12323800 CLARK FORK NEAR GALEN, MT

Pend Oreille Basin
Upper Clark Fork Subbasin

LOCATION.--Lat 46°12′30″, long 112°45′59″ referenced to North American Datum of 1927, in NE ¼ NE ¼ NE ¼ sec.7, T.5 N., R.9 W., Deer Lodge County, MT, Hydrologic Unit 17010201, on right bank at upstream side of bridge on county road, 2.6 mi downstream from Silver Bow Creek and Warm Springs Creek, 2 mi south of Galen, and at river mile 482.7.

DRAINAGE AREA.--651 mi^2. Area at site used prior to Oct. 1, 1994 was 793 mi^2.

SURFACE-WATER RECORDS

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

GAGE.--Water-stage recorder. Elevation of gage is 4,749.24 ft, referenced to the National Geodetic Vertical Datum of 1929.

REMARKS.--Records are good except those for estimated daily discharges, which are fair. Some regulation occurs by Storm and Silver Lakes and settling ponds on Silver Bow Creek near Warm Springs. Numerous diversions occur upstream from station. A U.S. Geological Survey satellite telemeter is located at the station.

12323800 CLARK FORK NEAR GALEN, MT—Continued

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

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	71	e78	e80	e78	e75	97	99	169	325	173	67	54
2	70	e80	e70	e90	e80	93	107	200	333	166	67	55
3	67	85	e70	106	e85	93	108	319	349	148	68	54
4	63	89	e90	98	95	96	102	322	370	118	69	51
5	68	90	e120	93	109	99	102	276	455	117	68	65
6	72	99	128	e80	103	105	115	249	543	108	70	63
7	79	109	122	85	99	114	133	225	478	104	68	59
8	78	123	124	103	101	103	128	223	427	104	66	54
9	78	123	122	102	103	90	121	242	425	97	64	58
10	80	126	116	e75	104	95	117	255	430	93	62	59
11	81	122	122	e50	104	103	127	287	558	90	60	56
12	82	118	122	e40	112	120	144	319	525	87	58	54
13	91	114	129	e45	112	123	141	343	470	79	56	51
14	93	101	138	e47	115	105	128	335	443	77	57	54
15	95	92	137	e50	112	88	117	295	410	79	57	55
16	103	91	e100	e50	107	85	113	277	372	78	58	55
17	105	82	e80	e50	106	85	110	293	375	81	65	55
18	92	77	e84	e50	106	86	175	296	357	110	68	58
19	91	78	e86	e50	104	91	193	309	331	95	69	60
20	109	83	87	49	103	95	128	313	313	90	68	65
21	111	83	89	53	101	86	103	359	321	85	68	65
22	106	92	96	62	101	78	95	361	318	84	63	66
23	107	89	97	76	104	75	97	306	293	79	62	94
24	103	e90	96	86	101	73	94	248	267	81	61	119
25	101	e80	99	88	101	76	97	263	233	100	62	116
26	99	e70	106	91	101	80	105	241	214	97	60	104
27	98	e70	96	e85	94	88	109	253	204	92	59	96
28	97	e65	91	e80	96	95	106	345	187	86	59	90
29	94	e70	e75	e80	---	95	114	347	172	80	52	92
30	91	e70	e76	e80	---	97	145	328	176	78	51	94
31	e75	---	e80	e80	---	100	---	329	---	73	51	---
Total	2,750	2,739	3,128	2,252	2,834	2,909	3,573	8,927	10,674	3,029	1,933	2,071
Mean	88.7	91.3	101	72.6	101	93.8	119	288	356	97.7	62.4	69.0
Max	111	126	138	106	115	123	193	361	558	173	70	119
Min	63	65	70	40	75	73	94	169	172	73	51	51
Ac-ft	5,450	5,430	6,200	4,470	5,620	5,770	7,090	17,710	21,170	6,010	3,830	4,110

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1988 - 2007, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	87.7	93.3	82.0	82.2	89.5	108	133	250	342	131	68.2	69.9
Max	170	159	132	169	174	167	257	668	974	381	233	184
(WY)	(1998)	(1998)	(1998)	(1997)	(1996)	(1997)	(1996)	(1997)	(1997)	(1997)	(1997)	(1993)
Min	40.6	50.7	40.7	42.5	43.5	54.2	55.4	68.6	51.1	21.4	10.2	20.3
(WY)	(1989)	(1993)	(1993)	(1993)	(1993)	(2005)	(2005)	(1992)	(1992)	(1988)	(1988)	(1988)

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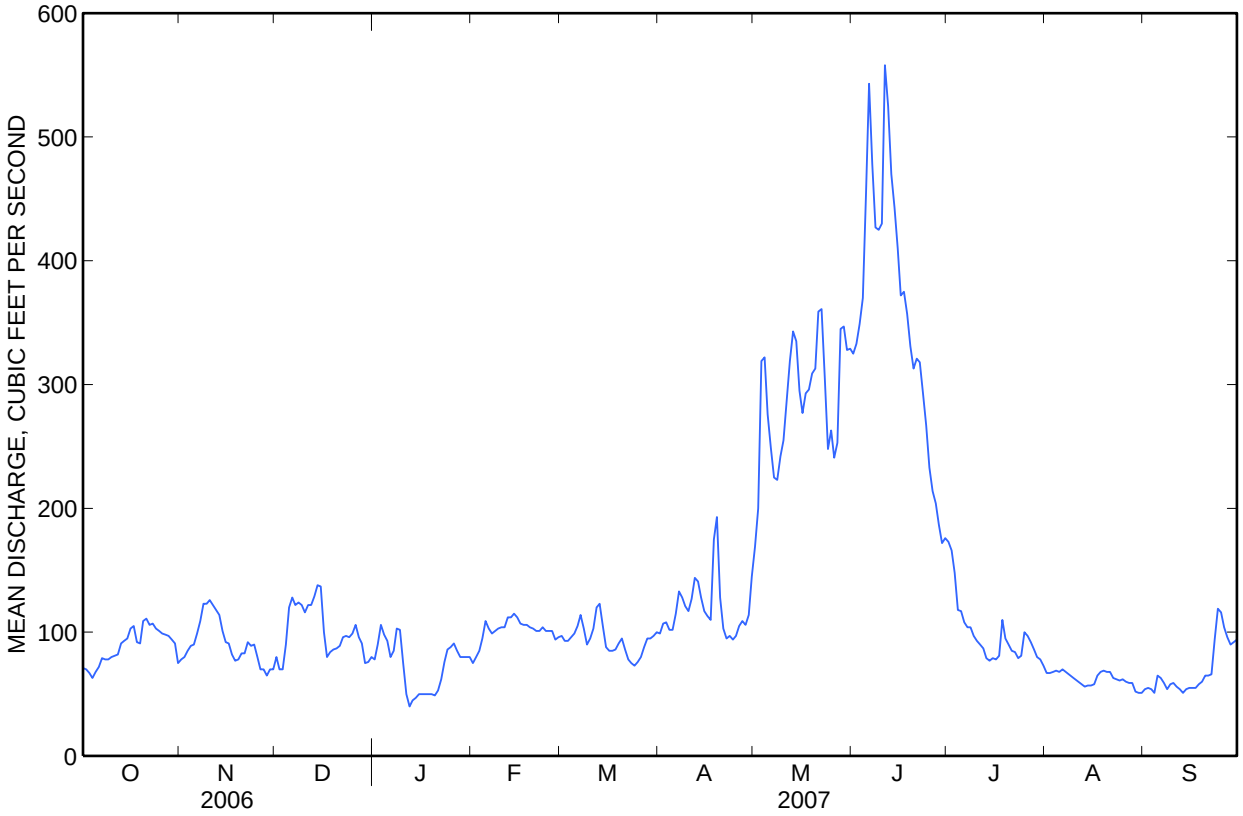
SUMMARY STATISTICS

	Calendar Year 2006		Water Year 2007		Water Years 1988 - 2007	
Annual total	43,323		46,819			
Annual mean	119		128		129	
Highest annual mean					288	1997
Lowest annual mean					59.6	1992
Highest daily mean	508	May 21	558	Jun 11	1,210	Jun 7, 1997
Lowest daily mean	35	Feb 17	40	Jan 12	9.7	Aug 11, 1988
Annual seven-day minimum	41	Feb 17	47	Jan 11	9.8	Aug 15, 1988
Maximum peak flow			605	Jun 6	1,240	Jun 7, 1997
Maximum peak stage			3.63	Jun 6	5.07	Jun 7, 1997
Instantaneous low flow					[a]9.0	Aug 9, 1988
Annual runoff (ac-ft)	85,930		92,870		93,490	
10 percent exceeds	228		300		271	
50 percent exceeds	83		95		88	
90 percent exceeds	56		59		45	

[a] Gage height, 1.39 ft.



WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1971-74, 1988 to current year.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: October 1991 to September 1998, October 2000 to September 2002.

REMARKS.--Sampling conducted since 1988 as part of EPA Superfund program. Several unpublished observations of specific conductance and water temperature were made during the year.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: Maximum, 25.5°C, June 23, 1991; minimum, 0.0°C, on many days during winter period.

WATER-QUALITY DATA
WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007

Part 1 of 2

[Remark codes: E, estimated.]

Date	Time	Instantaneous discharge, cfs (00061)	pH, water, unfltrd field, std units (00400)	Specific conductance, wat unf µS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Arsenic water, fltrd, µg/L (01000)	Arsenic water, unfltrd µg/L (01002)	Cadmium water, fltrd, µg/L (01025)	Cadmium water, unfltrd µg/L (01027)
Nov													
14...	1045	101	8.6	447	5.0	2.0	200	60.0	13.1	8.2	11.2	E.02	.17
Feb													
27...	1120	81	8.5	514	-4.0	1.0	210	62.0	14.1	8.7	10.8	.07	.17
Mar													
27...	1340	87	8.4	480	3.5	6.0	210	63.1	13.2	7.5	9.7	E.02	.08
May													
08...	1315	225	8.4	377	23.5	12.0	150	46.1	9.56	14.4	16.8	E.03	.08
Jun													
05...	1720	492	8.8	243	19.0	13.0	99	29.8	6.07	17.1	23.6	E.02	.23
19...	1125	341	8.9	338	22.0	12.0	140	41.9	8.59	17.4	18.8	E.03	.10
Jul													
24...	1155	79	8.6	383	25.5	18.0	170	50.1	10.3	16.2	17.0	.04	.05
Aug													
28...	0935	60	8.4	435	12.5	11.0	200	58.2	12.2	16.5	16.9	E.03	.06

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WATER-QUALITY DATA
WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007
Part 2 of 2
[Remark codes: <, less than; E, estimated.]

Date	Copper, water, fltrd, µg/L (01040)	Copper, water, unfltrd recover -able, µg/L (01042)	Iron, water, fltrd, µg/L (01046)	Iron, water, unfltrd recover -able, µg/L (01045)	Lead, water, fltrd, µg/L (01049)	Lead, water, unfltrd recover -able, µg/L (01051)	Mangan- ese, water, fltrd, µg/L (01056)	Mangan- ese, water, unfltrd recover -able, µg/L (01055)	Zinc, water, fltrd, µg/L (01090)	Zinc, water, unfltrd recover -able, µg/L (01092)	Suspnd. sedi- ment, sieve diametr percent <.063mm (70331)	Sus- pended sedi- ment concen- tration mg/L (80154)	Sus- pended sedi- ment dis- charge, tons/d (80155)
Nov													
14...	1.7	10.9	9	256	<.12	1.86	109	149	2.9	16	90	4	1.1
Feb													
27...	3.3	19.2	E6	327	<.12	2.07	178	273	5.3	21	72	12	2.6
Mar													
27...	2.7	9.3	10	199	<.12	1.25	151	207	3.7	10	83	5	1.2
May													
08...	3.7	14.6	15	290	E.07	1.83	95.9	174	3.0	13.0	74	11	6.7
Jun													
05...	5.7	56.4	21	968	E.10	6.79	52.9	258	1.2	29.2	68	48	64
19...	4.1	13.4	16	229	E.07	1.30	66.5	113	1.2	8.5	75	8	7.4
Jul													
24...	3.1	5.8	7	64	<.12	.41	34.4	67.8	1.4	2.7	77	2	.43
Aug													
28...	2.7	10.3	7	300	<.12	1.13	37.6	110	1.3	9.9	78	2	.32