13338500 SOUTH FORK CLEARWATER RIVER AT STITES, ID

Clearwater Basin
South Fork Clearwater Subbasin

LOCATION.--Lat 46°05′11″, long 115°58′36″ referenced to North American Datum of 1983, in NE ¼ SE ¼ NE ¼ sec.29, T.32 N., R.4 E., Idaho County, ID, Hydrologic Unit 17060305, Stites quad., on left bank at Stites, 0.4 mi upstream from county road bridge, 0.4 mi downstream from Cottonwood Creek, and at mile 4.0.

DRAINAGE AREA.--1,150 mi^2, approximately.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--October 1910 to April 1912, October 1964 to current year. Published as "at Kooskia," 1910-12.

REVISED RECORDS.--WSP 1317: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,311.99 ft above NGVD of 1929. October 1910 to April 1912, nonrecording gage 3.6 mi downstream at different datum.

REMARKS.--Records good except for estimated daily discharges, which are poor. Station equipment includes satellite telemetry. No regulation above station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,100 ft^3/s Feb. 7, 1996, gage height, 8.82 ft; minimum, 48 ft^3/s Nov. 30, 1987, gage height, 2.39 ft.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 8, 1964, reached a stage of 10.3 ft, from floodmarks, present site and datum, discharge, 17,500 ft^3/s.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,800 ft^3/s and (or) maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)
May 20	0315	*7,370	*7.30
Jun 2	0115	6,620	7.01
Jun 12	1430	6,670	7.03

Minimum daily discharge, 80 ft^3/s, Jan. 23.

13338500 SOUTH FORK CLEARWATER RIVER AT STITES, ID—Continued

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008
DAILY MEAN VALUES
[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	189	144	198	149	193	441	352	1,390	5,950	2,210	317	198
2	334	136	183	143	183	423	332	1,180	6,340	2,310	304	198
3	269	126	199	228	182	364	316	1,230	5,740	1,890	304	189
4	268	125	347	237	183	347	327	1,400	5,950	1,710	299	179
5	223	140	429	220	178	331	368	1,940	5,450	1,550	283	173
6	203	140	394	213	178	303	387	2,510	5,590	1,390	267	170
7	197	139	331	207	182	290	419	3,080	5,110	1,280	256	169
8	188	131	282	189	185	299	415	3,170	4,700	1,190	263	165
9	196	139	244	206	198	299	437	2,750	4,300	1,090	292	159
10	187	135	211	189	232	300	474	2,330	4,570	1,020	264	156
11	181	159	182	191	270	331	464	2,310	4,790	946	243	152
12	180	176	144	187	296	384	450	2,360	6,290	869	233	148
13	160	168	223	187	344	378	561	2,020	6,000	812	222	145
14	148	218	212	184	299	402	956	2,500	5,510	764	210	144
15	141	160	197	189	267	413	1,220	3,670	5,080	723	204	140
16	137	176	177	e140	274	415	1,110	4,590	4,790	682	196	138
17	148	246	178	e160	252	404	897	5,370	4,600	645	187	133
18	170	460	196	203	247	379	939	6,180	4,390	606	179	131
19	172	661	202	196	246	422	1,080	6,820	4,080	570	176	129
20	354	549	223	193	251	478	988	6,920	3,810	536	187	129
21	307	349	218	e130	248	469	840	6,840	3,710	507	389	161
22	258	208	174	e85	249	417	766	5,590	3,860	486	817	207
23	244	151	178	e80	262	390	827	5,010	3,550	533	380	218
24	254	142	225	e110	270	466	1,050	4,490	3,190	501	276	210
25	233	201	230	e140	322	481	969	4,940	2,950	450	238	179
26	209	233	214	e210	365	440	882	4,730	2,750	419	256	159
27	186	232	209	e240	337	416	910	4,530	2,550	392	267	149
28	169	227	192	e230	324	371	1,110	4,640	2,360	373	245	144
29	163	215	197	208	335	368	1,850	5,930	2,270	357	225	139
30	159	210	193	212	---	339	1,700	6,210	2,240	341	208	135
31	154	---	191	197	---	348	---	6,060	---	328	199	---
Total	6,381	6,496	6,973	5,653	7,352	11,908	23,396	122,690	132,470	27,480	8,386	4,846
Mean	206	217	225	182	254	384	780	3,958	4,416	886	271	162
Max	354	661	429	240	365	481	1,850	6,920	6,340	2,310	817	218
Min	137	125	144	80	178	290	316	1,180	2,240	328	176	129
Ac-ft	12,660	12,880	13,830	11,210	14,580	23,620	46,410	243,400	262,800	54,510	16,630	9,610
Cfsm	0.18	0.19	0.20	0.16	0.22	0.33	0.68	3.44	3.84	0.77	0.24	0.14
In.	0.21	0.21	0.23	0.18	0.24	0.39	0.76	3.97	4.29	0.89	0.27	0.16

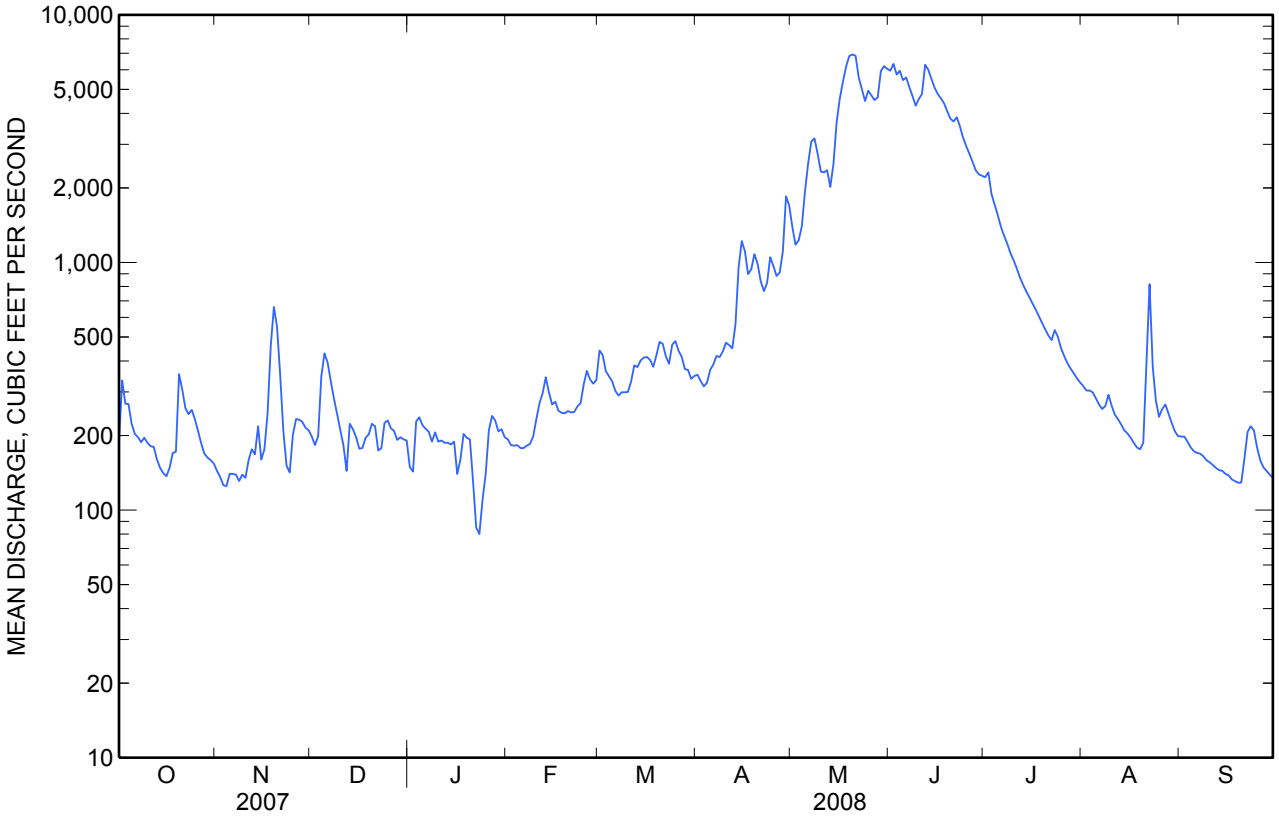
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1912 - 2008, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	277	347	425	494	598	949	2,012	3,153	2,387	759	273	235
Max	677	893	2,365	1,665	2,211	2,387	3,549	5,528	5,706	2,063	528	473
(WY)	(1976)	(1969)	(1976)	(1969)	(1996)	(1978)	(1978)	(1976)	(1975)	(1975)	(1975)	(1968)
Min	108	139	167	144	227	312	780	947	463	274	123	114
(WY)	(1988)	(1988)	(1988)	(1988)	(1994)	(1977)	(2008)	(1992)	(1992)	(2007)	(2007)	(1987)

13338500 SOUTH FORK CLEARWATER RIVER AT STITES, ID—Continued

SUMMARY STATISTICS

	Calendar Year 2007		Water Year 2008		Water Years 1912 - 2008	
Annual total	209,538		364,031			
Annual mean	574		995		991	
Highest annual mean					1,711	1976
Lowest annual mean					451	1992
Highest daily mean	2,370	May 3	6,920	May 20	9,400	May 29, 1912
Lowest daily mean	88	Sep 14	80	Jan 23	55	Nov 2, 2002
Annual seven-day minimum	91	Sep 11	133	Jan 19	87	Dec 29, 1987
Annual runoff (ac-ft)	415,600		722,100		718,300	
Annual runoff (cfsm)	0.499		0.865		0.862	
Annual runoff (inches)	6.78		11.78		11.71	
10 percent exceeds	1,470		3,820		2,630	
50 percent exceeds	290		275		431	
90 percent exceeds	119		149		177	



13338500 SOUTH FORK CLEARWATER RIVER AT STITES, ID—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1973-81, 1990, 1993, April to September(seasonal) 1996, 1998, 2001, 2005 to 2008.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: April to September (seasonal) 2005 to 2008.

INSTRUMENTATION.--Temperature recording data logger.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: Maximum, 28.0 °C July 23, 2006; Minimum 1.5 °C Apr. 3, 2008.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURE: Maximum, 25.0 °C Aug. 15, 17, 18; Minimum, 1.5 °C Apr. 3.

WATER-QUALITY DATA
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008

Part 1 of 3

[Remark codes: <, less than; E, estimated; S, most probable value.]

Date	Time	Altitude of land surface feet (72000)	Gage height, feet (00065)	Instantaneous discharge, cfs (00061)	Drainage area, mi2 (81024)	Stream width, feet (00004)	Turbdty white light, det ang 90+/-30 corrctd NTRU (63676)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)	Specif. conductance, wat unf lab, µS/cm 25 degC (90095)	Specific conductance, wat unf µS/cm 25 degC (00095)
Apr													
17...	1504	1,312	--	892	1,150	--	11	728	12.3	8.3	--	60	57
May													
21...	0935	1,312	7.22	7,370	1,150	--	24	723	12.1	7.0	--	22	21
Jun													
24...	0954	1,312	5.49	3,430	1,150	--	3.7	729	10.8	7.2	--	E24	22
Jul													
16...	1432	1,312	3.85	737	1,150	--	E1.1	728	10.8	8.1	--	E31	30
Aug													
06...	1407	1,312	3.26	263	1,150	134	E1.3	727	8.9	8.6	--	E41	40
Sep													
24...	1510	1,312	3.14	205	1,150	130	<2.0	725	11.4	8.8	8.4	E55	53

13338500 SOUTH FORK CLEARWATER RIVER AT STITES, ID—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008
Part 2 of 3
[Remark codes: <, less than; E, estimated; S, most probable value.]

Date	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium, water, fltrd, mg/L (00930)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	ANC, wat unf infl pt titr., field, mg/L as CaCO3 (00419)	Bicarbonate, wat unf infl pt titr., field, mg/L (00450)	Carbonate, wat unf infl pt titr., field, mg/L (00447)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L as SiO2 (00955)
Apr													
17...	19.0	8.8	--	--	--	--	--	--	--	--	--	--	--
May													
21...	12.0	6.5	--	--	--	--	--	--	--	--	--	--	--
Jun													
24...	22.0	12.2	--	--	--	--	--	--	--	--	--	--	--
Jul													
16...	32.0	20.6	--	--	--	--	--	--	--	--	--	--	--
Aug													
06...	32.0	22.9	--	--	--	--	--	--	--	--	--	--	--
Sep													
24...	22.0	14.5	5.04	1.29	.91	3.50	25	22	26	.0	1.11	E.06	15.8

WATER-QUALITY DATA
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008
Part 3 of 3
[Remark codes: <, less than; E, estimated; S, most probable value.]

Date	Sulfate water, fltrd, mg/L (00945)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrate + nitrite water fltrd, mg/L as N (00631)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L as P (00665)	E coli, modif. m-TEC, water, col/ 100 mL (90902)	Suspended sediment concentration mg/L (80154)	Number of sampling points, count (00063)	Purpose site visit, code (50280)	Sample purpose code (71999)	Sampling method, code (82398)
Apr												
17...	--	.36	<.020	.221	.024	.069	S11	11	--	1001	40.00	10
May												
21...	--	.36	<.020	.039	.016	.102	94	104	--	1001	40.00	10
Jun												
24...	--	.15	<.020	<.016	.014	.186	31	12	--	1001	40.00	10
Jul												
16...	--	.17	<.020	<.016	.013	.018	S17	3	--	1001	40.00	10
Aug												
06...	--	.14	<.020	<.016	.010	.012	S17	2	10	1001	40.00	10
Sep												
24...	1.56	.17	<.020	<.016	.008	.014	S11	2	10	1001	40.00	10

13338500 SOUTH FORK CLEARWATER RIVER AT STITES, ID—Continued

TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
		February			March			April			May	
1	---	---	---	---	---	---	8.5	2.5	5.0	8.5	4.5	6.0
2	---	---	---	---	---	---	7.5	2.0	4.5	10.0	4.5	7.0
3	---	---	---	---	---	---	9.0	1.5	5.0	10.5	6.5	8.0
4	---	---	---	---	---	---	6.5	3.5	5.0	11.0	7.0	9.0
5	---	---	---	---	---	---	8.0	3.5	5.5	9.5	7.5	8.5
6	---	---	---	---	---	---	8.5	4.0	6.0	9.0	6.5	7.5
7	---	---	---	---	---	---	9.0	5.0	6.5	7.5	6.0	7.0
8	---	---	---	---	---	---	10.0	5.0	7.0	7.5	5.5	6.5
9	---	---	---	---	---	---	8.0	5.0	6.5	8.0	6.0	7.0
10	---	---	---	---	---	---	8.0	4.0	5.5	7.5	5.5	6.5
11	---	---	---	---	---	---	11.0	4.0	7.0	8.5	6.5	7.5
12	---	---	---	---	---	---	12.5	5.0	8.5	8.5	6.0	7.0
13	---	---	---	---	---	---	13.0	6.5	9.5	7.0	5.5	6.5
14	---	---	---	---	---	---	9.5	5.0	7.5	8.0	6.5	7.0
15	---	---	---	---	---	---	6.0	4.0	5.0	9.5	6.0	7.5
16	---	---	---	---	---	---	6.0	4.0	5.0	9.0	7.0	8.5
17	---	---	---	---	---	---	9.5	3.5	6.5	9.0	7.0	8.0
18	---	---	---	---	---	---	10.0	5.5	7.5	9.0	7.5	8.5
19	---	---	---	---	---	---	7.0	4.5	6.0	9.0	7.5	8.5
20	---	---	---	---	---	---	4.5	3.0	4.0	9.0	7.0	8.0
21	---	---	---	---	---	---	7.0	2.0	4.0	7.5	6.5	7.0
22	---	---	---	---	---	---	9.0	3.0	6.0	7.0	6.0	6.5
23	---	---	---	---	---	---	7.0	5.5	6.5	8.0	6.0	7.0
24	---	---	---	---	---	---	9.0	5.5	7.0	8.5	7.5	8.0
25	---	---	---	---	---	---	8.5	6.0	7.0	10.0	8.0	9.0
26	---	---	---	---	---	---	10.0	4.5	7.0	9.5	8.0	8.5
27	---	---	---	---	---	---	10.5	5.5	8.0	10.0	8.0	9.0
28	---	---	---	---	---	---	11.5	7.0	9.0	10.0	8.5	9.0
29	---	---	---	---	---	---	9.5	5.0	7.0	9.0	8.0	8.5
30	---	---	---	---	---	---	6.5	4.5	5.0	10.0	8.0	9.0
31	---	---	---	---	---	---	---	---	---	10.5	8.0	9.5
Month	---	---	---	---	---	---	13.0	1.5	6.3	11.0	4.5	7.8

13338500 SOUTH FORK CLEARWATER RIVER AT STITES, ID—Continued

TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
		June			July			August			September	
1	11.0	9.5	10.0	16.5	15.0	15.5	23.0	17.5	20.0	19.0	14.5	16.5
2	10.0	9.0	9.5	17.0	14.5	15.5	23.0	18.5	20.5	18.5	12.5	15.5
3	9.5	8.0	8.5	18.0	15.0	16.5	23.0	17.0	20.0	19.5	13.5	16.5
4	8.5	8.0	8.0	18.0	16.5	17.0	23.0	16.5	20.0	18.0	13.5	16.0
5	10.0	8.0	9.0	18.5	16.0	17.0	23.5	17.0	20.0	18.5	12.5	15.5
6	10.0	9.0	9.5	19.0	15.5	17.0	23.5	18.0	20.5	20.0	14.0	17.0
7	9.0	8.5	8.5	19.0	15.5	17.0	24.5	19.0	21.5	20.0	14.5	17.0
8	10.5	8.0	9.0	19.5	15.5	17.5	24.0	20.0	22.0	19.5	13.5	16.5
9	10.5	9.0	10.0	20.0	15.5	17.5	23.5	19.5	22.0	18.5	13.5	16.0
10	10.0	7.5	8.5	20.5	16.0	18.0	22.0	18.5	20.5	18.5	13.0	16.0
11	7.5	6.0	6.5	19.5	15.5	17.5	23.0	17.5	20.0	18.5	12.5	15.5
12	8.5	6.5	7.5	19.0	14.0	16.5	23.0	17.0	20.0	18.5	12.0	15.5
13	10.5	8.0	9.0	20.0	14.0	17.0	24.0	18.5	21.0	19.0	12.5	16.0
14	11.5	9.5	10.5	21.0	15.5	18.0	24.5	18.5	21.5	19.0	12.0	15.5
15	11.5	10.0	11.0	20.0	16.5	18.5	25.0	19.0	22.0	19.0	12.0	15.5
16	12.0	10.5	11.5	21.0	16.5	18.5	24.5	18.5	21.5	18.5	12.0	15.5
17	12.5	11.0	12.0	21.5	16.0	18.5	25.0	19.0	22.0	18.5	12.0	15.0
18	12.0	10.5	11.5	21.5	16.5	19.0	25.0	19.0	22.0	18.5	12.5	15.5
19	12.5	10.5	11.5	21.5	16.0	19.0	23.5	20.0	21.5	19.0	13.0	16.5
20	13.0	11.0	12.0	22.0	16.0	19.0	21.5	19.5	20.5	17.0	14.5	16.0
21	13.5	12.0	13.0	21.5	17.0	19.0	20.0	17.5	19.0	16.5	14.5	15.5
22	14.0	12.5	13.5	19.5	17.5	18.0	18.5	15.0	16.5	15.5	13.5	14.5
23	13.5	12.0	13.0	20.0	16.5	18.0	21.0	14.5	18.0	15.5	10.5	13.0
24	14.0	12.0	13.0	21.5	15.5	18.5	22.0	16.0	19.0	15.5	10.5	13.0
25	14.0	12.0	13.0	22.5	16.5	19.5	22.0	17.0	19.5	16.5	11.0	13.5
26	15.0	13.0	14.0	23.0	17.5	20.5	21.5	17.0	19.0	16.5	12.0	14.5
27	15.0	13.0	14.0	23.5	18.0	20.5	18.5	16.0	17.5	17.0	11.5	14.0
28	16.0	13.5	14.5	23.0	18.0	20.5	20.5	15.0	17.5	16.5	11.0	13.5
29	17.0	14.5	15.5	22.5	18.0	20.0	22.0	16.0	19.0	16.0	10.0	13.0
30	17.5	15.5	16.5	22.5	18.0	20.0	20.5	17.0	19.0	16.5	10.0	13.5
31	---	---	---	23.0	16.5	20.0	18.5	16.5	17.5	---	---	---
Month	17.5	6.0	11.1	23.5	14.0	18.2	25.0	14.5	20.0	20.0	10.0	15.2