158	43	31
Annual	484	258	383	64	27

06200000 Boulder River at Big Timber, Mont.
Site Number 152

LOCATION.--Lat 45°50'03", long 109°56'17" (NAD 27), in SE¼NE¼SE¼ sec.14, T.1 N., R.14 E., Sweet Grass County, Hydrologic Unit 10070002, on left bank 150 ft upstream from Old Boulder Bridge, 1 mi east of Big Timber, and at river mile 1.6.
DRAINAGE AREA.--523 mi^2.
PERIOD OF RECORD.--April 1947 to December 1953, March 1955 to current year (2002). Monthly discharge only for April 1947, published in WSP 1309.
GAGE.--Water-stage recorder. Altitude of gage is 4,056.39 ft (NGVD 29, levels by U.S. Army Corps of Engineers).
REMARKS.--Diversions for irrigation of about 13,300 acres, of which about 250 acres lie downstream from station. U.S. Geological Survey satellite telemeter at station.

Magnitude and probability of annual low flow
based on 51 years of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	63	40	30	22	16	12
3	70	46	34	25	17	13
7	81	52	38	28	19	14
14	92	59	43	32	21	15
30	107	71	52	38	25	19
60	126	89	68	51	35	27
90	144	110	87	68	48	37
120	155	121	101	85	67	57
183	167	129	111	98	83	75

Magnitude and probability of seasonal low flow from
March-June based on 53 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	96	76	66	58	49	44
3	104	84	72	63	54	48
7	114	93	81	71	60	53
14	122	102	90	81	70	63
30	129	109	99	90	80	73

Magnitude and probability of seasonal low flow from
November-February based on 53 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	70	50	41	34	28	24
3	79	58	48	40	32	28
7	93	71	59	49	39	34
14	109	85	71	59	47	40
30	124	100	84	70	56	47

Duration of daily mean flows based on 53 years of record

Discharge, in ft^3/s, which was equaled or exceeded for indicated percent of time							
99%	98%	95%	90%	80%	70%	60%	50%
38	54	78	98	121	143	164	186
40%	30%	20%	15%	10%	5%	2%	1%
232	315	644	1,130	1,820	2,850	4,010	4,860

Magnitude and probability of annual high flow
based on 53 years of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2	5	10	25	50	100
	50%	20%	10%	4%	2%	1%
1	4,890	6,060	6,730	7,470	7,970	8,420
3	4,510	5,690	6,370	7,120	7,630	8,100
7	4,060	5,240	5,920	6,700	7,230	7,730
15	3,530	4,560	5,160	5,840	6,300	6,720
30	2,990	3,800	4,280	4,840	5,230	5,590
60	2,250	2,840	3,190	3,600	3,890	4,160
90	1,710	2,150	2,410	2,730	2,940	3,150

Magnitude and probability of seasonal low flow from
July-October based on 54 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	102	56	38	27	18	13
3	104	57	39	28	19	14
7	109	60	41	30	20	15
14	115	63	44	32	22	17
30	131	73	53	39	26	20

Monthly and annual mean discharges

Month	Maximum (ft^3/s)	Minimum (ft^3/s)	Mean (ft^3/s)	Standard deviation (ft^3/s)	Years of record
October	417	75	220	84	54
November	282	108	191	45	54
December	214	72	154	29	54
January	214	55	136	28	53
February	197	55	128	25	53
March	179	93	128	19	53
April	390	67	212	73	55
May	2,240	429	1,150	419	55
June	4,640	894	2,770	845	55
July	4,310	193	1,270	764	55
August	709	22	244	155	55
September	534	28	193	104	55
Annual	906	310	566	140	53

06200500 Sweet Grass Creek above Melville, Mont.
Site Number 153

LOCATION.--Lat 46°90'15", long 110°05'15" (NAD 27), in NW¼ sec.27, T.5 N., R.13 E., Sweet Grass County, on right bank 7.5 mi northwest of Melville.
DRAINAGE AREA.--63.8 mi^2.
PERIOD OF RECORD.--43 years. August 1913 to December 1924, April 1937 to September 1969 (discontinued). May 1907 to September 1911, April to September 1912 at site 5 mi upstream published as "Sweetgrass Creek above Melville," records not equivalent owing to diversion and tributary flow. Monthly discharge only for some periods, published in WSP 1309.
REVISED RECORDS.--WSP 1509: 1914-15, 1918, 1937. WSP 1729: Drainage area.
GAGE.--Water-stage recorder. Altitude of gage is 5,490 ft (NGVD 29, by barometer). Aug. 21, 1913, to Dec. 31, 1924, nonrecording gage at site 1,500 ft downstream at different datum. Apr. 17, 1937, to Sept. 25, 1951, water-stage recorder at site 1,000 ft downstream at different datum.
REMARKS.--Diversions for irrigation of 200 acres upstream from station. Diversions in T.5 N., R.12 E. from headwaters of American Fork in Musselshell River basin to irrigate an additional 300 acres upstream from station.

Magnitude and probability of annual low flow
based on 41 years of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	6.8	4.3	3.2	2.4	1.7	--
3	7.2	4.9	3.8	3.0	2.2	--
7	7.5	5.4	4.5	3.8	3.1	--
14	8.0	6.3	5.5	4.9	4.3	--
30	9.2	7.5	6.7	6.0	5.4	--
60	11	8.7	7.8	7.1	6.3	--
90	14	11	9.6	8.5	7.5	--
120	18	14	12	11	9.2	--
183	25	20	17	16	14	--

Magnitude and probability of seasonal low flow from
March-June based on 43 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	7.8	5.4	4.3	3.5	2.8	--
3	8.2	5.7	4.6	3.8	3.0	--
7	8.6	6.3	5.3	4.5	3.7	--
14	9.1	7.0	6.1	5.4	4.8	--
30	11	8.3	7.3	6.6	5.8	--

Magnitude and probability of seasonal low flow from
November-February based on 43 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	8.4	5.1	3.7	2.7	1.8	--
3	8.8	5.7	4.3	3.3	2.4	--
7	9.1	6.2	5.0	4.1	3.2	--
14	9.6	7.2	6.1	5.4	4.7	--
30	11	8.4	7.4	6.7	5.9	--

Duration of daily mean flows based on 43 years of record

Discharge, in ft^3/s, which was equaled or exceeded for indicated percent of time							
99%	98%	95%	90%	80%	70%	60%	50%
5.8	6.3	7.7	9.7	13	16	21	29
40%	30%	20%	15%	10%	5%	2%	1%
41	63	125	181	261	401	549	691

Magnitude and probability of annual high flow
based on 43 years of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2	5	10	25	50	100
	50%	20%	10%	4%	2%	1%
1	782	1,020	1,180	1,360	1,500	--
3	678	863	976	1,110	1,200	--
7	584	731	817	915	983	--
15	498	615	680	751	798	--
30	426	524	577	634	670	--
60	338	406	441	477	499	--
90	269	318	341	364	378	--

Magnitude and probability of seasonal low flow from
July-October based on 43 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	26	19	17	15	14	--
3	26	20	18	16	15	--
7	27	21	18	17	15	--
14	28	22	19	17	16	--
30	31	23	20	18	17	--

Monthly and annual mean discharges

Month	Maximum (ft^3/s)	Minimum (ft^3/s)	Mean (ft^3/s)	Standard deviation (ft^3/s)	Years of record
October	97	16	41	22	44
November	51	14	29	10	44
December	33	7.2	19	6.4	44
January	26	5.2	14	4.6	43
February	22	6.0	12	3.8	43
March	20	5.7	11	3.2	43
April	71	6.5	16	10	44
May	318	78	178	66	44
June	585	131	385	106	44
July	360	64	204	75	44
August	147	31	74	26	45
September	110	20	46	20	45
Annual	118	51	86	17	43

06201000 Sweet Grass Creek below Melville, Mont.
Site Number 154

LOCATION.--Lat 46°03'41", long 109°50'43" (NAD 27), near middle of south line of sec.27, T.4 N., R.15 E., Sweet Grass County, on left bank 6 mi southeast of Melville and 19 mi upstream from East Fork

DRAINAGE AREA.--143 mi^2 (revised).

PERIOD OF RECORD.--11 years (1910-11, 1937-40, 1941-42, 1946-52).

GAGE.--Water-stage recorder. Altitude of gage is 4,740 ft (NGVD 29, by barometer). May 1907 to November 1908, staff gage at site 2.5 mi downstream at different datum. Apr. 1, 1909, to Sept. 30, 1924, and Apr. 11, 1937, to Apr. 14, 1941, staff or wire-weight gages at various sites within 150 ft of present site at present datum.

REMARKS.--Diversions upstream from station for irrigation of 12,800 acres, of which 100 acres lie downstream from station.

Magnitude and probability of annual low flow based on 7 years of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	--	--	--	--	--	--
3	--	--	--	--	--	--
7	--	--	--	--	--	--
14	--	--	--	--	--	--
30	--	--	--	--	--	--
60	--	--	--	--	--	--
90	--	--	--	--	--	--
120	--	--	--	--	--	--
183	--	--	--	--	--	--

Magnitude and probability of seasonal low flow from March-June based on 12 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	16	12	10	8.9	--	--
3	17	13	11	9.6	--	--
7	18	13	12	10	--	--
14	19	15	14	13	--	--
30	24	18	16	14	--	--

Magnitude and probability of seasonal low flow from November-February based on 11 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	15	11	9.5	8.2	--	--
3	16	12	10	8.8	--	--
7	17	14	12	11	--	--
14	19	16	14	13	--	--
30	22	18	16	14	--	--

Duration of daily mean flows based on 11 years of record

Discharge, in ft^3/s, which was equaled or exceeded for indicated percent of time							
99%	98%	95%	90%	80%	70%	60%	50%
12	14	17	20	27	34	43	54
40%	30%	20%	15%	10%	5%	2%	1%
66	88	153	213	296	434	615	743

Magnitude and probability of annual high flow based on 11 years of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2	5	10	25	50	100
	50%	20%	10%	4%	2%	1%
1	780	1,220	1,550	--	--	--
3	668	1,010	1,260	--	--	--
7	520	795	989	--	--	--
15	426	646	794	--	--	--
30	359	527	638	--	--	--
60	289	405	478	--	--	--
90	233	315	363	--	--	--

Magnitude and probability of seasonal low flow from July-October based on 24 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	20	10	6.8	4.8	--	--
3	21	11	7.7	5.7	--	--
7	24	13	9.9	7.6	--	--
14	27	16	12	9.3	--	--
30	31	20	16	14	--	--

Monthly and annual mean discharges

Month	Maximum (ft^3/s)	Minimum (ft^3/s)	Mean (ft^3/s)	Standard deviation (ft^3/s)	Years of record
October	136	22	63	30	25
November	87	21	52	19	20
December	67	19	42	14	11
January	44	19	28	8.1	11
February	38	15	24	7.4	11
March	66	16	30	14	12
April	100	16	42	24	24
May	336	73	172	63	28
June	681	50	361	155	30
July	434	35	170	99	30
August	164	16	56	36	30
September	107	18	47	25	30
Annual	128	47	90	27	11

06202510 Stillwater River above Nye Creek, near Nye, Mont.
Site Number 155

LOCATION.--Lat 45°23'46", long 109°52'14" (NAD 27), in SW¼NE¼SW¼ sec.15, T.5 S., R.15 E., Stillwater County, Hydrologic Unit 10007005, at private bridge 200 ft above Nye Creek, 1.0 mi below Mountain View Creek, 4.3 mi southwest of Nye, and at river mile 41.3.
DRAINAGE AREA.--193 mi^2.
PERIOD OF RECORD.--November 1979 to September 1991 (discontinued).
GAGE.--Nonrecording gage and crest-stage gage. Altitude of gage is 4,880 ft (NGVD 29, from topographic map).
REMARKS.--Diversions or regulation upstream from gage have not been identified.

Magnitude and probability of annual low flow based on 11 years of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	27	23	22	21	--	--
3	32	27	25	23	--	--
7	37	33	31	29	--	--
14	42	38	36	34	--	--
30	46	41	39	37	--	--
60	53	46	42	39	--	--
90	58	49	45	42	--	--
120	65	54	49	46	--	--
183	92	75	67	61	--	--

Magnitude and probability of seasonal low flow from March-June based on 12 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	36	29	27	24	--	--
3	38	32	29	26	--	--
7	41	36	34	32	--	--
14	46	40	38	36	--	--
30	49	44	41	39	--	--

Magnitude and probability of seasonal low flow from November-February based on 11 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	29	24	22	21	--	--
3	34	28	26	24	--	--
7	39	33	31	30	--	--
14	44	38	36	35	--	--
30	49	42	40	37	--	--

Duration of daily mean flows based on 11 years of record

Discharge, in ft^3/s, which was equaled or exceeded for indicated percent of time							
99%	98%	95%	90%	80%	70%	60%	50%
33	34	39	46	55	65	82	110
40%	30%	20%	15%	10%	5%	2%	1%
162	263	482	743	1,210	1,940	2,740	3,060

Magnitude and probability of annual high flow based on 11 years of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2	5	10	25	50	100
	50%	20%	10%	4%	2%	1%
1	3,740	4,230	4,370	--	--	--
3	3,350	3,630	3,670	--	--	--
7	2,900	3,280	3,380	--	--	--
15	2,540	2,940	3,070	--	--	--
30	2,140	2,460	2,570	--	--	--
60	1,550	1,830	1,950	--	--	--
90	1,200	1,420	1,520	--	--	--

Magnitude and probability of seasonal low flow from July-October based on 11 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	83	65	57	50	--	--
3	92	75	66	60	--	--
7	98	78	68	60	--	--
14	103	81	71	63	--	--
30	115	90	79	71	--	--

Monthly and annual mean discharges

Month	Maximum (ft^3/s)	Minimum (ft^3/s)	Mean (ft^3/s)	Standard deviation (ft^3/s)	Years of record
October	243	82	127	44	11
November	156	58	88	27	12
December	77	46	63	12	12
January	73	42	56	10	12
February	67	39	52	8.6	12
March	70	41	51	8.4	12
April	238	67	138	61	12
May	1,080	440	781	228	12
June	2,380	896	1,810	433	12
July	1,620	303	912	466	12
August	471	113	294	93	12
September	326	76	169	62	12
Annual	437	270	373	66	11

06204050 West Rosebud Creek near Roscoe, Mont.
Site Number 156

LOCATION.--Lat 45°14'35", long 109°43'50" (NAD 27), in NE¼ sec.10, T.7 S., R.16 E., Stillwater County, Hydrologic Unit 10070005, on left bank at Mystic Lake powerplant, 2.0 mi downstream from Mystic Lake, 13.5 mi southwest of Roscoe, and at river mile 26.8.
DRAINAGE AREA.--52.1 mi^2.
PERIOD OF RECORD.--September 1965 to current year (2002).
GAGE.--Water-stage recorder and rectangular weir. Altitude of gage is 6,535.60 ft (NGVD 29).
REMARKS.--Flow regulated by Mystic Lake (station number 06204000). U.S. Geological Survey satellite telemeter at station.

Magnitude and probability of annual low flow based on 36 years of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	17	9.2	6.2	4.3	2.7	--
3	22	12	8.2	5.7	3.5	--
7	26	16	11	7.3	4.4	--
14	30	19	13	9.0	5.5	--
30	35	23	17	11	7.0	--
60	40	29	23	19	14	--
90	50	40	35	31	27	--
120	68	54	47	41	34	--
183	84	77	73	69	66	--

Magnitude and probability of seasonal low flow from March-June based on 37 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	23	12	7.8	5.2	3.1	--
3	25	14	9.0	6.1	3.7	--
7	28	16	11	7.4	4.5	--
14	32	19	13	9.1	5.6	--
30	36	24	17	12	7.1	--

Magnitude and probability of seasonal low flow from November-February based on 37 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	34	20	14	9.6	6.1	--
3	37	24	18	14	9.9	--
7	40	31	26	23	20	--
14	44	34	29	25	22	--
30	50	39	34	30	25	--

Duration of daily mean flows based on 37 years of record

Discharge, in ft^3/s, which was equaled or exceeded for indicated percent of time							
99%	98%	95%	90%	80%	70%	60%	50%
16	20	27	34	44	58	72	83
40%	30%	20%	15%	10%	5%	2%	1%
98	134	172	195	247	366	541	682

Magnitude and probability of annual high flow based on 37 years of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2	5	10	25	50	100
	50%	20%	10%	4%	2%	1%
1	632	929	1,110	1,310	1,440	--
3	589	856	1,020	1,200	1,320	--
7	530	751	882	1,030	1,130	--
15	468	650	759	885	971	--
30	398	541	630	737	812	--
60	308	398	457	528	581	--
90	261	325	364	412	446	--

Magnitude and probability of seasonal low flow from July-October based on 36 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	40	21	14	9.9	6.5	--
3	49	31	25	20	16	--
7	61	40	31	26	20	--
14	70	45	35	28	21	--
30	84	58	47	38	30	--

Monthly and annual mean discharges

Month	Maximum (ft^3/s)	Minimum (ft^3/s)	Mean (ft^3/s)	Standard deviation (ft^3/s)	Years of record
October	167	33	94	34	37
November	178	31	82	37	37
December	118	28	74	21	37
January	148	26	67	21	37
February	92	29	60	15	37
March	124	22	55	24	37
April	108	3.6	43	19	37
May	134	16	74	29	37
June	558	76	221	97	37
July	712	158	367	129	37
August	277	103	197	38	37
September	183	38	122	37	38
Annual	164	82	122	19	37

06204500 Rosebud Creek near Absarokee, Mont.
Site Number 157

LOCATION.--Lat 45°29'12", long 109°27'19" (NAD 27), in SW¼NW¼ sec.13, T.4 S., R.8 E., Stillwater County, on right bank 80 ft downstream from Smith Bridge, 0.2 mi downstream from confluence of East and West Rosebud Creeks, and 2.5 mi south of Absarokee.
DRAINAGE AREA.--394 mi^2 .
PERIOD OF RECORD.--34 years. April 1935 to September 1969 (discontinued).
REVISED RECORDS.--WSP 1036: 1944. WSP 1309: 1935-36(M). WSP 1729: Drainage area.
GAGE.--Water-stage recorder. Altitude of gage is 4,160 ft (NGVD 29, by barometer). Prior to July 14, 1942, nonrecording gage at present site and datum.
REMARKS.--Flow partly regulated by Mystic Lake (station number 06204000). Diversions for irrigation of about 16,000 acres upstream from station.

Magnitude and probability of annual low flow
based on 33 years of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	86	66	56	47	38	--
3	94	74	63	54	44	--
7	105	83	71	60	49	--
14	116	91	77	65	53	--
30	129	101	84	70	56	--
60	143	115	97	83	67	--
90	156	132	117	105	91	--
120	166	144	133	123	113	--
183	202	173	160	150	140	--

Magnitude and probability of seasonal low flow from
March-June based on 34 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	107	78	63	52	40	--
3	116	86	70	58	45	--
7	124	94	78	66	53	--
14	134	104	88	75	62	--
30	154	116	98	84	70	--

Magnitude and probability of seasonal low flow from
November-February based on 34 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	91	70	59	51	42	--
3	101	78	65	55	45	--
7	114	86	71	61	51	--
14	125	94	78	66	53	--
30	139	106	86	71	58	--

Duration of daily mean flows based on 34 years of record

Discharge, in ft^3/s, which was equaled or exceeded for indicated percent of time							
99%	98%	95%	90%	80%	70%	60%	50%
66	81	103	125	151	174	202	239
40%	30%	20%	15%	10%	5%	2%	1%
283	373	590	759	1,010	1,390	1,940	2,180

Magnitude and probability of annual high flow
based on 34 years of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2	5	10	25	50	100
	50%	20%	10%	4%	2%	1%
1	2,110	2,880	3,410	4,090	4,610	--
3	1,950	2,590	3,010	3,510	3,890	--
7	1,760	2,320	2,650	3,040	3,310	--
15	1,530	2,010	2,310	2,660	2,910	--
30	1,360	1,790	2,050	2,370	2,590	--
60	1,140	1,480	1,690	1,940	2,110	--
90	958	1,230	1,390	1,580	1,710	--

Magnitude and probability of seasonal low flow from
July-October based on 34 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	175	136	118	105	91	--
3	187	145	126	111	95	--
7	199	156	136	120	103	--
14	214	171	149	133	115	--
30	232	186	165	149	133	--

Monthly and annual mean discharges

Month	Maximum (ft^3/s)	Minimum (ft^3/s)	Mean (ft^3/s)	Standard deviation (ft^3/s)	Years of record
October	449	149	246	61	34
November	274	130	200	33	34
December	214	113	166	26	34
January	201	47	148	34	34
February	226	51	144	37	34
March	278	91	165	43	34
April	544	66	212	86	35
May	892	223	526	194	35
June	2,250	598	1,200	407	35
July	1,910	383	1,060	404	35
August	741	226	464	147	35
September	605	125	310	96	35
Annual	634	241	407	97	34

06205000 Stillwater River near Absarokee, Mont.
Site Number 158

LOCATION.--Lat 45°33'04", long 109°23'12" (NAD 27), in NE¼NE¼NW¼ sec.28, T.3 S., R.19 E., Stillwater County, Hydrologic Unit 10070005, on right bank 3 mi downstream from Rosebud Creek, 3.5 mi northeast of Absarokee, 9 mi southwest of Columbus, and at river mile 9.4.

DRAINAGE AREA.--975 mi^2.

PERIOD OF RECORD.--July 1910 to September 1914 (no winter records), March 1935 to September 1995, October 1995 to current year (2002; seasonal records only).

REVISED RECORDS.--WSP 1309: 1911(M). WSP 1729: Drainage area.

GAGE.--Water-stage recorder. Altitude of gage is 3,873.8 ft (NGVD 29, levels by U.S. Army Corps of Engineers). Prior to Oct. 1, 1914, nonrecording gage, and Mar. 26, 1935, to Sept. 30, 1942, nonrecording gage, at bridge 2 mi upstream at different datums.

REMARKS.--Flow partly regulated by Mystic Lake (station number 06204000). Diversions for irrigation of about 24,300 acres, of which 400 acres lie downstream from station. U.S. Geological Survey satellite telemeter at station.

Magnitude and probability of annual low flow
based on 60 years of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	154	115	95	80	65	56
3	170	130	109	92	74	63
7	192	152	130	112	93	81
14	210	172	151	134	115	103
30	231	193	172	154	135	123
60	262	221	199	181	162	149
90	291	249	227	209	189	176
120	321	278	255	236	215	201
183	399	333	301	275	248	231

Magnitude and probability of seasonal low flow from
March-June based on 63 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	205	152	122	98	67	58
3	218	164	132	106	77	67
7	226	175	148	126	95	85
14	241	192	167	145	116	106
30	262	209	185	165	136	126

Magnitude and probability of seasonal low flow from
November-February based on 63 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	160	116	96	83	67	59
3	176	131	111	93	76	67
7	198	154	132	115	94	84
14	218	174	153	136	117	106
30	245	194	175	156	138	126

Duration of daily mean flows based on 63 years of record

Discharge, in ft^3/s, which was equaled or exceeded for indicated percent of time							
99%	98%	95%	90%	80%	70%	60%	50%
121	149	197	226	284	336	394	481
40%	30%	20%	15%	10%	5%	2%	1%
609	836	1,410	1,960	2,700	3,820	5,240	5,970

Magnitude and probability of annual high flow
based on 63 years of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2	5	10	25	50	100
	50%	20%	10%	4%	2%	1%
1	5,910	7,520	8,480	9,620	10,400	11,200
3	5,390	6,880	7,800	8,900	9,690	10,400
7	4,840	6,280	7,180	8,270	9,060	9,820
15	4,230	5,500	6,290	7,240	7,920	8,580
30	3,730	4,790	5,430	6,180	6,690	7,180
60	3,040	3,860	4,330	4,870	5,220	5,550
90	2,470	3,110	3,470	3,870	4,140	4,380

Magnitude and probability of seasonal low flow from
July-October based on 69 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	389	287	237	199	161	138
3	402	299	249	211	172	149
7	417	317	269	233	196	173
14	438	336	288	252	214	191
30	477	369	319	281	243	219

Monthly and annual mean discharges

Month	Maximum (ft^3/s)	Minimum (ft^3/s)	Mean (ft^3/s)	Standard deviation (ft^3/s)	Years of record
October	852	0.00	509	147	71
November	574	227	403	73	65
December	430	184	317	54	63
January	413	.00	273	66	63
February	449	.00	260	69	63
March	565	.00	280	85	63
April	1,180	144	410	146	70
May	2,880	660	1,510	480	71
June	5,780	1,560	3,510	1,020	72
July	6,370	626	2,360	1,010	72
August	1,960	280	903	330	73
September	1,100	275	618	202	73
Annual	1,470	507	940	214	63

06207500 Clarks Fork Yellowstone River near Belfry, Mont.
Site Number 159

LOCATION.--Lat 45°00'37", long 109°03'53" (NAD 27), in NW¼SW¼NW¼ 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 mi^2.

PERIOD OF RECORD.--July 1921 to current year (2002). 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. Altitude of gage is 3,986.24 ft (NGVD 29, levels by U.S. Army Corps of Engineers). Prior to Nov. 15, 1934, nonrecording gage, and Nov. 15, 1934, to July 26, 1951, water-stage recorder at bridge 0.4 mi downstream from different datum. July 27, 1951, to Sept. 30, 1953, water-stage recorder at present site at datum 0.98 ft higher.

REMARKS.--Diversions for irrigation of about 11,100 acres upstream from station. U.S. Geological Survey satellite telemeter at station.

Magnitude and probability of annual low flow based on 80 years of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	121	85	67	54	41	34
3	130	91	71	57	42	34
7	143	99	77	60	44	35
14	155	107	83	65	48	38
30	171	119	94	75	56	45
60	202	146	116	92	69	55
90	232	174	140	114	86	70
120	249	192	159	133	106	89
183	263	207	181	161	141	128

Magnitude and probability of seasonal low flow from March-June based on 81 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	171	128	104	84	64	52
3	181	139	113	92	69	56
7	195	153	125	101	76	61
14	209	166	138	114	89	73
30	223	178	153	131	108	94

Magnitude and probability of seasonal low flow from November-February based on 81 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	145	107	88	74	60	51
3	157	117	96	80	64	54
7	173	134	114	97	80	69
14	190	151	130	113	94	82
30	209	174	155	139	122	111

Duration of daily mean flows based on 81 years of record

Discharge, in ft^3/s, which was equaled or exceeded for indicated percent of time							
99%	98%	95%	90%	80%	70%	60%	50%
74	102	137	164	205	234	263	315
40%	30%	20%	15%	10%	5%	2%	1%
375	575	1,300	2,010	2,900	4,250	5,900	7,290

Magnitude and probability of annual high flow based on 81 years of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2	5	10	25	50	100
	50%	20%	10%	4%	2%	1%
1	7,030	8,640	9,620	10,800	11,600	12,400
3	6,590	8,110	9,040	10,100	10,900	11,600
7	5,940	7,450	8,380	9,510	10,300	11,100
15	5,170	6,560	7,430	8,480	9,250	9,990
30	4,460	5,550	6,210	6,980	7,530	8,050
60	3,530	4,340	4,810	5,360	5,750	6,110
90	2,780	3,420	3,800	4,240	4,550	4,840

Magnitude and probability of seasonal low flow from July-October based on 80 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	170	104	78	61	45	36
3	175	108	81	63	47	38
7	182	112	84	65	48	38
14	193	118	88	68	50	41
30	217	132	99	77	57	46

Monthly and annual mean discharges

Month	Maximum (ft^3/s)	Minimum (ft^3/s)	Mean (ft^3/s)	Standard deviation (ft^3/s)	Years of record
October	725	46	280	145	81
November	648	115	295	88	81
December	379	110	263	54	81
January	359	110	231	47	81
February	328	100	222	43	81
March	364	96	222	42	81
April	1,170	110	425	204	81
May	5,700	839	2,040	801	81
June	7,220	1,610	4,110	1,200	81
July	5,740	349	2,190	1,090	81
August	1,450	66	616	313	82
September	834	50	314	164	82
Annual	1,480	547	936	214	81

06208500 Clarks Fork Yellowstone River at Edgar, Mont.
Site Number 160

LOCATION.--Lat 45°27'58", long 108°50'35" (NAD 27), in SE¼SE¼SE¼ sec.23, T.4 S., R.23 E., Carbon County, Hydrologic Unit 10070006, on right bank 400 ft downstream from county bridge, 0.5 mi east of Edgar, 6 mi upstream from Rock Creek, and at river mile 22.1.
DRAINAGE AREA.--2,022 mi^2.
PERIOD OF RECORD.--July 1921 to September 1969, October 1986 to current year (2002).
REVISED RECORDS.--WSP 1509: 1924, 1932(M). WSP 1729: Drainage area.
GAGE.--Water-stage recorder. Altitude of gage is 3,460 ft (NGVD 29). Prior to Aug. 31, 1953, nonrecording gage at same site and datum.
REMARKS.--Diversions for irrigation of about 41,500 acres, of which about 840 acres lie downstream from the station. In addition, about 6,300 acres of land upstream from the station are irrigated by diversions from the adjoining Rock Creek basin. U.S. Geological Survey satellite telemeter at station. Flows of White Horse Canal subtracted from discharge values at station.

Magnitude and probability of annual low flow
based on 63 years of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	195	130	96	71	47	35
3	211	143	106	78	52	39
7	234	157	116	85	56	41
14	256	173	128	95	64	47
30	288	197	146	109	73	54
60	337	252	200	157	113	89
90	370	297	252	215	175	150
120	402	332	293	260	224	200
183	428	356	322	296	269	252

Magnitude and probability of seasonal low flow from
March-June based on 64 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	270	198	152	115	79	59
3	290	224	174	133	90	67
7	375	297	238	186	132	101
14	375	297	238	186	132	101
30	375	297	238	186	132	101

Magnitude and probability of seasonal low flow from
November-February based on 64 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	221	177	155	138	120	109
3	239	194	171	153	133	121
7	262	216	194	177	159	147
14	287	242	220	202	184	172
30	315	263	237	216	193	178

Duration of daily mean flows based on 64 years of record

Discharge, in ft^3/s, which was equaled or exceeded for indicated percent of time							
99%	98%	95%	90%	80%	70%	60%	50%
135	175	219	272	322	373	429	486
40%	30%	20%	15%	10%	5%	2%	1%
566	730	1,310	2,020	2,880	4,150	5,820	7,160

Magnitude and probability of annual high flow
based on 64 years of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2	5	10	25	50	100
	50%	20%	10%	4%	2%	1%
1	6,890	8,400	9,270	10,300	11,000	11,600
3	6,380	7,880	8,750	9,760	10,500	11,100
7	5,740	7,260	8,180	9,280	10,100	10,800
15	5,000	6,390	7,280	8,370	9,170	9,950
30	4,330	5,450	6,180	7,080	7,750	8,410
60	3,420	4,220	4,730	5,350	5,810	6,260
90	2,710	3,350	3,760	4,240	4,600	4,940

Magnitude and probability of seasonal low flow from
July-October based on 63 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	272	159	113	82	55	41
3	282	167	119	88	59	45
7	300	180	129	95	64	49
14	323	195	140	103	70	53
30	371	228	165	122	84	63

Monthly and annual mean discharges

Month	Maximum (ft^3/s)	Minimum (ft^3/s)	Mean (ft^3/s)	Standard deviation (ft^3/s)	Years of record
October	1,010	298	534	167	64
November	777	310	501	98	64
December	592	217	409	76	64
January	512	200	351	69	64
February	584	180	349	76	64
March	554	220	364	75	64
April	1,400	123	558	213	64
May	5,580	757	2,110	803	64
June	7,260	1,770	4,070	1,220	64
July	4,770	290	2,030	1,030	64
August	1,540	50	616	343	65
September	1,400	156	477	208	65
Annual	1,620	644	1,030	224	64

06208800 Clarks Fork Yellowstone River near Silesia, Mont.
Site Number 161

LOCATION.--Lat 45°30'48", long 108°49'42" (NAD 27), in NW¼SE¼ sec.l, T.4 S., R.23 E., Carbon County, Hydrologic Unit 10070006 on left bank 0.5 mi downstream from Whitehorse Canal intake, 1 mi upstream from Rock Creek, 3 mi south of Silesia, and at river mile 16.3.

DRAINAGE AREA.--2,093 mi^2.

PERIOD OF RECORD.--October 1969 to November 1986 (discontinued). Records for July 1921 to September 1969 published as "Clarks Fork Yellowstone River at Edgar" at site 5.8 mi upstream not equivalent because of diversion into Whitehorse Canal during irrigation season.

GAGE.--Water-stage recorder. Altitude of gage is 3,405.79 ft (NGVD 29, levels by U.S. Corps of Army Engineers).

REMARKS.--Diversion for irrigation of about 45,900 acres of which about 2,180 acres lie downstream from station. In addition, about 56,200 acres of land upstream from station are irrigated by diversions from the adjoining Rock Creek basin.

Magnitude and probability of annual low flow
based on 16 years of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	192	134	106	85	--	--
3	207	158	135	116	--	--
7	252	195	166	144	--	--
14	281	227	202	183	--	--
30	350	299	272	251	--	--
60	398	345	314	287	--	--
90	431	389	368	352	--	--
120	466	425	405	390	--	--
183	533	465	431	404	--	--

Magnitude and probability of seasonal low flow from
March-June based on 17 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	302	202	148	109	--	--
3	312	234	191	158	--	--
7	338	295	273	255	--	--
14	375	335	312	293	--	--
30	398	358	337	321	--	--

Magnitude and probability of seasonal low flow from
November-February based on 16 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	207	168	150	136	--	--
3	223	189	175	164	--	--
7	269	227	208	193	--	--
14	310	261	236	217	--	--
30	367	325	304	288	--	--

Duration of daily mean flows based on 17 years of record

Discharge, in ft^3/s, which was equaled or exceeded for indicated percent of time							
99%	98%	95%	90%	80%	70%	60%	50%
200	224	280	328	403	453	503	579
40%	30%	20%	15%	10%	5%	2%	1%
682	843	1,300	1,980	3,030	4,630	6,070	7,740

Magnitude and probability of annual high flow
based on 17 years of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2	5	10	25	50	100
	50%	20%	10%	4%	2%	1%
1	7,720	9,460	10,500	11,700	--	--
3	7,280	9,040	10,100	11,200	--	--
7	6,450	8,260	9,350	10,600	--	--
15	5,630	7,300	8,270	9,350	--	--
30	4,830	6,050	6,660	7,260	--	--
60	3,910	4,800	5,170	5,490	--	--
90	3,060	3,780	4,090	4,350	--	--

Magnitude and probability of seasonal low flow from
July-October based on 17 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	336	218	166	129	--	--
3	346	226	173	136	--	--
7	368	244	190	152	--	--
14	399	278	226	190	--	--
30	475	347	293	254	--	--

Monthly and annual mean discharges

Month	Maximum (ft^3/s)	Minimum (ft^3/s)	Mean (ft^3/s)	Standard deviation (ft^3/s)	Years of record
October	950	484	657	141	18
November	669	416	567	71	18
December	680	397	478	75	17
January	514	292	423	62	17
February	499	350	424	44	17
March	596	334	428	77	17
April	761	337	521	131	17
May	3,230	1,020	1,890	607	17
June	6,660	2,220	4,450	1,290	17
July	5,600	422	2,430	1,300	17
August	1,250	333	766	301	17
September	1,020	263	671	226	17
Annual	1,510	661	1,140	235	17

06209500 Rock Creek near Red Lodge, Mont.
Site Number 162

LOCATION (REVISED).--Lat 45°05'11", long 109°19'46" (NAD 27), in NW¼NE¼SW¼ sec.36, T.8 S., R.19 E., Carbon County, Hydrologic Unit 10070006, on left bank 40 ft downstream from county bridge, 6.7 mi south of Red Lodge, and at river mile 49.1.

DRAINAGE AREA.--105 mi^2 .

PERIOD OF RECORD.--April to December 1932, May 1934 to September 1982, May 1985 to September 1986, January 2000 to current year (2002). Monthly discharge only for May 1934, published in WSP 1309.

REVISED RECORDS.--WSP 1729: Drainage area. WDR MT-00-1: Drainage area.

GAGE.--Water-stage recorder. Altitude of gage is 6,400 ft (NGVD 29). Prior to October 1986, water-stage recorder at datum 6,099.42 ft, levels by U.S. Army Corps of Engineers, at previous site 3.1 mi downstream. Streamflows are equivalent.

REMARKS.--Flow partly regulated by Glacier Lake. No diversions upstream from station. U.S. Geological Survey satellite telemeter at station.

Magnitude and probability of annual low flow
based on 49 years of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	23	19	17	16	14	--
3	24	20	19	17	16	--
7	25	22	21	20	18	--
14	26	24	22	21	20	--
30	28	26	24	23	21	--
60	31	28	26	24	22	--
90	36	32	29	27	25	--
120	41	36	33	31	29	--
183	66	57	53	49	46	--

Magnitude and probability of seasonal low flow from
March-June based on 52 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	25	21	20	18	16	15
3	26	22	20	19	17	16
7	27	23	22	20	19	18
14	28	24	23	22	20	19
30	29	26	24	23	22	20

Magnitude and probability of seasonal low flow from
November-February based on 51 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	25	20	18	16	14	12
3	26	22	20	18	16	15
7	27	24	22	20	18	17
14	29	26	24	22	21	19
30	31	27	25	24	22	20

Duration of daily mean flows based on 51 years of record

Discharge, in ft^3/s, which was equaled or exceeded for indicated percent of time							
99%	98%	95%	90%	80%	70%	60%	50%
20	23	25	28	34	40	48	67
40%	30%	20%	15%	10%	5%	2%	1%
105	176	286	368	490	685	934	1,060

Magnitude and probability of annual high flow
based on 51 years of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2	5	10	25	50	100
	50%	20%	10%	4%	2%	1%
1	1,070	1,430	1,650	1,910	2,090	2,260
3	986	1,300	1,480	1,690	1,840	1,980
7	887	1,170	1,340	1,530	1,670	1,790
15	773	1,000	1,130	1,280	1,380	1,470
30	683	872	975	1,090	1,160	1,220
60	576	724	806	895	953	1,010
90	483	597	658	724	766	804

Magnitude and probability of seasonal low flow from
July-October based on 52 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	63	54	50	48	45	43
3	64	56	52	49	46	44
7	67	58	53	50	47	45
14	70	60	55	52	48	46
30	80	67	61	57	52	49

Monthly and annual mean discharges

Month	Maximum (ft^3/s)	Minimum (ft^3/s)	Mean (ft^3/s)	Standard deviation (ft^3/s)	Years of record
October	124	50	83	18	52
November	78	40	55	10	52
December	56	27	42	6.4	52
January	45	21	34	5.5	52
February	42	20	31	4.6	52
March	40	20	30	3.8	52
April	99	24	40	12	52
May	460	88	220	87	54
June	1,130	273	596	187	55
July	1,090	220	494	182	55
August	427	153	258	64	55
September	219	89	141	31	55
Annual	252	97	172	35	51

06212500 Red Lodge Creek below Cooney Reservoir, near Boyd, Mont.
Site Number 163

LOCATION.--Lat 45°26'59", long 109°11'06" (NAD 27), in NE¼NW¼NW¼ sec.31, T.4 S., R.21 E., Carbon County, Hydrologic Unit 10070006, on right bank 250 ft upstream from Cottonwood Creek, 1.5 mi downstream from Cooney Dam, 6 mi west of Boyd, and at river mile 10.5.

DRAINAGE AREA.--210 mi^2.

PERIOD OF RECORD.--September 1937 to current year (2002); seasonal records water years 1997-99.

REVISED RECORDS.--WSP 1309: 1942(M), 1944(M). WSP 2116: 1957(M).

GAGE.--Water-stage recorder. Altitude of gage is 4,139.12 ft (NGVD 29).

REMARKS.--Some return flow from lands irrigated by water diverted from Rock Creek and East Rosebud Creek basins. Flow completely regulated by Cooney Reservoir (station number 06212000). Diversions for irrigation of about 6,900 acres upstream from station.

Magnitude and probability of annual low flow based on 60 years of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	5.6	2.0	0.89	0.39	0.05	0.00
3	5.9	2.5	1.6	1.0	.61	.42
7	7.5	3.5	2.3	1.6	.98	.71
14	9.4	4.5	2.9	2.0	1.2	.86
30	12	5.9	4.0	2.9	2.0	1.6
60	17	8.4	5.6	3.9	2.6	1.9
90	24	12	7.9	5.4	3.5	2.5
120	33	17	11	8.0	5.3	3.9
183	57	36	27	21	16	12

Magnitude and probability of seasonal low flow from March-June based on 62 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	11	4.7	2.4	1.2	0.54	0.29
3	11	5.5	3.8	2.7	1.9	1.5
7	12	6.2	4.2	3.0	2.1	1.6
14	15	7.1	4.8	3.4	2.3	1.8
30	19	8.5	5.6	3.9	2.6	2.0

Magnitude and probability of seasonal low flow from November-February based on 61 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	9.8	4.2	2.6	1.8	1.1	0.79
3	10	4.6	2.9	2.0	1.3	.95
7	11	5.4	3.6	2.6	1.7	1.3
14	14	7.0	4.8	3.5	2.4	1.9
30	16	8.1	5.5	3.9	2.6	2.0

Duration of daily mean flows based on 62 years of record

Discharge, in ft^3/s, which was equaled or exceeded for indicated percent of time							
99%	98%	95%	90%	80%	70%	60%	50%
2.8	4.1	5.9	9.9	19	31	47	67
40%	30%	20%	15%	10%	5%	2%	1%
94	125	165	186	231	308	455	567

Magnitude and probability of annual high flow based on 62 years of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2	5	10	25	50	100
	50%	20%	10%	4%	2%	1%
1	389	691	985	1,500	2,020	2,680
3	380	639	864	1,220	1,540	1,930
7	360	574	739	972	1,160	1,370
15	320	498	630	810	954	1,110
30	267	409	515	664	785	915
60	218	323	401	508	594	686
90	194	281	341	421	483	546

Magnitude and probability of seasonal low flow from July-October based on 64 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	29	7.7	2.9	1.0	0.09	0.04
3	31	9.0	3.9	1.7	.62	.47
7	41	15	7.3	3.6	1.5	.76
14	48	19	9.6	4.9	2.1	1.1
30	64	32	19	12	6.4	4.0

Monthly and annual mean discharges

Month	Maximum (ft^3/s)	Minimum (ft^3/s)	Mean (ft^3/s)	Standard deviation (ft^3/s)	Years of record
October	234	2.4	79	49	65
November	212	3.5	65	51	63
December	120	3.5	37	28	62
January	95	2.0	28	20	62
February	139	2.2	29	25	62
March	232	2.4	43	46	62
April	253	3.2	81	65	65
May	801	5.1	177	148	65
June	685	49	225	144	65
July	383	57	172	70	65
August	220	60	141	39	65
September	197	20	112	42	65
Annual	226	24	100	37	62

06214500 Yellowstone River at Billings, Mont.
Site Number 164

LOCATION.--Lat 45°48'00", long 108°28'00" (NAD 27), in SE¼SE¼SE¼ sec.27, T.1 N., R.26 E., Yellowstone County, Hydrologic Unit 10070007, on right bank 0.3 mi downstream from bridge on U.S. Highway 87, 1 mi northeast of Billings, 10 mi upstream from Pryor Creek, and at river mile 360.3.

DRAINAGE AREA.--11,805 mi^2.

PERIOD OF RECORD.--May 1904 to December 1905 (gage heights only January to March, December 1905), August 1928 to current year (2002). Monthly discharge only for some periods, published in WSP 1309. Published as "near Billings" 1904-05.

REVISED RECORDS.--WDR MT-68: 1967 (M). WSP 1729: Drainage area.

GAGE.--Water-stage recorder. Altitude of gage is 3,080 ft (NGVD 29). May 1904 to December 1905, nonrecording gage at bridge 0.3 ft upstream at different datum. Aug. 24, 1928, to June 30, 1932, nonrecording gage at bridge 0.3 mi upstream at datum 2.0 ft higher. July 1, 1932, to Oct. 12, 1937, water-stage recorder at old diversion dam 3.3 mi upstream at different datum. Oct. 13, 1937, to Jan. 9, 1963, and Dec. 2, 1967, to Sept. 12, 1990, water-stage recorder 0.3 mi upstream at datum 3,081.36 ft. Jan. 10, 1963, to Dec. 2, 1967, water-stage recorder 2.1 mi upstream at datum 3,069.9 ft.

REMARKS.--Diversions for irrigation of about 350,000 acres upstream from station. U.S. Army Corps of Engineers satellite telemeter at station.

Magnitude and probability of annual low flow based on 73 years of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	1,270	949	794	676	555	483
3	1,370	1,050	897	778	656	581
7	1,570	1,260	1,110	998	879	805
14	1,870	1,530	1,360	1,230	1,090	997
30	2,170	1,780	1,590	1,430	1,270	1,160
60	2,390	1,990	1,790	1,640	1,470	1,360
90	2,590	2,190	1,990	1,840	1,670	1,570
120	2,830	2,400	2,200	2,030	1,860	1,750
183	3,210	2,640	2,380	2,170	1,960	1,820

Magnitude and probability of seasonal low flow from March-June based on 74 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	2,200	1,690	1,430	1,230	1,020	885
3	2,270	1,770	1,510	1,300	1,090	952
7	2,410	1,930	1,690	1,500	1,290	1,160
14	2,590	2,120	1,900	1,720	1,530	1,410
30	2,820	2,310	2,080	1,900	1,720	1,610

Magnitude and probability of seasonal low flow from November-February based on 74 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	1,290	958	799	680	558	485
3	1,400	1,060	906	785	660	585
7	1,600	1,280	1,130	1,010	894	820
14	1,890	1,550	1,390	1,260	1,120	1,040
30	2,220	1,840	1,650	1,490	1,330	1,220

Duration of daily mean flows based on 74 years of record

Discharge, in ft^3/s, which was equaled or exceeded for indicated percent of time							
99%	98%	95%	90%	80%	70%	60%	50%
1,280	1,510	1,760	2,160	2,560	2,930	3,370	3,850
40%	30%	20%	15%	10%	5%	2%	1%
4,400	5,740	8,860	12,700	18,100	25,900	34,500	43,100

Magnitude and probability of annual high flow based on 74 years of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2	5	10	25	50	100
	50%	20%	10%	4%	2%	1%
1	38,700	49,400	55,600	62,500	67,000	71,300
3	36,500	47,200	53,400	60,500	65,400	69,900
7	33,400	43,900	50,300	57,800	63,000	68,000
15	29,900	39,300	45,000	51,900	56,700	61,300
30	26,300	34,300	39,100	44,800	48,700	52,400
60	21,100	27,300	31,000	35,300	38,300	41,200
90	17,000	21,900	24,800	28,100	30,400	32,500

Magnitude and probability of seasonal low flow from July-October based on 75 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	2,980	2,200	1,840	1,580	1,310	1,150
3	3,010	2,230	1,880	1,610	1,350	1,190
7	3,080	2,290	1,930	1,660	1,390	1,230
14	3,210	2,380	2,000	1,720	1,440	1,270
30	3,430	2,540	2,140	1,840	1,540	1,360

Monthly and annual mean discharges

Month	Maximum (ft^3/s)	Minimum (ft^3/s)	Mean (ft^3/s)	Standard deviation (ft^3/s)	Years of record
October	6,800	2,130	4,020	1,050	76
November	5,160	2,280	3,560	683	76
December	4,450	1,580	2,800	534	75
January	3,830	1,360	2,480	511	74
February	4,380	1,560	2,650	654	74
March	5,480	1,770	3,020	726	74
April	8,800	1,440	4,110	1,290	75
May	24,100	5,640	12,600	4,030	75
June	53,900	9,850	25,300	8,350	76
July	37,200	3,410	13,700	6,570	76
August	9,780	1,460	5,230	2,120	76
September	7,300	1,530	4,090	1,360	77
Annual	12,100	3,760	6,970	1,720	74

06216000 Pryor Creek at Pryor, Mont.
Site Number 165

LOCATION.--Lat 45°26'06", long 108°32'01" (NAD 27), in NE¼NW¼NE¼ sec.5, T.5 S., R.26 E., Big Horn County, Hydrologic Unit 10070008, on left bank 60 ft upstream from county bridge, 0.5 mi north of Pryor, 1.4 mi downstream from Lost Creek, and at river mile 82.7.

DRAINAGE AREA.--117 mi^2.

PERIOD OF RECORD.--June 1921 to September 1924 (no winter records), November 1966 to current year (2002). Monthly discharge only for some periods, published in WSP 1309.

REVISED RECORDS.--WSP 1729: Drainage area. WDR MT-87-1: 1982-83 (M), 1986 (M).

GAGE.--Water-stage recorder. Altitude of gage is 4,007.35 ft (NGVD 29, levels by U.S. Army Corps of Engineers). Prior to Oct. 14, 1966, nonrecording gage at approximately same site at different datum.

REMARKS.--Diversions for irrigation of about 1,100 acres upstream from station.

Magnitude and probability of annual low flow based on 35 years of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	12	7.5	5.9	4.9	3.9	--
3	12	8.3	6.8	5.9	5.0	--
7	13	9.0	7.6	6.6	5.7	--
14	14	9.8	8.2	7.1	6.2	--
30	16	11	9.3	8.1	7.0	--
60	19	13	11	10	8.7	--
90	21	15	13	12	10	--
120	23	17	15	13	12	--
183	25	19	17	16	15	--

Magnitude and probability of seasonal low flow from March-June based on 36 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	16	11	9.7	8.6	7.5	--
3	17	12	10	8.9	7.8	--
7	18	13	11	9.8	8.6	--
14	20	15	13	11	9.7	--
30	23	18	16	14	13	--

Magnitude and probability of seasonal low flow from November-February based on 35 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	23	18	17	16	15	--
3	24	19	17	16	15	--
7	24	20	18	17	16	--
14	25	21	19	18	17	--
30	26	22	20	19	18	--

Duration of daily mean flows based on 35 years of record

Discharge, in ft^3/s, which was equaled or exceeded for indicated percent of time							
99%	98%	95%	90%	80%	70%	60%	50%
7.9	9.4	12	16	20	24	26	28
40%	30%	20%	15%	10%	5%	2%	1%
31	34	41	44	52	64	93	135

Magnitude and probability of annual high flow based on 35 years of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2	5	10	25	50	100
	50%	20%	10%	4%	2%	1%
1	91	214	360	667	1,030	--
3	77	171	278	494	738	--
7	65	134	207	345	493	--
15	57	110	162	256	350	--
30	50	89	126	188	248	--
60	43	71	96	136	174	--
90	39	61	79	108	134	--

Magnitude and probability of seasonal low flow from July-October based on 37 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	12	7.6	6.0	4.9	4.0	--
3	12	8.3	6.9	5.9	5.0	--
7	13	9.1	7.6	6.6	5.7	--
14	14	9.8	8.2	7.2	6.2	--
30	16	11	9.3	8.2	7.1	--

Monthly and annual mean discharges

Month	Maximum (ft^3/s)	Minimum (ft^3/s)	Mean (ft^3/s)	Standard deviation (ft^3/s)	Years of record
October	63	18	32	10	37
November	62	19	32	9.8	37
December	70	19	31	10	37
January	54	19	29	8.3	36
February	56	19	30	9.1	36
March	71	18	32	11	36
April	59	18	33	11	39
May	251	18	55	47	39
June	158	14	41	30	39
July	69	6.8	23	13	40
August	50	7.7	21	9.4	40
September	61	12	26	10	40
Annual	66	16	32	12	35

06216500 Pryor Creek near Billings, Mont.
Site Number 166

LOCATION.--Lat 45°42'54", long 108°18'51" (NAD 27), in sec.30, T.1 S., R.28 E., Yellowstone County, on bridge on U.S. Highway 87, 11 mi southeast of Billings and 14 mi upstream from mouth.
DRAINAGE AREA.--440 mi^2 (revised). At site used 1911-24, 430 mi^2 (revised).
PERIOD OF RECORD.--15 years (1938-53).
GAGE.--Crest-stage gage after May 26, 1955. Altitude of gage is 3,310 ft (NGVD 29, by barometer). Prior to Sept. 30, 1924, wire-weight gage at site 2 mi upstream at different datum. Mar. 30, 1938, to Dec. 31, 1953, wire-weight gage at same site and datum.
REMARKS.--Diversions for irrigation of 1,500 acres upstream from station.

Magnitude and probability of annual low flow
based on 14 years of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	1.9	0.07	0.00	0.00	--	--
3	2.2	.09	.00	.00	--	--
7	2.5	.28	.04	.00	--	--
14	3.6	.58	.18	.02	--	--
30	6.3	1.6	.74	.38	--	--
60	9.5	3.0	1.5	.84	--	--
90	14	6.0	3.7	2.5	--	--
120	19	9.5	6.4	4.5	--	--
183	26	16	12	8.9	--	--

Magnitude and probability of seasonal low flow from
March-June based on 17 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	14	3.3	1.0	0.00	--	--
3	15	3.7	1.2	.00	--	--
7	18	4.7	1.6	.00	--	--
14	26	11	6.0	.02	--	--
30	39	20	12	.39	--	--

Magnitude and probability of seasonal low flow from
November-February based on 16 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	17	9.3	6.0	0.00	--	--
3	17	9.5	6.2	.00	--	--
7	19	10	6.7	.00	--	--
14	21	12	8.0	.02	--	--
30	24	14	9.2	.39	--	--

Duration of daily mean flows based on 16 years of record

Discharge, in ft^3/s, which was equaled or exceeded for indicated percent of time							
99%	98%	95%	90%	80%	70%	60%	50%
0.29	0.58	3.1	9.4	17	25	32	39
40%	30%	20%	15%	10%	5%	2%	1%
45	57	74	88	119	188	294	418

Magnitude and probability of annual high flow
based on 16 years of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2	5	10	25	50	100
	50%	20%	10%	4%	2%	1%
1	486	837	1,080	1,400	--	--
3	380	673	891	1,190	--	--
7	267	469	626	848	--	--
15	192	322	421	558	--	--
30	144	239	309	404	--	--
60	108	176	226	295	--	--
90	91	146	184	235	--	--

Magnitude and probability of seasonal low flow from
July-October based on 28 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	5.5	0.24	0.00	0.00	0.00	--
3	6.5	.30	.00	.00	.00	--
7	6.8	.53	.04	.00	.00	--
14	7.9	.95	.19	.02	.00	--
30	11	2.4	.94	.39	.13	--

Monthly and annual mean discharges

Month	Maximum (ft^3/s)	Minimum (ft^3/s)	Mean (ft^3/s)	Standard deviation (ft^3/s)	Years of record
October	207	9.3	46	36	29
November	80	15	43	18	27
December	66	18	36	15	19
January	77	.00	32	18	16
February	145	.00	51	40	16
March	233	.00	98	61	17
April	290	25	95	73	28
May	324	16	100	73	29
June	297	9.7	91	68	29
July	152	.28	38	36	29
August	59	.76	22	16	29
September	119	1.7	35	28	30
Annual	92	22	52	24	16

06216900 Pryor Creek near Huntley, Mont.
Site Number 167

LOCATION.--Lat 45°49'19", long 108°17'23" (NAD 27), in NE¼SE¼NW¼ sec.19, T.1 N., R.28 E., Yellowstone County, Hydrologic Unit 10070008, on left bank 250 ft upstream from county bridge on Indian Creek road, 1.9 mi downstream from Indian Creek, 4.9 mi south of Huntley, and at river mile 11.2.
DRAINAGE AREA.--582 mi^2.
PERIOD OF RECORD.--October 1978 to September 2001.
GAGE.--Water-stage recorder. Altitude of gage is 3,140 ft (NGVD 29, from topographic map.) Prior to Nov. 12, 1996, water-stage recorder at site 450 ft downstream at different datum.
REMARKS.--Diversions for irrigation of about 3,200 acres upstream from station.

Magnitude and probability of annual low flow based on 21 years of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	4.7	1.1	0.40	0.04	--	--
3	5.6	1.3	.54	.24	--	--
7	6.5	1.8	.86	.44	--	--
14	8.4	2.8	1.6	.92	--	--
30	11	4.4	2.6	1.7	--	--
60	16	7.4	4.8	3.3	--	--
90	22	13	10	7.9	--	--
120	28	19	15	13	--	--
183	34	26	22	19	--	--

Magnitude and probability of seasonal low flow from March-June based on 21 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	21	9.2	5.6	3.6	--	--
3	22	11	6.7	4.4	--	--
7	25	16	13	11	--	--
14	34	22	18	15	--	--
30	44	33	29	26	--	--

Magnitude and probability of seasonal low flow from November-February based on 21 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	20	13	11	9.2	--	--
3	23	15	13	11	--	--
7	26	19	17	15	--	--
14	30	23	20	18	--	--
30	36	27	24	21	--	--

Duration of daily mean flows based on 21 years of record

Discharge, in ft^3/s, which was equaled or exceeded for indicated percent of time							
99%	98%	95%	90%	80%	70%	60%	50%
1.5	3.1	8.0	16	27	34	40	46
40%	30%	20%	15%	10%	5%	2%	1%
54	62	78	89	112	166	260	366

Magnitude and probability of annual high flow based on 21 years of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2	5	10	25	50	100
	50%	20%	10%	4%	2%	1%
1	580	1,010	1,340	1,800	--	--
3	459	792	1,040	1,390	--	--
7	317	547	726	979	--	--
15	213	365	494	691	--	--
30	160	262	347	478	--	--
60	121	188	243	327	--	--
90	104	154	194	253	--	--

Magnitude and probability of seasonal low flow from July-October based on 21 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	4.7	1.2	0.56	0.19	--	--
3	5.7	1.4	.77	.38	--	--
7	6.7	2.0	.98	.58	--	--
14	8.5	3.0	1.8	.97	--	--
30	11	4.6	2.8	1.7	--	--

Monthly and annual mean discharges

Month	Maximum (ft^3/s)	Minimum (ft^3/s)	Mean (ft^3/s)	Standard deviation (ft^3/s)	Years of record
October	117	25	50	19	22
November	112	24	50	18	22
December	95	26	49	17	22
January	126	27	51	23	22
February	116	22	66	28	22
March	453	43	103	92	21
April	218	30	86	46	22
May	403	33	126	108	22
June	184	29	74	45	22
July	107	3.0	31	29	22
August	61	2.5	22	17	22
September	51	11	32	11	22
Annual	136	39	63	24	21

06217750 Fly Creek at Pompeys Pillar, Mont.
Site Number 168

LOCATION.--Lat 45°59'33", long 107°57'07" (NAD 27), in SW¼NW¼SE¼ sec.23, T.3 N., R.30 E., Yellowstone County, Hydrologic Unit 10070007, on downstream side of county bridge near right bank at Pompeys Pillar, 300 ft downstream from Lost Boy Creek, and 0.5 mi upstream from mouth.
DRAINAGE AREA.--285 mi^2.
PERIOD OF RECORD.--October 1968 to September 1981 (discontinued).
GAGE.--Nonrecording gage and crest-stage gage. Altitude of gage is 2,852.84 ft (NGVD 29, Montana State Highway Commission bridge reference mark). Oct. 1, 1968, to May 1974, nonrecording gage at present site but different datum. May 1974 to July 16, 1978, nonrecording gage at bridge 3 mi upstream at different datum.
REMARKS.--Flow affected by waste water from irrigation ditches and by return flow from irrigated areas upstream.

Magnitude and probability of annual low flow
based on 12 years of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	3.2	2.3	1.9	1.7	--	--
3	3.8	3.1	2.7	2.4	--	--
7	4.2	3.4	3.1	2.8	--	--
14	4.7	3.8	3.4	3.1	--	--
30	5.2	4.2	3.8	3.5	--	--
60	5.8	4.9	4.5	4.2	--	--
90	6.6	5.5	5.0	4.7	--	--
120	7.9	6.4	5.7	5.2	--	--
183	20	16	14	13	--	--

Magnitude and probability of seasonal low flow from
March-June based on 13 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	4.9	3.5	3.0	2.6	--	--
3	5.7	4.3	3.8	3.5	--	--
7	5.9	4.5	4.1	3.9	--	--
14	6.3	4.9	4.5	4.3	--	--
30	8.2	5.7	5.0	4.5	--	--

Magnitude and probability of seasonal low flow from
November-February based on 12 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	3.2	2.3	2.0	1.7	--	--
3	3.9	3.1	2.8	2.5	--	--
7	4.2	3.5	3.1	2.8	--	--
14	4.7	3.9	3.4	3.1	--	--
30	5.3	4.3	3.8	3.5	--	--

Duration of daily mean flows based on 13 years of record

Discharge, in ft^3/s, which was equaled or exceeded for indicated percent of time							
99%	98%	95%	90%	80%	70%	60%	50%
3.0	3.6	4.4	5.2	6.7	8.1	11	15
40%	30%	20%	15%	10%	5%	2%	1%
26	39	53	61	72	89	132	282

Magnitude and probability of annual high flow
based on 13 years of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2	5	10	25	50	100
	50%	20%	10%	4%	2%	1%
1	368	1,420	3,120	7,660	--	--
3	316	1,080	2,180	4,850	--	--
7	233	669	1,230	2,450	--	--
15	165	396	661	1,190	--	--
30	118	244	373	609	--	--
60	80	141	200	302	--	--
90	65	108	147	213	--	--

Magnitude and probability of seasonal low flow from
July-October based on 12 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	8.4	6.1	4.9	3.9	--	--
3	9.1	7.4	6.6	5.9	--	--
7	10	8.1	7.2	6.4	--	--
14	11	8.6	7.6	6.8	--	--
30	13	9.8	8.8	8.2	--	--

Monthly and annual mean discharges

Month	Maximum (ft^3/s)	Minimum (ft^3/s)	Mean (ft^3/s)	Standard deviation (ft^3/s)	Years of record
October	54	7.9	19	12	13
November	10	5.9	8.8	1.5	13
December	9.8	3.7	6.6	1.6	13
January	32	3.6	9.3	8.0	13
February	238	4.8	39	69	13
March	437	4.3	75	122	13
April	53	6.9	18	14	13
May	514	23	76	132	13
June	115	35	60	21	13
July	74	18	39	14	13
August	77	25	44	15	13
September	97	45	61	14	13
Annual	69	21	38	16	13

06287000 Bighorn River near St. Xavier, Mont.
Site Number 169

LOCATION.--Lat 45°19'00", long 107°55'05" (NAD 27), in NW¼NW¼NE¼ 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 mi^2. Area at site used prior to Apr. 16, 1963, 19,626 mi^2.

PERIOD OF RECORD.--October 1934 to current year (2002).

GAGE.--Water-stage recorder. Altitude of gage is 3,158.38 ft (NGVD 29, levels by U.S. Army Corps of Engineers). Prior to Apr. 16, 1963, and June 13, 1964, to Mar. 31, 1965, water-stage recorder at site 1.2 mi upstream at different datum. Apr. 1, 1965, to July 31, 1966, water-stage recorder at site 1,300 ft downstream at present datum.

REMARKS.--Recorded discharge values. Some regulation by 14 reservoirs in Wyoming with combined capacity of 1,400,000 acre-ft and complete regulation by Bighorn Lake since Nov. 3, 1965. Diversions for irrigation of about 375,000 acres upstream from station. Bureau of Reclamation satellite telemeter at station.

Unregulated streamflow period

Magnitude and probability of annual low flow based on 29 years of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	882	604	483	396	311	--
3	981	741	638	563	488	--
7	1,150	929	836	768	701	--
14	1,340	1,090	977	891	802	--
30	1,540	1,260	1,130	1,030	914	--
60	1,730	1,390	1,230	1,100	971	--
90	1,920	1,540	1,370	1,230	1,090	--
120	2,110	1,710	1,520	1,370	1,210	--
183	2,250	1,830	1,640	1,490	1,330	--

Magnitude and probability of seasonal low flow from March-June based on 30 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	1,390	1,090	945	838	729	--
3	1,520	1,180	1,020	897	767	--
7	1,670	1,320	1,150	1,020	879	--
14	1,920	1,490	1,290	1,130	972	--
30	2,170	1,680	1,470	1,310	1,140	--

Magnitude and probability of seasonal low flow from November-February based on 29 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	889	613	489	401	316	--
3	991	747	647	573	496	--
7	1,170	936	843	780	709	--
14	1,400	1,100	983	896	811	--
30	1,630	1,290	1,140	1,040	923	--

Duration of daily mean flows based on 30 years of record

Discharge, in ft^3/s, which was equaled or exceeded for indicated percent of time							
99%	98%	95%	90%	80%	70%	60%	50%
850	998	1,190	1,390	1,710	1,990	2,280	2,580
40%	30%	20%	15%	10%	5%	2%	1%
2,880	3,300	4,120	5,030	6,690	10,500	15,400	18,800

Magnitude and probability of annual high flow based on 30 years of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2	5	10	25	50	100
	50%	20%	10%	4%	2%	1%
1	14,500	21,100	25,600	31,600	36,100	--
3	13,300	20,000	24,600	30,600	35,300	--
7	12,200	18,600	23,100	29,000	33,500	--
15	10,900	16,700	20,600	25,500	29,200	--
30	9,630	14,700	17,900	21,700	24,500	--
60	7,730	11,500	13,900	16,600	18,600	--
90	6,420	9,260	11,000	13,000	14,300	--

Magnitude and probability of seasonal low flow from July-October based on 29 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	1,430	1,130	999	903	807	--
3	1,470	1,160	1,030	930	830	--
7	1,550	1,230	1,090	986	880	--
14	1,690	1,330	1,160	1,040	918	--
30	1,860	1,460	1,290	1,160	1,030	--

Monthly and annual mean discharges

Month	Maximum (ft^3/s)	Minimum (ft^3/s)	Mean (ft^3/s)	Standard deviation (ft^3/s)	Years of record
October	4,030	1,570	2,770	685	30
November	4,000	1,360	2,580	630	30
December	3,310	1,100	2,140	615	30
January	3,500	1,090	1,930	590	30
February	3,760	888	2,110	717	30
March	4,540	1,400	2,630	764	30
April	4,800	1,230	2,610	850	30
May	8,740	1,630	4,530	1,770	30
June	17,900	2,750	9,570	4,400	30
July	14,000	1,140	5,740	3,590	30
August	4,990	1,300	2,430	991	30
September	3,930	1,330	2,560	711	30
Annual	5,060	1,710	3,470	843	30

06287000 Bighorn River near St. Xavier, Mont.—Continued
Site Number 169

Regulated streamflow period

Magnitude and probability of annual low flow
based on 37 years of record

Period of consecutive days	Discharge, in ft³/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	1,260	658	411	259	142	--
3	1,630	859	537	338	184	--
7	1,870	1,050	693	458	267	--
14	1,970	1,160	782	529	316	--
30	2,180	1,370	946	650	393	--
60	2,360	1,660	1,280	994	714	--
90	2,590	1,880	1,500	1,200	899	--
120	2,870	2,090	1,670	1,340	1,010	--
183	3,100	2,300	1,870	1,530	1,180	--

Magnitude and probability of seasonal low flow from
March-June based on 38 seasons of record

Period of consecutive days	Discharge, in ft³/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	2,220	1,180	691	395	184	--
3	2,260	1,250	769	465	235	--
7	2,370	1,400	926	607	345	--
14	2,500	1,510	1,020	685	404	--
30	2,720	1,630	1,100	740	439	--

Magnitude and probability of seasonal low flow from
November-February based on 37 seasons of record

Period of consecutive days	Discharge, in ft³/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	2,120	1,210	808	544	324	--
3	2,280	1,390	961	668	415	--
7	2,520	1,640	1,160	824	519	--
14	2,700	1,850	1,370	1,000	657	--
30	2,820	2,040	1,620	1,290	954	--

Duration of daily mean flows based on 38 years of record

Discharge, in ft³/s, which was equaled or exceeded for indicated percent of time							
99%	98%	95%	90%	80%	70%	60%	50%
626	1,130	1,550	1,760	2,180	2,510	2,840	3,180
40%	30%	20%	15%	10%	5%	2%	1%
3,570	3,950	4,450	5,120	5,800	7,340	8,700	11,500

Magnitude and probability of annual high flow
based on 38 years of record

Period of consecutive days	Discharge, in ft³/s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2	5	10	25	50	100
	50%	20%	10%	4%	2%	1%
1	7,400	12,000	15,400	20,200	24,100	--
3	7,260	11,600	14,900	19,500	23,200	--
7	7,060	11,200	14,300	18,600	22,100	--
15	6,750	10,600	13,400	17,200	20,300	--
30	6,220	9,430	11,800	14,900	17,400	--
60	5,440	7,800	9,390	11,400	12,900	--
90	4,960	6,810	8,000	9,450	10,500	--

Magnitude and probability of seasonal low flow from
July-October based on 37 seasons of record

Period of consecutive days	Discharge, in ft³/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	1,390	963	785	660	539	--
3	1,970	1,410	1,140	944	749	--
7	2,260	1,650	1,360	1,130	911	--
14	2,370	1,760	1,470	1,250	1,030	--
30	2,550	1,890	1,580	1,350	1,120	--

Monthly and annual mean discharges

Month	Maximum (ft³/s)	Minimum (ft³/s)	Mean (ft³/s)	Standard deviation (ft³/s)	Years of record
October	5,140	1,220	3,100	1,060	38
November	5,150	856	3,170	1,150	38
December	5,000	1,540	3,180	797	38
January	5,270	1,540	3,110	755	38
February	4,380	1,400	3,090	751	38
March	4,810	328	3,130	1,080	38
April	6,680	678	3,120	1,480	38
May	6,980	900	3,280	1,460	38
June	11,800	1,080	5,070	2,730	38
July	18,900	1,390	5,340	3,680	38
August	6,780	1,260	3,230	1,290	38
September	4,540	1,070	2,850	940	38
Annual	4,950	1,470	3,480	928	38

06287500 Soap Creek near St. Xavier, Mont.
Site Number 170

LOCATION.--Lat 45°19'38", long 107°46'10" (NAD 27), in NE¼ sec.10, T.6 S., R.32 E., Big Horn County, on left bank 6 mi upstream from mouth and 9.5 mi southwest of St. Xavier.

DRAINAGE AREA.--98.3 mi^2 .

PERIOD OF RECORD.--19 years. September 1911 to June 1912 (fragmentary daily discharge only), May to November 1913, March 1939 to September 1953, October 1967 to September 1972 (discontinued). April 1914 to September 1924, at sites about 5 mi downstream; records not equivalent owing to diversions.

REVISED RECORDS (WATER YEARS)--WSP 1309: 1940(M). WSP 1729: Drainage area.

GAGE.--Water-stage recorder. Altitude of gage is 3,250 ft (NGVD 29, from topographic map). Prior to Mar. 26, 1939, nonrecording gage at site 0.5 mi downstream at different datum.

REMARKS.--Diversions for irrigation of about 1,100 acres upstream from station.

Magnitude and probability of annual low flow
based on 18 years of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	12	6.7	4.1	2.4	--	--
3	12	6.9	4.4	2.8	--	--
7	12	8.0	6.0	4.5	--	--
14	13	9.2	7.2	5.8	--	--
30	15	11	8.6	7.1	--	--
60	17	12	9.8	8.2	--	--
90	18	13	11	9.7	--	--
120	19	15	13	11	--	--
183	20	16	13	12	--	--

Magnitude and probability of seasonal low flow from
March-June based on 19 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	19	12	9.2	7.0	--	--
3	19	13	11	8.8	--	--
7	21	15	12	10	--	--
14	24	16	13	11	--	--
30	27	19	16	13	--	--

Magnitude and probability of seasonal low flow from
November-February based on 19 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	12	6.8	4.1	2.5	--	--
3	13	7.0	4.5	2.9	--	--
7	13	8.1	6.0	4.6	--	--
14	14	9.3	7.3	5.8	--	--
30	16	11	8.9	7.3	--	--

Duration of daily mean flows based on 19 years of record

Discharge, in ft^3/s, which was equaled or exceeded for indicated percent of time							
99%	98%	95%	90%	80%	70%	60%	50%
7.0	8.6	11	13	15	18	21	24
40%	30%	20%	15%	10%	5%	2%	1%
27	31	36	42	52	76	121	166

Magnitude and probability of annual high flow
based on 19 years of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2	5	10	25	50	100
	50%	20%	10%	4%	2%	1%
1	263	480	642	859	--	--
3	185	312	393	488	--	--
7	133	218	272	335	--	--
15	99	160	201	253	--	--
30	74	121	154	197	--	--
60	57	88	108	134	--	--
90	51	76	91	109	--	--

Magnitude and probability of seasonal low flow from
July-October based on 20 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	14	10	8.5	7.3	--	--
3	15	11	8.9	7.6	--	--
7	15	11	9.3	8.0	--	--
14	16	12	9.8	8.3	--	--
30	17	13	11	9.4	--	--

Monthly and annual mean discharges

Month	Maximum (ft^3/s)	Minimum (ft^3/s)	Mean (ft^3/s)	Standard deviation (ft^3/s)	Years of record
October	38	13	24	6.9	20
November	32	11	22	6.2	20
December	26	12	19	4.3	19
January	54	8.0	21	9.8	19
February	96	6.0	31	24	19
March	104	13	45	25	19
April	82	16	41	17	20
May	187	16	48	43	20
June	162	15	46	35	21
July	52	9.3	25	12	21
August	32	9.3	19	6.7	21
September	32	9.9	21	7.0	21
Annual	52	14	31	11	19

06288500 Bighorn River near Hardin, Mont.
Site Number 171

LOCATION.--Lat 45°44' 20", long 107°34' 20" (NAD 27), in NW¼ sec.19, T.1 S., R.34 E., Big Horn County, at highway bridge, 0.5 mi upstream from Little Bighorn River, and 2 mi east of Hardin.

DRAINAGE AREA.--20,722 mi^2.

PERIOD OF RECORD.--25 years (1904-25, 1928-32).

GAGE.--Chain gage. Altitude of gage is 2,900 ft (NGVD 29, from topographic map). Prior to Dec. 1, 1917, chain or staff gage at railroad bridge 100 ft upstream at different datums.

REMARKS.--Diversion for irrigation of about 35,000 acres upstream from station.

Magnitude and probability of annual low flow based on 24 years of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	1,050	719	566	453	--	--
3	1,100	769	609	491	--	--
7	1,140	813	654	534	--	--
14	1,210	892	735	615	--	--
30	1,320	1,020	867	751	--	--
60	1,470	1,190	1,060	945	--	--
90	1,620	1,300	1,150	1,030	--	--
120	1,750	1,410	1,260	1,150	--	--
183	2,010	1,620	1,480	1,380	--	--

Magnitude and probability of seasonal low flow from March-June based on 26 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	1,670	1,230	1,030	887	744	--
3	1,700	1,240	1,040	897	751	--
7	1,760	1,320	1,120	980	837	--
14	1,880	1,500	1,340	1,220	1,100	--
30	2,320	1,830	1,610	1,450	1,290	--

Magnitude and probability of seasonal low flow from November-February based on 26 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	1,130	811	652	532	410	--
3	1,170	860	700	577	450	--
7	1,200	899	745	625	501	--
14	1,240	951	807	695	579	--
30	1,330	1,090	974	886	792	--

Duration of daily mean flows based on 25 years of record

Discharge, in ft^3/s, which was equaled or exceeded for indicated percent of time							
99%	98%	95%	90%	80%	70%	60%	50%
761	854	1,120	1,380	1,690	1,920	2,160	2,620
40%	30%	20%	15%	10%	5%	2%	1%
3,170	4,210	6,370	8,910	12,400	17,900	23,800	28,000

Magnitude and probability of annual high flow based on 25 years of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2	5	10	25	50	100
	50%	20%	10%	4%	2%	1%
1	30,100	35,700	36,900	37,400	37,600	--
3	27,900	32,700	33,700	34,100	34,200	--
7	25,300	30,000	31,100	31,600	31,700	--
15	21,800	26,400	27,800	28,600	28,900	--
30	19,000	22,500	23,300	23,700	23,800	--
60	15,200	17,800	18,400	18,700	18,800	--
90	12,300	14,600	15,200	15,500	15,600	--

Magnitude and probability of seasonal low flow from July-October based on 25 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	1,770	1,160	878	672	478	--
3	1,800	1,190	900	692	496	--
7	1,850	1,230	940	731	533	--
14	1,930	1,310	1,020	808	605	--
30	2,130	1,480	1,190	973	763	--

Monthly and annual mean discharges

Month	Maximum (ft^3/s)	Minimum (ft^3/s)	Mean (ft^3/s)	Standard deviation (ft^3/s)	Years of record
October	9,500	1,490	2,790	1,660	26
November	4,890	1,210	2,280	838	26
December	3,400	1,000	1,880	556	26
January	2,720	941	1,520	409	26
February	2,550	814	1,680	389	26
March	10,700	1,690	3,420	2,030	26
April	13,800	1,440	3,500	2,430	26
May	15,800	3,060	6,760	2,750	26
June	24,900	2,530	16,100	4,680	26
July	22,300	607	10,200	4,940	26
August	8,920	1,120	4,280	1,860	26
September	5,380	1,270	2,870	1,110	27
Annual	8,020	1,870	4,790	1,180	25

06289000 Little Bighorn River at State line, near Wyola, Mont.
Site Number 172

LOCATION.--Lat 45°00'25", long 107°36'52" (NAD 27), in SW¼NW¼ 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.--182 mi^2.

PERIOD OF RECORD.--March 1939 to current year (2002). Prior to October 1940, published as "Little Horn River at State line, near Wyola."

REVISED RECORDS.--WSP 1729: Drainage area.

GAGE.--Water-stage recorder. Altitude of gage is 4,350 ft (NGVD 29).

REMARKS.--Diversions for irrigation of 163 acres upstream from station.

Magnitude and probability of annual low flow
based on 62 years of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	38	30	26	23	19	18
3	42	34	29	26	22	20
7	49	41	36	33	29	26
14	54	47	43	40	36	34
30	57	51	49	46	44	43
60	60	55	52	49	47	45
90	64	57	53	51	48	46
120	67	59	55	53	50	48
183	75	66	61	58	54	52

Magnitude and probability of seasonal low flow from
March-June based on 63 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	51	43	39	36	33	31
3	54	47	43	40	37	35
7	57	50	46	44	40	38
14	59	52	49	47	44	42
30	60	55	52	50	48	47

Magnitude and probability of seasonal low flow from
November-February based on 63 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	38	30	26	23	20	18
3	43	34	29	26	23	20
7	50	41	37	33	29	26
14	55	48	44	40	37	34
30	59	52	49	47	44	43

Duration of daily mean flows based on 63 years of record

Discharge, in ft^3/s, which was equaled or exceeded for indicated percent of time							
99%	98%	95%	90%	80%	70%	60%	50%
38	46	49	53	62	70	79	87
40%	30%	20%	15%	10%	5%	2%	1%
99	123	179	240	342	516	784	985

Magnitude and probability of annual high flow
based on 63 years of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2	5	10	25	50	100
	50%	20%	10%	4%	2%	1%
1	831	1,180	1,410	1,710	1,920	2,140
3	771	1,080	1,280	1,520	1,690	1,860
7	711	992	1,170	1,380	1,530	1,670
15	631	879	1,040	1,230	1,370	1,500
30	552	764	899	1,060	1,180	1,300
60	428	578	673	788	870	949
90	345	458	527	610	668	725

Magnitude and probability of seasonal low flow from
July-October based on 63 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	76	64	58	53	48	45
3	79	68	63	59	54	51
7	80	70	65	61	57	54
14	82	71	66	62	58	56
30	85	74	68	64	60	57

Monthly and annual mean discharges

Month	Maximum (ft^3/s)	Minimum (ft^3/s)	Mean (ft^3/s)	Standard deviation (ft^3/s)	Years of record
October	120	61	87	15	63
November	104	55	76	12	63
December	91	47	68	10	63
January	85	44	63	8.7	63
February	88	48	62	8.1	63
March	86	49	62	7.9	63
April	172	51	85	25	64
May	533	126	324	97	64
June	1,120	145	515	242	64
July	689	95	219	96	64
August	228	70	123	31	64
September	151	64	98	20	64
Annual	253	79	149	37	63

06290000 Pass Creek near Wyola, Mont.
Site Number 173

LOCATION.--Lat 45°03'23", long 107°21'19" (NAD 27), in NE¼NE¼SE¼ sec.13, T.9 S., R.35 E., 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 mi^2. Drainage area at site used prior to Sept. 30, 1956, 119 mi^2.
PERIOD OF RECORD.--June 1935 to September 1956 (no winter records prior to 1939), October 1982 to current year (2002).
GAGE.--Water-stage recorder. Altitude of gage is 3,920 ft (NGVD 29). Dec. 21, 1950, to Sept. 30, 1956, water-stage recorder, and June 4, 1935, to Dec. 20, 1950, nonrecording gage at site 0.3 mi upstream at different datum. Flow is equivalent.
REMARKS.--Diversions for irrigation of about 2,500 acres upstream from station.

Magnitude and probability of annual low flow based on 38 years of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	4.5	1.9	1.1	0.71	0.41	--
3	5.1	2.2	1.3	.81	.47	--
7	5.9	2.5	1.5	.95	.54	--
14	6.7	3.0	1.9	1.2	.73	--
30	8.1	4.2	2.9	2.0	1.3	--
60	10	5.6	3.9	2.8	1.9	--
90	12	7.5	5.7	4.4	3.3	--
120	14	9.4	7.6	6.3	5.0	--
183	15	11	9.4	8.1	6.8	--

Magnitude and probability of seasonal low flow from March-June based on 39 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	16	11	9.4	8.0	6.8	--
3	17	12	10	8.5	7.2	--
7	19	14	11	9.6	8.0	--
14	23	16	13	11	9.5	--
30	29	20	16	13	11	--

Magnitude and probability of seasonal low flow from November-February based on 38 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	7.7	4.9	3.8	3.0	2.2	--
3	8.6	5.5	4.3	3.4	2.6	--
7	9.6	6.4	5.1	4.2	3.3	--
14	11	7.7	6.2	5.1	4.1	--
30	14	9.7	7.9	6.6	5.2	--

Duration of daily mean flows based on 38 years of record

Discharge, in ft^3/s, which was equaled or exceeded for indicated percent of time							
99%	98%	95%	90%	80%	70%	60%	50%
1.0	1.9	4.4	7.2	12	15	18	21
40%	30%	20%	15%	10%	5%	2%	1%
26	32	46	59	79	116	175	232

Magnitude and probability of annual high flow based on 38 years of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2	5	10	25	50	100
	50%	20%	10%	4%	2%	1%
1	233	445	647	992	1,330	--
3	187	340	486	739	988	--
7	149	262	369	557	743	--
15	127	212	289	414	532	--
30	106	171	226	310	385	--
60	86	134	173	231	280	--
90	73	111	140	182	218	--

Magnitude and probability of seasonal low flow from July-October based on 41 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	4.9	2.1	1.2	0.84	0.46	--
3	5.3	2.3	1.4	.91	.56	--
7	6.1	2.6	1.6	1.0	.60	--
14	6.8	3.1	2.0	1.3	.80	--
30	8.3	4.3	3.0	2.1	1.4	--

Monthly and annual mean discharges

Month	Maximum (ft^3/s)	Minimum (ft^3/s)	Mean (ft^3/s)	Standard deviation (ft^3/s)	Years of record
October	28	5.7	17	5.9	41
November	28	9.6	18	4.8	41
December	34	5.7	16	5.3	41
January	32	6.6	18	6.6	38
February	58	9.9	25	12	38
March	115	8.8	39	20	39
April	106	20	51	22	41
May	324	20	97	64	41
June	375	3.8	85	68	41
July	93	1.0	28	21	42
August	38	1.1	12	9.6	42
September	29	1.6	13	7.2	42
Annual	77	14	36	15	38

06290500 Little Bighorn River below Pass Creek, near Wyola, Mont.
Site Number 174

LOCATION.--Lat 45°10'38", long 107°23'36" (NAD 27), in W½SW¼ sec.35, T.7 S., R.35 E., Big Horn County, Hydrologic Unit 10080016, on right bank 3.5 mi north of Wyola, 6 mi downstream from Pass Creek, and at river mile 92.3.

DRAINAGE AREA.--428 mi^2.

PERIOD OF RECORD.--March 1939 to December 1958, August 1959 to September 1975, October 1976 to current year (2002). Prior to October 1940, published as "Little Horn River below Pass Creek, near Wyola."

REVISED RECORDS.--WSP 1729: Drainage area.

GAGE.--Water-stage recorder. Altitude of gage is 3,600 ft (NGVD 29).

REMARKS.--Diversions for irrigation of about 8,300 acres upstream from station. U.S. Geological Survey satellite telemeter at station.

Magnitude and probability of annual low flow
based on 58 years of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	57	38	30	24	18	15
3	63	43	33	27	20	16
7	71	49	39	31	23	18
14	78	56	45	36	27	22
30	87	63	51	41	31	26
60	94	71	60	51	42	36
90	100	79	68	60	51	46
120	105	86	76	69	61	56
183	108	90	81	74	67	62

Magnitude and probability of seasonal low flow from
March-June based on 61 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	99	75	60	48	35	28
3	100	78	65	55	44	37
7	104	83	71	61	50	44
14	111	88	76	67	57	51
30	128	99	86	75	64	58

Magnitude and probability of seasonal low flow from
November-February based on 61 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	61	44	36	30	24	21
3	67	50	42	36	30	26
7	76	59	50	44	38	34
14	85	68	60	53	46	41
30	94	78	69	63	56	51

Duration of daily mean flows based on 61 years of record

Discharge, in ft^3/s, which was equaled or exceeded for indicated percent of time							
99%	98%	95%	90%	80%	70%	60%	50%
42	50	65	76	94	105	116	127
40%	30%	20%	15%	10%	5%	2%	1%
148	174	235	310	440	695	1,030	1,290

Magnitude and probability of annual high flow
based on 61 years of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2	5	10	25	50	100
	50%	20%	10%	4%	2%	1%
1	1,010	1,620	2,150	2,970	3,730	4,610
3	939	1,450	1,850	2,450	2,960	3,530
7	868	1,300	1,610	2,030	2,360	2,700
15	778	1,150	1,410	1,730	1,980	2,230
30	676	1,000	1,220	1,480	1,680	1,870
60	525	773	939	1,150	1,300	1,460
90	427	618	744	903	1,020	1,140

Magnitude and probability of seasonal low flow from
July-October based on 60 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	79	51	38	29	21	16
3	82	52	39	30	21	17
7	85	56	42	32	23	18
14	89	60	46	37	28	23
30	95	66	52	42	32	26

Monthly and annual mean discharges

Month	Maximum (ft^3/s)	Minimum (ft^3/s)	Mean (ft^3/s)	Standard deviation (ft^3/s)	Years of record
October	163	74	122	24	62
November	153	77	119	19	62
December	162	59	106	19	62
January	165	55	105	23	61
February	232	58	115	33	61
March	282	62	139	43	61
April	327	63	183	62	62
May	1,320	146	463	209	62
June	1,400	168	636	349	62
July	758	57	232	132	62
August	236	24	112	46	63
September	186	40	108	35	63
Annual	381	89	204	66	61

06291000 Owl Creek near Lodge Grass, Mont.
Site Number 175

LOCATION.--Lat 45°16'05", long 107°18'03" (NAD 27), in NW¼NE¼SE¼, sec.33, T.6 S., R.36 E., Big Horn County, Hydrologic Unit 10080016, on right bank 1.4 mi downstream from Sioux Pass Creek, 5.0 mi southeast of Lodge Grass, and at river mile 7.0.
DRAINAGE AREA.--163 mi^2.
PERIOD OF RECORD.--April 1939 to September 1945, October 1979 to September 1992 (discontinued).
GAGE.--Water-stage recorder. Altitude of gage is 3,460 ft (NGVD 29, from topographic map). April 1939 to September 1945, recording gage at same site and datum.
REMARKS.--Numerous diversions for irrigation upstream from station.

Magnitude and probability of annual low flow
based on 18 years of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	0.46	0.05	0.00	0.00	--	--
3	.49	.05	.00	.00	--	--
7	.59	.06	.00	.00	--	--
14	.71	.06	.00	.00	--	--
30	.98	.15	.00	.00	--	--
60	1.3	.29	.09	.00	--	--
90	2.1	.57	.22	.08	--	--
120	2.3	1.1	.71	.48	--	--
183	2.9	1.4	.89	.58	--	--

Magnitude and probability of seasonal low flow from
March-June based on 19 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	3.0	0.87	0.37	0.17	--	--
3	3.4	.97	.41	.18	--	--
7	4.0	1.2	.52	.23	--	--
14	5.6	1.8	.76	.33	--	--
30	7.5	4.0	2.7	1.9	--	--

Magnitude and probability of seasonal low flow from
November-February based on 19 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	1.1	0.32	0.15	0.08	--	--
3	1.2	.34	.16	.08	--	--
7	1.4	.38	.17	.09	--	--
14	1.7	.46	.21	.10	--	--
30	2.2	.73	.37	.20	--	--

Duration of daily mean flows based on 19 years of record

Discharge, in ft^3/s, which was equaled or exceeded for indicated percent of time							
99%	98%	95%	90%	80%	70%	60%	50%
0.07	0.13	0.33	0.65	1.6	2.6	3.8	4.9
40%	30%	20%	15%	10%	5%	2%	1%
6.1	7.9	11	15	20	33	60	93

Magnitude and probability of annual high flow
based on 19 years of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2	5	10	25	50	100
	50%	20%	10%	4%	2%	1%
1	145	280	392	558	--	--
3	108	200	272	372	--	--
7	77	137	180	235	--	--
15	52	92	119	154	--	--
30	35	61	78	100	--	--
60	25	40	51	65	--	--
90	21	34	43	53	--	--

Magnitude and probability of seasonal low flow from
July-October based on 19 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	0.60	0.16	0.00	0.00	--	--
3	.63	.17	.00	.00	--	--
7	.72	.18	.00	.00	--	--
14	.82	.21	.00	.00	--	--
30	.99	.23	.00	.00	--	--

Monthly and annual mean discharges

Month	Maximum (ft^3/s)	Minimum (ft^3/s)	Mean (ft^3/s)	Standard deviation (ft^3/s)	Years of record
October	12	1.2	3.7	2.6	19
November	14	.38	4.6	3.1	19
December	18	.45	4.9	4.0	19
January	12	.28	4.7	3.2	19
February	48	.29	11	12	19
March	80	7.3	24	19	19
April	48	6.2	17	11	20
May	93	1.4	20	20	20
June	95	1.1	16	20	20
July	19	.13	4.7	4.3	20
August	7.5	.00	2.0	2.0	20
September	5.0	.00	2.1	1.6	20
Annual	23	2.5	9.7	5.2	19

06291500 Lodge Grass Creek above Willow Creek Diversion, near Wyola, Mont.
Site Number 176

LOCATION.--Lat 45°07'39", long 107°36'01" (NAD 27), in SE¼NE¼NE¼ sec.24, T.8 S., R.33 E., Big Horn County, Hydrologic Unit 10080016, on left bank 0.2 mi upstream from Willow Creek diversion canal, 1.1 mi downstream from Spring Creek, 10 mi west of Wyola, 17 mi southwest of Lodge Grass, and at river mile 43.0.

DRAINAGE AREA.--80.7 mi^2.

PERIOD OF RECORD.--March 1939 to September 1974, October 1982 to current year (2002).

REVISED RECORDS.--WSP 1559: 1944-47. WSP 1629: Drainage area.

GAGE.--Water-stage recorder. Altitude of gage is 4,170 ft (NGVD 29). March 1939 to September 1974 recording gage 0.1 mi upstream at different datum. Flows are equivalent.

REMARKS.--Diversions for irrigation of about 400 acres upstream from station.

Magnitude and probability of annual low flow
based on 53 years of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	8.4	5.7	4.5	3.7	2.9	2.5
3	9.2	6.4	5.1	4.2	3.3	2.8
7	10	7.3	5.9	4.8	3.8	3.2
14	12	8.5	7.1	6.0	5.0	4.3
30	14	10	8.6	7.3	6.0	5.2
60	15	12	10	8.8	7.4	6.6
90	16	13	11	9.9	8.6	7.8
120	17	13	12	11	9.5	8.7
183	18	15	13	12	10	9.3

Magnitude and probability of seasonal low flow from
March-June based on 55 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	13	9.5	7.5	6.0	4.6	3.8
3	14	10	8.1	6.5	5.0	4.1
7	15	11	8.9	7.2	5.5	4.5
14	16	12	10	9.0	7.6	6.8
30	18	14	12	11	9.8	9.0

Magnitude and probability of seasonal low flow from
November-February based on 55 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	8.9	6.1	4.9	4.0	3.2	2.7
3	9.7	6.8	5.5	4.6	3.7	3.1
7	11	7.8	6.4	5.4	4.4	3.8
14	12	8.9	7.5	6.3	5.2	4.6
30	14	10	8.7	7.4	6.1	5.3

Duration of daily mean flows based on 55 years of record

Discharge, in ft^3/s, which was equaled or exceeded for indicated percent of time							
99%	98%	95%	90%	80%	70%	60%	50%
6.6	8.1	11	13	16	18	20	23
40%	30%	20%	15%	10%	5%	2%	1%
28	34	56	79	118	189	309	379

Magnitude and probability of annual high flow
based on 55 years of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2	5	10	25	50	100
	50%	20%	10%	4%	2%	1%
1	333	495	606	751	861	973
3	303	444	538	657	746	834
7	276	404	488	592	667	741
15	244	355	427	514	577	638
30	207	298	357	430	482	534
60	155	217	257	305	340	374
90	121	169	198	234	259	283

Magnitude and probability of seasonal low flow from
July-October based on 54 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	17	12	9.9	8.2	6.6	5.6
3	17	13	11	8.9	7.2	6.2
7	18	13	11	9.5	7.8	6.7
14	19	14	12	9.9	8.1	6.9
30	20	15	13	11	9.3	8.2

Monthly and annual mean discharges

Month	Maximum (ft^3/s)	Minimum (ft^3/s)	Mean (ft^3/s)	Standard deviation (ft^3/s)	Years of record
October	36	12	21	5.4	55
November	28	11	19	4.5	55
December	25	8.6	17	4.1	55
January	30	4.9	17	5.4	55
February	32	9.0	17	5.0	55
March	37	10	20	6.1	55
April	71	11	32	13	56
May	257	36	119	47	56
June	445	53	195	101	56
July	176	20	63	31	56
August	51	10	28	10	56
September	40	6.8	22	7.6	56
Annual	86	22	48	15	55

06293500 Little Bighorn River near Crow Agency, Mont.
Site Number 177

LOCATION.--Lat 45°34'02", long 107°27'12" (NAD 27), in E½SE¼ sec.13, T.3 S., R.34 E., Big Horn County, on right bank at Chicago, Burlington & Quincy Railroad bridge, 2 mi south of Crow Agency, and 17 mi upstream from mouth.

DRAINAGE AREA.--1,181 mi^2 (revised).

PERIOD OF RECORD.--25 years (1928-29, 1930-32, 1938-60).

GAGE.--Water-stage recorder. Altitude of gage is 3,045 ft (NGVD 29). Apr. 11, 1912, to Sept. 30, 1918, staff or chain gage; Oct. 1, 1918, to Sept. 30, 1924, and Aug. 26, 1928, to Sept. 30, 1930, water-stage recorder; Oct. 1, 1930, to Dec. 5, 1932, and Apr. 1, 1938, to May 6, 1947, wire-weight or chain gage; all at same site and datum.

REMARKS.--Diversions for irrigation of 13,700 acres upstream from station. Flow partly regulated since about 1940 by Willow Creek Reservoir (capacity, 23,000 acre-ft).

Magnitude and probability of annual low flow
based on 22 years of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	43	16	8.1	4.2	--	--
3	47	17	8.6	4.4	--	--
7	53	22	12	6.9	--	--
14	58	30	20	14	--	--
30	70	40	29	21	--	--
60	83	52	39	30	--	--
90	96	64	50	41	--	--
120	108	78	65	56	--	--
183	115	91	80	72	--	--

Magnitude and probability of seasonal low flow from
March-June based on 25 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	111	88	78	72	65	--
3	115	93	83	77	70	--
7	118	100	96	94	93	--
14	137	114	108	106	104	--
30	185	134	117	106	97	--

Magnitude and probability of seasonal low flow from
November-February based on 25 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	79	42	26	16	8.3	--
3	79	46	32	22	14	--
7	88	55	40	29	19	--
14	94	68	56	47	38	--
30	102	81	72	66	59	--

Duration of daily mean flows based on 25 years of record

Discharge, in ft^3/s, which was equaled or exceeded for indicated percent of time							
99%	98%	95%	90%	80%	70%	60%	50%
24	33	51	73	101	121	144	168
40%	30%	20%	15%	10%	5%	2%	1%
196	261	407	518	701	1,020	1,420	1,840

Magnitude and probability of annual high flow
based on 25 years of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2	5	10	25	50	100
	50%	20%	10%	4%	2%	1%
1	1,480	2,500	3,280	4,380	5,290	--
3	1,280	2,080	2,690	3,540	4,230	--
7	1,080	1,660	2,080	2,640	3,090	--
15	887	1,330	1,660	2,100	2,460	--
30	732	1,100	1,380	1,780	2,110	--
60	571	853	1,070	1,370	1,610	--
90	492	717	878	1,100	1,270	--

Magnitude and probability of seasonal low flow from
July-October based on 36 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	57	20	8.9	4.8	0.00	--
3	62	22	9.5	5.0	.00	--
7	67	27	13	7.9	.00	--
14	75	34	21	15	5.5	--
30	81	46	32	24	16	--

Monthly and annual mean discharges

Month	Maximum (ft^3/s)	Minimum (ft^3/s)	Mean (ft^3/s)	Standard deviation (ft^3/s)	Years of record
October	861	58	167	127	37
November	566	96	163	79	32
December	202	74	132	30	25
January	337	66	123	54	25
February	362	83	159	70	25
March	946	115	326	195	25
April	1,800	114	347	299	38
May	1,080	155	555	249	40
June	2,030	125	782	407	40
July	680	50	271	172	40
August	275	24	113	66	39
September	382	20	121	73	40
Annual	436	144	248	93	25

06294000 Little Bighorn River near Hardin, Mont.
Site Number 178

LOCATION.--Lat 45°44'09", long 107°33'24" (NAD 27), in SE¼NE¼NE¼ sec.19, T.1 S., R.34 E., Big Horn County, Hydrologic Unit 10080016, on left bank 50 ft downstream from bridge on Sarpy Road, 0.2 mi upstream from terminal wasteway of Agency Canal, 0.6 mi upstream from mouth, and 2.3 mi east of Hardin.

DRAINAGE AREA.--1,294 mi^2.

PERIOD OF RECORD.--June 1953 to current year (2002).

REVISED RECORDS.--WDR MT-86-1: 1978.

GAGE.--Water-stage recorder. Altitude of gage is 2,882.29 ft (NGVD 29, levels by U.S. Army Corps of Engineers). Prior to Oct. 7, 1953, nonrecording gage at site 0.4 mi downstream. Oct. 7, 1953, to May 6, 1963, water-stage recorder at site 0.3 mi downstream. May 6, 1963, to Nov. 6, 1963, nonrecording gage at site 0.4 mi downstream. All at different datums. Nov. 7, 1963, to Aug. 15, 1976, water-stage recorder at site 35 ft downstream at present datum. Aug. 15, 1976, to Sept. 30, 1979, water-stage recorders were located on each bank downstream from Sarpy Road bridge and were used depending on control conditions.

REMARKS.--Flow partly regulated by Willow Creek Reservoir (capacity, 23,000 acre-ft). Diversions for irrigation of 20,980 acres upstream from station. Figures of discharge given herein include flow of terminal wasteway of Agency Canal. U.S. Geological Survey satellite telemeter at station. Unpublished records of instantaneous water temperature and specific conductance are available in files of the U.S. Geological Survey Montana District Office.

Magnitude and probability of annual low flow based on 48 years of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	55	22	10	4.6	1.6	--
3	63	27	12	5.5	1.8	--
7	74	33	16	7.2	2.4	--
14	79	37	20	11	4.5	--
30	94	46	26	14	6.6	--
60	107	57	35	21	11	--
90	119	67	44	29	17	--
120	124	81	61	47	34	--
183	131	93	76	63	50	--

Magnitude and probability of seasonal low flow from March-June based on 49 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	130	72	49	34	21	--
3	139	79	54	37	23	--
7	152	88	61	43	28	--
14	182	108	75	53	34	--
30	213	130	95	71	50	--

Magnitude and probability of seasonal low flow from November-February based on 49 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	64	41	30	22	15	--
3	74	48	35	26	18	--
7	88	60	46	35	25	--
14	99	72	60	50	40	--
30	112	86	74	65	55	--

Duration of daily mean flows based on 49 years of record

Discharge, in ft^3/s, which was equaled or exceeded for indicated percent of time							
99%	98%	95%	90%	80%	70%	60%	50%
14	24	50	73	103	127	148	169
40%	30%	20%	15%	10%	5%	2%	1%
191	244	343	446	629	1,010	1,540	1,970

Magnitude and probability of annual high flow based on 49 years of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2	5	10	25	50	100
	50%	20%	10%	4%	2%	1%
1	1,510	2,750	3,850	5,630	7,280	--
3	1,380	2,420	3,290	4,630	5,810	--
7	1,200	2,010	2,620	3,470	4,150	--
15	1,040	1,710	2,170	2,760	3,200	--
30	863	1,400	1,770	2,240	2,580	--
60	679	1,100	1,380	1,720	1,970	--
90	570	894	1,110	1,370	1,550	--

Magnitude and probability of seasonal low flow from July-October based on 49 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	68	23	11	5.1	2.0	--
3	75	27	13	6.2	2.3	--
7	84	34	17	7.7	3.1	--
14	86	38	21	11	5.1	--
30	101	47	27	15	7.2	--

Monthly and annual mean discharges

Month	Maximum (ft^3/s)	Minimum (ft^3/s)	Mean (ft^3/s)	Standard deviation (ft^3/s)	Years of record
October	276	61	155	50	49
November	248	83	154	37	49
December	223	66	136	37	49
January	366	72	142	57	49
February	610	70	202	104	49
March	987	71	313	211	49
April	748	55	316	174	49
May	2,850	72	614	450	49
June	1,980	117	824	532	50
July	1,330	8.5	263	232	50
August	382	2.5	119	74	50
September	267	19	127	65	50
Annual	676	70	281	125	49

06294500 Bighorn River above Tullock Creek, near Bighorn, Mont.
Site Number 179

LOCATION.--Lat 46°07'29", long 107°28'06" (NAD 27), in SE¼SE¼NE¼ sec.3, T.4 N., R.34 E., Treasure County, Hydrologic Unit 10080015, on right bank 1.9 mi upstream from Tullock Creek, 3.6 mi southwest of Bighorn, 4.5 mi southeast of Custer, and at river mile 3.0.

DRAINAGE AREA.--22,414 mi^2. Area at site used Oct. 7, 1955, to Sept. 30, 1981, 22,885 mi^2.

PERIOD OF RECORD.--October 1981 to current year (2002). Previously published as "06294700 Bighorn River at Bighorn, MT" 1956-81, and as "near Custer" 1945-55. Flows are equivalent at all sites.

GAGE.--Water-stage recorder. Altitude of gage is 2,700 ft (NGVD 29). May 11, 1945 to Dec. 6, 1945, nonrecording gage, and Dec. 7, 1945, to Oct. 6, 1955, water-stage recorder 1.7 mi upstream at different datum. Oct. 7, 1955, to Sept. 30, 1981, at site 2.3 mi downstream at different datum.

REMARKS.--Flow regulated by Bighorn Lake beginning November 1965 (usable capacity, 1,312,000 acre-ft). Major regulation prior to November 1965 by 14 reservoirs in Wyoming and 1 in Montana with combined usable capacity of about 1,400,000 acre-ft. Diversion for irrigation of about 445,200 acres upstream from station. U.S. Army Corps of Engineers satellite telemeter at station.

Unregulated streamflow period

Magnitude and probability of annual low flow
based on 18 years of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	988	717	600	514	--	--
3	1,120	828	690	586	--	--
7	1,310	951	768	627	--	--
14	1,510	1,080	857	689	--	--
30	1,680	1,220	997	824	--	--
60	1,970	1,470	1,210	1,010	--	--
90	2,160	1,660	1,410	1,210	--	--
120	2,360	1,890	1,660	1,470	--	--
183	2,560	2,020	1,730	1,500	--	--

Magnitude and probability of seasonal low flow from
March-June based on 19 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	1,890	1,300	977	737	--	--
3	1,970	1,390	1,070	823	--	--
7	2,190	1,580	1,200	907	--	--
14	2,500	1,820	1,390	1,050	--	--
30	2,760	2,000	1,600	1,290	--	--

Magnitude and probability of seasonal low flow from
November-February based on 19 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	1,190	874	752	668	--	--
3	1,280	1,000	896	825	--	--
7	1,480	1,230	1,140	1,080	--	--
14	1,740	1,490	1,400	1,330	--	--
30	2,050	1,720	1,560	1,440	--	--

Duration of daily mean flows based on 19 years of record

Discharge, in ft^3/s, which was equaled or exceeded for indicated percent of time							
99%	98%	95%	90%	80%	70%	60%	50%
806	968	1,260	1,580	2,030	2,370	2,640	2,910
40%	30%	20%	15%	10%	5%	2%	1%
3,260	3,800	4,440	5,470	7,080	10,500	14,800	16,600

Magnitude and probability of annual high flow
based on 19 years of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2	5	10	25	50	100
	50%	20%	10%	4%	2%	1%
1	13,400	18,900	22,600	27,300	--	--
3	12,200	17,900	21,800	26,800	--	--
7	10,900	16,600	20,500	25,600	--	--
15	9,920	15,100	18,600	23,000	--	--
30	8,790	13,400	16,500	20,300	--	--
60	7,160	10,800	13,000	15,500	--	--
90	6,180	9,020	10,700	12,600	--	--

Magnitude and probability of seasonal low flow from
July-October based on 19 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	1,330	898	712	579	--	--
3	1,370	931	742	607	--	--
7	1,450	999	805	666	--	--
14	1,630	1,120	894	730	--	--
30	1,840	1,250	1,000	836	--	--

Monthly and annual mean discharges

Month	Maximum (ft^3/s)	Minimum (ft^3/s)	Mean (ft^3/s)	Standard deviation (ft^3/s)	Years of record
October	4,060	1,760	3,130	618	19
November	4,180	1,360	3,030	648	19
December	3,690	1,280	2,600	560	19
January	3,890	1,380	2,380	595	19
February	4,450	1,950	2,720	738	19
March	5,380	1,540	3,520	1,180	19
April	5,230	1,220	3,200	982	19
May	9,100	1,600	4,650	1,870	19
June	15,200	2,380	9,070	4,320	20
July	12,600	707	5,290	3,580	20
August	4,860	868	2,330	1,050	20
September	4,110	1,630	2,750	725	20
Annual	5,500	1,620	3,670	999	19

06294500 Bighorn River above Tullock Creek, near Bighorn, Mont.—Continued
Site Number 179

Regulated streamflow period

Magnitude and probability of annual low flow based on 37 years of record

Period of consecutive days	Discharge, in ft³/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	1,390	910	703	556	418	--
3	1,650	1,080	830	656	493	--
7	1,860	1,240	971	779	596	--
14	1,980	1,350	1,070	874	679	--
30	2,160	1,560	1,280	1,080	876	--
60	2,450	1,830	1,530	1,310	1,070	--
90	2,730	2,020	1,660	1,390	1,120	--
120	2,950	2,140	1,740	1,440	1,140	--
183	3,210	2,340	1,890	1,550	1,200	--

Magnitude and probability of seasonal low flow from March-June based on 38 seasons of record

Period of consecutive days	Discharge, in ft³/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	2,370	1,460	1,050	770	519	--
3	2,460	1,560	1,160	876	616	--
7	2,590	1,700	1,300	1,020	760	--
14	2,740	1,840	1,450	1,180	913	--
30	2,970	2,000	1,590	1,300	1,030	--

Magnitude and probability of seasonal low flow from November-February based on 37 seasons of record

Period of consecutive days	Discharge, in ft³/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	2,060	1,310	988	760	548	--
3	2,280	1,490	1,120	863	619	--
7	2,530	1,710	1,310	1,020	733	--
14	2,730	1,900	1,480	1,170	860	--
30	2,910	2,140	1,750	1,440	1,130	--

Duration of daily mean flows based on 38 years of record

Discharge, in ft³/s, which was equaled or exceeded for indicated percent of time							
99%	98%	95%	90%	80%	70%	60%	50%
907	1,130	1,530	1,800	2,300	2,670	3,050	3,450
40%	30%	20%	15%	10%	5%	2%	1%
3,840	4,240	5,170	5,680	6,390	8,150	10,700	12,600

Magnitude and probability of annual high flow based on 38 years of record

Period of consecutive days	Discharge, in ft³/s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2	5	10	25	50	100
	50%	20%	10%	4%	2%	1%
1	8,330	14,500	19,900	28,400	36,100	--
3	8,240	13,800	18,100	24,300	29,500	--
7	7,850	12,600	16,000	20,500	24,000	--
15	7,370	11,600	14,500	18,300	21,200	--
30	6,810	10,300	12,700	15,700	18,000	--
60	5,990	8,730	10,500	12,500	14,000	--
90	5,480	7,710	9,050	10,600	11,600	--

Magnitude and probability of seasonal low flow from July-October based on 37 seasons of record

Period of consecutive days	Discharge, in ft³/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	1,580	1,120	927	788	652	--
3	1,970	1,410	1,160	978	798	--
7	2,180	1,590	1,320	1,110	911	--
14	2,320	1,680	1,380	1,160	939	--
30	2,490	1,790	1,470	1,240	1,000	--

Monthly and annual mean discharges

Month	Maximum (ft³/s)	Minimum (ft³/s)	Mean (ft³/s)	Standard deviation (ft³/s)	Years of record
October	5,550	1,260	3,310	1,170	38
November	5,600	1,220	3,460	1,230	38
December	4,910	1,590	3,440	831	38
January	5,480	1,620	3,380	808	38
February	5,310	1,790	3,460	904	38
March	6,580	908	3,810	1,360	38
April	7,880	1,060	3,750	1,670	38
May	8,890	1,300	4,290	1,980	38
June	12,700	1,050	5,900	3,200	38
July	19,100	951	5,390	3,820	38
August	6,970	930	3,150	1,350	38
September	4,950	1,010	2,910	965	38
Annual	5,590	1,530	3,860	1,080	38

06294940 Sarpy Creek near Hysham, Mont.
Site Number 180

LOCATION.--Lat 46°14'19", long 107°08'12" (NAD 27), in NW¼SE¼SE¼ sec.30, T.6 N., R.37 E., Treasure County, Hydrologic Unit 10100001, on left bank 100 ft upstream from bridge on FAS Route 415, 1.3 mi upstream from Hysham Canal, 5.5 mi southeast of Hysham, and at river mile 11.0.
DRAINAGE AREA.--453 mi^2.
PERIOD OF RECORD.--September 1973 to September 30, 1984 (discontinued).
GAGE.--Water-stage recorder. Altitude of gage is 2,677.5 ft (NGVD 29).
REMARKS.--Diversions for irrigation of about 970 acres upstream from station.

Magnitude and probability of annual low flow
based on 10 years of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	0.00	0.00	0.00	0.00	--	--
3	.00	.00	.00	.00	--	--
7	.00	.00	.00	.00	--	--
14	.00	.00	.00	.00	--	--
30	.00	.00	.00	.00	--	--
60	.00	.00	.00	.00	--	--
90	.00	.00	.00	.00	--	--
120	.04	.00	.00	.00	--	--
183	.20	.02	.00	.00	--	--

Magnitude and probability of seasonal low flow from
March-June based on 11 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	0.22	0.01	0.00	0.00	--	--
3	.31	.06	.01	.00	--	--
7	.68	.26	.17	.12	--	--
14	1.3	.46	.27	.18	--	--
30	2.0	.79	.48	.31	--	--

Magnitude and probability of seasonal low flow from
November-February based on 11 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	0.00	0.00	0.00	0.00	--	--
3	.00	.00	.00	.00	--	--
7	.00	.00	.00	.00	--	--
14	.01	.00	.00	.00	--	--
30	.22	.00	.00	.00	--	--

Duration of daily mean flows based on 11 years of record

Discharge, in ft^3/s, which was equaled or exceeded for indicated percent of time							
99%	98%	95%	90%	80%	70%	60%	50%
0.02	0.04	0.10	0.20	0.40	0.60	0.79	0.99
40%	30%	20%	15%	10%	5%	2%	1%
1.9	2.7	4.8	6.6	11	24	61	123

Magnitude and probability of annual high flow
based on 11 years of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2	5	10	25	50	100
	50%	20%	10%	4%	2%	1%
1	76	238	430	--	--	--
3	57	196	386	--	--	--
7	40	137	275	--	--	--
15	27	85	167	--	--	--
30	18	54	101	--	--	--
60	13	35	62	--	--	--
90	11	29	52	--	--	--

Magnitude and probability of seasonal low flow from
July-October based on 10 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	0.00	0.00	0.00	0.00	--	--
3	.00	.00	.00	.00	--	--
7	.00	.00	.00	.00	--	--
14	.00	.00	.00	.00	--	--
30	.00	.00	.00	.00	--	--

Monthly and annual mean discharges

Month	Maximum (ft^3/s)	Minimum (ft^3/s)	Mean (ft^3/s)	Standard deviation (ft^3/s)	Years of record
October	2.4	0.00	0.43	0.76	11
November	2.5	.00	.68	.95	11
December	3.4	.00	.91	1.1	11
January	46	.00	7.4	13	11
February	49	1.3	11	14	11
March	111	1.1	29	44	11
April	38	1.5	9.3	11	11
May	59	1.2	13	18	11
June	14	.25	5.2	4.3	11
July	2.9	.00	.79	1.1	11
August	1.2	.00	.21	.41	11
September	19	.00	1.6	5.4	12
Annual	20	1.5	6.6	6.9	11

06294995 Armells Creek near Forsyth, Mont.
Site Number 181

LOCATION.--Lat 46°14'59", long 106°48'22" (NAD 27), in SE¼NW¼NE¼ sec.26, T.6 N., R.39 E., Rosebud County, Hydrologic Unit 10100001, on right bank 300 ft upstream from bridge on Interstate Highway 94, 2.2 mi upstream from mouth, and 6 mi southwest of Forsyth.
DRAINAGE AREA.--370 mi^2.
PERIOD OF RECORD.--July 1974 to September 1984, October 1987 to September 1995 (discontinued).
GAGE.-- Water-stage recorder. Altitude of gage is 2,557.11 ft (NGVD 29).
REMARKS.--Diversions for irrigation of about 200 acres upstream from station.

Magnitude and probability of annual low flow
based on 17 years of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	0.00	0.00	0.00	0.00	--	--
3	.00	.00	.00	.00	--	--
7	.00	.00	.00	.00	--	--
14	.00	.00	.00	.00	--	--
30	.01	.00	.00	.00	--	--
60	.05	.01	.00	.00	--	--
90	.09	.02	.01	.01	--	--
120	.13	.03	.01	.01	--	--
183	.38	.08	.04	.02	--	--

Magnitude and probability of seasonal low flow from
March-June based on 18 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	0.11	0.01	0.00	0.00	--	--
3	.17	.02	.00	.00	--	--
7	.40	.09	.04	.02	--	--
14	.77	.17	.06	.03	--	--
30	1.2	.33	.15	.07	--	--

Magnitude and probability of seasonal low flow from
November-February based on 18 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	0.02	0.00	0.00	0.00	--	--
3	.03	.00	.00	.00	--	--
7	.04	.00	.00	.00	--	--
14	.06	.00	.00	.00	--	--
30	.08	.01	.00	.00	--	--

Duration of daily mean flows based on 18 years of record

Discharge, in ft^3/s, which was equaled or exceeded for indicated percent of time							
99%	98%	95%	90%	80%	70%	60%	50%
0.02	0.03	0.08	0.17	0.34	0.51	0.68	0.85
40%	30%	20%	15%	10%	5%	2%	1%
1.1	1.9	3.3	4.7	7.5	16	44	91

Magnitude and probability of annual high flow
based on 18 years of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2	5	10	25	50	100
	50%	20%	10%	4%	2%	1%
1	87	439	981	2,250	--	--
3	62	291	627	1,380	--	--
7	41	175	363	772	--	--
15	26	101	197	394	--	--
30	17	58	105	196	--	--
60	12	36	63	111	--	--
90	9.0	27	48	84	--	--

Magnitude and probability of seasonal low flow from
July-October based on 18 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	0.00	0.00	0.00	0.00	--	--
3	.00	.00	.00	.00	--	--
7	.01	.00	.00	.00	--	--
14	.02	.00	.00	.00	--	--
30	.05	.01	.00	.00	--	--

Monthly and annual mean discharges

Month	Maximum (ft^3/s)	Minimum (ft^3/s)	Mean (ft^3/s)	Standard deviation (ft^3/s)	Years of record
October	4.4	0.02	0.81	1.3	18
November	2.4	.00	.65	.77	18
December	2.6	.01	.53	.77	18
January	48	.00	4.3	11	18
February	52	.00	7.0	15	18
March	175	.04	27	49	18
April	25	.29	6.1	6.9	18
May	58	.27	9.6	16	18
June	23	.12	6.0	6.7	18
July	37	.01	2.9	8.4	19
August	5.7	.02	.98	1.5	19
September	26	.01	2.3	5.9	19
Annual	17	.38	5.8	6.0	18

06295000 Yellowstone River at Forsyth, Mont.
Site Number 182

LOCATION.--Lat 46°15'58", long 106°41'24" (NAD 27), in NE¼NW¼NW¼ sec.23, T.6 N., R.40 E., Rosebud County, Hydrologic Unit 10100001, on right bank 0.3 mi downstream from U.S. Highway 12 bridge, at Forsyth, and at river mile 238.2.

DRAINAGE AREA.--40,146 mi^2.

PERIOD OF RECORD.--July 16, 1921, to September 30, 1923 (no winter records), October 1977 to current year (2002). Miscellaneous discharge measurements were made in 1974 to 1976 and are available in files of U.S. Geological Survey Montana District Office.

GAGE.--Water-stage recorder. Altitude of gage is 2,504.62 ft (NGVD 29), from nearby elevation determined by City of Forsyth. July 1921 to March 1922, nonrecording gage on discontinued highway bridge 10 ft downstream from gage at different datum. March 1922 to September 1923, nonrecording gage on discontinued highway bridge 10 ft downstream from gage at datum 2 ft higher.

REMARKS.--Diversions for irrigation of about 838,000 acres upstream from station. Flow regulated to some extent by Bighorn Lake, usable capacity, 1,312,000 acre-ft, on Bighorn River. Small diversion dam about 4,200 ft downstream from station. Bureau of Reclamation satellite telemeter at station.

Magnitude and probability of annual low flow
based on 24 years of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	3,230	2,320	1,920	1,640	--	--
3	3,460	2,520	2,100	1,800	--	--
7	3,880	2,970	2,560	2,260	--	--
14	4,630	3,620	3,090	2,670	--	--
30	5,150	4,100	3,520	3,050	--	--
60	5,460	4,400	3,820	3,340	--	--
90	5,890	4,780	4,170	3,670	--	--
120	6,200	5,040	4,420	3,910	--	--
183	6,610	5,240	4,530	3,980	--	--

Magnitude and probability of seasonal low flow from
March-June based on 25 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	5,200	3,600	2,830	2,250	1,690	--
3	5,320	3,760	3,000	2,440	1,880	--
7	5,460	4,060	3,400	2,900	2,390	--
14	5,900	4,610	4,030	3,590	3,150	--
30	6,260	4,850	4,240	3,790	3,340	--

Magnitude and probability of seasonal low flow from
November-February based on 25 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	3,350	2,360	1,930	1,650	1,320	--
3	3,630	2,600	2,140	1,820	1,450	--
7	4,080	3,200	2,790	2,480	2,160	--
14	4,650	3,760	3,330	2,990	2,630	--
30	5,250	4,410	3,970	3,610	3,230	--

Duration of daily mean flows based on 25 years of record

Discharge, in ft^3/s, which was equaled or exceeded for indicated percent of time							
99%	98%	95%	90%	80%	70%	60%	50%
2,560	3,110	3,660	4,420	5,190	5,970	6,780	7,610
40%	30%	20%	15%	10%	5%	2%	1%
8,440	10,300	13,500	16,700	23,200	32,000	43,200	48,800

Magnitude and probability of annual high flow
based on 25 years of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2	5	10	25	50	100
	50%	20%	10%	4%	2%	1%
1	41,500	57,300	69,100	85,500	99,000	--
3	39,600	54,000	64,000	77,200	87,400	--
7	36,100	49,500	58,900	71,400	81,300	--
15	33,300	45,500	53,900	65,000	73,600	--
30	30,000	40,500	47,500	56,400	63,100	--
60	25,300	33,800	39,300	46,100	51,100	--
90	21,100	28,000	32,300	37,600	41,500	--

Magnitude and probability of seasonal low flow from
July-October based on 24 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	5,520	4,030	3,300	2,740	--	--
3	5,630	4,080	3,330	2,760	--	--
7	5,790	4,180	3,410	2,830	--	--
14	5,970	4,280	3,480	2,880	--	--
30	6,230	4,450	3,650	3,060	--	--

Monthly and annual mean discharges

Month	Maximum (ft^3/s)	Minimum (ft^3/s)	Mean (ft^3/s)	Standard deviation (ft^3/s)	Years of record
October	10,700	3,520	7,490	2,120	25
November	10,500	4,190	6,990	1,700	25
December	8,930	3,620	6,110	1,190	25
January	7,800	3,240	5,720	1,120	25
February	10,200	3,510	6,140	1,590	25
March	15,100	3,220	7,060	2,530	25
April	13,300	4,220	7,720	2,340	25
May	27,800	10,000	17,300	4,270	25
June	63,700	10,000	29,800	12,000	25
July	34,400	6,140	18,300	8,680	25
August	17,600	2,740	8,150	3,590	25
September	11,300	2,720	6,960	2,370	25
Annual	17,600	6,030	10,600	2,630	25

06295113 Rosebud Creek at reservation boundary, near Kirby, Mont.
Site Number 183

LOCATION.--Lat 45°21'40", long 106°59'23" (NAD 27), in NE¼NE¼SW¼ sec.36, T.5 S., R.38 E., Big Horn County, Hydrologic Unit 10100003, on right bank, 0.2 mi upstream from Dry Creek, 0.5 mi north of reservation boundary, 1.9 mi downstream from Cache Creek, 2.0 mi north of Kirby, and at river mile 179.6.
DRAINAGE AREA.-- 123 mi^2.
PERIOD OF RECORD.--October 1979 to current year (2002).
GAGE.--Water-stage recorder. Altitude of gage is 3,780 ft (NGVD 29).
REMARKS.--Numerous small diversions for irrigation upstream from station.

Magnitude and probability of annual low flow based on 22 years of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	0.51	0.07	0.00	0.00	--	--
3	.52	.08	.02	.00	--	--
7	.63	.12	.03	.00	--	--
14	.71	.22	.10	.05	--	--
30	1.1	.40	.21	.11	--	--
60	1.4	.67	.41	.26	--	--
90	1.7	.87	.58	.39	--	--
120	2.0	1.1	.73	.51	--	--
183	2.3	1.3	.90	.63	--	--

Magnitude and probability of seasonal low flow from March-June based on 23 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	2.9	1.4	0.87	0.54	--	--
3	3.1	1.6	.99	.63	--	--
7	3.4	1.8	1.3	.89	--	--
14	4.2	2.5	1.8	1.3	--	--
30	5.9	3.4	2.4	1.8	--	--

Magnitude and probability of seasonal low flow from November-February based on 22 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	1.4	0.56	0.31	0.18	--	--
3	1.6	.67	.39	.23	--	--
7	1.8	.82	.49	.31	--	--
14	2.0	.97	.61	.40	--	--
30	2.4	1.3	.87	.61	--	--

Duration of daily mean flows based on 23 years of record

Discharge, in ft^3/s, which was equaled or exceeded for indicated percent of time							
99%	98%	95%	90%	80%	70%	60%	50%
0.10	0.20	0.49	0.98	1.6	2.2	2.9	3.6
40%	30%	20%	15%	10%	5%	2%	1%
4.6	6.0	9.5	12	15	21	32	42

Magnitude and probability of annual high flow based on 23 years of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2	5	10	25	50	100
	50%	20%	10%	4%	2%	1%
1	44	81	105	133	--	--
3	38	70	92	117	--	--
7	31	56	74	95	--	--
15	25	42	52	62	--	--
30	21	32	37	42	--	--
60	17	25	28	31	--	--
90	15	21	24	26	--	--

Magnitude and probability of seasonal low flow from July-October based on 22 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	0.53	0.09	0.00	0.00	--	--
3	.57	.10	.03	.00	--	--
7	.67	.13	.04	.01	--	--
14	.74	.23	.11	.06	--	--
30	1.1	.42	.22	.12	--	--

Monthly and annual mean discharges

Month	Maximum (ft^3/s)	Minimum (ft^3/s)	Mean (ft^3/s)	Standard deviation (ft^3/s)	Years of record
October	8.0	0.33	2.9	1.6	23
November	12	.37	3.3	2.3	23
December	13	.34	3.3	2.4	23
January	10	1.0	3.4	1.9	23
February	29	1.0	6.3	6.0	23
March	42	1.0	13	10	23
April	41	2.3	15	9.6	23
May	24	1.8	12	6.2	23
June	20	1.0	8.5	5.0	23
July	11	.03	3.6	2.8	23
August	4.6	.01	1.6	1.3	23
September	3.2	.00	1.6	.93	23
Annual	12	.77	6.3	2.7	23

06295250 Rosebud Creek near Colstrip, Mont.
Site Number 184

LOCATION.--Lat 45°46'03", long 106°34'10" (NAD 27), in SE¼SW¼NE¼ sec.8, T.1 S., R.42 E., Rosebud County, Hydrologic Unit 10100003, on left bank 10 ft downstream from bridge on FAS Route 315, 1.5 mi downstream from Lee Coulee, 8.4 mi southeast of Colstrip, and at river mile 85.6.
DRAINAGE AREA.--799 mi^2.
PERIOD OF RECORD.--October 1974 to current year (2002).
GAGE.--Water-stage recorder. Altitude of gage is 3,000 ft (NGVD 29).
REMARKS.--Diversions for irrigation of about 800 acres upstream from station.

Magnitude and probability of annual low flow based on 27 years of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	0.51	0.00	0.00	0.00	0.00	--
3	.62	.00	.00	.00	.00	--
7	.94	.00	.00	.00	.00	--
14	1.2	.00	.00	.00	.00	--
30	1.3	.00	.00	.00	.00	--
60	2.0	.00	.00	.00	.00	--
90	2.8	.35	.05	.00	.00	--
120	5.3	1.0	.31	.10	.02	--
183	6.2	2.3	1.3	.79	.44	--

Magnitude and probability of seasonal low flow from March-June based on 28 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	9.7	4.7	3.1	1.9	0.00	--
3	10	4.9	3.3	2.1	.00	--
7	17	5.7	3.5	2.1	.14	--
14	18	6.1	3.7	2.3	.14	--
30	19	7.6	4.4	2.7	1.5	--

Magnitude and probability of seasonal low flow from November-February based on 27 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	6.0	1.4	0.35	0.04	0.00	--
3	6.8	1.6	.41	.06	.00	--
7	7.1	1.8	.62	.21	.05	--
14	8.9	2.8	1.1	.38	.09	--
30	11	3.6	1.4	.49	.12	--

Duration of daily mean flows based on 28 years of record

Discharge, in ft^3/s, which was equaled or exceeded for indicated percent of time							
99%	98%	95%	90%	80%	70%	60%	50%
0.10	0.19	0.49	0.97	4.2	6.3	8.9	13
40%	30%	20%	15%	10%	5%	2%	1%
17	23	32	40	53	84	158	229

Magnitude and probability of annual high flow based on 28 years of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2	5	10	25	50	100
	50%	20%	10%	4%	2%	1%
1	98	232	367	603	832	--
3	85	204	328	549	772	--
7	73	174	280	474	671	--
15	60	138	219	366	516	--
30	49	107	167	276	388	--
60	40	85	130	212	295	--
90	35	73	110	176	241	--

Magnitude and probability of seasonal low flow from July-October based on 27 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	0.61	0.00	0.00	0.00	0.00	--
3	.70	.00	.00	.00	.00	--
7	1.1	.00	.00	.00	.00	--
14	1.3	.00	.00	.00	.00	--
30	1.4	.00	.00	.00	.00	--

Monthly and annual mean discharges

Month	Maximum (ft^3/s)	Minimum (ft^3/s)	Mean (ft^3/s)	Standard deviation (ft^3/s)	Years of record
October	48	0.00	9.6	12	28
November	46	.03	12	11	28
December	46	.41	13	11	28
January	70	3.0	15	14	28
February	105	5.0	27	24	28
March	164	7.4	46	38	28
April	185	8.9	41	38	28
May	306	4.2	52	72	28
June	212	.78	36	52	28
July	104	.00	19	26	28
August	57	.00	9.2	15	28
September	56	.00	6.8	13	28
Annual	96	3.0	24	23	28

06296003 Rosebud Creek at mouth, near Rosebud, Mont.
Site Number 185

LOCATION.--Lat 46°15'53", long 106°28'30" (NAD 27), in SW¼NW¼NE¼ sec.21, T.6 N., R.42 E., Rosebud County, Hydrologic Unit 10100003, on left bank 0.4 mi upstream from bridge on Interstate Highway 94, 0.8 mi upstream from mouth, and 1.6 mi southwest of Rosebud.
DRAINAGE AREA.--1,302 mi^2.
PERIOD OF RECORD.--October 1974 to current year (2002).
GAGE.--Water-stage recorder. Altitude of gage is 2,480 ft (NGVD 29).
REMARKS.--Diversions for irrigation of about 2,000 acres upstream from station.

Magnitude and probability of annual low flow based on 27 years of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	0.18	0.00	0.00	0.00	0.00	--
3	.20	.00	.00	.00	.00	--
7	.25	.01	.00	.00	.00	--
14	.29	.01	.00	.00	.00	--
30	.42	.01	.00	.00	.00	--
60	.69	.06	.01	.00	.00	--
90	1.5	.15	.04	.01	.00	--
120	2.3	.37	.12	.05	.01	--
183	4.0	.75	.26	.10	.03	--

Magnitude and probability of seasonal low flow from March-June based on 28 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	2.0	0.30	0.07	0.00	0.00	--
3	2.6	.38	.08	.00	.00	--
7	3.6	.54	.18	.07	.02	--
14	6.0	.93	.31	.11	.03	--
30	10	1.7	.60	.22	.07	--

Magnitude and probability of seasonal low flow from November-February based on 27 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	1.7	0.14	0.00	0.00	0.00	--
3	2.1	.15	.01	.00	.00	--
7	2.2	.22	.04	.00	.00	--
14	2.6	.27	.05	.00	.00	--
30	3.8	.50	.13	.04	.01	--

Duration of daily mean flows based on 28 years of record

Discharge, in ft^3/s, which was equaled or exceeded for indicated percent of time							
99%	98%	95%	90%	80%	70%	60%	50%
0.04	0.08	0.20	0.41	0.81	2.0	4.5	8.0
40%	30%	20%	15%	10%	5%	2%	1%
14	23	36	45	63	115	213	319

Magnitude and probability of annual high flow based on 28 years of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2	5	10	25	50	100
	50%	20%	10%	4%	2%	1%
1	216	580	1,020	1,930	2,980	--
3	161	455	818	1,580	2,480	--
7	115	322	579	1,120	1,760	--
15	88	237	409	746	1,110	--
30	70	178	286	472	649	--
60	54	131	200	307	400	--
90	46	109	165	251	324	--

Magnitude and probability of seasonal low flow from July-October based on 27 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	0.18	0.00	0.00	0.00	0.00	--
3	.22	.00	.00	.00	.00	--
7	.31	.01	.00	.00	.00	--
14	.35	.02	.00	.00	.00	--
30	.47	.03	.00	.00	.00	--

Monthly and annual mean discharges

Month	Maximum (ft^3/s)	Minimum (ft^3/s)	Mean (ft^3/s)	Standard deviation (ft^3/s)	Years of record
October	46	0.00	8.4	11	28
November	48	.01	9.4	12	28
December	48	.03	10	12	28
January	159	.03	19	31	28
February	187	.07	38	51	28
March	428	.04	72	93	28
April	180	5.0	44	42	28
May	478	.39	61	104	28
June	286	.48	41	62	28
July	133	.00	18	33	28
August	48	.00	8.2	12	28
September	77	.00	8.6	19	28
Annual	112	1.0	28	29	28

06306300 Tongue River at State line, near Decker, Mont.
Site Number 186

LOCATION.--Lat 45°00'32", long 106°50'08" (NAD 27), in NW¼NW¼NE¼ 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 mi^2.

PERIOD OF RECORD.--August 1960 to current year (2002). Records published as "near Decker" May 1928 to September 1938, not equivalent owing to intervening drainage area.

GAGE.--Water-stage recorder. Altitude of gage is 3,429.14 ft (NGVD 29, levels by U.S. Army Corps of Engineers).

REMARKS.--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. U.S. Geological Survey satellite telemeter at station.

Magnitude and probability of annual low flow
based on 41 years of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	88	50	30	18	9.0	--
3	94	53	33	20	10	--
7	102	57	35	21	11	--
14	113	63	40	25	13	--
30	127	74	48	31	18	--
60	147	91	64	46	29	--
90	164	115	91	73	55	--
120	184	139	116	98	79	--
183	197	153	131	115	97	--

Magnitude and probability of seasonal low flow from
March-June based on 42 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	165	118	97	82	67	--
3	174	126	105	88	72	--
7	187	139	118	102	86	--
14	213	163	140	122	104	--
30	247	183	154	133	112	--

Magnitude and probability of seasonal low flow from
November-February based on 42 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	93	69	58	51	42	--
3	102	77	65	57	48	--
7	117	89	76	66	56	--
14	135	103	87	75	63	--
30	154	118	100	86	71	--

Duration of daily mean flows based on 42 years of record

Discharge, in ft^3/s, which was equaled or exceeded for indicated percent of time							
99%	98%	95%	90%	80%	70%	60%	50%
45	64	86	114	153	185	214	242
40%	30%	20%	15%	10%	5%	2%	1%
270	343	486	680	1,070	1,830	2,760	3,380

Magnitude and probability of annual high flow
based on 42 years of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2	5	10	25	50	100
	50%	20%	10%	4%	2%	1%
1	2,820	4,680	5,960	7,570	8,750	--
3	2,610	4,140	5,090	6,190	6,940	--
7	2,350	3,600	4,310	5,070	5,560	--
15	2,100	3,170	3,750	4,350	4,710	--
30	1,830	2,780	3,290	3,810	4,120	--
60	1,370	2,070	2,450	2,860	3,110	--
90	1,080	1,580	1,860	2,150	2,330	--

Magnitude and probability of seasonal low flow from
July-October based on 41 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	116	57	32	19	9.4	--
3	118	58	34	21	11	--
7	124	61	36	22	12	--
14	132	67	41	26	14	--
30	148	78	49	32	18	--

Monthly and annual mean discharges

Month	Maximum (ft^3/s)	Minimum (ft^3/s)	Mean (ft^3/s)	Standard deviation (ft^3/s)	Years of record
October	402	116	253	67	42
November	324	126	224	47	42
December	271	102	179	44	42
January	330	79	177	54	42
February	672	80	229	101	42
March	855	88	303	148	42
April	676	124	355	129	42
May	3,280	268	1,140	549	42
June	3,570	176	1,640	945	42
July	1,670	55	461	329	42
August	475	13	176	102	42
September	615	47	214	107	43
Annual	862	138	446	156	42

06307500 Tongue River at Tongue River Dam, near Decker, Mont.
Site Number 187

LOCATION.--Lat 45°08'29", long 106°46'15" (NAD 27), in SW¼SE¼SE¼ sec.12, T.8 S., R.40 E., Big Horn County, Hydrologic Unit 10090101, on left bank 0.5 mi downstream from Tongue River Dam, 4 mi upstream from Post Creek, 8 mi northeast of Decker, 16 mi southeast of Kirby, and at river mile 188.4.
DRAINAGE AREA.--1,770 mi^2.
PERIOD OF RECORD.--May 1939 to current year (2002).
REVISED RECORDS.--WSP 1729: Drainage area.
GAGE.--Water-stage recorder. Altitude of gage is 3,344.40 ft (NGVD 29, levels by Bureau of Reclamation). Prior to Aug. 5, 1975, at datum 10.00 ft lower.
REMARKS.--Flow regulated by Tongue River Reservoir (station number 06307000) and many small reservoirs (combined capacity, about 15,000 acre-ft). Diversion for irrigation of about 64,800 acres upstream from station. U.S. Geological Survey satellite telemeter at station.

Magnitude and probability of annual low flow based on 62 years of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	67	25	12	5.8	2.2	1.1
3	82	33	16	7.4	2.6	1.2
7	104	48	23	10	3.4	1.4
14	127	74	45	15	4.3	2.6
30	128	75	49	32	19	12
60	150	99	73	53	36	26
90	171	128	105	86	68	56
120	194	143	117	97	77	65
183	232	174	145	123	100	87

Magnitude and probability of seasonal low flow from March-June based on 63 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	118	42	19	8.1	2.7	1.1
3	136	53	23	10	3.2	1.3
7	169	75	34	15	4.4	1.7
14	185	82	47	16	4.7	2.8
30	198	100	61	38	21	13

Magnitude and probability of seasonal low flow from November-February based on 63 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	114	59	36	23	12	7.7
3	128	73	47	30	17	11
7	140	86	56	36	20	13
14	141	92	69	53	37	29
30	146	103	82	66	50	41

Duration of daily mean flows based on 63 years of record

Discharge, in ft^3/s, which was equaled or exceeded for indicated percent of time							
99%	98%	95%	90%	80%	70%	60%	50%
46	59	83	115	153	183	220	260
40%	30%	20%	15%	10%	5%	2%	1%
327	412	524	669	930	1,530	2,420	3,000

Magnitude and probability of annual high flow based on 63 years of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2	5	10	25	50	100
	50%	20%	10%	4%	2%	1%
1	2,210	3,660	4,550	5,530	6,160	6,720
3	2,130	3,440	4,190	4,980	5,460	5,870
7	1,990	3,170	3,840	4,540	4,960	5,320
15	1,770	2,810	3,410	4,060	4,470	4,820
30	1,480	2,380	2,930	3,570	4,000	4,380
60	1,130	1,790	2,200	2,700	3,040	3,360
90	936	1,410	1,710	2,060	2,300	2,530

Magnitude and probability of seasonal low flow from July-October based on 63 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	108	63	46	36	27	22
3	118	71	54	43	33	28
7	132	85	68	57	47	42
14	156	101	80	67	54	47
30	196	132	106	88	71	61

Monthly and annual mean discharges

Month	Maximum (ft^3/s)	Minimum (ft^3/s)	Mean (ft^3/s)	Standard deviation (ft^3/s)	Years of record
October	665	71	274	127	63
November	554	41	254	133	63
December	369	62	188	57	63
January	287	80	173	42	63
February	592	57	180	74	63
March	676	23	224	128	63
April	958	15	362	217	63
May	2,710	157	903	493	63
June	3,820	183	1,430	892	64
July	2,080	169	571	327	64
August	768	103	361	156	64
September	775	107	308	132	64
Annual	853	133	437	152	63

06307600 Hanging Woman Creek near Birney, Mont.
Site Number 188

LOCATION.--Lat 45°17'57", long 106°30'28" (NAD 27), in N½NW¼SE¼ sec.19, T.6 S., R.43 E., Rosebud County, Hydrologic Unit 10090101, on right bank 0.5 mi downstream from bridge on Birney-Otter road, 1.2 mi south of Birney, 1.2 mi downstream from East Fork, and at river mile 3.3.
DRAINAGE AREA.--470 mi^2.
PERIOD OF RECORD.--September 1973 to September 1984, October 1985 to September 1995.
REVISED RECORDS.--WDR MT-82-1: 1980 (M).
GAGE.--Water-stage recorder. Altitude of gage is 3,150 ft (NGVD 29, from topographic map).
REMARKS.-- Diversions for irrigation of about 1,240 acres upstream from station.

Magnitude and probability of annual low flow based on 20 years of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	0.03	0.00	0.00	0.00	--	--
3	.03	.00	.00	.00	--	--
7	.06	.00	.00	.00	--	--
14	.07	.00	.00	.00	--	--
30	.15	.00	.00	.00	--	--
60	.18	.01	.00	.00	--	--
90	.33	.03	.00	.00	--	--
120	.39	.04	.00	.00	--	--
183	.46	.14	.07	.04	--	--

Magnitude and probability of seasonal low flow from March-June based on 21 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	0.35	0.10	0.02	0.00	--	--
3	.48	.11	.04	.01	--	--
7	.56	.17	.08	.04	--	--
14	.71	.26	.15	.09	--	--
30	.94	.44	.30	.22	--	--

Magnitude and probability of seasonal low flow from November-February based on 21 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	0.35	0.02	0.00	0.00	--	--
3	.42	.03	.00	.00	--	--
7	.42	.05	.01	.00	--	--
14	.46	.11	.04	.00	--	--
30	.54	.18	.09	.01	--	--

Duration of daily mean flows based on 21 years of record

Discharge, in ft^3/s, which was equaled or exceeded for indicated percent of time							
99%	98%	95%	90%	80%	70%	60%	50%
0.02	0.04	0.09	0.18	0.37	0.55	0.74	0.92
40%	30%	20%	15%	10%	5%	2%	1%
1.2	1.7	2.4	3.1	4.3	8.7	23	44

Magnitude and probability of annual high flow based on 21 years of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2	5	10	25	50	100
	50%	20%	10%	4%	2%	1%
1	116	430	772	1,340	--	--
3	74	257	448	760	--	--
7	44	138	232	380	--	--
15	26	73	116	181	--	--
30	16	41	65	103	--	--
60	9.4	23	36	56	--	--
90	7.0	17	25	39	--	--

Magnitude and probability of seasonal low flow from July-October based on 20 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	0.06	0.00	0.00	0.00	--	--
3	.06	.00	.00	.00	--	--
7	.09	.00	.00	.00	--	--
14	.10	.00	.00	.00	--	--
30	.16	.00	.00	.00	--	--

Monthly and annual mean discharges

Month	Maximum (ft^3/s)	Minimum (ft^3/s)	Mean (ft^3/s)	Standard deviation (ft^3/s)	Years of record
October	3.0	0.00	0.68	0.72	21
November	3.0	.00	.88	.76	21
December	3.1	.06	.95	.79	21
January	21	.30	2.6	5.2	21
February	71	.36	10	17	21
March	93	.57	9.8	20	21
April	17	.50	2.9	3.6	21
May	98	.41	6.6	21	21
June	13	.20	3.7	4.1	21
July	19	.00	2.8	4.4	21
August	7.2	.00	1.0	1.6	21
September	2.3	.00	.48	.61	22
Annual	14	.35	3.5	3.4	21

06307616 Tongue River at Birney Day School Bridge, near Birney, Mont.
Site Number 189

LOCATION.--Lat 45°24'42", long 106°27'26" (NAD 27), in SE¼SW¼SW¼ sec.8, T.5 S., R.43 E., Rosebud County, Hydrologic Unit 10090102, on left bank, 60 ft upstream from Bureau of Indian Affairs bridge, 0.2 mi east of Birney Day School, 5.5 mi downstream from Cook Creek, 6.5 mi northeast of Birney, and at river mile 144.3.

DRAINAGE AREA.--2,621 mi^2.

PERIOD OF RECORD.--October 1979 to current year (2002).

GAGE.--Water-stage recorder. Altitude of gage is 3,060 ft (NGVD 29).

REMARKS.--Flow regulated by Tongue River Reservoir (station number 06307000), and many small reservoirs in Wyoming (combined capacity, about 15,000 acre-ft). Numerous diversions for irrigation upstream from station.

Magnitude and probability of annual low flow based on 22 years of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	74	49	39	31	--	--
3	85	56	44	35	--	--
7	96	64	49	38	--	--
14	108	74	59	48	--	--
30	130	92	74	61	--	--
60	149	108	88	73	--	--
90	179	131	105	84	--	--
120	194	143	116	94	--	--
183	230	172	142	119	--	--

Magnitude and probability of seasonal low flow from March-June based on 23 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	123	74	54	41	--	--
3	132	80	58	43	--	--
7	144	88	63	46	--	--
14	159	95	71	54	--	--
30	183	113	86	68	--	--

Magnitude and probability of seasonal low flow from November-February based on 22 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	101	65	50	39	--	--
3	112	77	61	49	--	--
7	125	88	70	57	--	--
14	141	101	81	66	--	--
30	161	120	97	78	--	--

Duration of daily mean flows based on 23 years of record

Discharge, in ft^3/s, which was equaled or exceeded for indicated percent of time							
99%	98%	95%	90%	80%	70%	60%	50%
64	71	87	120	162	197	230	262
40%	30%	20%	15%	10%	5%	2%	1%
313	370	467	520	710	1,230	2,020	2,570

Magnitude and probability of annual high flow based on 23 years of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2	5	10	25	50	100
	50%	20%	10%	4%	2%	1%
1	1,810	2,850	3,430	4,030	--	--
3	1,700	2,750	3,340	3,950	--	--
7	1,590	2,600	3,180	3,790	--	--
15	1,410	2,320	2,830	3,380	--	--
30	1,170	1,940	2,430	3,000	--	--
60	889	1,420	1,760	2,160	--	--
90	747	1,140	1,380	1,680	--	--

Magnitude and probability of seasonal low flow from July-October based on 22 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	142	89	69	56	--	--
3	157	97	75	60	--	--
7	172	110	85	68	--	--
14	196	129	100	80	--	--
30	233	161	128	104	--	--

Monthly and annual mean discharges

Month	Maximum (ft^3/s)	Minimum (ft^3/s)	Mean (ft^3/s)	Standard deviation (ft^3/s)	Years of record
October	381	85	246	83	23
November	347	66	219	77	23
December	260	64	179	49	23
January	287	91	179	45	23
February	350	90	197	60	23
March	434	78	226	94	23
April	583	66	275	157	23
May	1,770	144	654	397	23
June	2,920	225	1,120	745	23
July	1,270	234	556	257	23
August	676	159	399	136	23
September	694	113	320	137	23
Annual	644	133	381	127	23

06307740 Otter Creek at Ashland, Mont.
Site Number 190

LOCATI0N.--Lat 45°35'18", long 106°15'17" (NAD 27), in NE¼NE¼SE¼ sec.11, T.3 S., R.44 E., Rosebud County, Hydrologic Unit 10090102, on left bank 200 ft downstream from bridge on U.S. Highway 212, 0.3 mi southeast of Ashland, and at river mile 2.7.
DRAINAGE AREA.--707 mi^2.
PERIOD OF RECORD.--October 1972 to November 1985, October 1987 to September 1995.
GAGE.--Water-stage recorder. Altitude of gage is 2,916.57 ft (NGVD 29).
REMARKS.--Diversion for irrigation of about 4,200 acres upstream from station.

Magnitude and probability of annual low flow
based on 19 years of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	0.00	0.00	0.00	0.00	--	--
3	.04	.00	.00	.00	--	--
7	.06	.00	.00	.00	--	--
14	.12	.00	.00	.00	--	--
30	.27	.00	.00	.00	--	--
60	.41	.08	.02	.00	--	--
90	.70	.14	.04	.01	--	--
120	.75	.32	.20	.14	--	--
183	1.2	.60	.41	.31	--	--

Magnitude and probability of seasonal low flow from
March-June based on 21 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	0.91	0.21	0.04	0.00	--	--
3	1.3	.23	.05	.00	--	--
7	1.4	.38	.14	.01	--	--
14	1.9	.81	.49	.31	--	--
30	2.4	1.1	.67	.45	--	--

Magnitude and probability of seasonal low flow from
November-February based on 20 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	0.88	0.23	0.00	0.00	--	--
3	1.0	.25	.08	.00	--	--
7	1.1	.38	.17	.02	--	--
14	1.4	.43	.19	.09	--	--
30	1.7	.64	.34	.19	--	--

Duration of daily mean flows based on 21 years of record

Discharge, in ft^3/s, which was equaled or exceeded for indicated percent of time							
99%	98%	95%	90%	80%	70%	60%	50%
0.03	0.07	0.16	0.33	0.66	0.99	1.5	2.2
40%	30%	20%	15%	10%	5%	2%	1%
2.9	3.9	5.4	6.6	8.1	14	28	56

Magnitude and probability of annual high flow
based on 21 years of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2	5	10	25	50	100
	50%	20%	10%	4%	2%	1%
1	34	112	207	397	--	--
3	26	88	168	337	--	--
7	20	64	118	229	--	--
15	15	44	78	144	--	--
30	11	30	52	95	--	--
60	8.2	21	34	58	--	--
90	7.3	17	27	45	--	--

Magnitude and probability of seasonal low flow from
July-October based on 20 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	0.01	0.00	0.00	0.00	--	--
3	.05	.00	.00	.00	--	--
7	.07	.00	.00	.00	--	--
14	.13	.00	.00	.00	--	--
30	.28	.00	.00	.00	--	--

Monthly and annual mean discharges

Month	Maximum (ft^3/s)	Minimum (ft^3/s)	Mean (ft^3/s)	Standard deviation (ft^3/s)	Years of record
October	4.4	0.18	1.4	1.3	22
November	6.1	.71	2.5	1.5	22
December	7.0	.57	2.5	1.8	21
January	30	.10	4.9	7.7	21
February	35	.35	7.1	8.4	21
March	106	1.3	15	24	21
April	28	.99	6.5	6.6	21
May	53	.71	7.3	11	21
June	16	.36	4.4	3.9	21
July	8.9	.28	2.3	2.2	21
August	5.5	.00	1.4	1.7	21
September	4.1	.00	.89	1.0	21
Annual	19	.60	4.7	4.3	21

06307830 Tongue River below Brandenberg Bridge, near Ashland, Mont.
Site Number 191

LOCATION.--Lat 45°50'24", long 106°13'22" (NAD 27), in SE¼SW¼NE¼ sec.14, T.1N., R.44E., Rosebud County, Hydrologic Unit 10090102, on right bank downstream from county bridge, 22 mi north of Ashland, and at river mile 81.3.

DRAINAGE AREA.--3,948 mi^2. Area at site used prior to Sept. 20, 1984, 4,062 mi^2.

PERIOD OF RECORD.--October 1973 to September 20, 1984, July 2000 to current year (2002).

GAGE.--Water-stage recorder. Altitude of gage is 2,760 ft (NGVD 29), from topographic map. October 1973 to Sept. 20, 1984, water-stage recorder at site 6.5 mi downstream at different datum.

REMARKS.--Flow regulated by Tongue River Reservoir (station number 06307000), and many small reservoirs in Wyoming (combined capacity, about 15,000 acre-ft). Diversions for irrigation for about 73,000 acres upstream from station. U.S. Geological Survey satellite telemeter at station.

Magnitude and probability of annual low flow based on 11 years of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	80	62	54	48	--	--
3	88	69	60	54	--	--
7	105	80	68	59	--	--
14	119	89	74	63	--	--
30	134	102	87	75	--	--
60	161	126	109	97	--	--
90	189	144	121	104	--	--
120	208	155	129	108	--	--
183	249	187	152	123	--	--

Magnitude and probability of seasonal low flow from March-June based on 13 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	161	113	92	76	--	--
3	172	120	95	77	--	--
7	188	126	98	79	--	--
14	199	129	100	81	--	--
30	232	142	107	84	--	--

Magnitude and probability of seasonal low flow from November-February based on 12 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	81	63	55	49	--	--
3	89	70	61	55	--	--
7	107	82	69	59	--	--
14	122	92	77	66	--	--
30	141	110	94	81	--	--

Duration of daily mean flows based on 13 years of record

Discharge, in ft^3/s, which was equaled or exceeded for indicated percent of time							
99%	98%	95%	90%	80%	70%	60%	50%
71	79	100	125	168	209	249	297
40%	30%	20%	15%	10%	5%	2%	1%
353	422	504	615	904	1,450	2,580	3,410

Magnitude and probability of annual high flow based on 13 years of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2	5	10	25	50	100
	50%	20%	10%	4%	2%	1%
1	1,860	3,450	4,760	6,730	--	--
3	1,840	3,350	4,470	5,950	--	--
7	1,750	3,170	4,100	5,170	--	--
15	1,590	2,930	3,790	4,790	--	--
30	1,320	2,500	3,330	4,390	--	--
60	1,000	1,880	2,530	3,390	--	--
90	831	1,510	2,000	2,640	--	--

Magnitude and probability of seasonal low flow from July-October based on 12 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	220	167	137	112	--	--
3	228	169	137	112	--	--
7	233	172	139	113	--	--
14	239	176	143	117	--	--
30	262	196	158	127	--	--

Monthly and annual mean discharges

Month	Maximum (ft^3/s)	Minimum (ft^3/s)	Mean (ft^3/s)	Standard deviation (ft^3/s)	Years of record
October	511	104	276	96	13
November	388	84	216	89	13
December	389	96	194	76	13
January	334	93	219	83	13
February	406	90	229	84	13
March	705	81	289	161	13
April	594	98	323	160	13
May	2,500	111	821	710	13
June	3,450	224	1,420	1,020	13
July	2,260	182	668	527	14
August	916	126	425	198	14
September	436	120	309	94	14
Annual	886	120	452	221	13

06308400 Pumpkin Creek near Miles City, Mont.
Site Number 192

LOCATION.--Lat 46°13'42", long 105°41'24" (NAD 27), in SW¼NE¼SW¼ sec.35, T.6 N., R.48 E., Custer County, Hydrologic Unit 10090102, on right bank 12 ft upstream from bridge on U.S. Highway 312, 7.5 mi upstream from mouth, and 16 mi southeast of Miles City.
DRAINAGE AREA.--697 mi^2.
PERIOD OF RECORD.--October 1972 to September 1985 (discontinued).
GAGE.--Water-stage recorder. Altitude of gage is 2,475.86 ft (NGVD 29).
REMARKS.--Diversions for irrigation of about 3,600 acres upstream from station.

Magnitude and probability of annual low flow
based on 12 years of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	0.00	0.00	0.00	0.00	--	--
3	.00	.00	.00	.00	--	--
7	.00	.00	.00	.00	--	--
14	.00	.00	.00	.00	--	--
30	.00	.00	.00	.00	--	--
60	.00	.00	.00	.00	--	--
90	.00	.00	.00	.00	--	--
120	.07	.00	.00	.00	--	--
183	.32	.00	.00	.00	--	--

Magnitude and probability of seasonal low flow from
March-June based on 13 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	0.00	0.00	0.00	0.00	--	--
3	.00	.00	.00	.00	--	--
7	.00	.00	.00	.00	--	--
14	.01	.00	.00	.00	--	--
30	.10	.00	.00	.00	--	--

Magnitude and probability of seasonal low flow from
November-February based on 12 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	0.00	0.00	0.00	0.00	--	--
3	.00	.00	.00	.00	--	--
7	.00	.00	.00	.00	--	--
14	.00	.00	.00	.00	--	--
30	.00	.00	.00	.00	--	--

Duration of daily mean flows based on 13 years of record

Discharge, in ft^3/s, which was equaled or exceeded for indicated percent of time							
99%	98%	95%	90%	80%	70%	60%	50%
0.01	0.03	0.07	0.14	0.27	0.41	0.55	0.68
40%	30%	20%	15%	10%	5%	2%	1%
0.82	0.95	2.8	7.2	17	61	160	265

Magnitude and probability of annual high flow
based on 13 years of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2	5	10	25	50	100
	50%	20%	10%	4%	2%	1%
1	319	977	1,620	2,640	--	--
3	236	768	1,290	2,090	--	--
7	157	496	822	1,320	--	--
15	94	306	513	829	--	--
30	58	182	293	448	--	--
60	34	108	173	261	--	--
90	26	85	141	221	--	--

Magnitude and probability of seasonal low flow from
July-October based on 13 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	0.00	0.00	0.00	0.00	--	--
3	.00	.00	.00	.00	--	--
7	.00	.00	.00	.00	--	--
14	.00	.00	.00	.00	--	--
30	.00	.00	.00	.00	--	--

Monthly and annual mean discharges

Month	Maximum (ft^3/s)	Minimum (ft^3/s)	Mean (ft^3/s)	Standard deviation (ft^3/s)	Years of record
October	9.7	0.00	1.4	2.6	14
November	2.7	.00	.33	.70	14
December	.74	.00	.17	.24	13
January	29	.00	4.7	9.0	13
February	134	.00	30	48	13
March	299	.01	54	96	13
April	84	.00	17	25	13
May	205	.00	36	69	13
June	64	.00	17	21	13
July	18	.00	3.8	5.9	13
August	16	.00	2.0	4.5	13
September	60	.00	6.6	17	13
Annual	50	.22	14	15	13

06308500 Tongue River at Miles City, Mont.
Site Number 193

LOCATION.--Lat 46°23'05", long 105°50'41" (NAD 27), in SE¼SE¼SE¼ sec.4, T.7 N., R.47 E., Custer County, Hydrologic Unit 10090102, on right bank 1.5 mi south of Miles City and at river mile 2.3.

DRAINAGE AREA.--5,397 mi^2. Area at site used prior to Oct. 4, 1995, 5,379 mi^2.

PERIOD OF RECORD.--April 1938 to April 1942, April 1946 to current year (2002). Published as "near Miles City" April 1938 to April 1942. Not equivalent to records published as "near Miles City" May 1929 to October 1932. April 1946 to Oct. 4, 1995, at site 2.5 mi upstream. Flows at present site are equivalent with site operated from 1946. Monthly discharge only for some periods, published in WSP 1309.

REVISED RECORDS.--WSP 1729: Drainage area.

GAGE.--Water-stage recorder. Altitude of gage is 2,360 ft (NGVD 29). April 1938 to April 1942, nonrecording gage at site 8 mi upstream at different datum. April 1946 to Sept. 30, 1963, at datum 1.00 ft higher. Oct. 4, 1995, gage was moved 2.5 mi downstream.

REMARKS.--Flow regulation by Tongue River Reservoir (station number 0630700; capacity, 79,100 acre-ft), and many small reservoirs in Wyoming (combined capacity, about 15,000 acre-ft). Diversions for irrigation of about 100,800 acres upstream from station. U.S. Army Corps of Engineers satellite telemeter at station.

Magnitude and probability of annual low flow based on 58 years of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	33	9.1	3.7	1.5	0.12	0.00
3	38	11	4.3	1.7	.13	.00
7	46	14	5.7	2.3	.19	.00
14	58	18	8.0	3.8	1.5	.73
30	80	31	17	9.3	4.5	2.7
60	111	51	30	19	9.9	6.3
90	142	74	48	31	18	12
120	179	100	66	43	25	17
183	204	124	87	61	38	27

Magnitude and probability of seasonal low flow from March-June based on 59 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	103	26	10	4.3	1.4	0.65
3	116	33	14	6.7	2.5	1.3
7	133	43	21	11	4.7	2.6
14	169	61	32	17	8.1	4.7
30	243	93	49	27	13	7.5

Magnitude and probability of seasonal low flow from November-February based on 60 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	86	52	38	27	19	14
3	95	60	45	34	23	18
7	107	72	56	45	34	28
14	120	85	68	56	44	37
30	140	103	84	71	57	48

Duration of daily mean flows based on 59 years of record

Discharge, in ft^3/s, which was equaled or exceeded for indicated percent of time							
99%	98%	95%	90%	80%	70%	60%	50%
5.1	9.0	28	68	122	160	196	235
40%	30%	20%	15%	10%	5%	2%	1%
278	365	523	686	964	1,510	2,400	3,040

Magnitude and probability of annual high flow based on 59 years of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2	5	10	25	50	100
	50%	20%	10%	4%	2%	1%
1	2,870	5,010	6,450	8,200	9,430	10,600
3	2,540	4,290	5,300	6,370	7,020	7,560
7	2,160	3,530	4,230	4,880	5,240	5,510
15	1,790	2,880	3,440	3,970	4,260	4,480
30	1,420	2,310	2,780	3,250	3,510	3,720
60	1,030	1,690	2,070	2,460	2,700	2,900
90	846	1,370	1,660	1,980	2,170	2,330

Magnitude and probability of seasonal low flow from July-October based on 60 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	48	12	4.7	1.8	0.16	0.00
3	50	13	4.9	1.9	.16	.00
7	57	15	6.0	2.7	.18	.00
14	69	19	8.3	4.2	1.8	.91
30	98	32	17	9.8	4.9	2.9

Monthly and annual mean discharges

Month	Maximum (ft^3/s)	Minimum (ft^3/s)	Mean (ft^3/s)	Standard deviation (ft^3/s)	Years of record
October	694	10	247	148	60
November	585	61	256	128	60
December	423	68	191	72	60
January	529	77	196	92	60
February	1,790	84	281	250	60
March	1,780	74	532	428	60
April	1,690	12	441	318	62
May	2,980	29	692	520	61
June	3,820	42	1,270	894	61
July	2,210	13	467	413	61
August	700	6.1	182	146	61
September	599	2.4	200	138	61
Annual	986	57	409	190	59

06309000 Yellowstone River at Miles City, Mont.
Site Number 194

LOCATION.--Lat 46°25'18", long 105°51'38" (NAD 27), in NE¼SW¼NW¼ sec.28, T.8 N., R.47 E., Custer County, Hydrologic Unit 10100001, on left bank at upstream side of bridge on State Highway 22 at Miles City, 0.8 mi downstream from Tongue River, and at river mile 184.2.

DRAINAGE AREA.--48,253 mi^2.

PERIOD OF RECORD.--September 1922 to September 1923, August 1928 to current year (2002). Monthly discharge only for some periods, published in WSP 1309.

REVISED RECORDS.--WSP 1729: Drainage area.

GAGE.--Water-stage recorder. Altitude of gage is 2,333.3 ft (NGVD 29, levels by U.S. Army Corps of Engineers). Prior to May 6, 1929, nonrecording gages 1.2 mi downstream at different datums. May 6, 1929, to Sept. 30, 1931, nonrecording gage, and Oct. 1, 1931, to Nov. 10, 1937, water-stage recorder 300 ft upstream from present site at same datum. Nov. 11, 1937, to Sept. 30, 1946, water-stage recorder 1.2 mi downstream at different datum. Oct. 1, 1946, to Mar. 15, 1979, water-stage recorder at site 300 ft upstream at present datum. Mar. 16, 1979, to Sept. 21, 1979, nonrecording gage at present site and datum. Sept. 22, 1979, recording gage established at same site and datum.

REMARKS.--Some regulation by reservoirs on tributary streams. Diversions for irrigation of about 1,100,000 acres upstream from station (does not include flood irrigation). U.S. Army Corps of Engineers satellite telemeter at station.

Unregulated streamflow period

Magnitude and probability of annual low flow
based on 36 years of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	1,840	1,440	1,280	1,170	1,060	--
3	2,010	1,570	1,380	1,250	1,120	--
7	2,310	1,820	1,620	1,460	1,310	--
14	2,800	2,200	1,940	1,740	1,550	--
30	3,450	2,690	2,350	2,090	1,830	--
60	4,070	3,230	2,840	2,530	2,220	--
90	4,570	3,710	3,280	2,940	2,580	--
120	5,110	4,210	3,750	3,390	3,010	--
183	5,590	4,550	4,060	3,670	3,260	--

Magnitude and probability of seasonal low flow from
March-June based on 38 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	4,270	3,100	2,540	2,110	1,690	--
3	4,400	3,310	2,770	2,360	1,950	--
7	4,770	3,700	3,180	2,770	2,350	--
14	5,330	4,210	3,630	3,170	2,690	--
30	6,420	4,810	4,080	3,530	2,970	--

Magnitude and probability of seasonal low flow from
November-February based on 38 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	1,860	1,460	1,300	1,190	1,080	--
3	2,040	1,590	1,400	1,260	1,130	--
7	2,380	1,870	1,650	1,490	1,320	--
14	2,950	2,320	2,030	1,810	1,590	--
30	3,680	2,930	2,560	2,280	1,980	--

Duration of daily mean flows based on 38 years of record

Discharge, in ft^3/s, which was equaled or exceeded for indicated percent of time							
99%	98%	95%	90%	80%	70%	60%	50%
1,840	2,220	2,840	3,520	4,540	5,290	6,040	7,020
40%	30%	20%	15%	10%	5%	2%	1%
8,030	9,770	14,300	19,000	26,000	38,300	49,700	60,700

Magnitude and probability of annual high flow
based on 38 years of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2	5	10	25	50	100
	50%	20%	10%	4%	2%	1%
1	54,400	69,000	76,400	84,100	88,700	--
3	52,300	65,300	71,500	77,600	81,200	--
7	48,900	61,100	67,000	72,700	76,000	--
15	44,500	55,400	60,800	66,000	69,000	--
30	39,000	49,100	54,200	59,200	62,100	--
60	30,600	38,900	43,400	48,100	51,100	--
90	24,800	31,400	34,800	38,300	40,400	--

Magnitude and probability of seasonal low flow from
July-October based on 36 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	4,230	3,010	2,460	2,060	1,670	--
3	4,290	3,050	2,490	2,080	1,680	--
7	4,450	3,180	2,610	2,200	1,790	--
14	4,710	3,360	2,760	2,320	1,880	--
30	5,140	3,690	3,040	2,570	2,100	--

Monthly and annual mean discharges

Month	Maximum (ft^3/s)	Minimum (ft^3/s)	Mean (ft^3/s)	Standard deviation (ft^3/s)	Years of record
October	12,900	4,120	7,090	1,820	38
November	9,160	3,980	6,500	1,320	38
December	7,070	2,920	4,920	1,170	38
January	7,180	2,030	4,390	1,150	38
February	9,610	2,340	5,140	1,760	38
March	18,600	4,100	7,940	2,820	38
April	15,200	2,730	7,800	2,580	38
May	27,000	7,330	16,800	4,820	38
June	58,600	10,000	36,800	10,400	38
July	42,300	3,990	19,900	9,750	38
August	16,000	2,620	7,550	3,320	38
September	13,700	2,960	6,670	2,320	40
Annual	16,700	6,140	11,000	2,530	38

06309000 Yellowstone River at Miles City, Mont.—Continued
Site Number 194

Regulated streamflow period

Magnitude and probability of annual low flow based on 36 years of record

Period of consecutive days	Discharge, in ft³/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	2,990	2,290	2,010	1,810	1,610	--
3	3,220	2,480	2,170	1,950	1,730	--
7	3,680	2,950	2,640	2,430	2,210	--
14	4,480	3,630	3,230	2,920	2,600	--
30	5,390	4,400	3,870	3,440	2,980	--
60	5,920	4,870	4,320	3,880	3,390	--
90	6,410	5,280	4,690	4,220	3,700	--
120	6,800	5,600	4,960	4,450	3,890	--
183	7,280	5,870	5,140	4,560	3,940	--

Magnitude and probability of seasonal low flow from March-June based on 37 seasons of record

Period of consecutive days	Discharge, in ft³/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	5,920	4,160	3,330	2,720	2,110	--
3	6,130	4,350	3,490	2,850	2,220	--
7	6,310	4,630	3,840	3,260	2,670	--
14	6,840	5,230	4,500	3,970	3,420	--
30	7,390	5,610	4,810	4,220	3,620	--

Magnitude and probability of seasonal low flow from November-February based on 36 seasons of record

Period of consecutive days	Discharge, in ft³/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	3,110	2,380	2,080	1,870	1,650	--
3	3,360	2,580	2,250	2,010	1,780	--
7	3,930	3,110	2,760	2,500	2,240	--
14	4,650	3,810	3,420	3,130	2,830	--
30	5,490	4,710	4,340	4,050	3,740	--

Duration of daily mean flows based on 37 years of record

Discharge, in ft³/s, which was equaled or exceeded for indicated percent of time							
99%	98%	95%	90%	80%	70%	60%	50%
2,920	3,310	4,130	4,770	5,840	6,710	7,520	8,330
40%	30%	20%	15%	10%	5%	2%	1%
9,620	11,300	15,000	18,300	25,300	34,800	47,000	55,200

Magnitude and probability of annual high flow based on 37 years of record

Period of consecutive days	Discharge, in ft³/s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2	5	10	25	50	100
	50%	20%	10%	4%	2%	1%
1	45,200	60,000	69,300	80,300	88,200	--
3	43,500	58,400	67,800	79,100	87,200	--
7	40,200	54,500	63,600	74,600	82,500	--
15	37,000	50,400	58,700	68,900	76,100	--
30	33,300	45,200	52,600	61,300	67,500	--
60	27,900	37,700	43,500	50,200	54,900	--
90	23,300	31,000	35,600	40,800	44,300	--

Magnitude and probability of seasonal low flow from July-October based on 36 seasons of record

Period of consecutive days	Discharge, in ft³/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	5,970	4,450	3,730	3,170	2,610	--
3	6,100	4,520	3,770	3,210	2,630	--
7	6,240	4,620	3,850	3,270	2,670	--
14	6,480	4,750	3,940	3,330	2,750	--
30	6,860	5,010	4,150	3,500	3,000	--

Monthly and annual mean discharges

Month	Maximum (ft³/s)	Minimum (ft³/s)	Mean (ft³/s)	Standard deviation (ft³/s)	Years of record
October	13,000	4,220	8,420	2,170	37
November	10,800	4,730	7,790	1,800	37
December	9,340	4,070	6,610	1,190	37
January	8,900	3,780	6,260	1,250	37
February	16,200	3,900	7,270	2,390	37
March	17,700	3,030	8,630	3,220	37
April	14,700	4,250	8,730	2,640	37
May	29,100	10,000	17,800	5,070	37
June	61,900	10,000	32,700	12,300	37
July	46,300	6,060	20,600	10,400	37
August	16,500	3,030	8,830	3,530	37
September	13,100	3,660	7,800	2,500	37
Annual	17,500	6,180	11,800	2,890	37

06324500 Powder River at Moorhead, Mont.
Site Number 195

LOCATION.--Lat 45°03'25", long 105°52'39" (NAD 27), in NE¼NE¼NW¼ 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.--8,086 mi^2; Sept. 13, 1956 to Aug. 27, 2001 published as 8,088 mi^2.

PERIOD OF RECORD.--May 1929 to September 1972, October 1974 to current year (2002). Monthly discharge only for some periods, published in WSP 1309.

REVISED RECORDS.--WSP 1309: 1932(M). WSP 1729: Drainage area.

GAGE.--Water-stage recorder. Altitude of gage is 3,334.63 ft (NGVD 29, levels by U.S. Army Corps of Engineers). Prior to Aug. 28, 1931, nonrecording gage at site 0.3 mi upstream at different datum. Aug. 28, 1931, to Mar. 21, 1956, water-stage recorder at site 1.2 mi upstream at different datum. Mar. 22 to July 24, 1956, nonrecording gage at site 0.3 mi downstream at different datum. July 25 to Sept. 12, 1956, nonrecording gage at present site and datum. Sept. 13, 1956, to Aug. 27, 2001, water-stage recorder during period of gage operation 1.1 mi downstream at different datum.

REMARKS.--Some regulation by three reservoirs in Wyoming (combined usable capacity, 36,800 acre-ft). Diversions for irrigation of about 66,300 acres upstream from station. U.S. Geological Survey satellite telemeter at station.

Magnitude and probability of annual low flow
based on 70 years of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	16	2.5	0.00	0.00	0.00	0.00
3	19	3.1	.00	.00	.00	.00
7	22	3.8	.90	.05	.00	.00
14	28	7.1	2.6	.37	.00	.00
30	43	13	5.9	2.8	1.1	.57
60	67	28	17	11	5.9	3.9
90	99	51	34	23	14	10
120	128	75	54	40	28	22
183	148	98	79	66	53	46

Magnitude and probability of seasonal low flow from
March-June based on 71 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	123	42	21	11	4.6	2.5
3	133	47	24	13	5.6	3.1
7	160	62	33	18	8.7	5.0
14	230	99	54	30	14	8.1
30	329	175	115	77	47	33

Magnitude and probability of seasonal low flow from
November-February based on 71 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	66	34	21	13	7.0	4.4
3	76	44	29	20	12	8.3
7	94	56	38	26	16	11
14	108	64	44	31	19	13
30	125	81	60	45	31	23

Duration of daily mean flows based on 71 years of record

Discharge, in ft^3/s, which was equaled or exceeded for indicated percent of time							
99%	98%	95%	90%	80%	70%	60%	50%
3.5	7.3	20	46	93	132	174	224
40%	30%	20%	15%	10%	5%	2%	1%
284	372	557	734	1,080	1,840	2,920	3,930

Magnitude and probability of annual high flow
based on 71 years of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2	5	10	25	50	100
	50%	20%	10%	4%	2%	1%
1	4,190	7,540	10,300	14,300	17,700	21,500
3	3,300	5,800	7,800	10,700	13,100	15,700
7	2,530	4,330	5,680	7,540	9,020	10,600
15	1,960	3,320	4,280	5,540	6,490	7,450
30	1,530	2,600	3,350	4,320	5,050	5,770
60	1,170	1,950	2,500	3,220	3,750	4,280
90	976	1,560	1,950	2,440	2,800	3,140

Magnitude and probability of seasonal low flow from
July-October based on 71 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	18	2.6	0.00	0.00	0.00	0.00
3	20	3.7	.00	.00	.00	.00
7	23	4.9	1.2	.06	.00	.00
14	30	8.3	3.3	.70	.00	.00
30	46	15	6.3	3.4	1.1	.75

Monthly and annual mean discharges

Month	Maximum (ft^3/s)	Minimum (ft^3/s)	Mean (ft^3/s)	Standard deviation (ft^3/s)	Years of record
October	897	16	226	159	71
November	660	80	225	96	71
December	326	56	159	56	71
January	445	27	154	64	71
February	1,200	21	288	206	71
March	2,290	185	612	385	71
April	1,310	117	508	237	71
May	5,550	83	1,090	881	72
June	4,130	40	1,400	1,070	72
July	2,500	34	471	431	72
August	1,220	.60	176	194	72
September	686	1.3	147	143	72
Annual	1,090	110	448	193	71

06325500 Little Powder River near Broadus, Mont.
Site Number 196

LOCATION.--Lat 45°23'25", long 105°18'15" (NAD 27), in NW¼NE¼ sec.21, T.5 S., R.52 E., Powder River County, 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 mi^2.

PERIOD OF RECORD.--20 years. May 1947 to September 1953, water year 1956, March 1957 to September 1972, discontinued. Monthly discharge only for May 1947, published in WSP 1309.

REVISED RECORDS (WATER YEARS).--WSP 1116: 1947. WSP 1729: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Altitude of gage is 3,020 ft (NGVD 29, by barometer). Prior to Dec. 10, 1962, water-stage recorder at site 0.8 mi upstream at different datum.

REMARKS.--Minor diversions upstream from station.

Magnitude and probability of annual low flow
based on 18 years of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	0.24	0.00	0.00	0.00	--	--
3	.25	.00	.00	.00	--	--
7	.51	.03	.00	.00	--	--
14	.83	.09	.00	.00	--	--
30	1.3	.46	.22	.00	--	--
60	2.1	1.0	.63	.42	--	--
90	2.7	1.5	1.1	.87	--	--
120	3.0	1.9	1.5	1.2	--	--
183	3.7	2.3	1.8	1.6	--	--

Magnitude and probability of seasonal low flow from
March-June based on 20 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	4.6	2.4	1.8	0.00	--	--
3	5.2	2.6	1.8	.00	--	--
7	5.9	2.8	1.8	.00	--	--
14	8.2	3.3	2.0	1.3	--	--
30	12	5.1	3.3	2.2	--	--

Magnitude and probability of seasonal low flow from
November-February based on 21 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	1.2	0.00	0.00	0.00	--	--
3	1.3	.02	.00	.00	--	--
7	1.4	.42	.06	.00	--	--
14	1.7	.62	.12	.00	--	--
30	2.2	1.0	.61	.38	--	--

Duration of daily mean flows based on 20 years of record

Discharge, in ft^3/s, which was equaled or exceeded for indicated percent of time							
99%	98%	95%	90%	80%	70%	60%	50%
0.16	0.33	0.82	1.5	2.4	3.2	4.2	5.6
40%	30%	20%	15%	10%	5%	2%	1%
8.4	16	33	47	69	150	417	708

Magnitude and probability of annual high flow
based on 20 years of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2	5	10	25	50	100
	50%	20%	10%	4%	2%	1%
1	943	1,530	1,920	2,390	--	--
3	737	1,340	1,740	2,240	--	--
7	520	976	1,270	1,610	--	--
15	349	642	807	970	--	--
30	230	420	521	614	--	--
60	147	269	332	391	--	--
90	108	196	241	284	--	--

Magnitude and probability of seasonal low flow from
July-October based on 20 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	0.83	0.13	0.00	0.00	--	--
3	.87	.16	.00	.00	--	--
7	1.1	.24	.06	.00	--	--
14	1.4	.44	.16	.00	--	--
30	1.9	.78	.40	.00	--	--

Monthly and annual mean discharges

Month	Maximum (ft^3/s)	Minimum (ft^3/s)	Mean (ft^3/s)	Standard deviation (ft^3/s)	Years of record
October	70	1.5	6.6	15	21
November	16	1.8	4.4	3.1	21
December	8.7	.87	3.8	2.1	21
January	8.2	.35	3.7	2.0	21
February	340	3.2	48	83	21
March	558	5.3	160	190	21
April	238	2.3	63	74	21
May	190	3.1	51	50	22
June	305	2.0	81	72	22
July	110	1.5	28	27	22
August	69	.00	14	20	22
September	54	.39	7.3	11	22
Annual	110	3.0	40	27	20

06326300 Mizpah Creek near Mizpah, Mont.
Site Number 197

LOCATION.--Lat 46°15'39", long 105°17'34" (NAD 27), in NW¼NE¼SW¼ sec.24, T.6 N., R.51 E., Custer County, Hydrologic Unit 10090210, on left bank 20 ft downstream from county bridge, 1.0 mi upstream from mouth, and 1.6 mi northwest of Mizpah.
DRAINAGE AREA.--797 mi^2.
PERIOD OF RECORD.--October 1974 to September 1986 (discontinued).
GAGE.--Water-stage recorder and crest-stage gage. Altitude of gage is 2,490 ft (NGVD 29, from topographic map).

Magnitude and probability of annual low flow
based on 11 years of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	0.00	0.00	0.00	0.00	--	--
3	.00	.00	.00	.00	--	--
7	.00	.00	.00	.00	--	--
14	.00	.00	.00	.00	--	--
30	.00	.00	.00	.00	--	--
60	.01	.00	.00	.00	--	--
90	.03	.01	.00	.00	--	--
120	.08	.01	.00	.00	--	--
183	.31	.04	.01	.00	--	--

Magnitude and probability of seasonal low flow from
March-June based on 12 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	0.00	0.00	0.00	0.00	--	--
3	.02	.00	.00	.00	--	--
7	.06	.00	.00	.00	--	--
14	.12	.02	.01	.00	--	--
30	.31	.05	.02	.01	--	--

Magnitude and probability of seasonal low flow from
November-February based on 11 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	0.00	0.00	0.00	0.00	--	--
3	.00	.00	.00	.00	--	--
7	.00	.00	.00	.00	--	--
14	.00	.00	.00	.00	--	--
30	.00	.00	.00	.00	--	--

Duration of daily mean flows based on 12 years of record

Discharge, in ft^3/s, which was equaled or exceeded for indicated percent of time							
99%	98%	95%	90%	80%	70%	60%	50%
0.01	0.03	0.07	0.14	0.29	0.43	0.58	0.72
40%	30%	20%	15%	10%	5%	2%	1%
0.86	1.1	4.9	12	23	69	175	350

Magnitude and probability of annual high flow
based on 12 years of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2	5	10	25	50	100
	50%	20%	10%	4%	2%	1%
1	346	955	1,600	--	--	--
3	236	741	1,330	--	--	--
7	164	486	852	--	--	--
15	92	283	508	--	--	--
30	58	169	292	--	--	--
60	36	102	171	--	--	--
90	27	80	137	--	--	--

Magnitude and probability of seasonal low flow from
July-October based on 11 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	0.01	0.00	0.00	0.00	--	--
3	.01	.00	.00	.00	--	--
7	.01	.00	.00	.00	--	--
14	.01	.00	.00	.00	--	--
30	.01	.00	.00	.00	--	--

Monthly and annual mean discharges

Month	Maximum (ft^3/s)	Minimum (ft^3/s)	Mean (ft^3/s)	Standard deviation (ft^3/s)	Years of record
October	25	0.00	4.8	8.8	12
November	1.6	.00	.33	.46	12
December	2.1	.01	.26	.58	12
January	18	.00	1.9	5.1	12
February	110	.00	29	40	12
March	319	.13	60	96	12
April	126	.07	17	36	12
May	196	.06	39	60	12
June	71	.10	19	22	12
July	28	.00	5.9	8.0	12
August	14	.00	2.1	3.8	12
September	166	.00	16	47	12
Annual	46	1.1	16	16	12

06326500 Powder River near Locate, Mont.
Site Number 198

LOCATION.--Lat 46°25'48", long 105°18'34" (NAD 27), in SW¼SW¼SE¼ 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 mi^2.

PERIOD OF RECORD.--March 1938 to current year (2002).

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

GAGE.--Water-stage recorder. Altitude 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 datum. Oct. 1, 1965, to Oct. 4, 1966, nonrecording gage, and Oct. 5, 1966, to Mar. 21, 1978, water-stage recorder at present site and datum. Mar. 22, 1978, to Apr. 23, 1981, water-stage recorder 1.5 mi upstream at different datum, Apr. 24 to Aug. 20, 1981, water-stage recorder at present site and datum, and Aug. 21, 1981, to Sept. 30, 1981, water-stage recorder 1.5 mi upstream at different datum. Oct. 1, 1981, to Apr. 5, 1995, water-stage recorder at site 1.5 mi downstream at different datum. Apr. 7, 1995, to present (2002), water-stage recorders located on each bank and used depending on control conditions.

REMARKS.--Some regulation by three reservoirs in Wyoming (combined usable capacity, 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.

Magnitude and probability of annual low flow based on 63 years of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	15	3.7	1.2	0.00	0.00	0.00
3	17	4.6	1.7	.00	.00	.00
7	21	5.3	1.9	.12	.00	.00
14	38	6.6	2.3	.22	.00	.00
30	47	9.1	2.6	.74	.14	.04
60	74	24	11	5.0	1.9	.90
90	111	47	25	13	5.9	3.2
120	143	67	39	22	11	6.5
183	163	85	55	37	22	16

Magnitude and probability of seasonal low flow from March-June based on 64 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	147	55	30	17	8.3	5.0
3	158	63	35	21	11	7.0
7	188	81	48	30	17	11
14	267	122	75	47	27	18
30	427	203	125	80	45	30

Magnitude and probability of seasonal low flow from November-February based on 64 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	46	22	13	7.6	2.4	0.00
3	55	27	17	10	3.2	.00
7	64	35	23	15	5.9	.00
14	80	45	30	20	8.0	.00
30	111	62	44	31	11	.00

Duration of daily mean flows based on 64 years of record

Discharge, in ft^3/s, which was equaled or exceeded for indicated percent of time							
99%	98%	95%	90%	80%	70%	60%	50%
2.6	5.8	16	41	85	124	174	241
40%	30%	20%	15%	10%	5%	2%	1%
337	485	755	1,000	1,380	2,150	3,680	5,340

Magnitude and probability of annual high flow based on 64 years of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2	5	10	25	50	100
	50%	20%	10%	4%	2%	1%
1	5,530	11,000	15,700	22,900	29,100	36,000
3	4,520	9,090	13,100	19,200	24,600	30,700
7	3,440	6,700	9,430	13,500	17,000	20,900
15	2,590	4,720	6,350	8,590	10,400	12,200
30	2,010	3,510	4,560	5,930	6,950	7,960
60	1,520	2,570	3,280	4,160	4,780	5,380
90	1,260	2,080	2,610	3,250	3,700	4,130

Magnitude and probability of seasonal low flow from July-October based on 64 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	18	4.1	1.5	0.17	0.00	0.00
3	20	5.0	2.0	.29	.00	.00
7	24	5.8	2.3	.76	.00	.00
14	43	7.4	2.4	.84	.08	.02
30	49	10	3.9	1.5	.49	.21

Monthly and annual mean discharges

Month	Maximum (ft^3/s)	Minimum (ft^3/s)	Mean (ft^3/s)	Standard deviation (ft^3/s)	Years of record
October	921	1.8	252	225	64
November	790	12	220	127	64
December	417	12	150	78	64
January	476	9.4	143	84	64
February	3,850	6.1	434	601	64
March	4,630	80	1,240	1,090	64
April	3,060	109	739	486	65
May	5,970	114	1,150	913	65
June	8,040	48	1,610	1,390	65
July	2,020	10	581	500	65
August	1,100	1.4	215	208	65
September	898	.24	174	198	65
Annual	1,620	81	576	300	64

06326600 O'Fallon Creek near Ismay, Mont.
Site Number 199

LOCATION.--Lat 46°25'17", long 104°45'40" (NAD 27), in NE¼SE¼ sec.30, T.8 N., R.56 E., Fallon County, Hydrologic Unit 10100005, on left bank, about 350 ft upstream from U.S. Highway 12, 1 mi east of road to Ismay, 6.5 mi southeast of Ismay, 11.5 mi west of Plevna, and at river mile 58.3.
DRAINAGE AREA.--669 mi^2.
PERIOD OF RECORD.--October 1977 to September 1992 (discontinued). Crest-stage partial-record data collected July 1962 to September 1977.
GAGE.--Water-stage recorder. Altitude of gage is 2,590 ft (NGVD 29, from topographic map).

Magnitude and probability of annual low flow based on 14 years of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	0.00	0.00	0.00	0.00	--	--
3	.00	.00	.00	.00	--	--
7	.00	.00	.00	.00	--	--
14	.00	.00	.00	.00	--	--
30	.00	.00	.00	.00	--	--
60	.03	.00	.00	.00	--	--
90	.08	.00	.00	.00	--	--
120	.08	.00	.00	.00	--	--
183	.23	.00	.00	.00	--	--

Magnitude and probability of seasonal low flow from March-June based on 15 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	0.00	0.00	0.00	0.00	--	--
3	.00	.00	.00	.00	--	--
7	.08	.00	.00	.00	--	--
14	.24	.00	.00	.00	--	--
30	.91	.00	.00	.00	--	--

Magnitude and probability of seasonal low flow from November-February based on 15 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	0.00	0.00	0.00	0.00	--	--
3	.00	.00	.00	.00	--	--
7	.01	.00	.00	.00	--	--
14	.03	.00	.00	.00	--	--
30	.10	.00	.00	.00	--	--

Duration of daily mean flows based on 15 years of record

Discharge, in ft^3/s, which was equaled or exceeded for indicated percent of time							
99%	98%	95%	90%	80%	70%	60%	50%
0.02	0.03	0.08	0.17	0.34	0.51	0.68	0.84
40%	30%	20%	15%	10%	5%	2%	1%
1.0	2.2	5.7	9.2	17	43	125	248

Magnitude and probability of annual high flow based on 15 years of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2	5	10	25	50	100
	50%	20%	10%	4%	2%	1%
1	310	876	1,510	2,690	--	--
3	224	677	1,190	2,160	--	--
7	146	469	867	1,670	--	--
15	86	270	506	1,010	--	--
30	53	163	303	600	--	--
60	31	94	168	316	--	--
90	23	68	123	235	--	--

Magnitude and probability of seasonal low flow from July-October based on 14 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	0.00	0.00	0.00	0.00	--	--
3	.00	.00	.00	.00	--	--
7	.00	.00	.00	.00	--	--
14	.00	.00	.00	.00	--	--
30	.00	.00	.00	.00	--	--

Monthly and annual mean discharges

Month	Maximum (ft^3/s)	Minimum (ft^3/s)	Mean (ft^3/s)	Standard deviation (ft^3/s)	Years of record
October	13	0.00	2.0	4.3	15
November	5.8	.00	.83	1.5	15
December	1.7	.00	.60	.62	15
January	14	.00	1.6	3.6	15
February	172	.00	37	63	15
March	568	.00	62	144	15
April	120	.14	19	31	15
May	81	.03	20	29	15
June	160	.00	20	41	15
July	21	.00	5.4	7.0	15
August	58	.00	5.1	15	15
September	5.6	.00	.49	1.5	15
Annual	64	1.2	14	18	15

06327500 Yellowstone River at Glendive, Mont.
Site Number 200

LOCATION.--Lat 47°06'00", long 104°43'00" (NAD 27), in N½ sec.35, T.16 N, R.55 E., Dawson County, at highway bridge at Glendive.
DRAINAGE AREA.--66,788 mi^2.
PERIOD OF RECORD.--16 years (1897-1910, 1931-34).
GAGE.--Chain gage. Altitude of gage is 2,040 ft (NGVD 29, from topographic map).
REMARKS.--Diversions for irrigation of about 1,200,000 acres upstream from station. Some regulation on tributary streams. Records for this station are considered equivalent to records for Yellowstone River at Sidney (station number 06329500) except during periods of operation of Lower Yellowstone Canal at Lower Yellowstone Dam at Intake.

Magnitude and probability of annual low flow based on 10 years of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	3,120	2,040	1,530	1,160	--	--
3	3,170	2,100	1,590	1,220	--	--
7	3,300	2,320	1,830	1,450	--	--
14	3,680	2,810	2,330	1,940	--	--
30	4,180	3,500	3,110	2,780	--	--
60	4,470	3,930	3,590	3,300	--	--
90	4,680	4,170	3,850	3,570	--	--
120	4,930	4,480	4,240	4,040	--	--
183	5,860	5,290	5,020	4,820	--	--

Magnitude and probability of seasonal low flow from March-June based on 13 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	5,090	3,430	2,710	2,200	--	--
3	5,130	4,030	3,650	3,400	--	--
7	5,330	4,380	4,070	3,880	--	--
14	5,580	4,640	4,330	4,130	--	--
30	6,610	5,340	4,820	4,460	--	--

Magnitude and probability of seasonal low flow from November-February based on 12 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	3,190	2,110	1,600	1,240	--	--
3	3,240	2,170	1,670	1,300	--	--
7	3,340	2,340	1,860	1,510	--	--
14	3,700	2,840	2,360	1,970	--	--
30	4,210	3,540	3,160	2,840	--	--

Duration of daily mean flows based on 13 years of record

Discharge, in ft^3/s, which was equaled or exceeded for indicated percent of time							
99%	98%	95%	90%	80%	70%	60%	50%
2,060	2,500	3,360	4,240	4,850	5,410	5,970	7,120
40%	30%	20%	15%	10%	5%	2%	1%
8,450	11,500	17,900	24,400	36,400	49,800	65,800	71,900

Magnitude and probability of annual high flow based on 13 years of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2	5	10	25	50	100
	50%	20%	10%	4%	2%	1%
1	65,500	86,600	96,100	105,000	--	--
3	62,800	81,900	90,100	97,200	--	--
7	60,600	76,500	82,300	86,500	--	--
15	57,000	69,500	73,100	75,200	--	--
30	53,400	65,000	68,100	69,900	--	--
60	42,600	53,600	57,800	61,000	--	--
90	34,700	43,300	46,500	48,900	--	--

Magnitude and probability of seasonal low flow from July-October based on 12 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	5,780	4,860	4,440	4,120	--	--
3	5,840	4,960	4,570	4,270	--	--
7	5,970	5,130	4,760	4,470	--	--
14	6,130	5,350	5,010	4,760	--	--
30	6,470	5,660	5,300	5,040	--	--

Monthly and annual mean discharges

Month	Maximum (ft^3/s)	Minimum (ft^3/s)	Mean (ft^3/s)	Standard deviation (ft^3/s)	Years of record
October	9,500	4,880	6,640	1,310	14
November	7,390	4,200	5,560	812	14
December	5,700	2,920	4,530	805	14
January	5,700	3,270	4,570	686	13
February	5,940	3,360	4,690	744	13
March	18,800	5,660	9,300	3,710	13
April	13,900	4,370	8,550	2,560	14
May	44,700	9,660	21,900	9,260	14
June	74,200	10,000	46,100	14,000	14
July	64,000	4,050	27,700	16,100	14
August	24,100	2,780	11,600	5,510	14
September	12,100	2,860	7,840	2,270	14
Annual	17,700	6,060	13,300	3,120	13

06329200 Burns Creek near Savage, Mont.
Site Number 201

LOCATION.--Lat 47°22'20", long 104°25'46" (NAD 27), in NE¼SE¼SE¼ sec.27, T.19 N., R.57 E., Richland County, Hydrologic Unit 10100004, on right bank 1,000 ft upstream from bridge on State Highway 16, 7 mi southwest of Savage, and at river mile 2.1.
DRAINAGE AREA.--233 mi^2.
PERIOD OF RECORD.--October 1957 to September 1967, September 1975 to September 1984, October 1985 to September 1986 (discontinued).
GAGE.--Water-stage recorder. Altitude of gage is 2,000 ft (NGVD 29, from topographic map).
REMARKS.--Minor diversions for irrigation upstream.

Magnitude and probability of annual low flow based on 12 years of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	0.00	0.00	0.00	0.00	--	--
3	.00	.00	.00	.00	--	--
7	.00	.00	.00	.00	--	--
14	.00	.00	.00	.00	--	--
30	.00	.00	.00	.00	--	--
60	.08	.00	.00	.00	--	--
90	.24	.07	.00	.00	--	--
120	.39	.19	.11	.00	--	--
183	.51	.26	.17	.00	--	--

Magnitude and probability of seasonal low flow from March-June based on 19 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	0.28	0.00	0.00	0.00	--	--
3	.30	.00	.00	.00	--	--
7	.38	.00	.00	.00	--	--
14	.85	.14	.00	.00	--	--
30	1.6	.64	.35	.00	--	--

Magnitude and probability of seasonal low flow from November-February based on 15 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	0.05	0.00	0.00	0.00	--	--
3	.06	.00	.00	.00	--	--
7	.08	.00	.00	.00	--	--
14	.11	.00	.00	.00	--	--
30	.29	.00	.00	.00	--	--

Duration of daily mean flows based on 20 years of record

Discharge, in ft^3/s, which was equaled or exceeded for indicated percent of time							
99%	98%	95%	90%	80%	70%	60%	50%
0.02	0.04	0.10	0.19	0.39	0.58	0.78	0.97
40%	30%	20%	15%	10%	5%	2%	1%
1.4	2.0	3.5	5.2	8.8	21	56	106

Magnitude and probability of annual high flow based on 20 years of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2	5	10	25	50	100
	50%	20%	10%	4%	2%	1%
1	153	605	1,190	2,370	--	--
3	100	399	797	1,630	--	--
7	62	231	442	860	--	--
15	39	134	247	458	--	--
30	25	84	155	290	--	--
60	16	50	89	160	--	--
90	12	36	63	109	--	--

Magnitude and probability of seasonal low flow from July-October based on 13 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	0.00	0.00	0.00	0.00	--	--
3	.00	.00	.00	.00	--	--
7	.00	.00	.00	.00	--	--
14	.00	.00	.00	.00	--	--
30	.01	.00	.00	.00	--	--

Monthly and annual mean discharges

Month	Maximum (ft^3/s)	Minimum (ft^3/s)	Mean (ft^3/s)	Standard deviation (ft^3/s)	Years of record
October	2.7	0.19	1.2	0.80	19
November	2.1	.45	1.0	.47	19
December	2.1	.23	.78	.44	19
January	5.0	.20	.89	1.1	18
February	103	.10	16	27	17
March	183	1.2	42	52	19
April	118	1.8	12	26	20
May	15	.68	4.4	3.8	20
June	15	.28	6.1	4.8	20
July	25	.18	4.6	6.7	19
August	1.6	.10	.72	.56	17
September	9.8	.11	1.6	2.7	14
Annual	21	.83	7.9	6.7	20

06329500 Yellowstone River near Sidney, Mont.
Site Number 202

LOCATION.--Lat 47°40'42", long 104°09'22" (NAD 27), in SW¼NE¼SW¼ 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 mi^2. Area at site 4.5 mi upstream, 68,812 mi^2.

PERIOD OF RECORD.--October 1910 to September 1931 published as "at Intake", October 1933 to current year (2002). 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 (2002) are published in annual reports.

GAGE.--Water-stage recorder. Altitude 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 mi upstream at different datum. 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 datum 1.36 ft higher. Apr. 4, 1952, to Nov. 19, 1967, water-stage recorder at site 4.5 mi upstream at different datum.

REMARKS.--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 NW¼ 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 lie upstream from station. U.S. Army Corps of Engineers satellite telemeter at station.

Unregulated streamflow period

Magnitude and probability of annual low flow
based on 51 years of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	2,020	1,290	1,020	842	677	585
3	2,120	1,400	1,140	956	789	696
7	2,440	1,660	1,360	1,160	963	853
14	3,000	2,100	1,730	1,470	1,210	1,060
30	3,910	2,830	2,330	1,970	1,600	1,380
60	4,430	3,410	2,950	2,620	2,270	2,070
90	4,940	3,940	3,490	3,160	2,830	2,620
120	5,450	4,440	4,000	3,670	3,330	3,120
183	6,020	4,790	4,260	3,880	3,490	3,250

Magnitude and probability of seasonal low flow from
March-June based on 53 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	5,200	3,480	2,540	1,850	1,210	880
3	5,290	3,690	2,830	2,180	1,550	1,200
7	5,660	4,100	3,270	2,620	1,970	1,600
14	6,420	4,710	3,830	3,160	2,470	2,070
30	7,980	5,770	4,750	3,990	3,240	2,790

Magnitude and probability of seasonal low flow from
November-February based on 52 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	2,110	1,330	1,050	871	707	617
3	2,230	1,450	1,160	979	809	714
7	2,560	1,710	1,390	1,180	981	869
14	3,190	2,280	1,910	1,650	1,400	1,250
30	4,030	3,170	2,800	2,540	2,270	2,110

Duration of daily mean flows based on 53 years of record

Discharge, in ft^3/s, which was equaled or exceeded for indicated percent of time							
99%	98%	95%	90%	80%	70%	60%	50%
1,650	2,050	2,910	3,720	4,850	5,770	6,760	7,780
40%	30%	20%	15%	10%	5%	2%	1%
8,960	11,600	17,100	22,600	30,500	45,100	63,100	71,000

Magnitude and probability of annual high flow
based on 53 years of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2	5	10	25	50	100
	50%	20%	10%	4%	2%	1%
1	68,600	94,300	109,000	124,000	134,000	142,000
3	64,800	87,700	100,000	113,000	121,000	128,000
7	58,500	78,200	88,600	99,400	106,000	112,000
15	51,700	69,400	79,000	89,200	95,600	101,000
30	45,100	60,000	67,800	75,800	80,700	84,900
60	35,700	47,000	52,800	58,600	62,100	65,000
90	28,900	37,900	42,500	47,200	50,000	52,400

Magnitude and probability of seasonal low flow from
July-October based on 52 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	4,310	2,600	1,890	1,410	978	752
3	4,390	2,670	1,950	1,470	1,030	797
7	4,530	2,820	2,100	1,620	1,170	928
14	4,800	3,000	2,260	1,740	1,270	1,010
30	5,400	3,410	2,590	2,020	1,500	1,210

Monthly and annual mean discharges

Month	Maximum (ft^3/s)	Minimum (ft^3/s)	Mean (ft^3/s)	Standard deviation (ft^3/s)	Years of record
October	29,100	3,730	7,950	3,690	54
November	12,200	3,700	6,910	1,630	54
December	8,710	3,020	5,380	1,420	54
January	13,100	2,090	5,060	1,860	53
February	15,400	2,700	6,110	2,870	53
March	21,200	5,190	10,900	4,420	53
April	39,200	2,820	10,900	6,120	53
May	38,100	5,410	18,600	6,490	53
June	77,300	10,000	42,200	14,400	53
July	55,000	3,310	24,400	12,600	53
August	20,500	1,600	9,080	4,660	53
September	16,000	2,390	6,960	3,000	53
Annual	21,200	5,810	12,900	3,630	53

06329500 Yellowstone River near Sidney, Mont.—Continued
Site Number 202

Regulated streamflow period

Magnitude and probability of annual low flow based on 36 years of record

Period of consecutive days	Discharge, in ft³/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	3,280	2,210	1,720	1,380	1,050	--
3	3,430	2,350	1,870	1,520	1,180	--
7	3,790	2,730	2,260	1,910	1,560	--
14	4,660	3,380	2,740	2,260	1,770	--
30	5,630	4,090	3,260	2,610	1,960	--
60	6,360	4,810	3,940	3,230	2,500	--
90	6,810	5,380	4,580	3,920	3,220	--
120	7,220	5,780	4,990	4,350	3,660	--
183	7,590	6,020	5,210	4,570	3,880	--

Magnitude and probability of seasonal low flow from March-June based on 37 seasons of record

Period of consecutive days	Discharge, in ft³/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	6,370	4,570	3,750	3,140	2,540	--
3	6,610	4,810	3,980	3,350	2,730	--
7	7,010	5,230	4,380	3,750	3,100	--
14	7,530	5,670	4,810	4,170	3,520	--
30	8,360	6,210	5,250	4,530	3,810	--

Magnitude and probability of seasonal low flow from November-February based on 36 seasons of record

Period of consecutive days	Discharge, in ft³/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	3,440	2,310	1,800	1,430	1,070	--
3	3,620	2,470	1,950	1,570	1,210	--
7	4,010	2,900	2,390	2,020	1,640	--
14	4,900	3,820	3,290	2,870	2,430	--
30	5,860	4,770	4,200	3,730	3,230	--

Duration of daily mean flows based on 37 years of record

Discharge, in ft³/s, which was equaled or exceeded for indicated percent of time							
99%	98%	95%	90%	80%	70%	60%	50%
2,460	3,140	3,990	4,770	5,960	6,890	7,790	8,680
40%	30%	20%	15%	10%	5%	2%	1%
10,200	11,800	15,800	20,000	27,000	38,300	49,700	61,500

Magnitude and probability of annual high flow based on 37 years of record

Period of consecutive days	Discharge, in ft³/s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2	5	10	25	50	100
	50%	20%	10%	4%	2%	1%
1	50,400	67,600	78,100	90,600	99,300	--
3	48,400	64,700	74,600	86,200	94,300	--
7	44,300	59,600	69,100	80,300	88,200	--
15	39,900	54,300	63,300	74,000	81,600	--
30	35,300	48,500	56,800	66,800	73,800	--
60	29,100	39,800	46,400	54,200	59,600	--
90	24,200	32,800	37,900	43,900	48,100	--

Magnitude and probability of seasonal low flow from July-October based on 36 seasons of record

Period of consecutive days	Discharge, in ft³/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	5,420	3,600	2,780	2,200	1,640	--
3	5,500	3,650	2,820	2,230	1,670	--
7	5,650	3,780	2,940	2,330	1,760	--
14	5,940	3,960	3,060	2,420	1,810	--
30	6,520	4,340	3,340	2,630	1,990	--

Monthly and annual mean discharges

Month	Maximum (ft³/s)	Minimum (ft³/s)	Mean (ft³/s)	Standard deviation (ft³/s)	Years of record
October	15,400	4,090	8,820	2,490	37
November	11,400	3,970	7,990	2,040	37
December	9,590	3,970	6,800	1,280	37
January	9,670	3,820	6,700	1,380	37
February	17,800	4,180	7,950	2,690	37
March	26,000	3,240	11,000	5,190	37
April	15,400	4,230	9,450	2,980	37
May	34,600	9,820	17,800	5,870	37
June	65,300	10,000	34,000	13,500	37
July	49,700	4,810	21,100	11,600	37
August	18,200	1,600	8,220	3,960	37
September	12,900	2,990	7,430	2,850	37
Annual	19,200	6,390	12,300	3,330	37

06334000 Little Missouri River near Alzada, Mont.
Site Number 203

LOCATION.--Lat 45°05', long 104°24' (NAD 27), NE¼SW¼ sec.6, T.9 S., R.60 E., Carter County, on right bank 1.9 mi downstream from Thompson Creek and 4 mi north of Alzada.

DRAINAGE AREA.--904 mi^2.

PERIOD OF RECORD.--June 1911 to December 1914 (no winter records in most years), March 1915 to September 1925, August 1928 to September 1932, March 1935 to September 1969. Records collected at station of same name in 1904 at site 8 mi upstream are not equivalent (published as "at Alzada" in WSP 1309). Monthly discharge only for some periods, published in WSP 1309.

GAGE.--Water-stage recorder. Altitude of gage is 3,367 ft (NGVD 29, from river-profile survey). Prior to Apr. 4, 1912, staff gage at site about 150 ft upstream at datum about 2.0 ft higher. Apr. 4, 1912, to June 13, 1947, chain or staff gage at site 300 ft upstream at datum 2.07 ft higher.

REMARKS.--Several diversions for irrigation upstream from station. Some storage in coulees. Records of chemical analyses for the periods May to September 1949, December 1949 to July 1950, and October 1950 to July 1951, suspended-sediment loads for the period March 1949 to December 1951, and water temperatures for the period of June 1949 to December 1951, are published in reports of U.S. Geological Survey (published as "Little Missouri River at Alzada, MT").

Magnitude and probability of annual low flow based on 45 years of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	0.00	0.00	0.00	0.00	0.00	--
3	.00	.00	.00	.00	.00	--
7	.00	.00	.00	.00	.00	--
14	.00	.00	.00	.00	.00	--
30	.04	.00	.00	.00	.00	--
60	.09	.00	.00	.00	.00	--
90	.19	.01	.00	.00	.00	--
120	.41	.05	.00	.00	.00	--
183	2.1	.19	.04	.01	.00	--

Magnitude and probability of seasonal low flow from March-June based on 49 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	0.51	0.00	0.00	0.00	0.00	--
3	.63	.00	.00	.00	.00	--
7	.79	.05	.00	.00	.00	--
14	1.3	.12	.01	.00	.00	--
30	4.8	.53	.13	.03	.00	--

Magnitude and probability of seasonal low flow from November-February based on 49 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	0.04	0.00	0.00	0.00	0.00	--
3	.04	.00	.00	.00	.00	--
7	.05	.00	.00	.00	.00	--
14	.10	.00	.00	.00	.00	--
30	.16	.00	.00	.00	.00	--

Duration of daily mean flows based on 49 years of record

Discharge, in ft^3/s, which was equaled or exceeded for indicated percent of time							
99%	98%	95%	90%	80%	70%	60%	50%
0.02	0.04	0.11	0.22	0.45	0.67	0.89	1.7
40%	30%	20%	15%	10%	5%	2%	1%
5.1	13	32	62	143	428	1,020	1,630

Magnitude and probability of annual high flow based on 49 years of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2	5	10	25	50	100
	50%	20%	10%	4%	2%	1%
1	1,680	3,010	3,810	4,650	5,170	--
3	1,430	2,610	3,310	4,030	4,460	--
7	939	1,800	2,340	2,940	3,320	--
15	592	1,180	1,580	2,050	2,360	--
30	373	771	1,050	1,380	1,610	--
60	239	511	705	942	1,110	--
90	176	388	548	755	906	--

Magnitude and probability of seasonal low flow from July-October based on 51 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	0.00	0.00	0.00	0.00	0.00	0.00
3	.00	.00	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	.00
14	.02	.00	.00	.00	.00	.00
30	.10	.00	.00	.00	.00	.00

Monthly and annual mean discharges

Month	Maximum (ft^3/s)	Minimum (ft^3/s)	Mean (ft^3/s)	Standard deviation (ft^3/s)	Years of record
October	493	0.00	23	75	52
November	97	.00	6.4	19	52
December	22	.00	2.3	4.4	52
January	10	.00	1.6	2.5	49
February	663	.00	63	136	49
March	1,050	.11	197	219	49
April	1,450	.11	206	331	53
May	905	.04	126	194	53
June	2,160	.00	215	337	54
July	314	.00	50	68	54
August	442	.00	39	74	54
September	358	.00	30	69	55
Annual	324	1.9	77	67	49

06334630 Box Elder Creek at Webster, Mont.
Site Number 204

LOCATION.--Lat 45°54'25", long 104°03'30" (NAD 27), NE¼ sec.30, T.2 N., R.62 E., Fallon County, on left bank at Wayne Cox Ranch, 0.5 mi west of Montana-South Dakota State line, 2 mi upstream from Coal Bank Creek, 17 mi southeast of Webster, and 33 mi southeast of Baker.

DRAINAGE AREA.--1,092 mi^2 .

PERIOD OF RECORD.--14 years. September 1959 to September 1973 (discontinued).

REVISED RECORDS.--WSP 1729: Drainage area.

GAGE.--Water-stage recorder. Altitude of gage is 2,950 ft (NGVD 29, from topographic map). Prior to Nov. 8, 1960, nonrecording gage at site 300 ft upstream at different datum.

REMARKS.--Diversions for irrigation of about 14,000 acres upstream from station.

Magnitude and probability of annual low flow
based on 12 years of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	0.69	0.18	0.04	0.00	--	--
3	.87	.31	.10	.00	--	--
7	1.2	.46	.15	.00	--	--
14	1.4	.54	.19	.00	--	--
30	2.3	.70	.29	.12	--	--
60	3.0	1.7	1.2	.96	--	--
90	3.4	2.2	1.8	1.6	--	--
120	4.3	2.7	2.3	2.0	--	--
183	6.3	3.7	3.2	2.9	--	--

Magnitude and probability of seasonal low flow from
March-June based on 13 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	3.9	0.91	0.28	0.00	--	--
3	4.9	.96	.31	.10	--	--
7	5.7	1.4	.60	.28	--	--
14	7.5	2.4	1.3	.72	--	--
30	19	6.3	3.6	2.3	--	--

Magnitude and probability of seasonal low flow from
November-February based on 12 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	0.85	0.28	0.09	0.00	--	--
3	1.0	.40	.17	.00	--	--
7	1.3	.49	.19	.00	--	--
14	1.5	.57	.23	.00	--	--
30	2.4	.99	.61	.40	--	--

Duration of daily mean flows based on 13 years of record

Discharge, in ft^3/s, which was equaled or exceeded for indicated percent of time							
99%	98%	95%	90%	80%	70%	60%	50%
0.19	0.38	0.95	1.8	3.1	4.3	5.3	7.3
40%	30%	20%	15%	10%	5%	2%	1%
13	28	65	108	197	432	964	1,690

Magnitude and probability of annual high flow
based on 13 years of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2	5	10	25	50	100
	50%	20%	10%	4%	2%	1%
1	1,400	3,450	5,230	7,840	--	--
3	1,300	3,140	4,520	6,210	--	--
7	1,130	2,590	3,480	4,370	--	--
15	779	1,730	2,270	2,770	--	--
30	521	1,040	1,290	1,480	--	--
60	320	660	836	990	--	--
90	250	524	669	798	--	--

Magnitude and probability of seasonal low flow from
July-October based on 12 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	1.6	0.31	0.07	0.00	--	--
3	1.7	.47	.13	.00	--	--
7	2.2	.81	.20	.00	--	--
14	2.6	1.0	.30	.00	--	--
30	3.5	1.1	.43	.16	--	--

Monthly and annual mean discharges

Month	Maximum (ft^3/s)	Minimum (ft^3/s)	Mean (ft^3/s)	Standard deviation (ft^3/s)	Years of record
October	452	0.82	42	124	13
November	66	2.6	9.9	17	13
December	27	1.3	5.3	6.6	13
January	10	1.0	4.2	3.2	13
February	425	4.2	63	117	13
March	1,050	8.4	249	310	13
April	860	3.8	215	272	13
May	1,050	6.2	222	299	13
June	658	2.4	199	201	13
July	122	.67	44	39	13
August	46	.82	15	15	13
September	90	2.5	20	24	13
Annual	186	4.3	91	65	13

06336500 Beaver Creek at Wibaux, Mont.
Site Number 205

LOCATION.--Lat 46°59'24", long 104°11'00" (NAD 27), NE¼NE¼ sec.12, T.14 N., R.59 E., Wibaux County, Hydrologic Unit 10110204, on left bank 20 ft upstream from bridge on old U.S. Highway 10, at Wibaux, 12 mi upstream from Little Beaver Creek, and at river mile 62.5.
DRAINAGE AREA.--351 mi^2.
PERIOD OF RECORD.--April 1938 to June 1969, October 1978 to September 1984.
REVISED RECORDS.--WSP 1309: 1943, 1947-48. WSP 1509: 1942(M), 1944-45, 1946(M).
GAGE.--Water-stage recorder. Altitude of gage is 2,650 ft (NGVD 29, by barometer). Prior to Sept. 21, 1940, nonrecording gages at site about 500 ft upstream at different datums.
REMARKS.--Several known diversions for irrigation upstream from station.

Magnitude and probability of annual low flow
based on 34 years of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	0.00	0.00	0.00	0.00	0.00	--
3	.00	.00	.00	.00	.00	--
7	.00	.00	.00	.00	.00	--
14	.00	.00	.00	.00	.00	--
30	.01	.00	.00	.00	.00	--
60	.11	.00	.00	.00	.00	--
90	.20	.03	.00	.00	.00	--
120	.34	.05	.01	.00	.00	--
183	.61	.16	.06	.00	.00	--

Magnitude and probability of seasonal low flow from
March-June based on 36 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	0.50	0.00	0.00	0.00	0.00	--
3	.55	.00	.00	.00	.00	--
7	.67	.01	.00	.00	.00	--
14	1.0	.09	.00	.00	.00	--
30	2.0	.54	.23	.11	.04	--

Magnitude and probability of seasonal low flow from
November-February based on 36 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	0.00	0.00	0.00	0.00	0.00	--
3	.00	.00	.00	.00	.00	--
7	.00	.00	.00	.00	.00	--
14	.07	.00	.00	.00	.00	--
30	.28	.00	.00	.00	.00	--

Duration of daily mean flows based on 35 years of record

Discharge, in ft^3/s, which was equaled or exceeded for indicated percent of time							
99%	98%	95%	90%	80%	70%	60%	50%
0.02	0.04	0.11	0.22	0.44	0.66	0.88	1.2
40%	30%	20%	15%	10%	5%	2%	1%
1.8	3.1	6.1	9.4	18	52	243	589

Magnitude and probability of annual high flow
based on 35 years of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2	5	10	25	50	100
	50%	20%	10%	4%	2%	1%
1	594	1,790	2,850	4,350	5,490	--
3	444	1,400	2,300	3,610	4,660	--
7	295	948	1,570	2,500	3,240	--
15	175	575	970	1,580	2,090	--
30	102	324	539	868	1,140	--
60	58	179	295	473	623	--
90	43	126	204	322	420	--

Magnitude and probability of seasonal low flow from
July-October based on 35 seasons of record

Period of consecutive days	Discharge, in ft^3/s, for indicated recurrence interval, in years, and non-exceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	0.00	0.00	0.00	0.00	0.00	--
3	.00	.00	.00	.00	.00	--
7	.00	.00	.00	.00	.00	--
14	.01	.00	.00	.00	.00	--
30	.06	.00	.00	.00	.00	--

Monthly and annual mean discharges

Month	Maximum (ft^3/s)	Minimum (ft^3/s)	Mean (ft^3/s)	Standard deviation (ft^3/s)	Years of record
October	5.4	0.00	1.0	1.3	36
November	38	.00	2.3	6.2	36
December	2.8	.00	.95	.80	36
January	8.8	.00	.96	1.6	36
February	241	.00	20	45	36
March	456	1.2	117	134	36
April	566	.62	79	138	37
May	33	.37	7.3	7.9	37
June	136	.02	21	35	37
July	109	.00	11	21	36
August	10	.00	1.5	2.4	36
September	34	.00	1.7	5.7	36
Annual	62	.25	21	19	35