Water-Data Report 2012

12322000 KOOTENAI RIVER AT PORTHILL, ID

Kootenai Basin
Lower Kootenai Subbasin

LOCATION.--Lat 48°59′47″, long 116°30′27″ referenced to North American Datum of 1983, in SE ¼ NE ¼ SE ¼ sec.7, T.65 N., R.1 W., Boundary County, ID, Hydrologic Unit 17010104, Smith Falls quad., on right bank 1,200 ft south of international boundary at Porthill, and at mile 105.8.

DRAINAGE AREA.--13,700 mi^2, approximately.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--May to July 1904, October 1927 to March 1928 (elevations only), April 1928 to current year in reports of Geological Survey. October 1924 to September 1927 (gage heights only) in reports of Water Survey of Canada, Department of Environment.

REVISED RECORDS.--SWD ID 1971-75(m).

GAGE.--Water-stage recorder and acoustic doppler velocity meter. Datum of gage is 1,700.00 ft above Topographic Division Datum of 1928. Gage readings have been reduced to that datum. NGVD of 1929 and datum of Geodetic Survey of Canada are 0.03 ft higher (NAVD88 is 3.896 ft higher). Prior to May 17, 1928, nonrecording gages at approximately same site. Datum of gages prior to July 28, 1928, 38.34 ft higher, except in 1904 when different datum was used. Prior to March 27, 1996, at site 1,500 ft downstream at same datum.

COOPERATION.--This station is maintained by the United States under agreement with Canada.

REMARKS.--No estimated daily discharges. Records fair. Daily discharge represents entire flow passing the international boundary. From October 1989 to December 2003 computations were made using USGS Branch model. Beginning Jan. 2004, velocity data from an acoustic doppler velocity meter (ADVM) has been used to compute the discharge record. Boundary dike of Reclamation Farm and U.S. Forest Service roadway dike (south side of Boundary Creek) remained intact and flow of river was confined throughout year to main channel on which gage is located. Elevations affected by backwater from Kootenay Lake. Flow regulated by Libby Dam started on Mar. 21, 1972. Station equipment includes satellite telemetry.

EXTREMES FOR PERIOD OF RECORD.--

UNREGULATED PERIOD (1929-71): Maximum daily discharge prior to regulation by Libby Dam, 125,000 ft^3/s June 1, 1948; maximum elevation, 1,767.61 ft, June 7, 1961; minimum daily discharge, 1,380 ft^3/s Feb. 8, 1936; minimum elevation, 1,738.21 ft, Apr. 3, 1944.

REGULATED PERIOD (1972 to current year): Maximum daily discharge since regulation began, 62,700 ft^3/s June 20, 2006, maximum elevation, 1,758.84 ft, June 2, 1972; minimum daily discharge, 2,610 ft^3/s Jan. 9, 1973.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum elevation known, 1,772.7 ft in June 1894, present datum.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 59,900 ft^3/s June 29; maximum elevation, 1,758.59 ft, July 4; minimum daily discharge, 5,290 ft^3/s Feb. 21; minimum elevation, 1,740.98 ft, Mar. 23.

12322000 KOOTENAI RIVER AT PORTHILL, ID—Continued

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012
DAILY MEAN VALUES

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	7,540	5,960	20,100	7,540	5,870	5,750	34,800	36,500	36,800	57,900	26,100	13,500
2	7,270	7,300	21,700	6,640	5,760	5,800	33,000	35,800	43,200	58,400	24,500	12,400
3	6,360	7,540	21,000	6,450	5,750	5,750	31,600	32,700	50,400	58,400	24,100	11,600
4	5,650	7,480	16,300	6,420	5,730	5,810	31,400	31,100	48,500	59,400	23,100	10,900
5	5,540	7,530	15,700	6,050	5,700	6,220	30,300	29,900	55,300	58,500	22,700	10,000
6	5,990	7,450	20,000	6,400	5,650	6,800	32,500	28,700	49,900	56,900	22,700	10,200
7	5,820	7,320	25,100	6,400	5,630	6,890	33,400	27,500	41,400	56,400	21,900	10,000
8	5,980	7,390	26,500	6,220	5,520	6,780	32,700	27,500	45,200	54,900	20,700	9,940
9	5,580	9,550	27,100	6,120	5,530	6,630	32,400	28,600	47,500	52,000	20,400	9,990
10	5,540	10,300	26,200	6,090	5,700	6,760	32,300	30,700	46,600	50,100	20,300	9,840
11	6,040	10,300	22,400	6,310	6,050	7,080	33,000	30,900	46,500	49,800	20,400	9,930
12	6,380	10,500	19,400	5,990	5,410	7,340	35,100	29,400	48,900	49,000	20,300	9,820
13	6,150	10,400	24,200	5,820	5,440	7,600	38,100	28,900	51,200	48,100	19,700	9,750
14	5,950	10,300	25,600	5,590	5,930	8,570	38,500	30,000	48,400	48,500	18,300	9,580
15	5,950	10,800	22,100	5,850	5,580	8,950	37,200	35,300	47,900	50,200	18,700	9,520
16	5,950	17,200	22,400	5,810	5,420	11,900	36,800	41,300	50,200	49,400	18,500	9,640
17	5,770	19,100	21,300	5,630	5,500	13,800	35,400	43,500	49,900	48,500	18,300	9,660
18	5,700	22,000	15,900	5,760	5,570	12,300	34,000	41,200	48,400	46,500	18,500	9,780
19	5,570	25,300	16,200	5,590	5,450	11,300	32,900	37,000	47,500	43,700	17,800	9,670
20	5,580	25,800	23,500	5,370	5,430	10,100	29,700	33,200	47,600	40,400	16,500	9,720
21	5,620	25,800	22,800	5,550	5,300	9,810	31,200	32,000	48,200	39,800	16,300	9,640
22	5,720	25,000	22,300	5,580	5,340	9,500	33,100	36,300	49,200	37,400	16,000	9,530
23	5,930	22,300	22,200	5,700	5,850	9,340	35,400	39,400	48,300	35,100	15,800	9,460
24	6,170	22,400	21,300	5,730	5,830	12,300	42,800	36,300	47,500	32,400	15,800	9,450
25	5,810	18,300	16,200	5,530	5,870	13,800	53,900	33,100	48,200	30,700	15,600	9,500
26	5,600	17,300	15,400	5,560	5,690	14,200	54,400	30,800	51,700	29,400	14,100	9,500
27	5,720	16,800	15,500	5,840	5,800	18,600	51,600	29,500	59,900	27,700	14,100	9,540
28	5,600	16,800	17,800	5,580	5,570	21,900	44,600	28,600	58,700	27,300	13,900	9,620
29	5,650	19,200	15,400	5,550	5,570	23,300	38,900	29,900	60,500	27,100	14,100	9,590
30	5,380	19,400	11,800	5,800	---	25,800	35,300	34,300	58,900	26,900	14,100	9,480
31	5,640	---	8,960	5,960	---	32,900	---	35,600	---	26,900	13,800	---
Total	183,150	442,820	622,360	184,430	163,440	353,580	1,096,300	1,025,500	1,482,400	1,377,700	577,100	300,750
Mean	5,908	14,760	20,080	5,949	5,636	11,410	36,540	33,080	49,410	44,440	18,620	10,020
Max	7,540	25,800	27,100	7,540	6,050	32,900	54,400	43,500	60,500	59,400	26,100	13,500
Min	5,380	5,960	8,960	5,370	5,300	5,750	29,700	27,500	36,800	26,900	13,800	9,450
Ac-ft	363,300	878,300	1,234,000	365,800	324,200	701,300	2,175,000	2,034,000	2,940,000	2,733,000	1,145,000	596,500

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1929 - 1971, BY WATER YEAR (WY) (UNREGULATED)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	7,059	6,449	5,570	4,680	5,099	5,847	17,750	45,810	51,730	25,120	10,470	7,285
Max	18,310	13,100	15,880	13,890	14,130	12,500	48,000	67,760	86,560	53,430	18,020	17,640
(WY)	(1948)	(1934)	(1934)	(1934)	(1951)	(1934)	(1934)	(1956)	(1967)	(1954)	(1954)	(1959)
Min	3,750	2,917	2,884	2,099	2,192	2,996	5,518	21,750	22,810	10,150	6,469	4,945
(WY)	(1937)	(1937)	(1945)	(1937)	(1936)	(1937)	(1945)	(1944)	(1941)	(1944)	(1941)	(1936)

12322000 KOOTENAI RIVER AT PORTHILL, ID—Continued

SUMMARY STATISTICS

	Water Years 1929 - 1971	
Annual mean	[a]16,100	
Highest annual mean	22,430	
Lowest annual mean	8,205	
Highest daily mean	125,000	Jun 1
Lowest daily mean	1,380	Feb 8
Annual seven-day minimum	1,520	Jan 3
Annual runoff (ac-ft)	11,670,000	
10 percent exceeds	44,300	
50 percent exceeds	7,490	
90 percent exceeds	3,690	

[a] Statistics 1929-1971 are prior to regulation by Libby Dam.

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1972 - 2012, BY WATER YEAR (WY)

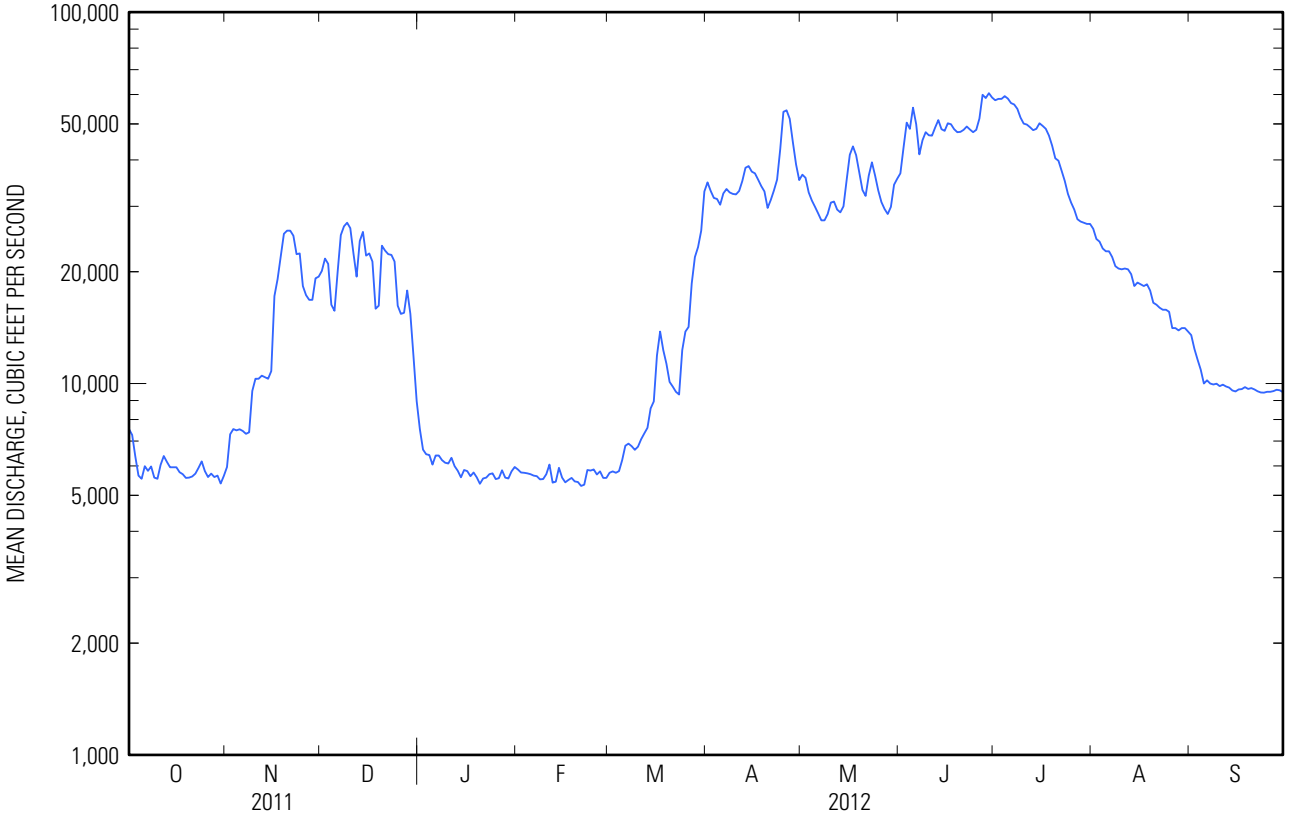
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	12,800	16,050	17,730	14,380	12,440	10,210	14,640	23,700	24,950	15,630	12,530	10,830
Max	32,350	27,050	32,450	29,770	25,230	19,850	36,540	44,060	49,410	44,440	20,090	20,690
(WY)	(1973)	(1992)	(1996)	(1996)	(1991)	(2011)	(2012)	(1997)	(2012)	(2012)	(1976)	(1972)
Min	5,474	5,165	3,639	3,371	4,315	4,940	6,137	11,530	6,717	4,696	4,220	5,782
(WY)	(2007)	(1972)	(1972)	(1972)	(1973)	(1985)	(2001)	(1977)	(1977)	(1988)	(1975)	(1994)

SUMMARY STATISTICS

	Calendar Year 2011		Water Year 2012		Water Years 1972 - 2012	
Annual total	7,099,960		[b]7,809,530			
Annual mean	19,450		21,340		15,500	
Highest annual mean					24,140	1996
Lowest annual mean					7,964	2001
Highest daily mean	52,900	May 16	60,500	Jun 29	62,700	Jun 20, 2006
Lowest daily mean	5,380	Oct 30	5,300	Feb 21	2,610	Jan 9, 1973
Annual seven-day minimum	5,630	Oct 25	5,430	Feb 16	2,760	Jan 7, 1973
Annual runoff (ac-ft)	14,080,000		15,490,000		11,230,000	
10 percent exceeds	39,100		48,200		27,300	
50 percent exceeds	17,300		16,400		13,700	
90 percent exceeds	6,370		5,650		5,650	

[b] Regulated by Libby Dam.

12322000 KOOTENAI RIVER AT PORTHILL, ID—Continued



12322000 KOOTENAI RIVER AT PORTHILL, ID—Continued

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012
DAILY MEAN VALUES
[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	e44.66	42.97	46.09	44.92	43.62	42.89	45.65	50.92	52.25	58.32	50.60	44.91
2	44.56	42.99	46.40	44.81	43.61	42.76	45.62	50.82	53.42	58.51	50.30	44.72
3	44.42	43.02	46.32	44.76	43.58	42.66	45.55	50.43	54.70	58.49	50.10	44.54
4	44.25	43.12	45.81	44.68	43.55	42.52	45.64	50.08	54.76	58.54	49.77	44.35
5	44.18	43.11	45.76	44.64	43.51	42.46	45.61	49.86	55.94	58.35	49.62	44.18
6	44.13	43.08	46.20	44.59	43.47	42.49	46.06	49.59	56.12	58.13	49.53	44.08
7	44.03	43.05	46.91	44.54	43.45	42.36	46.31	49.29	55.41	57.93	49.41	43.98
8	43.91	43.08	47.27	44.48	43.41	42.20	46.34	49.12	55.74	57.68	49.16	43.86
9	43.80	43.25	47.42	44.41	43.39	42.08	46.36	49.26	55.95	57.37	48.99	43.79
10	43.71	43.32	47.42	44.44	43.36	41.94	46.43	49.63	55.75	57.14	48.87	43.71
11	43.65	43.36	47.00	44.32	43.37	41.81	46.61	49.56	55.68	56.96	48.73	43.71
12	43.65	43.46	46.66	44.22	43.31	41.73	47.05	49.32	55.90	56.79	48.57	43.58
13	43.62	43.50	47.14	44.15	43.30	41.68	47.71	49.21	56.23	56.63	48.34	43.44
14	43.55	43.58	47.38	44.08	43.30	41.66	47.98	49.45	56.14	56.67	48.02	43.33
15	43.46	43.60	46.86	44.06	43.23	41.65	48.00	50.46	56.14	56.69	47.77	43.24
16	43.40	44.24	46.88	44.00	43.19	41.93	47.94	51.78	56.31	56.60	47.50	43.25
17	43.32	44.56	46.72	43.97	43.15	42.17	47.88	52.51	56.51	56.36	47.27	43.25
18	43.25	45.05	46.10	44.00	43.11	42.08	47.74	52.44	56.58	56.12	47.06	43.24
19	43.17	45.74	46.00	43.94	43.10	41.82	47.59	51.97	56.53	55.71	46.80	43.24
20	43.09	46.00	46.80	43.87	43.08	41.57	47.19	51.46	56.53	55.22	46.44	43.23
21	43.06	46.19	46.72	43.86	43.07	41.42	47.44	51.26	56.55	54.90	46.25	43.22
22	43.02	46.25	46.57	43.82	43.09	41.28	47.82	52.06	56.66	54.57	46.14	43.21
23	43.07	46.03	46.53	43.81	43.07	41.11	48.33	52.75	56.83	54.06	46.04	43.20
24	43.09	46.35	46.47	43.73	43.03	41.30	49.72	52.43	57.03	53.61	46.05	43.17
25	43.06	45.92	45.91	43.75	43.08	41.42	51.47	52.05	57.25	53.13	45.91	43.17
26	43.01	45.75	45.81	43.75	43.03	41.39	52.15	51.65	57.52	52.68	45.69	43.15
27	43.00	45.62	45.82	43.69	43.03	41.99	52.54	51.26	58.13	52.21	45.55	43.09
28	42.96	45.63	46.06	43.64	42.94	42.58	51.75	51.00	58.15	51.84	45.41	43.02
29	42.96	45.89	45.78	43.64	42.90	42.96	51.08	51.14	58.25	51.51	45.29	42.98
30	42.91	46.02	45.34	43.66	---	43.65	50.62	51.70	58.20	51.20	45.14	42.99
31	42.95	---	45.04	43.62	---	45.12	---	51.94	---	50.90	45.04	---
Mean	43.51	44.46	46.43	44.12	43.25	42.15	47.94	50.85	56.24	55.64	47.59	43.56
Max	44.66	46.35	47.42	44.92	43.62	45.12	52.54	52.75	58.25	58.54	50.60	44.91
Min	42.91	42.97	45.04	43.62	42.90	41.11	45.55	49.12	52.25	50.90	45.04	42.98

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1929 - 1971, BY WATER YEAR (WY) (UNREGULATED)

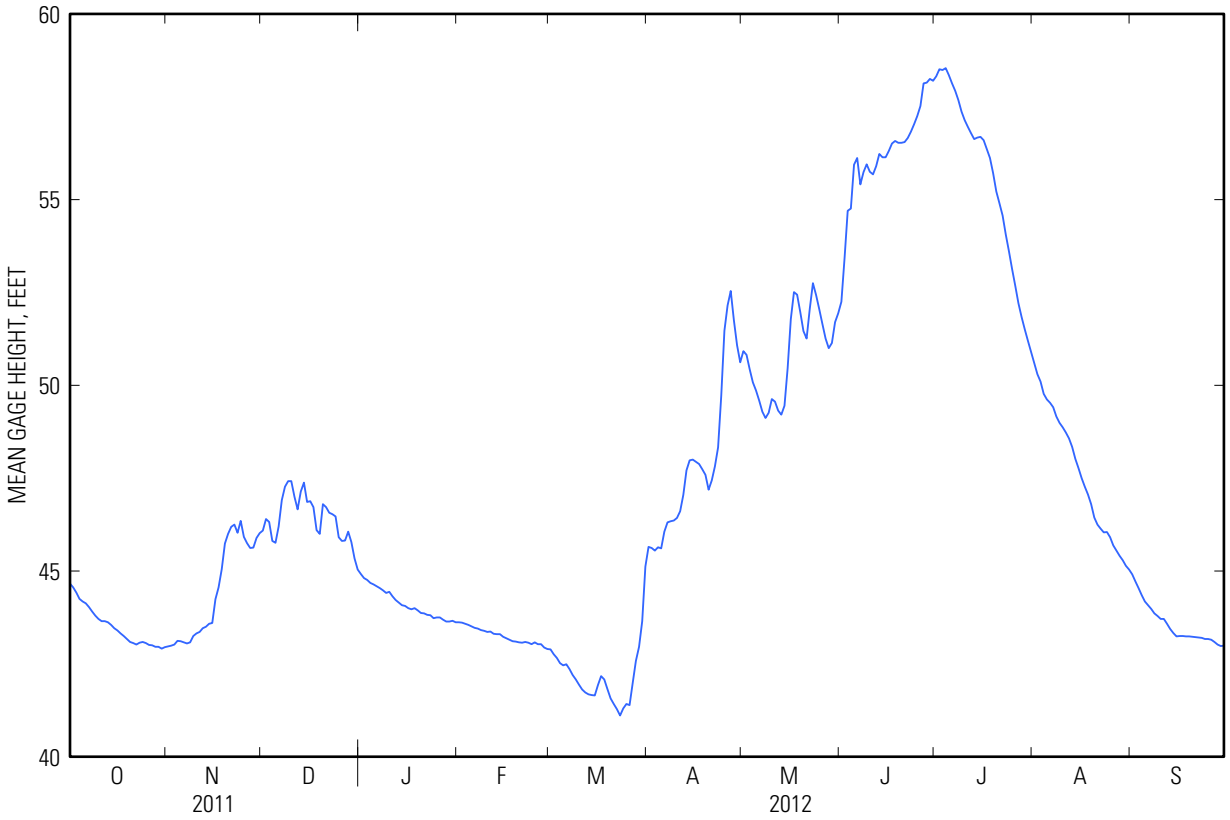
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	7,059	6,449	5,570	4,680	5,099	5,847	17,750	45,810	51,730	25,120	10,470	7,285
Max	18,310	13,100	15,880	13,890	14,130	12,500	48,000	67,760	86,560	53,430	18,020	17,640
(WY)	(1948)	(1934)	(1934)	(1934)	(1951)	(1934)	(1934)	(1956)	(1967)	(1954)	(1954)	(1959)
Min	3,750	2,917	2,884	2,099	2,192	2,996	5,518	21,750	22,810	10,150	6,469	4,945
(WY)	(1937)	(1937)	(1945)	(1937)	(1936)	(1937)	(1945)	(1944)	(1941)	(1944)	(1941)	(1936)

12322000 KOOTENAI RIVER AT PORTHILL, ID—Continued

SUMMARY STATISTICS

	Water Years 1929 - 1971	
Annual mean	[a]16,100	
Highest annual mean	22,430	
Lowest annual mean	8,205	
Highest daily mean	125,000	Jun 1
Lowest daily mean	1,380	Feb 8
Annual seven-day minimum	1,520	Jan 3
Annual runoff (ac-ft)	11,670,000	
10 percent exceeds	44,300	
50 percent exceeds	7,490	
90 percent exceeds	3,690	

[a] Statistics 1929-1971 are prior to regulation by Libby Dam.



12322000 KOOTENAI RIVER AT PORTHILL, ID—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1949-50, 1963 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1983 to September 1991 (discontinued).
WATER TEMPERATURE: January 1949 to September 1950, May 1963 to current year.
SUSPENDED SEDIMENT DISCHARGE: October 1983 to September 1991 (discontinued).

INSTRUMENTATION.--Water temperature recorder since May 23, 1963.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 303 microsiemens/cm, Feb. 3, 1985; minimum, 74 microsiemens/cm, Nov. 27, 1990.
WATER TEMPERATURE: Maximum, 23.5 °C July 27, 1975, July 29-31, 1988; minimum, 0.0 °C many days during winter months.
SEDIMENT CONCENTRATION: Maximum, 60 mg/L Nov. 27, 1986; minimum, 1 mg/L Dec. 28-29, 1985, Dec. 18, 1986.
SEDIMENT LOADS: Maximum, 3,220 tons Nov. 25, 1986; minimum, 11 tons July 25-26, Aug. 5, 23, 1988.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURE: Maximum, 17.1°C Aug. 20; minimum, 0.8°C Jan. 24, 25.

TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
		October			November			December			January	
1	14.5	14.0	14.5	8.0	7.0	7.5	7.0	7.0	7.0	5.5	5.0	5.5
2	14.5	14.0	14.5	7.5	7.0	7.0	7.0	7.0	7.0	5.0	5.0	5.0
3	14.5	14.0	14.0	7.5	7.5	7.5	7.0	6.5	6.5	5.0	4.5	4.5
4	14.0	14.0	14.0	8.0	7.5	7.5	6.5	6.0	6.5	4.5	4.0	4.0
5	14.0	13.5	13.5	7.5	7.5	7.5	6.0	6.0	6.0	4.0	3.5	4.0
6	14.0	13.5	13.5	7.5	7.0	7.0	6.0	5.5	6.0	3.5	3.5	3.5
7	14.0	14.0	14.0	7.0	6.5	6.5	6.0	5.5	6.0	3.5	3.0	3.0
8	14.0	14.0	14.0	6.5	6.5	6.5	6.5	6.0	6.5	3.0	3.0	3.0
9	14.0	13.5	14.0	7.0	6.5	6.5	6.5	6.0	6.5	3.5	3.0	3.0
10	13.5	13.0	13.5	7.0	6.5	6.5	6.5	6.0	6.0	3.5	3.5	3.5
11	13.0	12.5	13.0	7.0	6.5	6.5	6.0	6.0	6.0	3.5	3.0	3.0
12	12.5	12.0	12.5	7.5	7.0	7.0	6.0	6.0	6.0	3.0	2.5	3.0
13	12.5	12.0	12.0	7.5	7.0	7.5	6.0	5.5	5.5	2.5	2.5	2.5
14	12.0	11.5	12.0	7.0	6.5	7.0	6.0	5.5	6.0	2.5	2.5	2.5
15	11.5	11.0	11.5	6.5	6.5	6.5	6.5	6.0	6.0	2.5	2.5	2.5
16	11.5	11.0	11.0	6.5	6.5	6.5	6.5	6.0	6.0	2.5	2.5	2.5
17	11.0	11.0	11.0	6.5	6.0	6.0	6.5	6.0	6.5	2.5	2.0	2.0
18	11.0	10.5	11.0	6.5	6.0	6.5	6.5	6.0	6.0	2.0	1.5	1.5
19	10.5	10.5	10.5	7.0	6.5	6.5	6.5	6.0	6.0	1.5	1.0	1.0
20	10.5	10.5	10.5	7.0	7.0	7.0	6.0	6.0	6.0	1.0	1.0	1.0
21	10.5	10.0	10.0	7.0	7.0	7.0	6.0	5.5	6.0	1.0	1.0	1.0
22	10.5	10.0	10.0	7.0	7.0	7.0	6.0	6.0	6.0	1.0	1.0	1.0
23	10.5	10.0	10.0	7.5	7.0	7.5	6.0	5.5	5.5	1.0	1.0	1.0
24	10.0	10.0	10.0	7.5	7.5	7.5	5.5	5.0	5.0	1.0	1.0	1.0
25	10.0	10.0	10.0	7.5	7.0	7.5	5.0	5.0	5.0	1.0	1.0	1.0
26	10.0	9.5	10.0	7.0	6.5	7.0	5.0	5.0	5.0	1.0	1.0	1.0
27	10.0	9.5	9.5	6.5	6.5	6.5	5.0	5.0	5.0	1.5	1.0	1.5
28	9.5	9.5	9.5	6.5	6.5	6.5	5.5	5.0	5.0	2.0	1.5	1.5
29	9.5	9.0	9.5	6.5	6.5	6.5	5.5	5.5	5.5	2.0	2.0	2.0
30	9.0	8.5	9.0	7.0	6.5	7.0	5.5	5.5	5.5	2.0	2.0	2.0
31	8.5	8.0	8.0	---	---	---	5.5	5.5	5.5	2.0	2.0	2.0
Month	14.5	8.0	11.6	8.0	6.0	6.9	7.0	5.0	5.9	5.5	1.0	2.4

12322000 KOOTENAI RIVER AT PORTHILL, ID—Continued

TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
		February			March			April			May	
1	2.5	2.0	2.5	3.0	2.5	3.0	4.5	4.0	4.5	6.5	6.0	6.0
2	2.5	2.5	2.5	3.0	2.5	3.0	5.0	4.0	4.5	6.0	6.0	6.0
3	2.5	2.5	2.5	3.0	3.0	3.0	5.0	4.5	4.5	6.0	6.0	6.0
4	3.0	2.5	3.0	3.0	3.0	3.0	4.5	4.5	4.5	6.5	6.0	6.0
5	3.5	3.0	3.5	3.0	3.0	3.0	5.0	4.5	4.5	6.0	5.5	6.0
6	3.5	3.0	3.5	3.5	3.0	3.5	5.0	4.5	4.5	6.5	6.0	6.5
7	3.0	3.0	3.0	4.0	3.5	3.5	5.0	4.5	5.0	6.5	6.5	6.5
8	3.0	3.0	3.0	4.5	4.0	4.0	5.5	4.5	5.0	7.5	6.5	7.0
9	3.0	2.5	3.0	5.0	4.5	4.5	5.5	5.0	5.0	8.0	7.0	7.5
10	2.5	2.5	2.5	5.0	5.0	5.0	6.0	5.0	5.5	8.5	8.0	8.0
11	2.5	2.0	2.5	5.0	4.5	4.5	6.0	5.5	5.5	8.5	8.0	8.0
12	2.5	2.0	2.5	4.5	4.0	4.0	6.0	5.5	6.0	8.0	7.0	7.5
13	3.0	2.5	2.5	4.5	4.0	4.0	6.5	6.0	6.0	8.0	7.0	7.5
14	3.0	2.5	2.5	5.0	4.5	4.5	6.0	5.5	5.5	8.5	7.5	8.0
15	3.0	2.5	3.0	4.5	4.0	4.5	5.5	5.0	5.5	9.5	8.5	9.0
16	3.5	3.0	3.5	4.0	4.0	4.0	5.5	5.0	5.0	9.0	8.5	9.0
17	3.5	3.5	3.5	4.0	4.0	4.0	5.5	5.0	5.0	9.0	8.5	8.5
18	4.0	3.5	3.5	4.0	4.0	4.0	5.5	5.0	5.5	8.5	8.0	8.5
19	4.0	3.5	4.0	4.0	3.5	4.0	6.0	5.5	5.5	8.5	8.0	8.0
20	3.5	3.5	3.5	4.0	3.5	3.5	6.0	5.5	5.5	8.5	8.0	8.0
21	3.5	3.0	3.5	4.0	3.5	4.0	6.0	5.5	6.0	8.5	8.0	8.0
22	3.0	3.0	3.0	4.0	4.0	4.0	6.5	5.5	6.0	8.5	8.0	8.0
23	3.5	3.0	3.0	4.5	4.0	4.0	6.5	6.0	6.5	8.5	8.5	8.5
24	3.5	3.5	3.5	4.0	4.0	4.0	7.0	6.5	6.5	8.5	8.0	8.0
25	4.0	3.5	4.0	4.0	4.0	4.0	7.0	6.5	6.5	8.5	8.0	8.0
26	4.0	4.0	4.0	5.0	4.0	4.5	6.5	6.0	6.5	8.0	8.0	8.0
27	4.0	3.5	4.0	5.5	4.5	5.0	6.5	6.0	6.0	8.5	8.0	8.0
28	4.0	3.5	3.5	5.5	5.0	5.5	6.0	6.0	6.0	9.5	8.5	9.0
29	3.5	3.0	3.5	5.5	5.0	5.5	6.0	5.5	6.0	10.0	9.0	9.5
30	---	---	---	5.5	5.0	5.0	6.0	6.0	6.0	11.0	10.0	10.5
31	---	---	---	5.0	4.5	5.0	---	---	---	10.5	9.5	10.0
Month	4.0	2.0	3.2	5.5	2.5	4.1	7.0	4.0	5.5	11.0	5.5	7.8

12322000 KOOTENAI RIVER AT PORTHILL, ID—Continued

TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
		June			July			August			September	
1	9.5	9.0	9.5	12.0	11.5	11.5	15.5	15.0	15.5	16.5	16.0	16.5
2	9.0	8.5	8.5	11.5	11.0	11.5	15.5	15.0	15.0	16.0	15.5	16.0
3	9.0	8.5	9.0	12.5	11.5	12.0	15.0	14.5	15.0	16.0	15.5	15.5
4	9.0	8.5	8.5	12.5	11.5	12.0	15.0	14.5	14.5	16.0	15.0	15.5
5	9.5	9.0	9.0	12.0	10.5	11.0	14.5	14.0	14.5	15.5	15.0	15.5
6	10.0	9.0	9.5	12.0	11.0	11.5	15.0	14.5	15.0	15.5	15.0	15.0
7	9.0	8.5	8.5	12.0	11.5	12.0	16.0	15.0	15.5	15.5	15.0	15.5
8	8.5	8.0	8.0	12.5	12.0	12.0	16.0	16.0	16.0	15.5	15.0	15.5
9	9.0	8.5	9.0	13.5	12.5	13.0	16.0	16.0	16.0	15.5	15.0	15.5
10	9.0	8.5	9.0	14.0	13.5	14.0	16.0	15.5	16.0	15.5	15.5	15.5
11	9.0	8.5	9.0	14.0	13.5	14.0	16.0	15.5	16.0	16.0	15.5	16.0
12	10.0	9.0	9.5	14.5	14.0	14.5	16.5	15.5	16.0	16.0	15.5	16.0
13	10.5	10.0	10.0	15.0	14.5	15.0	16.0	15.5	16.0	16.0	15.5	15.5
14	10.0	9.5	10.0	15.0	14.5	15.0	16.0	15.5	15.5	15.5	15.0	15.0
15	9.5	9.5	9.5	15.0	14.0	14.5	16.5	15.5	16.0	15.0	14.0	14.5
16	10.0	9.5	10.0	15.0	14.0	14.5	17.0	16.0	16.5	14.5	14.0	14.5
17	10.5	10.0	10.0	15.0	14.0	14.5	17.0	16.5	16.5	14.5	14.5	14.5
18	10.0	9.5	10.0	14.5	14.0	14.0	17.0	16.0	16.5	15.0	14.5	15.0
19	10.0	9.5	9.5	15.0	14.5	14.5	16.5	16.0	16.5	15.5	15.0	15.5
20	10.0	9.5	9.5	15.0	14.0	15.0	17.0	16.5	16.5	15.5	15.5	15.5
21	10.5	10.0	10.0	14.5	14.0	14.0	17.0	16.5	17.0	15.5	15.5	15.5
22	11.0	10.0	10.5	14.0	14.0	14.0	17.0	16.5	16.5	15.5	15.5	15.5
23	11.5	11.0	11.0	14.5	14.0	14.0	16.5	16.0	16.5	15.5	15.0	15.5
24	12.0	11.5	11.5	14.5	13.5	14.0	16.5	15.5	16.0	15.5	15.0	15.5
25	12.5	12.0	12.0	14.0	14.0	14.0	16.0	15.5	16.0	15.0	15.0	15.0
26	12.5	11.5	12.0	14.5	13.5	14.0	16.0	15.5	16.0	15.0	14.5	15.0
27	12.0	11.5	11.5	14.5	14.0	14.5	15.5	15.0	15.0	15.0	14.5	15.0
28	11.5	11.0	11.0	15.0	14.0	14.5	15.0	15.0	15.0	15.0	14.5	15.0
29	12.0	11.5	11.5	16.0	14.5	15.5	15.5	15.0	15.5	15.5	15.0	15.0
30	12.5	12.0	12.0	16.0	15.5	15.5	16.5	15.5	16.0	15.5	15.0	15.0
31	---	---	---	16.0	15.5	15.5	17.0	16.5	16.5	---	---	---
Month	12.5	8.0	9.9	16.0	10.5	13.7	17.0	14.0	15.8	16.5	14.0	15.3

	Max	Min	Mean
Year	17.0	1.0	8.5