

12334650 BLACKFOOT RIVER BELOW ALICE CREEK, NEAR LINCOLN, MT

LOCATION.--Lat 46°59'21", long 112°30'40" (NAD 27) in SE¹/₄SE¹/₄SW¹/₄ Sec. 5, T.14 NO., R.1 W., Lewis and Clark County, Hydrologic Unit 17010203, at discontinued gage site at road bridge, 0.4 mi upstream from mouth of Hogum Creek, 3.0 mi downstream from Alice Creek, and 8.2 mi northeast of Lincoln.

DRAINAGE AREA.--96.9 mi².

PERIOD OF RECORD.--October 1970 to June 1974, September 1995 to May 1997, March 2004 through November 2004.

GAGE.--None. Elevation at sampling site is 4,803 ft (NGVD 29).

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: Water years 1970-75.

REMARKS.--Unpublished records of instantaneous water temperature and specific conductance are available in files of District office.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: Maximum, 23.0°C, July 10, 1973; minimum, 0.0°C, on many days during winter.

WATER-QUALITY DATA, MARCH 2004 TO NOVEMBER 2004

Date	Time	Instantaneous discharge, cfs (00061)	Turbidity, white light, 90+/-30 corrected NTRU (63676)	Turbidity, water, unfltrd lab, Hach 2100AN NTU (99872)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specific conductance, water, unfltrd uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO ₃ (00900)
MAR												
18...	1300	21	--	<2.0	--	--	--	8.6	222	14.0	4.0	120
APR												
13...	0800	77	--	<2.0	--	--	--	8.0	193	6.0	4.5	93
MAY												
25...	0930	129	--	<2.0	640	10.4	96	7.8	174	7.0	4.5	87
JUL												
13...	0930	31	--	<2.0	643	9.4	100	8.2	234	23.0	10.5	120
AUG												
23...	0930	40	--	<2.0	634	9.0	97	8.2	222	7.0	10.5	110
NOV												
09...	0830	18	<2.0		640	11.6	99	8.0	251	2.0	1.5	130

Date	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water, fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Total nitrogen, wat unfltrd by analysis, mg/L (62855)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)	Aluminum, water, fltrd, ug/L (01106)	Arsenic water, unfltrd ug/L (01002)	Cadmium water, unfltrd ug/L (01027)
MAR											
18...	27.1	11.6	<.010	<.016	<.002	.08	<.006	.009	<1	<2	<.04
APR											
13...	22.1	9.27	<.010	E.012	<.002	.14	<.006	.008	3	E1	.15
MAY											
25...	21.1	8.40	<.010	E.009	<.002	.08	<.006	.011	3	<2	.25
JUL											
13...	29.1	12.3	<.010	<.016	<.002	.05	<.006	.004	E1	<2	.07
AUG											
23...	26.4	11.6	E.005	<.016	<.002	.10	E.003	.016	6	<2	.05
NOV											
09...	31.1	12.6	<.010	<.016	<.002	E.05	<.006	.005	<2	<2	E.03

E--Estimated.

12334650 BLACKFOOT RIVER BELOW ALICE CREEK, NEAR LINCOLN, MT—Continued

WATER-QUALITY DATA, MARCH 2004 TO NOVEMBER 2004--CONTINUED

Date	Copper, water, unfltrd recover- able, ug/L (01042)	Iron, water, unfltrd recover- able, ug/L (01045)	Lead, water, unfltrd recover- able, ug/L (01051)	Mangan- ese, water, unfltrd recover- able, ug/L (01055)	Zinc, water, unfltrd recover- able, ug/L (01092)	Sus- pended sediment, percent <.063mm (70331)	Sus- pended sediment concentration mg/L (80154)	Sus- pended sediment dis- charge, tons/d (80155)
MAR 18...	1.0	130	.06	6	7	54	2	.11
APR 13...	3.1	180	.27	19	98	84	4	.83
MAY 25...	3.2	210	.72	29	118	72	5	1.7
JUL 13...	1.1	50	<.06	4	27	80	1	.08
AUG 23...	1.9	150	.23	13	18	81	3	.32
NOV 09...	1.2	20	<.06	2	13	75	1	.05

E--Estimated.

12334680 LANDERS FORK NEAR LINCOLN, MT

LOCATION.--Lat 46°58'40", long 112°33'19" (NAD 27) in SW¼NE¼SW¼ Sec. 12, T.14 NO., R.8 W., Lewis and Clark County, Hydrologic Unit 17010203, at highway bridge crossing, 0.24 mi southeast of Landers ForkRoad and 6.0 mi northeast of Lincoln.

DRAINAGE AREA.--130 mi².

PERIOD OF RECORD.--September 1995 to May 1997, March 2004 through November 2004.

GAGE.--None. Elevation at sampling site is 4,750 ft (NGVD 29).

WATER-QUALITY DATA, MARCH 2004 TO NOVEMBER 2004

Date	Time	Instantaneous discharge, cfs (00061)	Turbidity white light, det ang 90+/-30 corrctd NTRU (63676)	Turbidity, water, unfltrd lab, Hach 2100AN NTU (99872)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, water, unfltrd uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)
MAR 18...	1200	17	--	<2.0	--	--	--	8.5	252	12.0	5.5	140
APR 13...	0930	188	--	<2.0	--	--	--	8.3	211	6.0	4.5	110
MAY 25...	1100	318	--	<2.0	642	11.5	107	8.0	206	9.5	5.0	120
JUL 13...	1155	190	--	<2.0	664	9.5	99	8.1	222	27.0	11.0	120
AUG 23...	1100	112	--	190	635	8.8	94	8.5	226	7.0	10.0	120
NOV 09...	1000	51	<2.0	--	643	11.4	101	8.1	244	4.0	3.0	130

Date	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Total nitrogen, wat unfltrd mg/L (62855)	Ortho-phosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)	Aluminum, water, fltrd, ug/L (01106)	Arsenic water unfltrd ug/L (01002)	Cadmium water, unfltrd ug/L (01027)
MAR 18...	34.9	12.0	<.010	.021	<.002	.03	<.006	<.004	<1	E1	<.04
APR 13...	29.7	9.49	<.010	.131	E.001	.19	<.006	.006	3	E1	<.04
MAY 25...	29.4	10.1	<.010	.051	<.002	.23	<.006	E.004	3	<2	<.04
JUL 13...	31.4	10.4	<.010	.025	<.002	.04	<.006	.007	5	<2	<.04
AUG 23...	31.1	10.9	<.010	.075	E.001	.81	.017	.35	31	8	.32
NOV 09...	33.5	11.2	<.010	.064	E.001	.18	<.006	.004	3	<2	<.04

Date	Copper, water, unfltrd recover-able, ug/L (01042)	Iron, water, unfltrd recover-able, ug/L (01045)	Lead, water, unfltrd recover-able, ug/L (01051)	Manganese, water, unfltrd recover-able, ug/L (01055)	Zinc, water, unfltrd recover-able, ug/L (01092)	Suspended sediment, percent <.063mm (70331)	Suspended sediment concentration mg/L (80154)	Suspended sediment discharge, tons/d (80155)
MAR 18...	E.4	<9.0	<.06	<1	<2	75	1	.05
APR 13...	.9	50	.10	3	<2	77	6	3.0
MAY 25...	.8	40	.08	2	<2	73	5	4.3
JUL 13...	.8	70	.28	12	3	84	7	3.6
AUG 23...	13.6	3,770	18.6	716	30	98	298	90
NOV 09...	.8	10	.08	2	<2	83	2	.28

E--Estimated.

12334800 BLACKFOOT RIVER AT DALTON MOUNTAIN ROAD BRIDGE, NEAR LINCOLN, MT

LOCATION.--Lat 46°56'42", long 112°44'17" (NAD 27) in NE¼NW¼NE¼ Sec. 28, T.14 NO., R.9 W., Lewis and Clark County, Hydrologic Unit 17010203, at county road bridge to Dalton Mountain and 3.2 mi southwest of Lincoln.

DRAINAGE AREA.--399 mi².

PERIOD OF RECORD.--Water years 1973, 1995-97, March 2004 through November 2004.

GAGE.--None. Elevation at sampling site is 4,460 ft (NGVD 29).

WATER-QUALITY DATA, WATER YEAR MARCH 2004 TO NOVEMBER 2004

Date	Time	Instantaneous discharge, cfs (00061)	Turbidity white light, det ang 90+/-30 corrctd NTRU (63676)	Turbidity, water, unfltrd lab, Hach 2100AN NTU (99872)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, water, unfltrd uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)
MAR 18...	1030	85	--	<2.0	--	--	--	8.4	309	10.0	4.0	170
APR 13...	1045	224	--	3.2	--	--	--	8.2	253	8.5	5.0	140
MAY 25...	1250	577	--	<2.0	648	10.8	107	8.1	233	12.0	8.0	130
JUL 13...	1315	312	--	<2.0	649	9.0	104	8.3	263	29.0	14.5	150
AUG 23...	1200	232	--	8.9	644	8.9	95	8.4	268	9.0	10.5	150
NOV 09...	1130	105	<2.0	--	650	11.2	102	8.0	305	6.0	4.5	160

Date	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water, fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Total nitrogen, wat unfltrd by analysis, mg/L (62855)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)	Aluminum, water, fltrd, ug/L (01106)	Arsenic water unfltrd ug/L (01002)	Cadmium water, unfltrd ug/L (01027)	Copper, water, unfltrd recoverable, ug/L (01042)
MAR 18...	46.0	13.2	<.010	.033	<.002	.09	<.006	.009	<2	<2	<.04	.9
APR 13...	37.9	11.1	<.010	.045	E.001	.11	<.006	.015	<2	<2	<.04	1.6
MAY 25...	33.6	10.4	<.010	.022	<.002	.07	<.006	.010	2	<2	E.03	2.1
JUL 13...	39.0	11.7	<.010	<.016	<.002	.04	<.006	.009	5	E1	<.04	1.3
AUG 23...	38.5	12.1	<.010	.023	E.001	.14	E.004	.038	10	E2	E.03	1.8
NOV 09...	45.3	12.6	E.005	.022	<.002	.07	<.006	.006	<2	E1	<.04	.7

Date	Iron, water, unfltrd recoverable, ug/L (01045)	Lead, water, unfltrd recoverable, ug/L (01051)	Manganese, water, unfltrd recoverable, ug/L (01055)	Zinc, water, unfltrd recoverable, ug/L (01092)	Suspended sediment, percent <.063mm (70331)	Suspended sediment concentration mg/L (80154)	Suspended sediment discharge, tons/d (80155)
MAR 18...	70	.08	6	<2	73	3	.69
APR 13...	210	.34	13	6	84	17	10
MAY 25...	110	.20	7	10	66	9	14
JUL 13...	80	.21	11	2	89	6	5.1
AUG 23...	320	1.42	48	4	94	25	16
NOV 09...	30	E.04	3	<2	44	4	1.1

E--Estimated.

12335100 BLACKFOOT RIVER ABOVE NEVADA CREEK, NEAR HELMVILLE, MT

LOCATION.--Lat 46°55'09", long 113°00'53" (NAD 27), in SW¼SW¼SE¼ sec. 32, T.14 N., R.11 W., Powell County, Hydrologic Unit 17010203, on right bank 40 ft downstream from county road bridge, 1.9 mi south of Browns Lake, 4.2 mi upstream from Nevada Creek, 4.4 mi northwest of Helmville, and at river mile 72.0.

DRAINAGE AREA.--494 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1999 to current year. Records equivalent to those published as "12335000 Blackfoot River near Helmville," September 1940 to October 1953 at site 13.5 mi upstream.

GAGE.--Water-stage recorder. Elevation of gage is 4,280 ft (NGVD 29).

REMARKS.--Water-discharge records good except those for estimated daily discharges, which are fair. Numerous diversions for irrigation upstream from station. Several observations of water temperature and specific conductance were made during the year, U. S. Geological Survey satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 5, 1953 reached a discharge of 6,040 ft³/s at 12335000 Blackfoot River near Helmville.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	144	e140	155	e140	e140	122	148	491	707	542	201	202
2	147	e150	153	e140	e130	121	151	482	667	511	194	198
3	147	e150	153	e130	e130	121	149	503	652	485	195	199
4	148	e150	154	e120	e130	120	148	537	668	483	196	199
5	148	e140	152	e110	e140	120	148	612	717	484	191	201
6	e150	e140	151	e100	e130	122	148	720	796	469	189	196
7	e145	e130	156	e120	e130	119	149	765	855	449	185	195
8	142	e140	154	e130	125	126	153	792	804	451	190	193
9	142	e150	151	e130	124	159	182	838	769	429	183	189
10	143	162	e145	e130	124	181	226	811	745	410	177	186
11	145	169	148	e130	124	181	235	798	752	401	174	183
12	148	165	147	e130	e120	170	237	750	719	384	170	203
13	154	159	148	e130	e110	174	243	668	682	361	166	217
14	155	156	149	e130	e110	170	272	607	652	341	161	212
15	154	157	147	e130	e120	159	327	560	618	325	156	208
16	156	153	146	e140	e125	155	366	518	595	305	154	202
17	156	154	147	e130	126	162	368	505	569	291	151	199
18	153	153	e140	e130	125	175	366	492	548	280	160	198
19	151	156	e140	e140	126	184	354	520	535	282	166	206
20	149	161	e140	e150	125	176	348	530	514	284	170	219
21	151	156	e150	e150	124	162	344	556	486	271	201	220
22	149	e130	e140	e150	123	158	336	643	464	259	199	214
23	149	e140	e140	e150	123	157	326	702	475	250	228	204
24	148	e150	e150	e140	122	158	330	699	508	246	250	199
25	144	e150	160	e130	123	157	346	676	514	238	243	194
26	144	e150	163	e130	123	154	352	658	544	234	248	189
27	145	e140	157	e140	123	151	363	689	543	223	245	186
28	153	e140	e140	e150	123	147	413	722	527	218	235	185
29	172	e150	e130	e160	122	143	504	759	539	214	229	184
30	173	157	e130	e150	---	141	505	780	560	208	221	182
31	e150	---	e140	e140	---	140	---	756	---	205	213	---
TOTAL	4,655	4,498	4,576	4,180	3,620	4,685	8,537	20,139	18,724	10,533	6,041	5,962
MEAN	150	150	148	135	125	151	285	650	624	340	195	199
MAX	173	169	163	160	140	184	505	838	855	542	250	220
MIN	142	130	130	100	110	119	148	482	464	205	151	182
AC-FT	9,230	8,920	9,080	8,290	7,180	9,290	16,930	39,950	37,140	20,890	11,980	11,830

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2000 - 2004, BY WATER YEAR (WY)

MEAN	161	154	144	138	129	146	257	620	834	342	185	164
MAX	175	180	165	152	151	183	398	802	1,457	538	242	199
(WY)	(2000)	(2000)	(2000)	(2000)	(2003)	(2003)	(2003)	(2003)	(2002)	(2002)	(2002)	(2004)
MIN	142	139	128	129	107	121	139	433	578	262	152	135
(WY)	(2002)	(2002)	(2001)	(2001)	(2001)	(2002)	(2001)	(2001)	(2000)	(2000)	(2000)	(2001)

SUMMARY STATISTICS

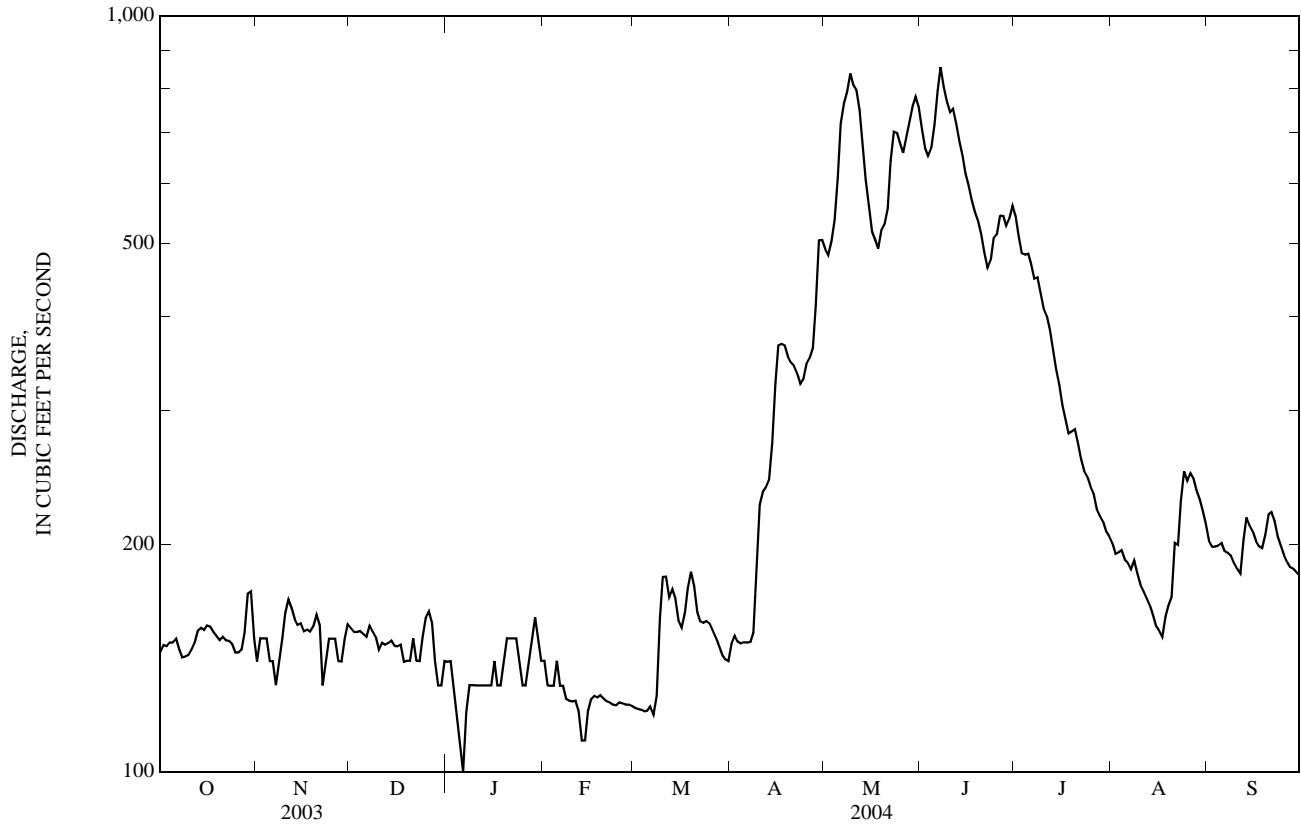
FOR 2003 CALENDAR YEAR

FOR 2004 WATER YEAR

WATER YEARS 2000 - 2004

ANNUAL TOTAL	110,101	96,150	
ANNUAL MEAN	302	263	273
HIGHEST ANNUAL MEAN			328
LOWEST ANNUAL MEAN			215
HIGHEST DAILY MEAN	1,820	May 31	855
LOWEST DAILY MEAN	90	Feb 24	100
ANNUAL SEVEN-DAY MINIMUM	112	Feb 23	119
MAXIMUM PEAK FLOW			882
MAXIMUM PEAK STAGE			5.39
ANNUAL RUNOFF (AC-FT)	218,400	190,700	197,700
10 PERCENT EXCEEDS	681	577	615
50 PERCENT EXCEEDS	161	162	163
90 PERCENT EXCEEDS	139	130	130

e--Estimated.



WATER-QUALITY RECORDS

PERIOD OF RECORD.—November 1995 to August 1998, April 2002 to current year.

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

Date	Time	Instantaneous discharge, cfs (00061)	Turbidity, water, unfltrd lab, Hach 2100AN NTU (99872)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specific conductance, water, unfltrd uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)
DEC 02...	1330	154	7.3	--	--	--	8.2	294	5.0	3.0	--
MAR 11...	1530	182	3.1	--	--	--	8.2	259	10.0	5.5	140
APR 13...	1215	245	2.9	--	--	--	8.4	271	16.0	9.5	150
MAY 26...	1645	648	7.7	653	9.5	98	8.4	236	12.5	10.0	130
JUL 14...	1330	340	<2.0	657	8.1	100	8.5	272	30.0	18.0	150
AUG 23...	1400	231	5.6	649	8.6	98	8.5	287	12.5	14.0	160

12335100 BLACKFOOT RIVER ABOVE NEVADA CREEK, NEAR HELMVILLE, MT—Continued

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

Date	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water, fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Total nitrogen, wat unfltrd by analysis, mg/L (62855)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)	Aluminum, water, fltrd, ug/L (01106)	Arsenic water unfltrd ug/L (01002)	Cadmium water, unfltrd ug/L (01027)
DEC 02...	--	--	--	E.009	E.001	.03	<.006	.008	--	--	--
MAR 11...	37.8	11.6	.023	E.015	E.001	.27	<.006	.022	<2	2	<.04
APR 13...	39.1	11.6	<.010	<.016	E.001	.08	<.006	.009	<2	E1	<.04
MAY 26...	35.5	10.8	<.010	E.009	<.002	.07	<.006	.017	2	<1	<.04
JUL 14...	39.6	12.1	<.010	<.016	<.002	.04	<.006	.009	5	E1	<.04
AUG 23...	40.4	13.2	<.010	<.016	<.002	.11	E.005	.027	13	3	E.02

Date	Copper, water, unfltrd recover-able, ug/L (01042)	Iron, water, unfltrd recover-able, ug/L (01045)	Lead, water, unfltrd recover-able, ug/L (01051)	Manganese, water, unfltrd recover-able, ug/L (01055)	Zinc, water, unfltrd recover-able, ug/L (01092)	Suspended sediment, percent <.063mm (70331)	Suspended sediment concentration mg/L (80154)	Suspended sediment discharge, tons/d (80155)
DEC 02...	--	--	--	--	--	53	12	5.0
MAR 11...	1.3	140	.14	24	E1	91	7	3.4
APR 13...	1.0	150	.21	21	E1	88	9	6.0
MAY 26...	1.6	230	.36	14	3	67	25	44
JUL 14...	1.0	80	.16	11	E2	81	5	4.6
AUG 23...	1.2	220	.63	31	2	96	12	7.5

E--Estimated.

PEND OREILLE RIVER BASIN

12335500 NEVADA CREEK ABOVE RESERVOIR, NEAR HELMVILLE, MT

LOCATION.--Lat 46°46'42", long 112°46'00" (NAD 27), in SW¹/₄NW¹/₄SW¹/₄ sec.20, T.12 N., R.9 W., Powell County, Hydrologic Unit 17010203, on right bank 0.7 mi upstream from Nevada Lake, 1.1 mi downstream from Gallagher Creek, 11 mi southeast of Helmville, and at river mile 34.5.

DRAINAGE AREA.--116 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1939 to current year. Prior to October 2001, published as "near Finn."

GAGE.--Water-stage recorder. Elevation of gage is 4,640 ft (NGVD 29). Prior to Apr. 30, 1942, nonrecording gage at site 0.1 mi, downstream at different elevation. Apr. 30, 1942 to July 26, 1953, water-stage recorder at site 0.2 mi downstream at different elevation. July 26, 1953, to Nov. 6, 1978, water-stage recorder at site 0.8 mi upstream at different elevation.

REMARKS.--Water-discharge records good except those for estimated daily discharges, which are poor. Diversions for irrigation of about 2,900 acres upstream from station. U.S. Geological Survey satellite telemeter at station.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.3	e10	e10	e8.0	e16	e14	31	20	45	19	11	7.0
2	7.7	e11	e11	e8.0	e15	e13	30	19	40	33	12	8.0
3	8.0	e11	e10	e7.0	e14	e12	27	21	37	28	13	9.4
4	8.1	e10	e9.5	e6.0	e13	e13	26	29	36	37	13	9.7
5	8.1	e9.0	e10	e5.5	e14	e14	26	38	36	27	12	9.3
6	8.3	e8.0	e12	e5.0	e13	e15	27	40	46	22	12	9.1
7	8.1	e9.0	e11	e7.0	e14	e17	28	38	39	21	11	8.8
8	7.1	e10	e10	e9.0	e15	e25	32	38	39	18	11	8.6
9	6.7	e12	e9.0	e10	e15	e90	36	39	41	18	11	8.7
10	7.1	e15	e8.0	e10	e15	e150	31	41	54	18	10	8.9
11	7.4	e15	e9.0	e10	e13	e110	28	43	45	18	9.7	9.0
12	8.9	e13	e9.0	e10	e10	e120	27	37	36	16	9.2	15
13	8.9	e11	e10	e10	e9.0	106	27	32	32	15	8.6	19
14	9.0	e10	e10	e10	e9.0	51	31	29	28	13	7.8	14
15	10	e10	e10	e10	e12	32	34	26	27	13	6.3	11
16	12	e11	e9.5	e11	e14	47	33	25	27	17	6.3	10
17	10	e12	e9.0	e11	e20	163	32	25	26	19	6.5	9.4
18	9.7	e13	e9.0	e10	e16	115	30	23	25	19	9.9	9.7
19	9.1	e16	e8.5	e11	e14	69	29	32	26	20	6.4	12
20	9.4	e10	e9.0	e12	e13	33	28	26	21	18	5.7	13
21	9.7	e9.0	e11	e14	e12	30	26	29	20	17	5.3	12
22	9.6	e8.0	e10	e15	e11	33	22	49	19	16	5.6	10
23	9.6	e9.0	e9.0	e15	e11	37	21	70	17	15	16	9.6
24	9.4	e10	e10	e14	e11	38	21	62	15	14	10	9.2
25	9.5	e11	e10	e12	e13	33	21	55	17	13	8.4	8.9
26	9.9	e10	e9.0	e13	e14	30	20	52	25	13	8.6	8.6
27	10	e9.5	e8.0	e15	e14	26	18	50	22	13	10	8.9
28	12	e9.0	e8.0	e17	e13	25	29	55	28	13	9.1	10
29	19	e9.5	e7.5	e18	e14	23	30	53	19	12	8.4	12
30	13	e10	e7.0	e18	---	23	26	49	18	11	7.9	12
31	e10	---	e7.5	e17	---	24	---	50	---	11	7.4	---
TOTAL	293.6	321.0	290.5	348.5	387.0	1,531	827	1,195	906	557	289.1	310.8
MEAN	9.47	10.7	9.37	11.2	13.3	49.4	27.6	38.5	30.2	18.0	9.33	10.4
MAX	19	16	12	18	20	163	36	70	54	37	16	19
MIN	6.7	8.0	7.0	5.0	9.0	12	18	19	15	11	5.3	7.0
AC-FT	582	637	576	691	768	3,040	1,640	2,370	1,800	1,100	573	616

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

MEAN	13.8	14.4	12.3	11.6	15.7	34.4	66.4	111	88.7	27.2	14.2	10.2
MAX	32.2	28.8	47.4	54.5	84.6	114	196	356	429	96.5	40.5	28.2
(WY)	(1960)	(1976)	(1976)	(1984)	(1986)	(1978)	(1952)	(1976)	(1975)	(1955)	(1975)	(1965)
MIN	5.52	5.73	3.74	3.83	4.17	7.61	10.0	16.0	11.5	6.19	3.89	3.68
(WY)	(1940)	(1989)	(1993)	(1988)	(1944)	(1962)	(1941)	(1977)	(1992)	(1985)	(1961)	(1940)

12335500 NEVADA CREEK ABOVE RESERVOIR, NEAR HELMVILLE, MT—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1939 - 2004	
ANNUAL TOTAL	11,416.2		7,256.5			
ANNUAL MEAN	31.3		19.8		35.2	
HIGHEST ANNUAL MEAN					77.2	
LOWEST ANNUAL MEAN					11.8	
HIGHEST DAILY MEAN	300	Mar 13	163	Mar 17	1,240	May 22, 1981
LOWEST DAILY MEAN	3.6	Sep 3	5.0	Jan 6	2.0	Jan 11, 1944
ANNUAL SEVEN-DAY MINIMUM	3.8	Sep 1	6.5	Aug 16	2.0	Feb 9, 1944
MAXIMUM PEAK FLOW			328	Mar 17	b1,800	Jun 2, 1953
MAXIMUM PEAK STAGE			3.28	Mar 17	c7.40	May 29, 1953
INSTANTANEOUS LOW FLOW			a4.7	Aug 21	d2.0	Aug 20, 1944
ANNUAL RUNOFF (AC-FT)	22,640		14,390		25,510	
10 PERCENT EXCEEDS	78		37		86	
50 PERCENT EXCEEDS	12		13		15	
90 PERCENT EXCEEDS	7.8		8.2		6.5	

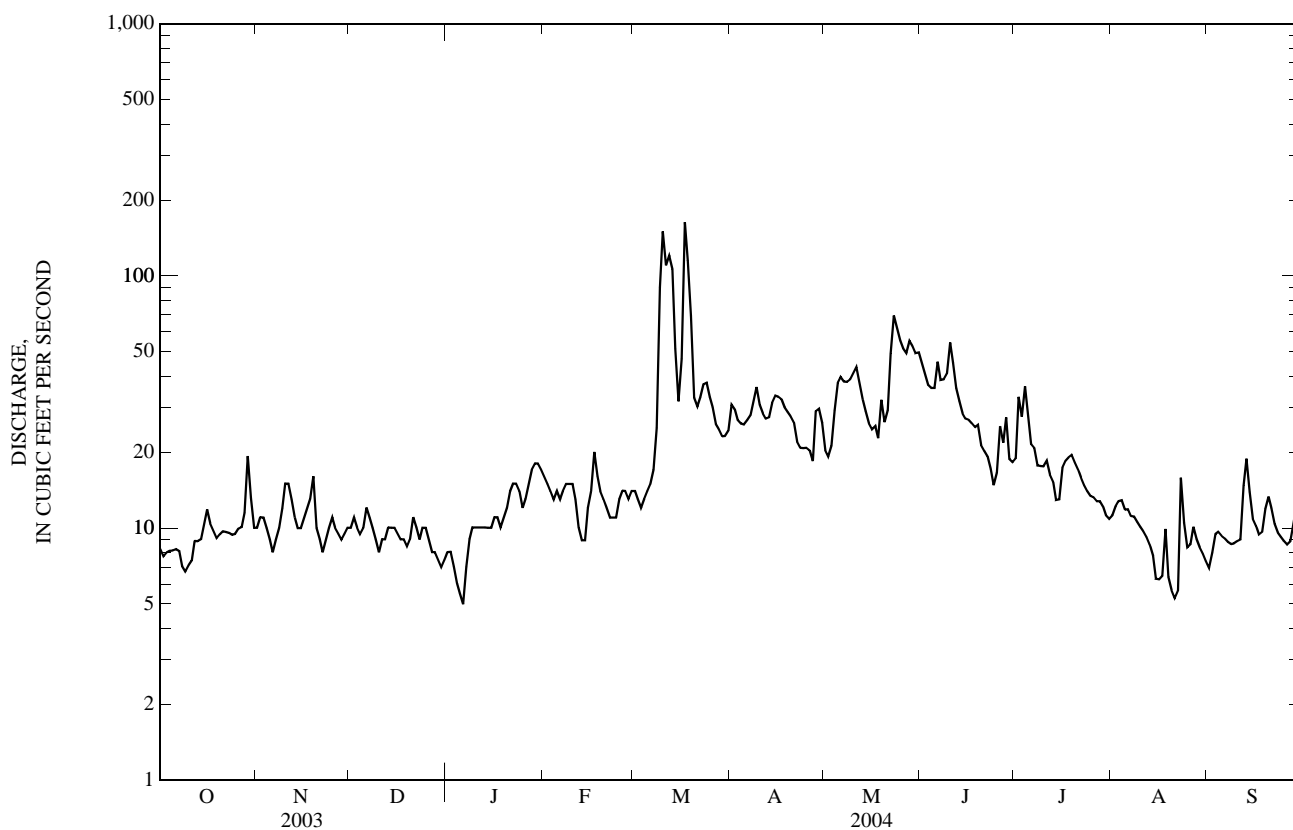
a--Gage height, 1.30 ft, may have been less during period of ice affect.

b--Gage height, 6.00 ft, site and datum then in use; from rating curve extended above 400 ft³/s, on the basis of inflow-outflow study of Nevada Lake.

c--Site and datum then in use; backwater from diversion dam.

d--Probably less than 2.0 ft³/s in several years.

e--Estimated.



PEND OREILLE RIVER BASIN

12335500 NEVADA CREEK ABOVE RESERVOIR, NEAR HELMVILLE, MT—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--April 1994 to January 2000, May 2003 to August 2004 (discontinued).

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

Date	Time	Instantaneous discharge, cfs (00061)	Turbidity, water, unfltrd Hach 2100AN NTU (99872)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, water, unfltrd uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)
DEC 02...	0900	11	8.4	--	--	--	7.7	263	-1.0	.5
MAR 10...	1030	146	15	--	--	--	7.4	115	.5	.0
APR 13...	1445	28	2.7	--	--	--	8.3	229	19.0	9.5
MAY 27...	1400	51	2.6	642	9.4	106	8.4	252	16.0	13.0
JUL 14...	1600	13	<2.0	646	7.6	106	8.5	286	32.0	23.5
AUG 25...	1330	8.4	2.3	640	9.2	108	8.5	293	14.0	14.5

Date	Hardness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water, fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Total nitrogen, water unfltrd mg/L (62855)	Ortho-phosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)	Aluminum, water, fltrd, ug/L (01106)	Arsenic water unfltrd ug/L (01002)
DEC 02...	--	--	--	--	.031	E.001	.21	.024	.050	--	--
MAR 10...	37	10.8	2.55	.251	.101	.005	1.39	.185	.30	8	5
APR 13...	110	28.7	8.12	<.010	<.016	<.002	.21	.017	.036	E1	4
MAY 27...	120	34.7	8.64	<.010	<.016	E.001	.38	.024	.056	2	4
JUL 14...	140	39.5	10.6	E.005	E.011	<.002	.36	.028	.062	E1	5
AUG 25...	140	39.3	10.7	<.010	<.016	<.002	.23	.033	.059	<2	6

Date	Cadmium water, unfltrd recoverable, ug/L (01027)	Copper, water, unfltrd recoverable, ug/L (01042)	Iron, water, unfltrd recoverable, ug/L (01045)	Lead, water, unfltrd recoverable, ug/L (01051)	Manganese, water, unfltrd recoverable, ug/L (01055)	Zinc, water, unfltrd recoverable, ug/L (01092)	Suspended sediment, percent <.063mm (70331)	Suspended sediment concentration mg/L (80154)	Suspended sediment discharge, tons/d (80155)
DEC 02...	--	--	--	--	--	--	97	9	.27
MAR 10...	E.02	2.8	770	.69	131	5	68	44	17
APR 13...	<.04	1.1	310	.12	45	<2	92	7	.53
MAY 27...	<.04	1.9	270	.18	37	<2	80	8	1.1
JUL 14...	<.04	1.1	290	.13	64	E1	89	7	.25
AUG 25...	<.04	1.0	260	.07	42	<2	90	4	.09

E--Estimated.

12336600 NEVADA CREEK BELOW RESERVOIR, NEAR HELMVILLE, MT

LOCATION.--Lat 46°48'10", long 112°49'00" (NAD 27) in SW¼SW¼SE¼ Sec. 11, T.12 N., R.10 W., Powell County, Hydrologic Unit 17010203, 0.6 mi downstream of Nevada Lake, 8.3 mi southeast of Helmville and at river mile 31.1.

DRAINAGE AREA.--143 mi².

PERIOD OF RECORD.--December 2003 to August 2004.

GAGE.--Seasonal gage operated by Montana Department of Natural Resources and Conservation. Elevation at sampling site is 4,540 ft (NGVD 29).

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

Date	Time	Instantaneous discharge, cfs (00061)	Turbidity, water, unfltrd lab, Hach 2100AN NTU (99872)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, water, unfltrd uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)
DEC 02...	1030	4.9	27	--	--	--	7.9	257	2.0	4.5	--
MAR 10...	1130	4.9	9.8	--	--	--	7.7	253	2.5	6.0	120
APR 14...	1900	6.5	16	643	--	--	8.0	238	11.0	7.5	110
MAY 27...	1140	62	18	644	9.0	95	7.9	228	13.0	10.0	110
JUL 14...	1445	22	15	650	13.6	164	8.8	245	32.0	16.5	110
AUG 25...	1145	39	18	641	7.2	88	8.4	236	13.0	16.5	100

Date	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Ammonia, water, fltrd, mg/L as N (00608)	Nitrite + nitrate, water, fltrd, mg/L as N (00631)	Nitrite, water, fltrd, mg/L as N (00613)	Total nitrogen, wat unfltrd by analysis, mg/L (62855)	Ortho-phosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)	Aluminum, water, fltrd, ug/L (01106)	Arsenic, water unfltrd ug/L (01002)	Cadmium, water, unfltrd ug/L (01027)
DEC 02...	--	--	--	.058	.005	.67	E.003	.102	--	--	--
MAR 10...	33.0	9.18	.105	.120	.004	.49	.029	.109	<1	5	<.04
APR 14...	29.7	7.74	.029	.017	E.001	.69	.023	.117	<1	5	<.04
MAY 27...	30.1	7.38	<.010	<.016	E.001	.24	.011	.095	E1	3	<.04
JUL 14...	32.0	8.02	.129	.029	.007	.76	.054	.162	<1	8	<.04
AUG 25...	27.8	7.93	.295	.122	.017	1.07	.072	.154	E1	11	<.04

Date	Copper, water, unfltrd recoverable, ug/L (01042)	Iron, water, unfltrd recoverable, ug/L (01045)	Lead, water, unfltrd recoverable, ug/L (01051)	Manganese, water, unfltrd recoverable, ug/L (01055)	Zinc, water, unfltrd recoverable, ug/L (01092)	Suspended sediment, percent <.063mm (70331)	Suspended sediment concentration, mg/L (80154)	Suspended sediment discharge, tons/d (80155)
DEC 02...	--	--	--	--	--	99	28	.37
MAR 10...	1.8	700	.20	466	E1	95	11	.15
APR 14...	1.6	690	.45	507	E2	95	24	.42
MAY 27...	2.0	620	.47	166	E2	97	22	3.7
JUL 14...	1.2	580	.32	356	E1	96	18	1.1
AUG 25...	1.7	710	.69	92	2	99	26	2.7

E--Estimated.

PEND OREILLE RIVER BASIN

12337800 NEVADA CREEK AT MOUTH, NEAR HELMVILLE, MT

LOCATION.--Lat 46°53'27", long 113°02'216" (NAD 27), in SW $\frac{1}{4}$ SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.7, T.13N., R.11W., Powell County, Hydrologic Unit 17010203, on left bank 0.5 mi upstream from private road bridge, 3.8 mi southwest of Browns Lake, 4.0 mi northwest of Helmville, and at river mile 0.7.

DRAINAGE AREA.--308 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 2001 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 4,240 ft (NGVD 29). Oct. 1, 2001 to Oct. 2, 2002, water-stage recorder 0.5 mi downstream at different elevation.

REMARKS.--Water-discharge records good except those for estimated daily discharges, which are poor. Partial regulation by Nevada lake (station number 12336500). Numerous diversions for irrigation upstream from station. U.S. Geological Survey satellite telemeter at station.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20	e25	e25	e22	e16	21	37	16	46	23	18	18
2	21	23	e26	e22	e15	21	41	15	44	18	19	18
3	20	e23	e24	e18	e15	21	40	15	42	19	19	20
4	21	e22	e22	e15	e14	21	39	14	39	28	23	17
5	22	e20	e24	e10	e15	21	39	16	35	35	18	16
6	21	e18	26	e6.0	e14	20	38	15	34	36	17	16
7	20	e19	26	e7.0	e15	20	38	14	37	34	16	18
8	19	e19	e25	e9.0	e16	42	38	16	34	32	17	23
9	19	e20	e25	e10	e17	205	40	20	37	31	17	26
10	20	22	e24	e12	e17	272	39	20	45	28	16	24
11	21	26	25	e13	e15	154	38	26	49	29	16	23
12	22	27	25	e14	e12	87	36	24	45	33	12	30
13	22	e25	24	e15	e14	73	31	21	41	30	15	39
14	22	e22	24	e15	e16	55	31	22	39	27	15	35
15	22	e22	24	e15	19	47	32	24	40	26	13	31
16	23	23	e22	e16	20	50	31	21	35	25	12	29
17	23	24	e22	e15	20	48	29	22	33	24	12	28
18	23	24	e21	e14	19	48	28	25	31	23	14	28
19	23	27	e20	e15	20	50	28	33	31	20	13	31
20	22	e23	e21	e17	20	41	28	34	33	21	12	39
21	22	e22	e23	e18	20	40	26	36	33	21	15	42
22	22	e20	e22	e18	20	39	23	38	33	22	15	35
23	22	e22	e20	e18	21	39	23	42	29	20	19	30
24	21	e23	e22	e17	21	40	20	43	29	17	26	27
25	21	e25	e24	e14	21	39	19	41	29	18	24	25
26	22	e24	e23	e15	21	38	18	40	33	17	23	24
27	23	e23	e22	e16	21	37	15	43	31	19	25	22
28	24	e22	e22	e18	21	36	15	47	32	17	25	20
29	30	e24	e22	e20	21	36	16	52	32	17	24	20
30	29	e25	e21	e19	---	36	16	49	27	17	21	20
31	e28	---	e22	e16	---	35	---	45	---	19	20	---
TOTAL	690	684	718	469.0	516	1,732	892	889	1,078	746	551	774
MEAN	22.3	22.8	23.2	15.1	17.8	55.9	29.7	28.7	35.9	24.1	17.8	25.8
MAX	30	27	26	22	21	272	41	52	49	36	26	42
MIN	19	18	20	6.0	12	20	15	14	27	17	12	16
AC-FT	1,370	1,360	1,420	930	1,020	3,440	1,770	1,760	2,140	1,480	1,090	1,540

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2001 - 2004, BY WATER YEAR (WY)

MEAN	22.1	23.9	23.2	21.6	28.8	61.4	70.3	66.1	70.1	31.4	23.3	27.5
MAX	24.5	24.6	24.5	26.8	47.8	102	112	135	97.0	40.2	27.7	31.2
(WY)	(2002)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2002)	(2002)	(2002)
MIN	19.7	22.8	21.9	15.1	17.8	26.5	29.7	28.7	35.9	24.1	17.8	25.5
(WY)	(2003)	(2004)	(2002)	(2004)	(2004)	(2002)	(2004)	(2004)	(2004)	(2004)	(2004)	(2003)

SUMMARY STATISTICS

FOR 2003 CALENDAR YEAR

FOR 2004 WATER YEAR

WATER YEARS 2001 - 2004

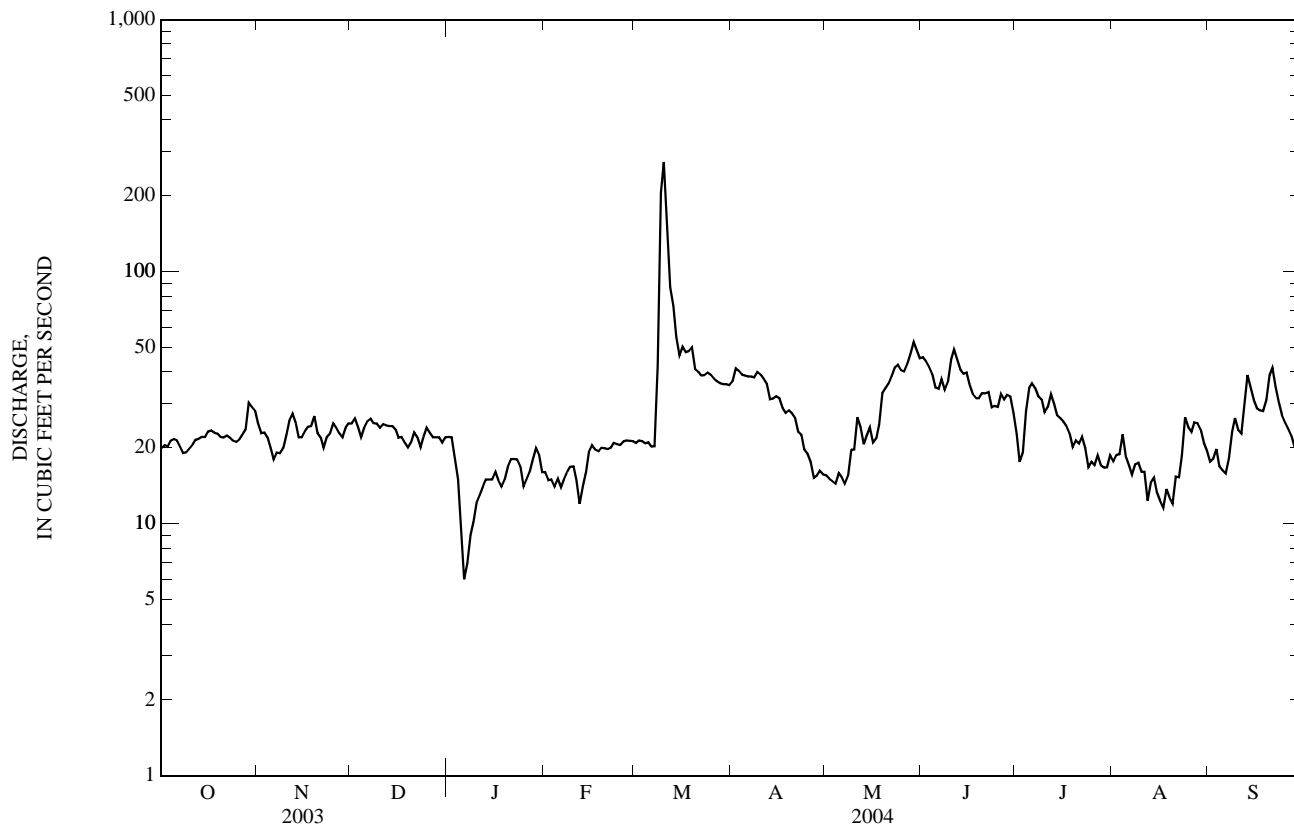
ANNUAL TOTAL	20,315	9,739.0	
ANNUAL MEAN	55.7	26.6	39.1
HIGHEST ANNUAL MEAN			55.7
LOWEST ANNUAL MEAN			26.6
HIGHEST DAILY MEAN	500	Mar 14	500
LOWEST DAILY MEAN	17	Aug 4	6.0
ANNUAL SEVEN-DAY MINIMUM	19	Aug 2	9.6
MAXIMUM PEAK FLOW		351	Mar 10
MAXIMUM PEAK STAGE		4.22	Mar 10
ANNUAL RUNOFF (AC-FT)	40,290	19,320	28,350
10 PERCENT EXCEEDS	119	39	71
50 PERCENT EXCEEDS	28	22	25
90 PERCENT EXCEEDS	20	15	19

a--Estimated daily discharge during period of ice effect.

b--Backwater from ice.

e--Estimated.

12337800 NEVADA CREEK AT MOUTH, NEAR HELMVILLE, MT—Continued



WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 2001 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: October 2001 to current year.

INSTRUMENTATION.--Temperature probe installed Oct. 25, 2001.

REMARKS--Water temperature record good. Missing temperature data for May 22-27 due to equipment problems.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: Maximum, 27.5°C, July 13, 2002; minimum, 0.0°C, many days during winter months.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum, 26.0°C, July, 16, 17; minimum, 0.0°C, many days October through March.

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

Date	Time	Instantaneous discharge, cfs (00061)	Turbidity, water, unfltrd lab, Hach 2100AN NTU (99872)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, water, unfltrd uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)
DEC 02...	1200	26	20	--	--	--	8.0	379	4.5	0.0	--
MAR 10...	1330	312	99	--	--	--	7.3	246	8.0	1.0	76
APR 14...	1700	31	24	--	--	--	8.4	374	13.0	12.5	170
MAY 26...	1530	39	14	648	11.4	132	8.6	461	15.0	14.5	220
JUL 14...	1140	27	5.5	658	9.5	122	8.8	401	28.0	20.0	180
AUG 24...	0930	29	3.5	652	8.5	91	8.4	402	9.0	11.5	190

12337800 NEVADA CREEK AT MOUTH, NEAR HELMVILLE, MT—Continued

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

Date	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Total nitro- gen, wat unfl- trd by anal- ysis, mg/L (62855)	Ortho- phos- phate, water, fltrd, mg/L as P (00671)	Phos- phorus, water, unfltrd mg/L (00665)	Alum- inum, water, fltrd, ug/L (01106)	Arsenic water unfltrd ug/L (01002)	Cadmium water, unfltrd ug/L (01027)
DEC 02...	--	--	--	.151	.003	.49	.063	.106	--	--	--
MAR 10...	20.7	5.90	.868	.147	.013	3.64	.449	.972	3	5	.06
APR 14...	49.2	12.5	.016	.018	.002	.55	.089	.175	<1	5	<.04
MAY 26...	58.6	17.0	<.010	<.016	<.002	.69	.112	.191	E1	6	<.04
JUL 14...	47.6	14.7	<.010	<.016	<.002	.44	.052	.087	E1	5	<.04
AUG 24...	51.1	14.5	E.008	<.016	E.001	.49	.039	.084	E1	7	<.04

Date	Copper, water, unfltrd recover- able, ug/L (01042)	Iron, water, unfltrd recover- able, ug/L (01045)	Lead, water, unfltrd recover- able, ug/L (01051)	Mangan- ese, water, unfltrd recover- able, ug/L (01055)	Zinc, water, unfltrd recover- able, ug/L (01092)	Sus- pended sedi- ment, percent <.063mm (70331)	Sus- pended sedi- ment concen- tration mg/L (80154)	Sus- pended sedi- ment dis- charge, tons/d (80155)
DEC 02...	--	--	--	--	--	99	21	1.5
MAR 10...	7.8	3,540	3.20	299	14	91	292	246
APR 14...	2.1	750	.71	133	2	99	43	3.6
MAY 26...	2.9	520	.46	112	E2	98	30	3.2
JUL 14...	1.3	170	.18	22	<2	99	6	.44
AUG 24...	2.2	140	.15	17	E1	96	6	.47

E--Estimated.

12337800 NEVADA CREEK AT MOUTH, NEAR HELMVILLE, MT—Continued

TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	12.0	8.5	10.5	---	---	---	0.0	0.0	0.0	0.0	0.0	0.0
2	12.5	9.0	11.0	0.5	0.0	---	0.0	0.0	0.0	0.0	0.0	0.0
3	12.0	8.5	10.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	12.0	8.5	10.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	12.5	9.0	11.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	13.0	9.5	11.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	12.0	10.0	11.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	12.0	9.0	10.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	11.0	9.0	10.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	9.0	6.0	7.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11	6.0	4.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	9.0	5.5	7.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13	9.0	7.0	8.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	7.5	5.5	6.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15	6.5	4.5	5.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16	7.0	5.0	6.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17	9.5	6.0	7.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18	9.5	7.0	8.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
19	9.5	6.5	8.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20	10.5	8.0	9.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
21	13.0	9.5	11.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22	12.0	9.5	11.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
23	10.5	7.0	9.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
24	7.0	4.5	5.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
25	5.0	2.0	3.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
26	6.0	3.0	4.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
27	8.0	5.5	6.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
28	7.5	7.0	7.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
29	7.5	2.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30	2.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
31	---	0.0	---	---	---	---	0.0	0.0	0.0	0.0	0.0	0.0
MONTH	13.0	0.0	8.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	FEBRUARY			MARCH			APRIL			MAY		
1	0.0	0.0	0.0	3.5	1.0	2.5	8.5	4.5	6.0	17.0	9.5	13.5
2	0.0	0.0	0.0	3.0	0.5	2.0	6.5	3.5	5.0	16.5	12.0	14.5
3	0.0	0.0	0.0	2.5	0.0	1.0	11.0	3.5	7.0	17.5	12.5	15.0
4	0.0	0.0	0.0	3.5	0.5	2.0	11.5	7.0	9.0	17.0	12.0	15.0
5	0.0	0.0	0.0	3.5	0.5	2.0	12.5	6.0	9.5	18.0	13.0	16.0
6	0.0	0.0	0.0	2.0	0.0	1.0	13.5	8.0	10.5	17.0	12.5	15.0
7	0.0	0.0	0.0	4.0	0.0	1.0	13.0	6.5	10.0	18.0	13.5	16.0
8	0.5	0.0	0.0	4.0	0.0	3.0	12.0	8.5	10.0	17.0	13.0	15.5
9	1.0	0.0	0.5	1.0	0.0	0.5	10.0	7.0	8.5	16.5	8.5	12.5
10	1.0	0.0	0.5	1.5	0.0	0.5	12.0	4.5	8.0	11.5	7.0	9.0
11	1.0	0.0	0.5	2.0	0.0	0.5	13.0	6.5	10.0	9.0	4.5	7.0
12	0.0	0.0	0.0	3.0	0.0	1.0	14.5	7.5	11.0	9.0	5.0	7.0
13	0.0	0.0	0.0	3.5	0.5	1.5	13.5	9.0	11.5	10.5	5.5	8.0
14	0.0	0.0	0.0	3.0	0.0	1.5	12.0	9.5	11.0	13.0	7.0	10.0
15	0.0	0.0	0.0	5.5	0.5	2.5	10.5	7.0	8.5	15.5	9.0	12.0
16	0.5	0.0	0.0	4.5	1.5	3.0	10.5	5.5	8.0	14.5	11.0	12.0
17	0.5	0.0	0.5	6.5	1.5	4.0	10.0	7.0	8.5	18.0	10.0	13.0
18	2.5	0.5	1.5	8.0	2.5	5.0	10.5	6.0	8.5	12.5	8.5	10.0
19	2.5	1.0	2.0	6.0	2.5	4.0	10.5	6.5	8.5	16.0	8.0	11.5
20	2.5	1.0	2.0	6.0	0.5	3.0	10.5	6.5	8.5	18.0	9.0	13.0
21	3.0	0.5	2.0	7.0	2.5	4.5	11.0	5.0	8.0	15.5	11.0	13.0
22	3.0	0.0	1.0	9.0	4.0	6.5	13.5	6.5	10.0	12.0	10.0	11.0
23	2.0	0.0	1.0	9.0	5.5	7.5	14.5	8.0	11.5	11.0	8.0	9.5
24	3.0	0.0	1.0	8.5	5.5	7.0	13.0	8.5	11.0	13.5	8.0	10.5
25	4.0	1.5	2.5	8.5	5.0	7.0	14.0	7.0	10.5	14.5	8.5	11.5
26	4.0	1.5	3.0	8.0	5.0	6.5	15.5	9.0	12.5	15.5	11.0	13.0
27	4.0	0.5	2.5	5.0	2.5	4.0	15.0	10.5	13.0	17.0	10.5	13.5
28	3.5	0.0	1.0	8.5	2.5	5.0	13.0	8.5	10.0	16.5	12.5	14.0
29	4.0	1.0	2.0	10.0	3.0	6.5	13.0	5.0	9.0	13.0	9.5	11.0
30	---	---	---	11.5	5.0	8.5	16.5	7.5	12.0	14.0	8.0	10.5
31	---	---	---	10.5	7.0	9.0	---	---	---	15.5	9.0	12.0
MONTH	4.0	0.0	1.0	11.5	0.0	3.5	16.5	3.5	9.5	18.0	4.5	12.0

PEND OREILLE RIVER BASIN

12337800 NEVADA CREEK AT MOUTH, NEAR HELMVILLE, MT—Continued

TEMPERATURE, WATER, DEGREES CELSIUS—CONTINUED
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	18.5	9.0	14.0	24.0	18.0	21.0	21.5	15.0	18.5	19.5	16.0	17.5
2	20.5	11.0	15.5	24.5	18.0	21.5	20.0	16.0	18.5	17.5	14.5	15.5
3	21.0	13.0	17.5	22.5	18.0	20.5	21.0	16.0	18.0	14.5	11.5	12.5
4	23.5	15.0	19.5	21.0	17.0	19.0	21.0	15.0	18.0	14.0	11.5	12.5
5	21.5	17.0	19.5	21.0	16.5	18.5	21.0	16.0	18.5	14.0	11.5	13.0
6	19.5	14.0	17.0	21.5	17.0	19.0	20.5	15.0	18.0	15.0	10.5	13.0
7	18.5	11.0	14.5	19.0	15.0	17.0	18.0	15.0	16.5	16.0	12.5	14.5
8	15.5	11.0	12.0	18.0	12.0	14.5	18.5	11.5	15.0	15.5	12.0	14.5
9	14.5	9.5	12.0	20.5	11.0	16.0	20.0	14.5	17.0	15.0	12.5	14.0
10	14.0	12.5	13.5	20.0	16.0	18.5	20.0	14.0	17.0	15.0	11.0	13.0
11	13.0	11.0	12.0	21.0	15.5	18.0	20.0	13.5	17.0	15.0	11.0	13.0
12	16.5	11.0	13.5	22.0	15.0	18.5	20.5	14.0	17.0	14.0	12.0	13.0
13	17.5	13.5	15.0	23.0	17.0	19.5	20.0	14.0	17.0	14.0	11.5	12.5
14	17.5	12.5	15.0	24.5	15.5	20.0	22.0	16.5	19.0	13.5	11.5	12.5
15	15.0	11.5	13.5	25.0	17.0	21.0	21.0	18.0	19.5	12.5	11.0	11.5
16	19.0	9.5	14.0	26.0	17.0	21.5	21.0	18.0	19.5	12.5	10.5	11.5
17	18.0	13.5	15.5	26.0	17.0	21.5	23.0	18.5	20.5	11.5	10.0	11.0
18	15.5	12.0	14.0	23.0	19.0	21.0	21.0	19.0	20.0	11.0	10.5	10.5
19	15.5	12.0	13.5	24.0	19.5	22.0	21.0	17.0	18.5	10.5	8.0	9.5
20	17.5	12.0	15.0	23.0	19.5	21.5	21.5	17.5	19.0	9.5	7.5	8.5
21	20.5	14.0	17.0	23.0	17.5	20.0	21.0	18.0	19.5	9.0	7.5	8.0
22	23.0	12.0	17.0	22.0	15.0	18.5	19.5	17.5	18.5	9.0	7.5	8.0
23	23.5	14.0	18.5	22.5	15.5	19.0	17.5	13.5	15.5	11.5	9.0	10.0
24	23.5	15.5	19.0	24.0	17.0	20.5	13.5	11.5	12.5	13.0	9.5	11.5
25	23.0	16.0	19.0	23.0	15.0	19.0	14.5	12.5	13.0	14.0	10.5	12.0
26	22.0	16.0	18.5	22.0	15.5	19.0	14.5	12.0	13.5	14.0	11.0	12.5
27	20.0	16.0	18.0	21.0	15.5	18.0	15.5	12.5	14.0	14.5	11.0	13.0
28	23.0	14.5	18.5	22.0	14.5	18.0	15.0	12.5	13.5	14.0	11.0	13.0
29	24.0	16.0	19.5	20.5	15.5	18.5	16.0	12.0	14.0	13.5	10.5	12.5
30	24.5	17.5	20.5	21.5	15.0	18.5	18.0	13.0	15.5	13.0	10.5	12.0
31	---	---	---	20.5	15.5	18.5	19.0	14.5	17.0	---	---	---
MONTH	24.5	9.0	16.0	26.0	11.0	19.5	23.0	11.5	17.0	19.5	7.5	12.0

12337820 BLACKFOOT RIVER AT RAYMOND BRIDGE, NEAR OVANDO, MT

LOCATION.--Lat 46°56'00", long 113°06'50" (NAD 27) in SW¼SE¼SE¼ Sec. 28, T.14 N., R.12 W., Powell County, Hydrologic Unit 17010203, 0.2 mi downstream from Wales Creek, 0.8 mi upstream from Frazier Creek and 6.0 mi south of Ovando.

DRAINAGE AREA.--Undetermined.

PERIOD OF RECORD.-- December 2003 to August 2004.

GAGE.--None. Elevation at sampling site is 4,540 ft (NGVD 29).

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

Date	Time	Instantaneous discharge, cfs (00061)	Turbidity, water, unfltrd lab, Hach 2100AN NTU (99872)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, water, unfltrd uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)
DEC 03...	0915	179	4.7	--	--	--	8.3	293	3.0	0.0	--
MAR 11...	1400	404	26	--	--	--	8.4	268	9.0	4.0	120
APR 13...	1315	298	6.0	--	--	--	8.5	280	13.5	10.0	150
MAY 26...	1340	731	8.6	649	10.6	112	8.5	254	13.0	10.5	140
JUL 14...	1000	374	<2.0	659	9.2	112	8.5	280	24.0	17.5	140
AUG 23...	1600	299	4.7	651	10.9	130	8.6	289	13.5	16.0	160

Date	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Ammonia, water, fltrd, mg/L as N (00608)	Nitrite + nitrate, water, fltrd, mg/L as N (00631)	Nitrite, water, fltrd, mg/L as N (00613)	Total nitrogen, wat unfltrd by analysis, mg/L (62855)	Ortho-phosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)	Aluminum, water, fltrd, ug/L (01106)	Arsenic, water unfltrd ug/L (01002)	Cadmium, water, unfltrd ug/L (01027)
DEC 03...	--	--	--	.027	E.001	.17	.008	.023	--	--	--
MAR 11...	32.5	10.3	1.14	.080	.006	2.82	.648	.86	<1	5	E.04
APR 13...	39.9	11.4	<.010	<.016	<.002	.17	.011	.031	<1	4	<.04
MAY 26...	37.6	11.4	<.010	<.016	<.002	.11	.006	.029	E1	E2	<.04
JUL 14...	37.3	11.7	<.010	<.016	<.002	.09	E.004	.013	4	E1	<.04
AUG 23...	42.6	13.4	<.010	<.016	<.002	.15	E.003	.023	13	3	<.04

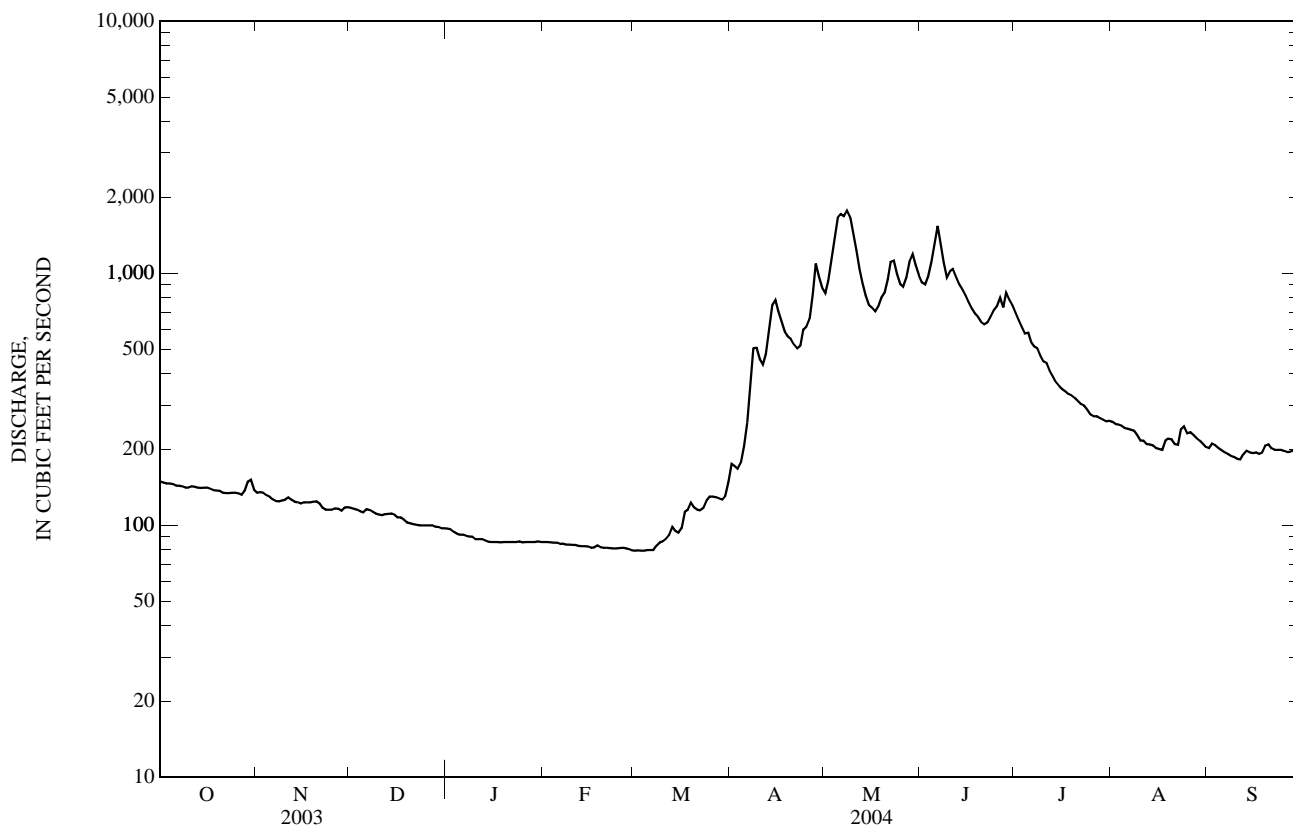
Date	Copper, water, unfltrd recover-able, ug/L (01042)	Iron, water, unfltrd recover-able, ug/L (01045)	Lead, water, unfltrd recover-able, ug/L (01051)	Manganese, water, unfltrd recover-able, ug/L (01055)	Zinc, water, unfltrd recover-able, ug/L (01092)	Suspended sediment, percent <.063mm (70331)	Suspended sediment concentration mg/L (80154)	Suspended sediment discharge, tons/d (80155)
DEC 03...	--	--	--	--	--	95	11	5.3
MAR 11...	5.0	890	.83	110	5	94	52	57
APR 13...	1.3	250	.26	37	E1	93	14	11
MAY 26...	2.3	280	.50	21	3	91	21	41
JUL 14...	.7	70	.14	9	<2	94	4	4.0
AUG 23...	1.2	160	.41	20	E1	89	10	8.1

E--Estimated.

12338300 NORTH FORK BLACKFOOT RIVER ABOVE DRY GULCH, NEAR OVANDO, MT—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1998 - 2004	
ANNUAL TOTAL	129,821		121,793			
ANNUAL MEAN	356		333		360	
HIGHEST ANNUAL MEAN					456	1999
LOWEST ANNUAL MEAN					242	2001
HIGHEST DAILY MEAN	3,370	May 30	1,780	May 8	3,870	May 26, 1999
LOWEST DAILY MEAN	86	Mar 8	79	Mar 1	72	Mar 18, 2001
ANNUAL SEVEN-DAY MINIMUM	87	Mar 5	80	Feb 29	73	Mar 5, 2001
MAXIMUM PEAK FLOW			1,860	May 8	b4,280	May 26, 1999
MAXIMUM PEAK STAGE			4.74	May 8	5.92	May 20, 2003
INSTANTANEOUS LOW FLOW			a75	May 8	c69	Mar 18, 2001
ANNUAL RUNOFF (AC-FT)	257,500		241,600		260,700	
10 PERCENT EXCEEDS	920		903		964	
50 PERCENT EXCEEDS	146		160		160	
90 PERCENT EXCEEDS	97		86		89	

a--Gage height, 2.36 ft.
 b--Gage height, 5.75 ft.
 c--Gage height, 2.35 ft.
 e--Estimated.



12338300 NORTH FORK BLACKFOOT RIVER ABOVE DRY GULCH, NEAR OVANDO, MT—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--September 1995 to May 1997, April 2001 to September 2002, March 2003 to August 2004.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: April 2001 to September 2002.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: Maximum 17.5°C, Aug. 6 and 7, 2001; minimum, 0.0°C, several days in February and March 2002.

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

Date	Time	Instantaneous discharge, cfs (00061)	Turbidity, water, unfltrd lab, Hach 2100AN NTU (99872)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specific conductance, water, unfltrd uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	
MAR	11...	1230	86	<2.0	--	--	8.1	254	--	7.5	140	
APR	14...	1530	768	8.1	--	--	8.2	189	12.5	7.0	99	
MAY	26...	1220	888	<2.0	652	10.9	104	8.3	177	10.0	6.5	94
JUL	14...	0830	374	<2.0	662	9.6	98	8.2	230	23.0	10.0	120
AUG	23...	1700	248	<2.0	654	9.7	102	8.5	250	13.0	10.5	140

Date	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water, fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Total nitrogen, wat unfltrd by analysis, mg/L (62855)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)	Aluminum, water, fltrd, ug/L (01106)	Arsenic water unfltrd ug/L (01002)	Cadmium water, unfltrd ug/L (01027)	
MAR	11...	32.1	15.2	E.009	.132	<.002	.17	<.006	<.004	<2	E1	<.04
APR	14...	25.3	8.67	<.010	.037	<.002	.14	<.006	.011	5	<2	<.04
MAY	26...	24.8	7.78	<.010	.027	<.002	.16	<.006	E.003	7	<2	<.04
JUL	14...	27.8	11.5	<.010	.059	<.002	.08	<.006	.004	2	<2	<.04
AUG	23...	32.9	14.2	<.010	.079	E.001	.10	<.006	<.004	E1	E1	<.04

Date	Copper, water, unfltrd recover-able, ug/L (01042)	Iron, water, unfltrd recover-able, ug/L (01045)	Lead, water, unfltrd recover-able, ug/L (01051)	Manganese, water, unfltrd recover-able, ug/L (01055)	Zinc, water, unfltrd recover-able, ug/L (01092)	Suspended sediment, percent <.063mm (70331)	Suspended sediment concentration mg/L (80154)	Suspended sediment discharge, tons/d (80155)	
MAR	11...	.9	10	<.06	2	E2	70	1	.23
APR	14...	.9	110	.17	6	<2	77	9	19
MAY	26...	.8	30	E.04	1	<2	79	4	9.6
JUL	14...	E.4	20	E.03	1	<2	78	1	1.0
AUG	23...	E.5	30	.09	2	<2	95	1	.67

E--Estimated.

12338690 MONTURE CREEK NEAR OVANDO, MT

LOCATION.--Lat 47°02'44", long 113°11'23" (NAD 27) in NW¼SE¼NW¼ Sec. 24, T.15 N., R.13 W., Powell County, Hydrologic Unit 17010203, at bridge on State Highway 200, 3.3 mi northwest of Ovando and at river mile 3.6.

DRAINAGE AREA.--140 mi².

PERIOD OF RECORD.-- December 2003 to August 2004 .

GAGE.--None. Elevation at sampling site is 3,987 ft (NGVD 29).

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

Date	Time	Instantaneous discharge, cfs (00061)	Turbidity, water, unfltrd lab, Hach 2100AN NTU (99872)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, water unfltrd uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)
DEC 03...	1115	50	5.0	--	--	--	8.0	188	4.0	1.5	--
MAR 18...	0900	90	3.7	--	--	--	8.3	220	7.0	2.0	110
APR 14...	1400	613	5.0	658	--	--	7.8	85	13.5	6.0	41
MAY 26...	1100	460	2.0	655	11.1	105	7.9	96	11.0	6.5	49
JUL 13...	1530	136	<2.0	660	9.5	114	8.5	151	31.0	17.0	72
AUG 24...	1540	74	<2.0	657	10.4	111	8.5	190	18.0	11.5	100

Date	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water, fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Total nitrogen, wat unfltrd mg/L (62855)	Ortho-phosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)	Aluminum, water, fltrd, ug/L (01106)	Arsenic water unfltrd ug/L (01002)	Cadmium water, unfltrd ug/L (01027)
DEC 03...	--	--	--	.056	E.001	.10	<.006	E.004	--	--	--
MAR 18...	27.0	10.8	.029	.181	.003	.55	.006	.037	2	<2	<.04
APR 14...	10.1	3.90	<.010	.099	<.002	.28	E.003	.026	17	2	<.04
MAY 26...	12.4	4.44	<.010	.026	E.001	.10	<.006	.010	11	<2	<.04
JUL 13...	17.5	6.75	<.010	E.014	<.002	.09	<.006	.008	5	<2	<.04
AUG 24...	24.8	10.3	<.010	.018	E.001	.12	<.006	.006	2	2	<.04

Date	Copper, water, unfltrd recover-able, ug/L (01042)	Iron, water, unfltrd recover-able, ug/L (01045)	Lead, water, unfltrd recover-able, ug/L (01051)	Manganese, water, unfltrd recover-able, ug/L (01055)	Zinc, water, unfltrd recover-able, ug/L (01092)	Suspended sediment, percent <.063mm (70331)	Suspended sediment concentration mg/L (80154)	Suspended sediment discharge, tons/d (80155)
DEC 03...	--	--	--	--	--	82	1	.14
MAR 18...	1.4	270	.09	48	<2	86	7	1.7
APR 14...	1.2	290	.23	20	E1	73	31	51
MAY 26...	.8	80	E.05	7	<2	67	7	8.7
JUL 13...	E.4	50	<.06	8	<2	82	2	.73
AUG 24...	E.5	40	<.06	5	<2	78	1	.20

E--Estimated.

12338700 BLACKFOOT RIVER AT SCOTTY BROWN BRIDGE, NEAR OVANDO, MT

LOCATION.--Lat 47°01'5544", long 113°14'122" (NAD 27) in SE¼NE¼NE¼ Sec. 33, T.15 N., R.13 W., Powell County, Hydrologic Unit 17010203, at county road bridge called Scotty Brown Bridge, 0.9 mi south of Highway 200, 5.0 mi west of Ovando.

DRAINAGE AREA.--1,428 mi².

PERIOD OF RECORD.-- September 1995 to May 1997, December 2003 to August 2004.

GAGE.--None. Elevation at sampling site is 3,910 ft (NGVD 29).

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

Date	Time	Instantaneous discharge, cfs (00061)	Turbidity, water, unfltrd lab, Hach 2100AN NTU (99872)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, water, unfltrd uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)
DEC 03...	1400	380	13	--	--	--	8.8	273	4.0	1.0	--
MAR 11...	1100	557	20	--	--	--	8.0	246	7.0	2.0	110
APR 14...	1200	1,720	12	658	--	--	8.3	152	9.0	4.0	78
MAY 25...	1715	2,090	2.9	659	10.8	111	8.5	170	17.0	10.0	93
JUL 13...	1650	950	<2.0	661	9.5	119	8.6	221	34.0	19.0	120
AUG 24...	1350	621	<2.0	659	10.2	110	8.4	261	14.5	12.0	150

Date	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Ammonia, water, fltrd, mg/L as N (00608)	Nitrite + nitrate, water, fltrd, mg/L as N (00631)	Nitrite, water, fltrd, mg/L as N (00613)	Total nitrogen, wat unfltrd mg/L (62855)	Ortho-phosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)	Aluminum, water, fltrd, ug/L (01106)	Arsenic, water, unfltrd ug/L (01002)	Cadmium, water, unfltrd ug/L (01027)
DEC 03...	--	--	--	.023	E.001	.07	<.006	E.004	--	--	--
MAR 11...	29.0	10.1	.895	.109	.006	2.43	.513	.70	<1	3	E.03
APR 14...	19.9	6.78	<.010	.062	E.001	.26	<.006	.031	9	<2	<.04
MAY 25...	24.6	7.55	<.010	E.010	E.001	.08	<.006	.012	7	<2	<.04
JUL 13...	30.1	11.2	<.010	<.016	<.002	.08	<.006	.008	4	E1	<.04
AUG 24...	36.9	13.6	<.010	E.014	E.001	.12	<.006	.008	3	2	<.04

Date	Copper, water, unfltrd recover-able, ug/L (01042)	Iron, water, unfltrd recover-able, ug/L (01045)	Lead, water, unfltrd recover-able, ug/L (01051)	Manganese, water, unfltrd recover-able, ug/L (01055)	Zinc, water, unfltrd recover-able, ug/L (01092)	Suspended sediment, percent <.063mm (70331)	Suspended sediment concentration mg/L (80154)	Suspended sediment discharge, tons/d (80155)
DEC 03...	--	--	--	--	--	83	2	2.1
MAR 11...	3.2	860	.80	87	5	95	53	80
APR 14...	2.1	290	.45	29	E1	80	29	135
MAY 25...	4.3	130	1.46	10	E1	79	9	51
JUL 13...	.7	40	.08	6	<2	78	4	10
AUG 24...	.8	70	.15	8	<2	82	4	6.7

E--Estimated.

12339500 CLEARWATER RIVER AT CLEARWATER, MT

LOCATION.--Lat 46°58'00", long 113°22'40" (NAD 27) in NE¼SW¼ Sec. 16, T.14 N., R.14 W., Missoula County, Hydrologic Unit 17010203, on left bank 400 ft upstream from mouth and 2.5 mi south of Clearwater Post Office.

DRAINAGE AREA.--391 mi².

PERIOD OF RECORD.-- December 2003 to August 2004.

GAGE.--None. Elevation at sampling site is 3,760 ft (NGVD 29).

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

Date	Time	Instantaneous discharge, cfs (00061)	Turbidity, water, unfltrd lab, Hach 2100AN NTU (99872)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, water, unfltrd uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)
DEC 03...	1230	103	3.2	--	--	--	8.5	155	4.0	1.0	--
MAR 11...	0900	81	<2.0	--	--	--	7.6	155	4.5	2.5	83
APR 14...	0930	835	<2.0	660	--	--	7.7	121	7.0	6.0	60
MAY 25...	1500	637	<2.0	663	9.5	104	8.1	113	16.0	13.0	58
JUL 13...	1830	132	<2.0	664	8.3	111	8.6	145	36.0	22.5	67
AUG 24...	1200	74	<2.0	663	9.7	112	8.3	175	13.5	15.5	90

Date	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Total nitrogen, wat unfltrd mg/L (62855)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)	Aluminum, water, fltrd, ug/L (01106)	Arsenic water unfltrd ug/L (01002)	Cadmium water, unfltrd ug/L (01027)
DEC 03...	--	--	--	.017	<.002	.15	<.006	.007	--	--	--
MAR 11...	21.9	6.86	E.005	.039	E.001	.16	<.006	.007	<2	<2	<.04
APR 14...	16.0	4.85	E.005	E.012	E.001	.19	<.006	.010	5	<2	<.04
MAY 25...	16.1	4.39	<.010	E.008	E.001	.12	<.006	.011	3	<2	<.04
JUL 13...	18.4	5.18	<.010	E.010	<.002	.16	E.003	.011	2	<2	<.04
AUG 24...	24.7	6.96	<.010	<.016	E.001	.14	<.006	.010	E1	E1	<.04

Date	Copper, water, unfltrd recover-able, ug/L (01042)	Iron, water, unfltrd recover-able, ug/L (01045)	Lead, water, unfltrd recover-able, ug/L (01051)	Manganese, water, unfltrd recover-able, ug/L (01055)	Zinc, water, unfltrd recover-able, ug/L (01092)	Suspended sediment, percent <.063mm (70331)	Suspended sediment concentration mg/L (80154)	Suspended sediment discharge, tons/d (80155)
DEC 03...	--	--	--	--	--	60	1	.28
MAR 11...	E.4	100	<.06	6	<2	72	1	.22
APR 14...	1.5	50	.14	11	<2	80	2	4.5
MAY 25...	.9	50	<.06	7	<2	79	2	3.4
JUL 13...	.8	30	E.04	11	<2	56	2	.71
AUG 24...	E.5	20	.06	8	<2	77	1	.20

E--Estimated.

PEND OREILLE RIVER BASIN

12340000 BLACKFOOT RIVER NEAR BONNER, MT

LOCATION.--Lat 46°53'59", long 113°45'20" (NAD 27), in SE $\frac{1}{4}$ SE $\frac{1}{4}$ NW $\frac{1}{4}$ sec.9, T.13 N., R.17 W., Missoula County, Hydrologic Unit 17010203, on right bank 5.0 mi downstream from Union Creek, 5.6 mi northeast of Bonner, and at river mile 7.9.

DRAINAGE AREA.--2,290 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July to November 1898, March 1899 to September 1901, May 1903 to January 1905, March to October 1905, October 1939 to current year. Monthly discharge only for some periods, published in WSP 1316. Published as "at Bonner" 1898-99 and as Big Blackfoot near Bonner 1903-05.

REVISED RECORDS.--WSP 1216: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 3,344.76 ft (NGVD 29). July 7, 1898 to June 30, 1901, and May 15, 1903, to Oct. 31, 1905, nonrecording gage at site 7 mi downstream at different elevation. Oct. 4, 1939, to Sept. 30, 1955, nonrecording gage at site 1.3 mi downstream at elevation 21.82 ft lower.

REMARKS.--Water-discharge records good except those for estimated daily discharges, which are fair. Flow slightly regulated by Nevada Creek Reservoir (station number 12336500). Diversions for irrigation of about 20,000 acres upstream from station. U.S. Geological Survey satellite telemeter at station.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	461	e450	518	e420	e470	441	1,660	2,930	3,400	2,050	676	646
2	462	e500	533	e450	e450	440	1,710	2,980	3,250	1,930	661	645
3	461	510	529	e420	e430	438	1,680	3,240	3,200	1,810	651	638
4	460	495	511	e370	e450	438	1,680	3,640	3,310	1,720	654	639
5	461	e470	506	e330	e440	435	1,790	4,060	3,620	1,710	649	628
6	460	e450	520	e300	e420	435	2,010	4,350	4,040	1,640	648	624
7	456	e470	524	e350	e440	424	2,340	4,400	4,090	1,540	636	616
8	450	e500	515	e420	e460	463	2,620	4,480	3,700	1,520	636	604
9	446	e530	494	e470	e450	603	2,790	4,500	3,400	1,470	636	597
10	445	590	481	e480	444	862	2,720	4,280	3,350	1,390	604	593
11	450	612	508	e480	428	997	2,640	4,050	3,470	1,370	575	586
12	472	580	499	e470	376	873	2,590	3,680	3,360	1,310	570	613
13	468	549	497	e470	356	903	2,690	3,290	3,160	1,230	555	658
14	471	538	504	e460	365	867	2,930	2,990	3,000	1,150	561	677
15	473	522	494	e460	422	817	3,160	2,750	2,840	1,100	546	678
16	486	519	473	e480	459	829	3,120	2,580	2,690	1,050	531	668
17	482	535	487	e470	438	868	2,970	2,470	2,540	1,010	529	650
18	476	525	446	e470	447	958	2,780	2,410	2,400	976	568	663
19	469	527	e400	e480	460	1,130	2,600	2,560	2,350	969	591	682
20	463	550	e430	e500	458	1,100	2,460	2,650	2,290	957	578	732
21	459	548	e480	e490	454	1,050	2,350	2,770	2,160	930	576	763
22	456	488	e450	e480	437	1,070	2,230	3,200	2,070	894	601	762
23	454	453	e430	e500	431	1,130	2,150	3,610	2,060	860	670	741
24	448	509	e450	e500	440	1,280	2,200	3,560	2,100	827	744	730
25	449	528	e470	e480	451	1,370	2,250	3,340	2,140	797	753	725
26	448	527	e450	e480	457	1,450	2,300	3,180	2,230	787	741	725
27	446	514	e430	e500	460	1,470	2,490	3,200	2,260	759	740	714
28	465	544	e400	e520	456	1,450	2,980	3,410	2,300	746	729	707
29	544	530	e380	e520	444	1,410	3,180	3,650	2,210	721	709	699
30	536	534	e380	e500	---	1,410	3,060	3,690	2,140	702	689	691
31	495	---	e400	e480	---	1,490	---	3,570	---	684	663	---
TOTAL	14,472	15,597	14,589	14,200	12,693	28,901	74,130	105,470	85,130	36,609	19,670	20,094
MEAN	467	520	471	458	438	932	2,471	3,402	2,838	1,181	635	670
MAX	544	612	533	520	470	1,490	3,180	4,500	4,090	2,050	753	763
MIN	445	450	380	300	356	424	1,660	2,410	2,060	684	529	586
AC-FT	28,710	30,940	28,940	28,170	25,180	57,330	147,000	209,200	168,900	72,610	39,020	39,860
CFSM	0.20	0.23	0.21	0.20	0.19	0.41	1.08	1.49	1.24	0.52	0.28	0.29
IN.	0.24	0.25	0.24	0.23	0.21	0.47	1.20	1.71	1.38	0.59	0.32	0.33

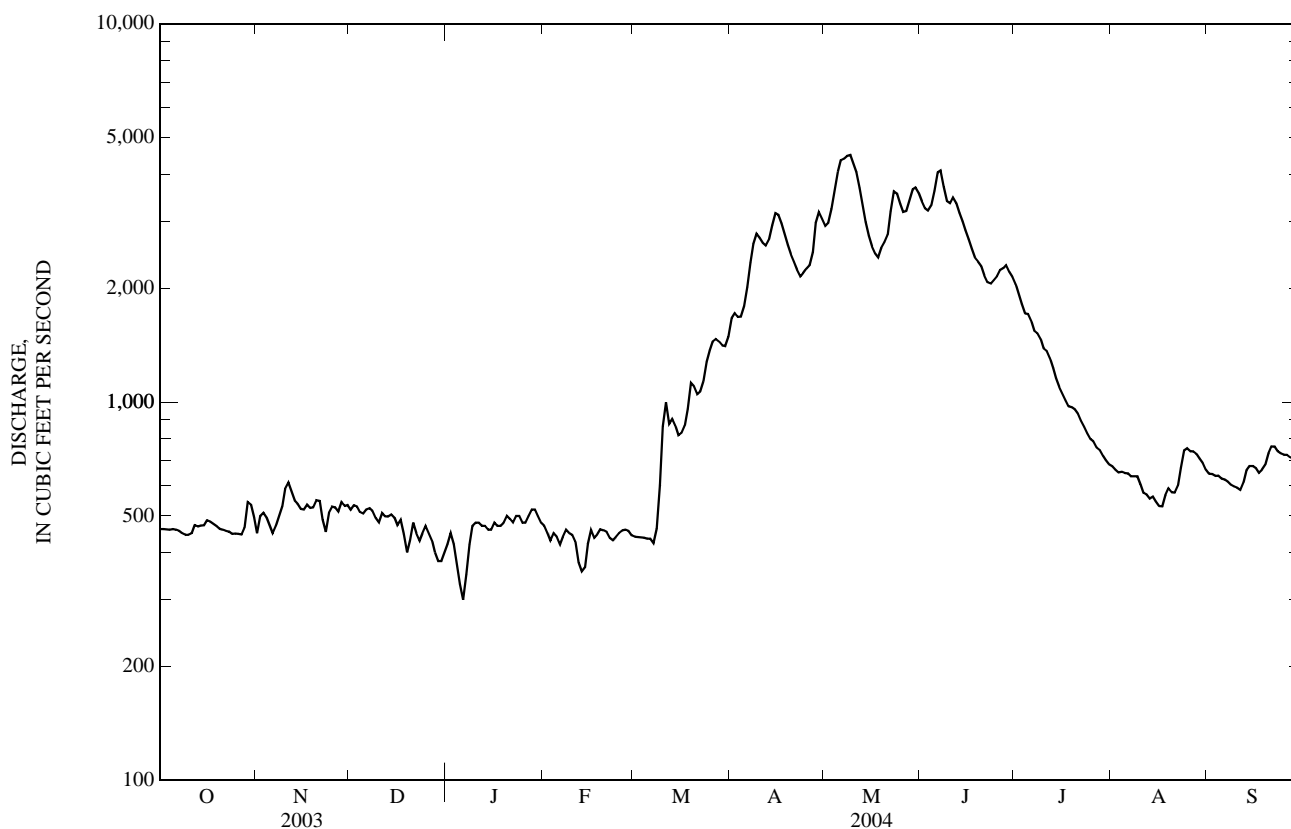
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1898 - 2004, BY WATER YEAR (WY)

MEAN	654	650	606	553	598	782	2,058	4,883	4,901	1,854	835	672
MAX	1,547	1,480	1,555	1,069	1,668	2,351	4,727	9,802	13,610	6,557	1,921	1,250
(WY)	(1960)	(1960)	(1996)	(1976)	(1971)	(1986)	(1943)	(1997)	(1899)	(1899)	(1899)	(1899)
MIN	370	369	332	348	359	435	463	1,096	1,158	533	365	363
(WY)	(1988)	(1988)	(1988)	(1988)	(1993)	(1988)	(1905)	(1941)	(1987)	(1977)	(1988)	(1988)

12340000 BLACKFOOT RIVER NEAR BONNER, MT—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1898 - 2004	
ANNUAL TOTAL	483,518		441,555			
ANNUAL MEAN	1,325		1,206		1,572	
HIGHEST ANNUAL MEAN					2,480 1976	
LOWEST ANNUAL MEAN					558 1941	
HIGHEST DAILY MEAN	7,830	May 30	4,500	May 9	18,000	Jun 10, 1964
LOWEST DAILY MEAN	300	Jan 10	300	Jan 6	200	Jan 4, 1950
ANNUAL SEVEN-DAY MINIMUM	360	Jan 7	377	Jan 1	239	Dec 21, 1983
MAXIMUM PEAK FLOW			4,590	May 8	b19,200	Jun 10, 1964
MAXIMUM PEAK STAGE			5.56	May 8	c16.00	Feb 9, 1996
INSTANTANEOUS LOW FLOW			a280	Feb 13	d156	Feb 2, 1989
ANNUAL RUNOFF (AC-FT)	959,100		875,800		1,139,000	
ANNUAL RUNOFF (CFSM)	0.58		0.53		0.69	
ANNUAL RUNOFF (INCHES)	7.85		7.17		9.33	
10 PERCENT EXCEEDS	3,550		3,130		4,090	
50 PERCENT EXCEEDS	544		636		731	
90 PERCENT EXCEEDS	442		444		450	

*--During periods of operation (1900-01, 1904, 1940 to current year).
 a--Gage height, 1.55 ft, but may have been lower during period of ice effect.
 b--Gage height, 10.89 ft.
 c--Backwater from ice.
 d--Gage height, 1.20 ft, but may have been lower during water year 1989 period of ice effect.
 e--Estimated.



WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1956-59, 1985 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: October 1955 to September 1959, October 1999 to September 2003.
 SUSPENDED-SEDIMENT DISCHARGE: July 1986 to April 1987, June 1988 to September 1995.

REMARKS.--Daily water temperature record good. Missing water temperature data from May 9-12 due to equipment problems.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: Maximum, 22.5°C, July 19, 2003; minimum, 0.0°C on many days during winter periods.
 SEDIMENT CONCENTRATION: Maximum daily mean, 335 mg/L, May 19, 1991; minimum daily mean, 1 mg/L on many days.
 SEDIMENT LOAD: Maximum daily, 8,100 tons, May 19, 1991; minimum daily, 0.54 ton, Feb. 8, 1995.

12340000 BLACKFOOT RIVER NEAR BONNER, MT—Continued

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

Date	Time	Instantaneous discharge, cfs (00061)	Turbidity, water, unfltrd lab, Hach 2100AN NTU (99872)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, water, unfltrd uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)
NOV 18...	1445	523	<2.0	--	--	--	8.5	260	3.0	3.0	130	34.0	12.1
APR 21...	1340	2,350	6.0	--	--	--	8.2	175	12.5	7.0	86	22.9	7.04
MAY 18...	1320	2,400	2.7	672	10.1	103	8.5	183	18.5	11.0	92	24.4	7.54
JUN 03...	0720	3,150	3.7	680	9.0	93	8.2	174	8.5	12.0	88	23.6	7.14
JUL 20...	0720	957	2.4	677	7.2	86	8.4	239	16.0	17.5	120	30.5	10.8
AUG 23...	1445	694	<2.0	671	8.9	100	8.7	246	13.0	14.5	130	31.1	11.7

Date	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Total nitrogen, water unfltrd mg/L (62855)	Ortho-phosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)	Aluminum, water, fltrd, ug/L (01106)	Arsenic water, fltrd, ug/L (01000)	Arsenic water unfltrd ug/L (01002)	Cadmium water, fltrd, ug/L (01025)	Cadmium water, unfltrd ug/L (01027)	Copper, water, fltrd, ug/L (01040)	Copper, water, unfltrd recover-able, ug/L (01042)
NOV 18...	--	E.012	<.002	.10	<.006	.004	--	1.0	<2	<.04	<.04	.6	.8
APR 21...	<.010	E.008	E.001	.15	<.006	.014	5	1.1	<2	<.04	<.04	.7	1.0
MAY 18...	<.010	<.016	E.001	.13	<.006	.010	--	.8	<2	<.04	<.04	.6	.7
JUN 03...	<.010	<.016	E.001	.08	<.006	.019	4	.8	<2	<.04	<.04	.6	1.1
JUL 20...	<.010	<.016	<.002	.11	<.006	.009	--	1.2	E2	<.04	E.02	.7	1.0
AUG 23...	<.010	E.008	<.002	.13	<.006	.008	<1	1.3	E1	<.04	<.04	.4	E.3

Date	Iron, water, fltrd, ug/L (01046)	Iron, water, unfltrd recover-able, ug/L (01045)	Lead, water, fltrd, ug/L (01049)	Lead, water, unfltrd recover-able, ug/L (01051)	Manganese, water, fltrd, ug/L (01056)	Manganese, water, unfltrd recover-able, ug/L (01055)	Zinc, water, fltrd, ug/L (01090)	Zinc, water, unfltrd recover-able, ug/L (01092)	Suspended sediment, percent <.063mm (70331)	Suspended sediment concentration mg/L (80154)	Suspended sediment discharge, tons/d (80155)
NOV 18...	<6	30	<.08	.07	.8	2	1.5	E2	95	2	2.8
APR 21...	10	90	E.05	.08	2.4	8	E.6	<2	85	6	38
MAY 18...	7	70	<.08	.10	1.7	7	E.3	<2	81	5	32
JUN 03...	8	140	<.08	.18	1.4	12	.8	E1	86	10	85
JUL 20...	E4	70	<.08	.13	1.4	8	E.3	E1	75	4	10
AUG 23...	<6	40	<.08	E.05	1.4	5	.7	<2	72	2	3.7

E--Estimated.

12340000 BLACKFOOT RIVER NEAR BONNER, MT—Continued

TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	11.5	9.0	10.5	1.0	0.5	0.5	2.5	1.5	2.0	0.5	0.0	0.5
2	11.5	9.0	10.5	0.5	0.5	0.5	3.0	2.0	2.5	0.5	0.0	0.5
3	11.5	9.0	10.5	1.0	0.5	0.5	3.5	2.5	3.0	1.0	0.5	0.5
4	11.0	8.5	10.0	1.0	0.5	0.5	2.5	0.5	1.0	1.0	1.0	1.0
5	11.5	8.5	10.0	0.5	0.0	0.5	1.0	0.0	0.5	1.0	0.0	0.5
6	12.0	9.5	11.0	1.0	0.0	0.5	1.5	1.0	1.5	1.0	0.0	0.5
7	11.5	10.0	10.5	1.0	0.5	0.5	2.0	1.5	2.0	0.0	0.0	0.0
8	11.5	10.0	10.5	1.0	0.5	0.5	1.5	1.0	1.5	0.5	0.0	0.0
9	11.5	10.0	10.5	0.5	0.0	0.5	1.5	0.0	0.5	0.0	0.0	0.0
10	10.0	8.0	8.5	0.5	0.0	0.5	0.5	0.0	0.5	0.0	0.0	0.0
11	8.5	6.5	7.5	0.5	0.0	0.5	0.5	0.5	0.5	0.0	0.0	0.0
12	8.5	7.0	8.0	1.0	0.0	0.5	1.0	0.5	0.5	0.0	0.0	0.0
13	8.5	7.5	8.0	1.0	0.5	0.5	1.0	0.5	0.5	0.0	0.0	0.0
14	8.0	6.5	7.5	1.5	0.5	1.0	1.0	0.5	1.0	0.5	0.0	0.0
15	7.5	6.5	7.0	1.5	1.0	1.5	1.0	0.5	1.0	0.5	0.0	0.0
16	7.5	6.5	7.0	2.0	1.0	1.5	1.0	0.0	0.5	0.5	0.0	0.0
17	9.5	7.5	8.0	2.5	1.5	2.0	1.0	0.0	0.5	0.5	0.0	0.0
18	9.0	7.0	8.0	3.0	2.5	2.5	0.5	0.0	0.5	0.0	0.0	0.0
19	9.0	7.0	8.0	4.0	2.5	3.0	0.5	0.5	0.5	0.0	0.0	0.0
20	9.5	8.0	8.5	3.0	2.0	2.5	0.5	0.0	0.5	0.0	0.0	0.0
21	11.5	9.0	10.0	2.0	0.5	1.5	0.5	0.0	0.5	0.0	0.0	0.0
22	10.5	9.0	10.0	0.5	0.5	0.5	0.5	0.0	0.5	0.5	0.0	0.0
23	10.0	8.5	9.0	0.5	0.5	0.5	0.5	0.0	0.5	0.0	0.0	0.0
24	8.5	6.5	7.5	0.5	0.5	0.5	0.5	0.0	0.5	0.0	0.0	0.0
25	6.5	4.5	5.5	0.5	0.0	0.5	0.5	0.0	0.5	0.0	0.0	0.0
26	6.5	4.5	5.5	0.5	0.0	0.5	0.5	0.0	0.5	0.0	0.0	0.0
27	7.5	6.5	7.0	0.5	0.0	0.5	0.5	0.0	0.5	0.5	0.0	0.0
28	8.5	7.5	8.0	0.5	0.0	0.5	0.5	0.0	0.5	0.5	0.0	0.0
29	8.5	5.0	6.5	1.5	0.5	1.0	0.5	0.0	0.5	0.5	0.0	0.0
30	5.0	2.0	3.5	2.0	1.0	1.5	0.5	0.0	0.5	0.5	0.0	0.0
31	2.0	0.5	1.0	---	---	---	0.5	0.0	0.5	0.5	0.0	0.0
MONTH	12.0	0.5	8.0	4.0	0.0	1.0	3.5	0.0	1.0	1.0	0.0	0.0
	FEBRUARY			MARCH			APRIL			MAY		
1	0.5	0.0	0.0	3.5	2.0	2.5	7.0	5.5	6.5	11.0	9.0	10.0
2	0.5	0.0	0.0	3.5	2.0	2.5	7.0	5.0	6.0	12.0	10.0	11.0
3	0.5	0.0	0.0	3.0	2.0	2.5	8.0	5.5	6.5	12.0	10.5	11.5
4	0.5	0.0	0.0	3.0	2.0	2.5	9.5	7.0	8.0	11.0	10.0	10.5
5	0.5	0.0	0.0	3.0	2.0	2.5	8.5	6.5	7.5	12.0	10.5	11.0
6	0.5	0.0	0.0	3.0	1.5	2.0	9.5	7.5	8.5	11.0	10.0	10.5
7	0.5	0.0	0.0	3.5	1.5	2.5	9.5	7.0	8.0	11.5	10.0	11.0
8	0.5	0.0	0.5	6.0	3.5	4.5	8.5	7.5	8.0	11.5	10.0	11.0
9	1.0	0.5	0.5	5.0	3.5	4.5	8.0	6.5	7.0	11.0	9.5	10.0
10	1.0	0.5	1.0	5.0	3.0	4.0	8.0	6.0	7.0	10.0	8.0	9.0
11	1.5	0.5	1.0	4.5	2.5	3.5	9.0	6.0	7.5	8.0	7.5	7.5
12	1.0	0.0	0.5	5.0	2.5	4.0	10.0	7.0	8.5	7.5	6.5	7.0
13	0.5	0.0	0.5	5.0	3.5	4.5	9.5	8.0	9.0	8.0	6.5	7.0
14	0.5	0.0	0.5	4.5	3.0	4.0	9.0	8.0	9.0	9.5	7.5	8.5
15	0.5	0.0	0.5	6.0	3.0	4.5	8.0	7.0	7.5	10.5	8.5	9.5
16	0.5	0.0	0.5	5.5	4.5	5.0	8.0	6.0	7.0	10.0	9.5	10.0
17	1.0	0.0	0.5	5.5	4.5	5.0	8.0	7.0	7.5	11.0	9.0	10.0
18	2.0	0.5	1.0	7.0	4.5	6.0	8.5	6.5	7.5	11.0	9.0	10.5
19	2.0	1.0	1.5	6.5	5.0	5.5	9.0	7.0	8.0	10.5	9.0	9.5
20	1.5	1.0	1.5	5.5	3.0	4.5	8.5	7.5	8.0	12.0	9.5	10.5
21	2.0	1.0	1.5	7.0	4.0	5.5	8.5	6.5	7.5	12.0	11.0	11.5
22	1.5	0.0	0.5	7.5	5.0	6.5	10.0	7.0	8.0	11.0	9.5	10.5
23	1.5	0.0	0.5	8.5	5.5	7.0	10.5	7.5	9.0	9.5	8.0	9.0
24	1.5	0.0	1.0	7.5	6.0	6.5	10.5	9.0	9.5	9.5	7.5	8.5
25	2.5	1.0	1.5	7.0	5.5	6.0	10.0	7.5	8.5	10.5	8.0	9.5
26	2.5	1.5	2.0	6.5	6.0	6.0	11.5	8.0	9.5	10.5	9.5	10.0
27	3.0	1.0	2.0	6.0	4.5	5.0	11.5	9.5	10.5	12.0	9.5	10.5
28	2.0	0.5	1.5	7.0	4.0	5.5	10.5	7.0	9.0	11.5	10.5	11.0
29	3.0	1.5	2.0	7.5	4.5	6.0	8.5	6.0	7.0	10.5	9.5	10.0
30	---	---	---	8.5	5.5	7.0	10.5	8.0	9.0	10.5	8.5	9.5
31	---	---	---	8.0	6.5	7.5	---	---	---	11.0	9.0	10.0
MONTH	3.0	0.0	1.0	8.5	1.5	4.5	11.5	5.0	8.0	12.0	6.5	10.0

PEND OREILLE RIVER BASIN

12340000 BLACKFOOT RIVER NEAR BONNER, MT—Continued

TEMPERATURE, WATER, DEGREES CELSIUS--CONTINUED
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	12.0	9.5	11.0	19.0	17.0	18.0	20.5	16.0	18.5	17.0	15.0	16.0
2	13.5	11.0	12.0	19.5	17.0	18.0	19.5	17.0	18.5	16.5	14.0	15.0
3	13.5	12.5	13.0	18.0	16.0	17.0	20.5	17.5	19.0	14.0	11.5	12.5
4	15.5	12.5	14.0	17.5	15.0	16.0	20.0	16.5	18.5	14.0	11.5	12.5
5	14.5	13.5	14.0	18.0	15.0	16.0	21.0	17.0	19.0	14.0	11.5	13.0
6	14.0	12.0	13.0	17.5	15.0	16.0	20.5	17.5	19.0	14.5	11.0	13.0
7	12.5	10.5	11.5	17.0	15.5	16.5	19.0	16.5	17.5	15.5	12.0	14.0
8	12.5	10.5	11.0	16.0	13.5	15.0	18.0	14.0	16.0	15.0	12.0	14.0
9	11.5	9.5	10.5	17.0	13.0	15.0	19.5	15.0	17.0	15.0	12.5	14.0
10	12.0	11.0	11.5	18.5	15.0	16.5	20.0	16.0	18.0	15.5	12.5	14.0
11	11.5	10.5	11.0	18.5	15.5	17.0	20.0	16.0	18.5	14.5	12.5	13.5
12	12.5	10.0	11.0	19.0	15.0	17.0	20.0	16.0	18.0	14.5	13.5	14.0
13	12.5	11.5	12.0	20.5	16.0	18.0	20.0	16.0	18.0	14.5	12.5	13.5
14	13.5	12.0	12.5	21.5	17.0	19.0	20.5	16.0	18.5	13.0	12.0	12.5
15	12.5	11.0	12.0	22.5	18.0	20.0	20.0	16.5	18.5	12.0	11.0	11.5
16	13.5	11.0	12.0	23.0	18.5	20.5	19.5	17.0	18.5	12.5	10.5	11.5
17	14.0	12.5	13.0	23.0	19.0	21.0	20.5	17.5	19.0	12.0	11.0	11.5
18	13.0	12.0	12.5	21.5	19.5	20.0	19.5	18.0	18.5	11.5	11.0	11.0
19	13.0	11.5	12.0	21.5	17.5	19.5	19.5	16.5	18.0	11.0	9.5	10.5
20	14.0	12.0	13.0	21.0	18.5	20.0	19.5	16.5	18.0	10.5	9.0	9.5
21	16.0	13.0	14.0	20.5	17.0	19.0	20.0	16.5	18.5	9.5	8.5	9.0
22	17.0	14.0	15.5	20.0	16.5	18.5	18.5	16.5	17.0	10.0	8.5	9.0
23	17.5	14.5	15.5	20.5	16.5	18.5	17.0	14.5	15.5	11.5	9.5	10.5
24	18.5	15.5	17.0	21.0	16.5	18.5	14.5	12.5	13.5	12.5	10.0	11.5
25	18.0	16.0	17.0	21.0	17.0	19.0	14.5	12.5	13.5	13.0	10.0	11.5
26	17.5	16.0	16.5	21.0	17.5	19.5	14.0	12.5	13.0	13.5	10.5	12.0
27	16.5	15.5	16.0	20.0	17.0	19.0	15.0	12.5	13.5	13.5	10.5	12.0
28	17.0	15.0	15.5	20.0	16.0	18.5	14.5	13.0	14.0	13.0	10.5	12.0
29	18.0	15.5	17.0	20.0	16.5	18.5	15.5	12.5	14.0	12.5	10.0	11.5
30	18.5	16.0	17.5	19.5	16.5	18.5	16.5	12.0	14.5	13.0	10.0	11.5
31	---	---	---	19.0	16.5	18.0	17.0	13.5	15.5	---	---	---
MONTH	18.5	9.5	13.5	23.0	13.0	18.0	21.0	12.0	17.0	17.0	8.5	12.0

12340500 CLARK FORK ABOVE MISSOULA, MT

LOCATION.--Lat 46°52'38", long 113°55'53" (NAD 27), in NW¼NW¼NW¼ sec.19, T.13 N., R.18 W., Missoula County, Hydrologic Unit 17010204, on right bank 0.2 mi downstream from county road bridge, 2.8 mi east of Missoula, 2.8 mi downstream from Milltown Dam, 3.0 mi downstream from Blackfoot River, and at river mile 361.6.

DRAINAGE AREA.--5,999 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1929 to current year. Monthly discharge only for some periods, published in WSP 1316.

REVISED RECORDS.--WSP 1042: 1936. WSP 1152: 1942. WSP 1246: 1929-30, 1935, drainage area. WSP 1316: 1932-33.

GAGE.--Water-stage recorder. Elevation of gage is 3,198.30 ft (NGVD 29) (levels by U.S. Army Corps of Engineers). Prior to May 27, 1929, nonrecording gage.

REMARKS.--Water-discharge records good. Diurnal fluctuation caused by powerplant at Milltown. Diversions for irrigation of about 120,000 acres upstream from station. U. S. Geological Survey satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in June 1908 reached a discharge of 48,000 ft³/s, provided by The Montana Power Company.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	994	1,070	1,270	e850	1,140	1,150	2,560	3,940	5,350	3,010	1,180	1,190
2	1,010	1,140	1,270	e950	1,080	1,130	2,690	3,940	5,080	2,860	1,150	1,190
3	1,020	1,250	1,290	e1,000	1,040	1,140	2,650	4,240	4,900	2,660	1,130	1,220
4	1,030	1,190	1,290	e850	1,050	1,120	2,610	4,780	4,950	2,570	1,140	1,170
5	1,060	1,160	1,250	e700	1,090	1,080	2,770	5,260	5,290	2,580	1,150	1,190
6	1,060	1,060	1,250	e600	1,050	1,140	3,020	5,710	5,820	2,510	1,150	1,160
7	1,070	1,100	1,280	e500	1,070	1,100	3,360	5,780	6,050	2,400	1,160	1,140
8	1,050	1,150	1,270	e700	1,070	1,180	3,720	5,850	5,580	2,360	1,130	1,130
9	1,040	1,280	1,260	e800	1,090	2,100	4,000	5,910	5,160	2,200	1,110	1,130
10	1,040	1,390	1,170	e900	1,070	2,360	3,920	5,630	5,130	2,160	1,070	1,140
11	1,060	1,430	1,180	e1,000	1,060	2,520	3,740	5,400	5,730	2,140	1,010	1,080
12	1,100	1,370	1,240	e1,100	1,010	2,000	3,660	4,940	5,710	2,100	993	1,130
13	1,130	1,330	1,230	e1,050	938	2,020	3,710	4,480	5,280	1,990	958	1,310
14	1,120	1,260	1,220	e1,050	818	2,070	4,060	4,070	4,880	1,880	917	1,530
15	1,150	1,220	1,240	e1,050	1,000	1,810	4,310	3,780	4,550	1,830	867	1,470
16	1,190	1,220	1,170	e1,100	1,110	1,780	4,270	3,530	4,270	1,790	826	1,430
17	1,180	1,270	1,120	e1,100	1,080	1,780	4,080	3,520	3,960	1,790	832	1,370
18	1,170	1,310	1,140	e1,100	1,110	1,890	3,830	3,450	3,750	1,720	830	1,360
19	1,130	1,260	e1,000	e1,100	1,160	2,160	3,650	3,740	3,710	1,690	864	1,420
20	1,130	1,280	e950	e1,100	1,200	2,190	3,440	3,950	3,680	1,690	1,020	1,660
21	1,120	1,330	e1,000	e1,150	1,170	2,000	3,360	4,010	3,410	1,700	987	1,790
22	1,100	1,270	e1,200	e1,150	1,130	1,900	3,230	4,450	3,270	1,600	960	1,700
23	1,110	1,110	e1,100	e1,150	1,100	2,030	2,990	5,110	3,180	1,530	1,130	1,660
24	1,110	1,160	e1,000	e1,150	1,100	2,250	3,020	5,240	3,040	1,470	1,270	e1,660
25	1,110	1,240	e1,100	1,140	1,150	2,420	3,110	4,930	3,100	1,430	1,350	e1,650
26	1,110	1,230	1,220	1,090	1,220	2,460	3,130	4,700	3,130	1,390	1,350	e1,600
27	1,130	1,230	1,130	1,060	1,230	2,460	3,310	4,750	3,170	1,360	1,380	e1,570
28	1,150	1,190	1,020	1,070	1,200	2,400	3,890	5,080	3,370	1,310	1,370	e1,550
29	1,320	1,220	e950	1,140	1,160	2,330	4,360	5,600	3,270	1,260	1,330	1,550
30	1,390	1,350	e900	1,200	---	2,260	4,210	5,750	3,200	1,210	1,280	1,540
31	1,270	---	e800	1,190	---	2,280	---	5,560	---	1,190	1,220	---
TOTAL	34,654	37,070	35,510	31,090	31,696	58,510	104,660	147,080	130,970	59,380	34,114	41,690
MEAN	1,118	1,236	1,145	1,003	1,093	1,887	3,489	4,745	4,366	1,915	1,100	1,390
MAX	1,390	1,430	1,290	1,200	1,230	2,520	4,360	5,910	6,050	3,010	1,380	1,790
MIN	994	1,060	800	500	818	1,080	2,560	3,450	3,040	1,190	826	1,080
AC-FT	68,740	73,530	70,430	61,670	62,870	116,100	207,600	291,700	259,800	117,800	67,670	82,690

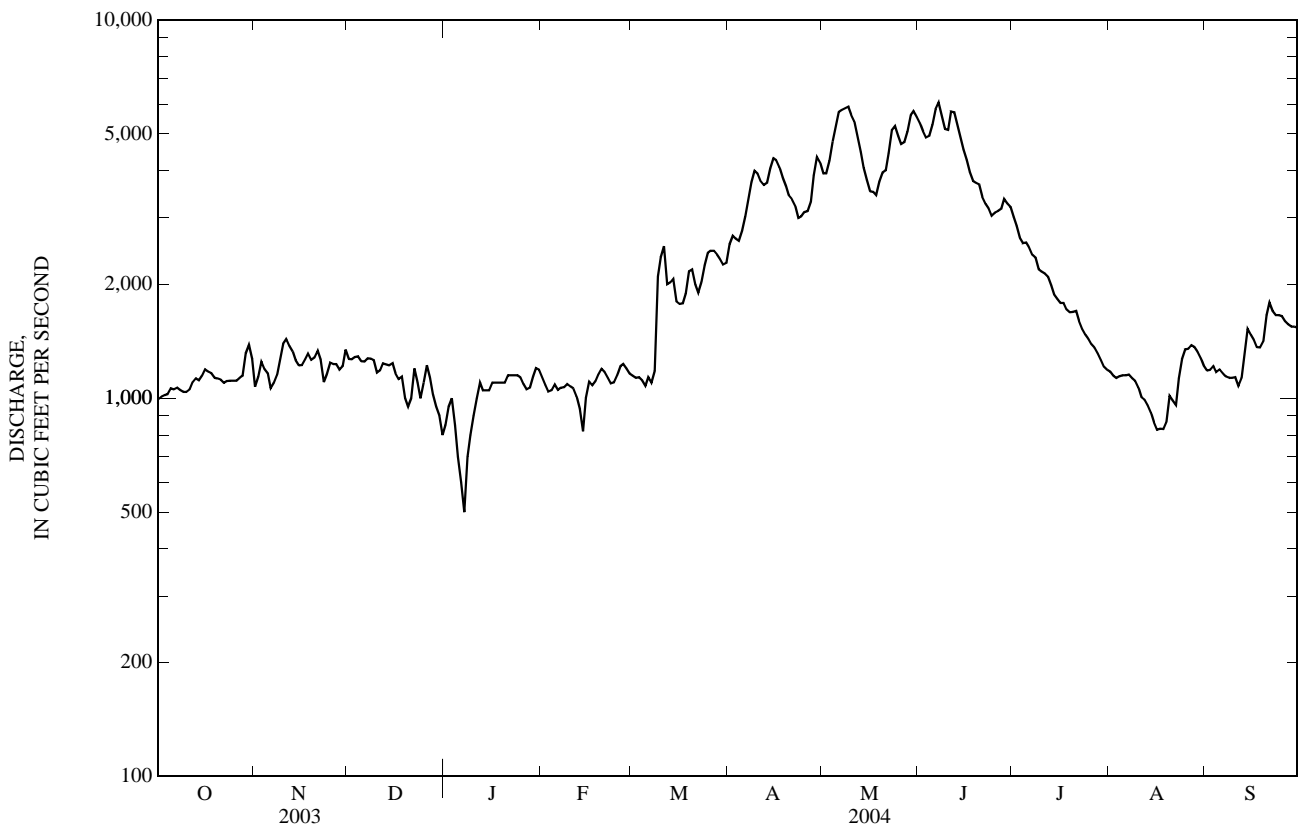
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1929 - 2004, BY WATER YEAR (WY)

MEAN	1,553	1,551	1,412	1,323	1,469	1,866	3,719	7,846	8,215	3,143	1,482	1,399
MAX	2,987	2,852	3,323	2,546	3,431	4,124	10,080	17,240	19,270	8,759	3,448	2,874
(WY)	(1960)	(1960)	(1976)	(1976)	(1996)	(1986)	(1934)	(1976)	(1975)	(1975)	(1975)	(1965)
MIN	854	882	874	606	674	1,037	1,191	2,005	2,122	868	627	653
(WY)	(1936)	(1938)	(1945)	(1937)	(1933)	(1937)	(1941)	(1941)	(1992)	(1931)	(1988)	(1937)

12340500 CLARK FORK ABOVE MISSOULA, MT—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1929 - 2004	
ANNUAL TOTAL	935,747		746,424			
ANNUAL MEAN	2,564		2,039		2,922	
HIGHEST ANNUAL MEAN					5,071	1976
LOWEST ANNUAL MEAN					1,344	1941
HIGHEST DAILY MEAN	15,100	May 31	6,050	Jun 7	30,800	Jun 21, 1975
LOWEST DAILY MEAN	677	Feb 25	500	Jan 7	340	Sep 27, 1937
ANNUAL SEVEN-DAY MINIMUM	851	Jan 18	721	Jan 4	446	Jan 7, 1937
MAXIMUM PEAK FLOW			a7,290	Jun 13	32,300	Jun 21, 1975
MAXIMUM PEAK STAGE			6.18	Jun 13	13.75	Jun 21, 1975
INSTANTANEOUS LOW FLOW			b453	Mar 5	c115	Oct 25, 1943
ANNUAL RUNOFF (AC-FT)	1,856,000		1,481,000		2,117,000	
10 PERCENT EXCEEDS	6,050		4,320		6,850	
50 PERCENT EXCEEDS	1,240		1,270		1,650	
90 PERCENT EXCEEDS	982		1,020		1,000	

a--Result of regulation.
 b--Gage height, 1.77 ft, result of regulation.
 c--Gage height, 0.64 ft.
 e--Estimated.



WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1969-71, 1977-83, 1986 to current year. Water years 1969-71 samples collected 3.4 miles downstream from gaging station.

PERIOD OF DAILY RECORD.--
 WATER TEMPERATURE: June 1977 to September 1983, February 2002 to September 2002.

SUSPENDED-SEDIMENT DISCHARGE: July 1986 to April 1987, June 1988 to January 1996, March 1996 to March 2003, August 2003 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--
 WATER TEMPERATURE: Maximum, 22.5°C, Aug. 7, 8, 1983, July 13-15, 2002; minimum, 0.0°C on many days during winter periods.
 SEDIMENT CONCENTRATION: Maximum daily mean, 592 mg/L, May 18, 1997; minimum daily mean, 1 mg/L, on many days from 1990 to 1994, and 1999 to 2001.
 SEDIMENT LOAD: Maximum daily, 42,200 tons, May 18, 1997; minimum daily, 1.6 tons, Dec. 27, 1992.

EXTREMES FOR CURRENT YEAR.--
 SEDIMENT CONCENTRATION: Maximum daily mean, 49 mg/L, Mar. 10; minimum daily mean, 3 mg/L, on several days in November, February, and September.
 SEDIMENT LOAD: Maximum daily, 437 tons, May 7; minimum daily, 8.1 tons, Feb. 15.

12340500 CLARK FORK ABOVE MISSOULA, MT—Continued

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

Date	Time	Instantaneous discharge, cfs (00061)	Turbidity, water, unfltrd lab, Hach 2100AN NTU (99872)	pH, water, unfltrd field, std units (00400)	Specif. conductance, water, unfltrd uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)
NOV 18...	1600	1,360	--	8.6	338	11.0	2.5	160	44.6	12.8
MAR 17...	1525	1,800	--	8.4	317	12.5	5.5	150	41.9	11.4
APR 21...	1535	3,340	--	8.4	219	15.0	7.5	100	28.2	7.75
MAY 18...	1505	3,360	--	8.3	196	12.0	10.5	94	25.7	7.31
JUN 03...	0850	4,920	5.0	8.2	195	16.0	12.5	110	29.2	7.91
JUN 14...	0715	4,980	3.4	8.2	205	11.0	12.5	96	26.8	7.13
JUL 20...	0850	1,660	8.0	8.3	263	20.0	19.5	130	32.9	10.5
AUG 23...	1635	1,220	<2.0	8.4	282	14.5	16.0	140	36.2	11.8

Date	Arsenic water, fltrd, ug/L (01000)	Arsenic water unfltrd ug/L (01002)	Cadmium water, fltrd, ug/L (01025)	Cadmium water, unfltrd ug/L (01027)	Copper, water, fltrd, ug/L (01040)	Copper, water, unfltrd recover-able, ug/L (01042)	Iron, water, fltrd, ug/L (01046)	Iron, water, unfltrd recover-able, ug/L (01045)	Lead, water, fltrd, ug/L (01049)	Lead, water, unfltrd recover-able, ug/L (01051)
NOV 18...	3.7	4	<.04	.04	2.8	5.8	E4	100	<.08	.53
MAR 17...	3.8	4	<.04	.07	4.2	9.8	19	230	.09	1.16
APR 21...	3.2	3	<.04	E.04	2.1	5.7	11	130	E.05	.55
MAY 18...	1.6	E2	<.04	E.02	1.2	2.6	12	90	E.05	.32
JUN 03...	2.2	2	<.04	.05	1.7	5.8	16	200	E.04	.82
JUN 14...	2.7	3	<.04	.06	1.5	6.6	12	230	E.05	1.11
JUL 20...	3.5	5	<.04	.14	1.5	13.9	16	400	.10	2.33
AUG 23...	3.2	4	<.04	.06	1.4	4.5	E3	140	<.08	.64

Date	Manganese, water, fltrd, ug/L (01056)	Manganese, water, unfltrd recover-able, ug/L (01055)	Zinc, water, fltrd, ug/L (01090)	Zinc, water, unfltrd recover-able, ug/L (01092)	Suspended sediment, percent <.063mm (70331)	Suspended sediment concentration mg/L (80154)	Suspended sediment discharge, tons/d (80155)
NOV 18...	9.7	17	2.3	8	93	4	15
MAR 17...	31.6	48	7.7	15	93	12	58
APR 21...	17.1	22	1.0	6	93	7	63
MAY 18...	10.8	16	1.8	6	89	5	45
JUN 03...	14.2	27	2.1	9	87	14	186
JUN 14...	15.0	36	1.9	11	92	13	175
JUL 20...	37.7	67	.8	25	91	24	108
AUG 23...	11.9	25	1.0	9	82	9	30

E--Estimated.

12340500 CLARK FORK ABOVE MISSOULA, MT—Continued

SUSPENDED-SEDIMENT
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Day	Mean concentration (mg/l)		Load (tons/day)		Mean concentration (mg/l)		Load (tons/day)		Mean concentration (mg/l)		Load (tons/day)		Mean concentration (mg/l)		Load (tons/day)									
	Mean concentration (mg/l)	Load (tons/day)	Mean concentration (mg/l)	Load (tons/day)	Mean concentration (mg/l)	Load (tons/day)	Mean concentration (mg/l)	Load (tons/day)	Mean concentration (mg/l)	Load (tons/day)	Mean concentration (mg/l)	Load (tons/day)	Mean concentration (mg/l)	Load (tons/day)	Mean concentration (mg/l)	Load (tons/day)								
	OCTOBER				NOVEMBER				DECEMBER				JANUARY				FEBRUARY				MARCH			
1	7	19	5	14	5	17	6	14	4	12	5	16												
2	7	19	5	15	5	17	6	15	4	12	5	15												
3	7	19	4	14	7	24	6	16	4	11	4	12												
4	7	19	4	13	7	24	6	14	4	11	5	15												
5	7	20	4	13	6	20	6	11	4	12	10	29												
6	7	20	4	11	5	17	7	11	4	11	4	12												
7	6	17	4	12	6	21	7	9.4	4	12	6	18												
8	6	17	5	16	7	24	7	13	4	12	9	29												
9	6	17	6	21	7	24	7	15	4	12	46	261												
10	6	17	6	23	6	19	6	15	4	12	49	312												
11	6	17	7	27	7	22	6	16	4	11	38	259												
12	6	18	7	26	8	27	6	18	4	11	31	167												
13	6	18	7	25	8	27	6	17	4	10	23	125												
14	7	21	6	20	10	33	5	14	4	8.8	16	89												
15	7	22	4	13	10	33	5	14	3	8.1	12	59												
16	7	22	4	13	11	35	5	15	4	12	12	58												
17	7	22	4	14	10	30	5	15	5	15	12	58												
18	7	22	4	14	8	25	5	15	5	15	13	66												
19	7	21	4	14	5	14	5	15	6	19	14	82												
20	7	21	6	21	4	10	4	12	6	19	15	89												
21	6	18	8	29	4	11	5	16	6	19	11	59												
22	6	18	5	17	4	13	5	16	6	18	10	51												
23	6	18	4	12	4	12	5	16	7	21	11	60												
24	6	18	3	9.4	4	11	5	16	7	21	12	73												
25	5	15	3	10	4	12	5	15	7	22	12	78												
26	5	15	3	10	4	13	5	15	8	26	12	80												
27	5	15	3	10	4	12	5	14	9	30	11	73												
28	5	16	3	9.6	4	11	6	17	9	29	10	65												
29	5	18	4	13	5	13	6	18	8	25	11	69												
30	5	19	5	18	6	15	5	16	---	---	12	73												
31	5	17	---	---	6	13	4	13	---	---	12	74												
TOTAL	---	575	---	477.0	---	599	---	456.4	---	456.9	---	2,526												
	APRIL				MAY				JUNE				JULY				AUGUST				SEPTEMBER			
1	12	83	12	128	13	188	6	49	28	89	4	13												
2	12	87	10	106	12	165	6	46	25	78	3	9.6												
3	12	86	10	114	12	159	5	36	22	67	4	13												
4	12	85	15	194	11	147	4	28	21	65	3	9.5												
5	11	82	20	284	13	186	4	28	20	62	4	13												
6	12	98	27	416	19	299	4	27	22	68	3	9.4												
7	13	118	28	437	18	294	4	26	20	63	3	9.2												
8	14	141	27	426	14	211	4	25	17	52	4	12												
9	17	184	26	415	16	223	4	24	16	48	3	9.2												
10	15	159	23	350	16	222	4	23	17	49	5	15												
11	14	141	18	262	23	356	4	23	17	46	4	12												
12	12	119	14	187	21	324	6	34	15	40	4	12												
13	11	110	11	133	16	228	6	32	14	36	5	18												
14	12	132	9	99	12	158	7	36	12	30	7	29												
15	14	163	7	71	10	123	7	35	10	23	6	24												
16	16	184	6	57	8	92	7	34	7	16	6	23												
17	16	176	6	57	7	75	7	34	5	11	6	22												
18	11	114	5	47	6	61	9	42	4	9.0	6	22												
19	10	99	6	61	5	50	16	73	4	9.3	7	27												
20	11	102	7	75	5	50	24	110	6	17	7	31												
21	10	91	7	76	5	46	30	138	6	16	7	34												
22	9	78	9	108	5	44	33	143	6	16	7	32												
23	10	81	12	166	5	43	36	149	7	21	7	31												
24	9	73	12	170	6	49	41	163	7	24	7	31												
25	8	67	10	133	8	67	42	162	7	26	6	27												
26	8	68	9	114	7	59	41	154	8	29	6	26												
27	7	63	10	128	5	43	40	147	6	22	6	25												
28	11	116	12	165	10	91	42	149	6	22	5	21												
29	13	153	14	212	11	97	43	146	5	18	5	21												
30	14	159	18	279	8	69	36	118	4	14	5	21												
31	---	---	15	225	---	---	29	93	4	13	---	---												
TOTAL	---	3,412	---	5,695	---	4,219	---	2,327	---	1,099.3	---	601.9												