

Figure 13. Schematic diagram showing gaging stations in Kootenai River basin.

KOOTENAI RIVER BASIN

12305000 KOOTENAI RIVER AT LEONIA, ID

LOCATION.--Lat 48°37'04", long 116°02'47", (NAD27), in NW¹/₄NW¹/₄NW¹/₄ sec.20, T.33 N., R.34 W., principal Meridian, Lincoln County, Montana, Leonia quad., Hydrologic Unit 17010104, on right bank at Leonia, 450 ft east of Montana-Idaho State line, 0.5 mi upstream from Boulder Creek, and at mile 171.6.

DRAINAGE AREA.--11,740 mi², approximately.

PERIOD OF RECORD.--March 1928 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,790.25 ft above NGVD of 1929. Prior to Oct. 1, 1970, at datum 90 ft lower. Prior to Nov. 13, 1928, nonrecording gage on bridge 250 ft upstream at datum 90.41 ft lower.

REMARKS.--Records good except for estimated daily discharges, which are fair. Station equipment includes satellite telemetry. Diversions above station for irrigation of about 14,600 acres. Flow regulated by Libby Dam and power plant since Mar. 21, 1972.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge (1929-71), 123,000 ft³/s May 28, 1948, gage height, 33.40 ft; minimum, 996 ft³/s Dec. 9, 1936, minimum gage height, 7.56 ft, Dec. 10, 1929.

Maximum discharge since regulation began in 1972, 62,000 ft³/s Jan. 16, 1974, gage height, 24.15 ft; maximum gage height, 25.06 ft, Feb. 9, 1996; minimum daily, 2,270 ft Dec. 9, 1972.

EXTREMES OUTSIDE PERIOD OF RECORD.--Floods of June 1894 and 1916 reached stages of 34.6 and 31.6 ft, respectively, present datum, from information by Great Northern Railway.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 31,500 ft³/s Dec. 14, gage height, 19.72 ft; minimum daily, 4,850 ft³/s Jan. 14.

Discharge, cubic feet per second
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10400	6790	22700	12600	7170	5530	6740	8370	20100	25600	18400	11700
2	10500	13000	26400	11000	6990	5540	7010	8130	19300	25400	18400	11700
3	10500	20800	26600	9720	6880	5610	6960	8110	17100	25300	18400	11800
4	10500	20400	22600	8070	6830	5550	6870	8240	16800	25200	18400	11800
5	10300	20300	17300	7190	6970	5490	6790	8380	16500	21800	18300	11800
6	10300	17000	19400	6620	6860	5500	6710	8720	16400	19500	18300	10500
7	10300	15300	26800	6230	6680	5550	6740	9240	16200	19400	18300	9540
8	10300	16900	27000	5730	6510	5670	7170	9620	16900	19400	18400	9980
9	9880	20200	21100	5380	6360	5750	7530	9840	16800	19100	18400	10100
10	9000	20200	16500	5300	6280	5790	7540	9780	16500	21300	18400	10200
11	8350	20200	24100	5300	6220	5820	7490	9490	25300	24800	18500	10300
12	7340	20200	24300	5340	6190	5910	7710	9220	26200	24700	18500	10300
13	6570	16700	24500	5280	6210	5970	7520	9210	24300	24600	18600	9470
14	6030	13700	31200	e4850	6130	5940	7190	9470	25000	24500	18500	8800
15	5760	14400	30500	e4950	5890	5890	7150	9510	26600	24500	18500	8740
16	5750	17200	29700	5080	5750	5860	6990	10300	26500	24600	18500	8690
17	6230	17400	29400	5220	5720	5910	7290	10500	27200	24600	18500	8690
18	6390	15400	24500	5510	5720	5890	7470	9860	27400	24600	16800	8670
19	6310	13500	22400	7150	5760	5830	7390	15300	27000	24500	15900	8670
20	6260	11600	22400	9310	5750	5810	7310	19600	26800	24300	15900	8700
21	6390	10900	22600	9330	5640	5800	7330	21600	26400	24500	15900	8640
22	6510	10800	22400	9360	5590	5740	7490	24600	26300	20400	15900	8630
23	6520	10800	22100	9040	5580	5700	7860	26700	26000	18900	15900	8620
24	6410	10800	17900	8950	5570	5640	8550	29500	26000	18900	15900	8590
25	6300	11600	16600	8700	5590	5610	9610	29300	25500	19000	15600	8580
26	6220	11900	16500	8380	5570	5620	10100	29200	25600	18900	14100	8600
27	6170	11600	20100	8120	5550	5880	10700	29100	25500	18900	12400	8090
28	6110	11300	27100	7900	5530	6820	10100	22800	25600	18500	11900	7670
29	6080	11200	22600	7670	---	7060	9310	20700	25900	18400	11800	7710
30	6060	14000	17300	7430	---	6950	8780	17800	25800	18400	11800	7930
31	6070	---	14500	7280	---	6770	---	19800	---	18300	11800	---
TOTAL	235810	446090	709100	227990	171490	182400	233400	471990	693500	680800	514900	283210
MEAN	7607	14870	22870	7355	6125	5884	7780	15230	23120	21960	16610	9440
MAX	10500	20800	31200	12600	7170	7060	10700	29500	27400	25600	18600	11800
MIN	5750	6790	14500	4850	5530	5490	6710	8110	16200	18300	11800	7670
AC-FT	467700	884800	1406000	452200	340200	361800	462900	936200	1376000	1350000	1021000	561700

KOOTENAI RIVER BASIN
12305000 KOOTENAI RIVER AT LEONIA, ID--Continued

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	6511	5700	4765	4024	4338	4896	14480	38710	45100	22770	9926	7020
MAX	15540	11280	13700	11330	10630	10390	39940	61770	74280	47510	16910	16560
(WY)	1948	1934	1934	1934	1951	1934	1934	1956	1967	1954	1954	1959
MIN	3532	2748	2477	1922	1994	2693	4334	18630	20630	9819	6142	4744
(WY)	1937	1937	1945	1937	1936	1944	1945	1944	1941	1944	1941	1936

SUMMARY STATISTICS

^a WATER YEARS 1929 - 1971

ANNUAL MEAN	14050
HIGHEST ANNUAL MEAN	19240 1956
LOWEST ANNUAL MEAN	7416 1944
HIGHEST DAILY MEAN	122000 May 28 1948
LOWEST DAILY MEAN	1070 Dec 8 1936
ANNUAL SEVEN-DAY MINIMUM	1310 Jan 2 1937
ANNUAL RUNOFF (AC-FT)	10180000
10 PERCENT EXCEEDS	37400
50 PERCENT EXCEEDS	6710
90 PERCENT EXCEEDS	3230

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1972 - 2005, BY WATER YEAR (WY) (REGULATED, UNADJUSTED)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	13950	16080	16400	14820	12340	8715	10920	15220	17570	13360	11740	11070
MAX	31980	26400	28140	28610	24790	15160	25570	31670	39200	29740	20310	20960
(WY)	1973	1992	1991	1976	1990	1990	1996	1997	1972	2002	1976	1972
MIN	5042	5004	3423	3109	3724	4350	5588	8352	5374	4139	3956	5539
(WY)	2004	1972	1972	1972	1973	1973	2001	1977	1977	1988	1975	1994

SUMMARY STATISTICS

FOR 2004 CALENDAR YEAR

FOR 2005 WATER YEAR

^b WATER YEARS 1972 - 2005

ANNUAL TOTAL	4301420	4850680	
ANNUAL MEAN	11750	13290	13520
HIGHEST ANNUAL MEAN			20400 1996
LOWEST ANNUAL MEAN			7466 2001
HIGHEST DAILY MEAN	31200	Dec 14	31200 Dec 14 56200 Jan 16 1974
LOWEST DAILY MEAN	4510	Jan 19	4850 Jan 14 2270 Dec 9 1972
ANNUAL SEVEN-DAY MINIMUM	4530	Jan 19	5150 Jan 11 2420 Dec 7 1972
ANNUAL RUNOFF (AC-FT)	8532000		9621000 9795000
10 PERCENT EXCEEDS	18200		25100 24300
50 PERCENT EXCEEDS	11100		10300 11800
90 PERCENT EXCEEDS	4940		5750 5040

a Unregulated

b Regulated, unadjusted.

e Estimated

KOOTENAI RIVER BASIN
12306500 MOYIE RIVER AT EASTPORT, ID
(International gaging station)

LOCATION.--Lat 48°59'57", long 116°10'47" (revised), (NAD83), in NW¹/₄NE¹/₄SE¹/₄ sec.10, T.65 N., R.2 E., Boundary County, Eastport quad., Hydrologic Unit 17010105, Idaho Panhandle National Forests, on left bank at Eastport, 1,000 ft downstream from international boundary, and at mile 25.0.

DRAINAGE AREA.--570 mi², approximately.

PERIOD OF RECORD.--January to December 1915, March to December 1916, August 1929 to current year in reports of Geological Survey. Monthly discharge only for some periods, published in WSP 1736.

GAGE.--Water-stage recorder. Datum of gage is 2,620.06 ft above NGVD of 1929. January 1915 to December 1916 nonrecording gage at site 0.2 mi upstream at different datum.

REMARKS.--Records fair Oct. 1 to July 1 and poor July 2 to Sept. 30. Estimated daily discharges are poor. Station equipment includes satellite telemetry. No regulation or diversion above station. Downstream diversion dam installed for new bridge construction October 2004 to January 2005.

COOPERATION.--This station is one of the international gaging stations maintained by the United States under agreement with Canada.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge observed, 10,600 ft³/s June 19, 1916; maximum gage height, 10.55 ft, May 20, 1954; minimum discharge, 23 ft³/s Nov. 7, 1936, gage height, 3.20 ft and Oct. 4-9, 2001, gage height, 3.15 ft.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,900 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
May 17	1030	*2,680	*6.82	No peaks greater than base discharge.			
Minimum daily, 55 ft ³ /s Sept. 9.							

Discharge, cubic feet per second
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	178	127	174	e200	560	242	390	1470	1050	1370	235	74
2	172	158	168	e190	540	239	410	1380	1150	1280	222	72
3	166	227	162	e170	522	238	401	1330	1180	1240	207	70
4	162	176	163	e140	522	237	400	1350	1120	1120	197	66
5	155	165	159	e130	523	236	394	1460	1090	1050	188	64
6	151	162	154	e130	502	239	390	1680	1080	1010	178	61
7	149	172	150	e130	478	247	406	1970	1180	981	172	59
8	143	173	154	e120	446	266	527	2220	1620	908	e160	57
9	146	165	151	e120	e420	277	542	2420	1550	940	e160	55
10	153	163	162	e110	e400	296	536	2460	1500	923	e170	76
11	142	159	519	e110	e390	309	546	2360	1480	896	e190	157
12	136	149	482	e110	389	339	553	2250	1430	815	148	146
13	132	148	428	e100	391	346	545	2210	1330	742	141	150
14	127	151	419	e85	372	346	534	2220	1310	680	133	135
15	123	148	398	e60	e350	349	521	2180	1360	624	127	129
16	124	150	381	e65	e330	350	522	2470	1300	590	121	125
17	132	149	366	e110	e320	359	587	2560	1570	588	126	128
18	142	148	357	e300	e300	358	624	2330	1890	541	157	122
19	140	148	348	e600	e300	343	629	2350	1850	497	137	115
20	139	136	345	e1100	e290	345	650	2200	1690	463	126	109
21	157	133	325	e1100	e280	341	699	2120	1550	428	118	106
22	157	138	e300	e700	e270	331	834	2010	1400	408	112	104
23	153	131	e280	e600	e270	327	1030	1930	1270	389	112	102
24	148	141	e260	e650	e260	315	1260	1760	1170	365	119	100
25	144	264	e260	e650	e250	307	1590	1610	1090	344	112	97
26	139	268	e260	e650	e250	302	1880	1480	1020	329	104	93
27	136	228	e240	e650	247	328	2110	1360	969	309	98	90
28	134	e190	e240	e650	243	417	1950	1280	1150	292	92	86
29	134	e170	e240	e650	---	436	1770	1200	1440	277	89	88
30	136	186	e220	610	---	405	1610	1130	1400	261	e95	123
31	134	---	e220	585	---	386	---	1070	---	249	e85	---
TOTAL	4484	5023	8485	11575	10415	9856	24840	57820	40189	20909	4431	2959
MEAN	145	167	274	373	372	318	828	1865	1340	674	143	98.6
MAX	178	268	519	1100	560	436	2110	2560	1890	1370	235	157
MIN	123	127	150	60	243	236	390	1070	969	249	85	55
AC-FT	8890	9960	16830	22960	20660	19550	49270	114700	79710	41470	8790	5870
CFSM	0.25	0.29	0.48	0.66	0.65	0.56	1.45	3.27	2.35	1.18	0.25	0.17
IN.	0.29	0.33	0.55	0.76	0.68	0.64	1.62	3.77	2.62	1.36	0.29	0.19

KOOTENAI RIVER BASIN

12309500 KOOTENAI RIVER AT BONNERS FERRY, ID

LOCATION.--Lat 48°41'53", long 116°18'45" (revised), (NAD83), in NW¹/₄SE¹/₄NE¹/₄ sec.27, T.62 N., R.1 E., Boundary County, Bonners Ferry quad., Hydrologic Unit 17010104, on left bank 100 ft downstream from Highway 95 bridge at Bonners Ferry, and at mile 152.8.

DRAINAGE AREA.--12,690 mi², approximately.

PERIOD OF RECORD.--May to October 1904, October 1927 to current year (elevations only prior to March 1928 and October 1960 to current year). Gage heights collected in this vicinity since 1904 are contained in reports of U.S. Weather Bureau.

REVISED RECORDS.--WSP 1716: Maximum elevation. WDR ID-78-2: 1975(m), 1976(M).

GAGE.--Water-stage recorder. Datum of gage is 1,700.00 ft with respect to U.S. Geological Survey benchmark V-3-1929 at elevation 1,777.08 ft. Gage heights have been reduced to that datum. NGVD of 1929 is 0.02 ft higher, NGVD of 1988 is 3.826 ft higher.

May 1 to Oct. 15, 1904, nonrecording gage on railroad bridge 0.8 mi downstream at different datum. Oct. 1, 1927, to Nov. 30, 1929, nonrecording gage near left bank. Dec. 1, 1929, to June 12, 1933, nonrecording gages on old highway bridge 40 ft downstream.

Nonrecording gage near right bank on downstream side of highway bridge at Bonners Ferry June 13, 1933, to Sept. 30, 1960.

May 8, 1942, to present, recording gage on left bank downstream from highway bridge at present datum. Datum of gages Oct. 1, 1927, to Jan. 2, 1931, was about 0.23 ft lower.

REMARKS.--Elevations affected by backwater from Kootenay Lake. No drainage district dike failed during year. Flow regulated by Libby Dam since Mar. 21, 1972 (see sta 12305000). Add 1,700 ft to gage heights to obtain elevations.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation, 1,780.13 ft, May 29, 1961; minimum, 1,741.14 ft, Dec. 5, 1929, Dec. 29, 1930, datum then in use.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 1894 reached a stage of 1,777.2 ft, present datum.

EXTREMES FOR CURRENT YEAR.--Maximum elevation, 1,756.50 ft, June 18; minimum elevation, 1,745.20 ft, Mar. 25.

Gage height, feet
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	48.62	45.73	52.17	49.78	46.63	45.35	45.52	46.49	53.29	55.66	51.90	48.40
2	48.70	47.45	53.92	48.98	46.49	45.35	45.60	46.38	53.40	55.58	51.92	48.41
3	48.75	51.25	54.21	48.34	46.38	45.35	45.58	46.34	52.74	55.57	51.92	48.42
4	48.73	51.72	53.66	47.56	46.29	45.32	45.56	46.39	52.52	55.47	51.88	48.46
5	48.62	51.70	51.85	46.98	46.30	45.28	45.53	46.53	52.32	54.93	51.82	48.56
6	48.50	51.07	50.95	46.67	46.31	45.28	45.50	46.73	52.26	53.73	51.74	48.27
7	48.55	49.96	53.71	46.55	46.24	45.28	45.50	47.16	52.19	53.53	51.69	47.53
8	48.53	50.10	54.25	46.30	46.14	45.31	45.62	47.61	52.52	53.40	51.68	47.62
9	48.36	51.59	53.14	46.10	46.06	45.33	45.74	47.99	52.60	53.26	51.68	47.75
10	48.02	51.89	51.35	46.03	46.02	45.34	45.74	48.14	52.42	53.52	51.69	47.87
11	47.71	51.97	52.64	45.95	45.96	45.35	45.72	48.00	53.95	54.73	51.66	48.01
12	47.33	52.02	54.41	45.96	45.90	45.39	45.72	47.79	55.20	54.82	51.63	48.10
13	46.95	51.35	53.54	45.97	45.90	45.39	45.79	47.76	55.12	54.70	51.63	47.91
14	46.69	49.89	55.61	45.81	45.87	45.37	45.64	47.99	54.73	54.64	51.57	47.46
15	46.52	49.41	55.90	e45.54	45.77	45.36	45.62	48.10	55.30	54.60	51.52	47.45
16	46.42	50.82	55.66	e45.51	45.67	45.35	45.59	48.62	55.46	54.61	51.54	47.50
17	46.51	51.11	55.52	e45.52	45.62	45.37	45.66	49.21	55.72	54.63	51.52	47.48
18	46.47	50.74	54.75	45.88	45.57	45.36	45.74	48.96	56.41	54.55	51.23	47.46
19	46.41	49.89	53.46	46.22	45.54	45.33	45.73	49.89	56.37	54.48	50.60	47.44
20	46.34	49.11	53.32	47.20	45.54	45.31	45.70	52.49	56.28	54.39	50.53	47.50
21	46.32	48.49	53.32	47.44	45.48	45.31	45.71	52.92	56.12	54.38	50.49	47.56
22	46.28	48.44	53.26	47.53	45.46	45.29	45.79	54.14	55.92	53.71	50.47	47.55
23	46.26	48.42	53.16	47.55	45.44	45.27	45.92	54.61	55.89	52.70	50.47	47.55
24	46.16	48.43	52.32	47.60	45.44	45.25	46.17	55.62	55.77	52.57	50.54	47.50
25	46.09	48.79	51.22	47.57	45.43	45.23	46.70	55.76	55.69	52.56	50.47	47.46
26	46.01	49.11	51.11	47.43	45.40	45.23	47.13	55.74	55.54	52.46	50.00	47.46
27	45.95	48.95	51.42	47.33	45.38	45.31	47.65	55.69	55.45	52.40	49.15	47.38
28	45.88	48.81	54.08	47.22	45.36	45.59	47.53	54.74	55.52	52.24	48.58	47.13
29	45.81	48.69	53.80	47.02	---	45.66	47.06	53.51	55.69	52.05	48.47	47.08
30	45.75	48.99	52.10	46.86	---	45.61	46.72	52.61	55.72	51.98	48.46	47.25
31	45.74	---	50.69	46.73	---	45.54	---	52.91	---	51.94	48.44	---
MEAN	47.06	49.86	53.24	46.88	45.84	45.36	45.97	50.22	54.60	53.86	50.87	47.72
MAX	48.75	52.02	55.90	49.78	46.63	45.66	47.65	55.76	56.41	55.66	51.92	48.56
MIN	45.74	45.73	50.69	45.51	45.36	45.23	45.50	46.34	52.19	51.94	48.44	47.08

CAL YR 2004 MEAN 48.60 MAX 55.90 MIN 45.10
WTR YR 2005 MEAN 49.32 MAX 56.41 MIN 45.23

e Estimated

KOOTENAI RIVER BASIN

12321500 BOUNDARY CREEK NEAR PORTHILL, ID
(International gaging station)

LOCATION.--Lat 48°59'50", long 116°34'05", (NAD27), in SW¹/₄NW¹/₄SW¹/₄ sec.11, T.65 N., R.2 W., Boundary County, Smith Falls quad., Hydrologic Unit 17010104, on left bank near mouth of canyon, 0.2 mi south of international boundary, 3 mi west of Porthill, and at mile 3.5.

DRAINAGE AREA.--97 mi², approximately.

PERIOD OF RECORD.--May 1928 to current year (no winter records 1929, 1930).

GAGE.--Water-stage recorder. Elevation of gage is 1,770 ft above NGVD of 1929, from topographic map. Prior to Apr. 24, 1929, nonrecording gage at site 140 ft upstream at different datum. Prior to Jan. 1, 1998, at datum 10.00 ft lower.

REMARKS.--Records fair except for estimated daily discharges, which are poor. Diversion upstream from station was used during the year.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,780 ft³/s June 1, 1997 (from rating curve extended above 2,000 ft³/s), gage height, 5.88 ft; minimum discharge, 5.0 ft³/s occurred sometime between Nov. 10 and Dec. 3, 1936.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,300 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
May 16	0545	*1,830	*13.81	No other peak greater than base discharge.			

Minimum daily, 23 ft³/s Sept. 8-9.

Discharge, cubic feet per second
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	51	66	91	e70	144	79	103	420	349	195	50	28
2	49	92	87	e60	138	78	107	431	332	177	49	27
3	48	101	83	e60	133	77	102	458	311	166	47	26
4	46	76	82	e55	134	77	101	496	295	151	45	25
5	45	78	82	e55	132	78	99	564	271	140	44	25
6	45	78	78	e60	123	81	97	755	271	187	42	24
7	46	85	76	e70	102	85	103	909	275	143	40	24
8	43	89	76	e70	e90	93	178	940	296	121	39	23
9	61	82	77	e65	e90	99	148	895	249	166	38	23
10	78	79	83	e60	e90	105	138	893	227	200	42	31
11	61	77	e300	e55	e90	110	144	782	237	180	69	53
12	55	64	189	e55	e90	123	143	745	252	149	51	48
13	51	67	161	e46	e95	120	139	818	217	132	49	51
14	49	79	164	e34	e95	116	135	825	219	120	42	39
15	49	76	149	e28	e85	115	132	829	274	112	39	33
16	67	75	136	e34	e85	113	152	1290	234	107	36	32
17	78	73	129	e50	e90	112	271	893	647	101	37	27
18	82	72	124	e95	e80	108	227	674	540	95	44	36
19	81	71	122	e190	e90	104	219	922	440	92	38	32
20	85	45	117	e220	e90	104	237	722	357	88	34	29
21	111	70	97	186	e90	105	286	615	316	83	32	27
22	102	69	91	163	e85	97	374	625	286	84	31	27
23	90	64	e85	182	e85	99	469	550	265	92	33	26
24	81	68	e80	192	e80	94	674	466	240	79	44	25
25	77	202	e80	177	81	93	811	432	232	74	36	25
26	73	138	e80	167	80	93	913	421	212	70	31	25
27	70	110	e80	165	79	101	898	419	220	66	29	24
28	69	73	e80	162	78	136	630	430	246	63	28	24
29	71	102	e80	158	---	123	485	423	230	60	28	24
30	79	93	e75	152	---	111	433	385	219	56	36	34
31	76	---	e75	149	---	102	---	363	---	53	31	---
TOTAL	2069	2514	3309	3285	2724	3131	8948	20390	8759	3602	1234	917
MEAN	66.7	83.8	107	106	97.3	101	298	658	292	116	39.8	30.6
MAX	111	202	300	220	144	136	913	1290	647	200	69	53
MIN	43	45	75	28	78	77	97	363	212	53	28	23
AC-FT	4100	4990	6560	6520	5400	6210	17750	40440	17370	7140	2450	1820
CFSM	0.69	0.86	1.10	1.09	1.00	1.04	3.07	6.78	3.01	1.20	0.41	0.32
IN.	0.79	0.96	1.27	1.26	1.04	1.20	3.43	7.82	3.36	1.38	0.47	0.35

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1928 - 2005, BY WATER YEAR (WY)

	MEAN	MAX	(WY)	MIN	(WY)
MEAN	58.5	82.5	67.2	52.5	55.2
MAX	337	290	275	253	206
(WY)	1948	2000	1942	1974	1951
MIN	14.2	14.1	16.4	14.7	13.0
(WY)	1937	1937	1931	1937	1937

SUMMARY STATISTICS

	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1928 - 2005	
ANNUAL TOTAL	67618		60882			
ANNUAL MEAN	185		167		200	
HIGHEST ANNUAL MEAN					357	
LOWEST ANNUAL MEAN					83.0	
HIGHEST DAILY MEAN	1240	May 3	1290	May 16	3100	Apr 29 1980
LOWEST DAILY MEAN	12	Jan 5	23	Sep 8	6.0	Nov 30 1952
ANNUAL SEVEN-DAY MINIMUM	20	Jan 2	24	Sep 3	8.0	Nov 25 1952
ANNUAL RUNOFF (AC-FT)	134100		120800		145200	
ANNUAL RUNOFF (CFSM)	1.90		1.72		2.07	
ANNUAL RUNOFF (INCHES)	25.93		23.35		28.08	
10 PERCENT EXCEEDS	558		426		635	
50 PERCENT EXCEEDS	78		90		60	
90 PERCENT EXCEEDS	31		35		24	

e Estimated

KOOTENAI RIVER BASIN

12322000 KOOTENAI RIVER AT PORTHILL, ID
(International gaging station)

LOCATION.--Lat 48°59'47", long 116°30'27", (NAD83), in SE¹/₄NE¹/₄SE¹/₄ sec.7, T.65 N., R.1 W., Boundary County, Smith Falls quad., Hydrologic Unit 17010104, on right bank 1,200 ft south of international boundary at Porthill, and at mile 105.8.

DRAINAGE AREA.--13,700 mi², approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May to July 1904 and October 1927 to March 1928 (elevations only), and 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.

REMARKS.--Records fair except for estimated daily discharges, which are poor. Daily discharge represents entire flow passing international boundary, and is computed by adding tributary inflow for intervening area to flow at station near Copeland and correcting for channel storage between stations near Copeland and at Porthill. From October 1989 to December 2003 the USGS Branch model was used for this computation. Beginning January 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. No drainage dike failed during year. Flow regulated by Libby Dam started on Mar. 21, 1972. Station equipment includes satellite telemetry.

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

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge (1929-71), 125,000 ft³/s June 1, 1948; maximum elevation, 1,767.61 ft, June 7, 1961; minimum daily discharge, 1,380 ft³/s Feb. 8, 1936; minimum elevation, 1,738.21 ft, Apr. 3, 1944.

Maximum discharge since regulation began in 1972, 60,200 ft³/s June 1, 1972, maximum elevation, 1,758.84 ft, June 2, 1972; minimum daily, 2,610 ft³/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, 33,400 ft³/s May 25; maximum elevation, 1,750.31 ft, June 19; minimum daily, 5,310 ft³/s Jan. 15; minimum elevation, 1,739.74 ft, Apr. 16.

Discharge, cubic feet per second
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12200	6690	19900	15700	8990	6100	8200	11300	23400	28000	19800	e13000
2	12000	9930	25200	13500	8760	6210	8230	11100	23400	27500	e19700	e12900
3	12400	18400	26400	11800	8600	6290	8660	11500	21200	27400	19700	e13000
4	12400	21200	25600	9460	8430	6370	8370	11400	20700	27000	e19800	e13100
5	12500	21200	21500	8160	8070	6230	8100	11700	20300	26500	e19800	e13100
6	9920	20100	18100	7190	8180	6160	8120	12200	19800	22900	e19800	e12300
7	10100	16900	24400	6990	8160	6100	8110	13700	19500	22000	e19800	e10100
8	10200	16500	26800	6520	7940	6380	8240	14600	20300	22000	e19600	e10700
9	9810	19800	24800	e5940	7450	6420	9130	15800	20400	22100	e19700	e10900
10	9260	21000	20300	5830	7510	6480	9040	15900	21000	22100	19800	e11100
11	8520	21100	21700	e5800	7550	6490	8990	15300	23800	25500	e20000	e11300
12	7100	21000	27300	e5860	7380	7380	8950	14500	29100	26800	e20000	e11400
13	6660	20000	24500	5780	7420	7190	9350	14700	28300	26800	20000	e10800
14	6620	16300	29500	e5650	7000	6950	8860	15200	26800	26800	e20000	e9560
15	6080	14300	30800	e5310	6980	6760	8350	14800	28100	26000	e20000	e9440
16	6340	17300	29900	5510	6480	6820	8410	16500	28900	26200	20100	e9380
17	7160	18500	29500	5690	6350	7080	8640	17100	30100	26100	19700	e9330
18	7110	18000	27900	6120	6790	6980	9120	16500	31400	25900	18700	e9280
19	6690	15500	24400	7590	6780	6960	9030	16800	31000	26100	e17800	e9240
20	6840	13700	23900	10300	6730	6880	8800	25000	29900	26000	17700	e9330
21	6880	12000	23800	11200	6380	6980	8450	25800	29600	25700	17300	e9250
22	7070	11600	23600	e11200	6260	6920	8830	29200	29300	24700	17100	e9220
23	6940	11800	23300	11100	6160	6770	9880	30200	28700	21600	17200	e9300
24	7350	11700	22200	10900	6130	6630	10500	33200	28100	20900	e17200	e9240
25	7030	12800	18900	10800	6290	6400	12600	33400	27700	e20800	16900	e9180
26	6960	13600	18200	10400	6220	6460	13900	33200	27600	20700	16000	e9260
27	6900	13200	18600	9900	6170	6950	15400	33000	28000	20700	14700	e8980
28	6640	13000	25000	e9750	6190	8220	15400	30600	27900	e20800	13500	7900
29	6440	12400	25900	e9470	---	8740	14200	26000	28100	20500	13300	7810
30	6410	12500	21600	9110	---	8670	12400	23400	28100	20400	e13000	e8350
31	6630	---	17700	8940	---	8490	---	22700	---	19900	e13100	---
TOTAL	255160	472020	741200	267470	201350	213460	294260	616300	780500	746400	560800	307750
MEAN	8231	15730	23910	8628	7191	6886	9809	19880	26020	24080	18090	10260
MAX	12500	21200	30800	15700	8990	8740	15400	33400	31400	28000	20100	13100
MIN	6080	6690	17700	5310	6130	6100	8100	11100	19500	19900	13000	7810
AC-FT	506100	936300	1470000	530500	399400	423400	583700	1222000	1548000	1480000	1112000	610400

KOOTENAI RIVER BASIN

12322000 KOOTENAI RIVER AT PORTHILL, ID--Continued
(International gaging station)

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, 3220 tons Nov. 25, 1986; minimum, 11 tons July 25-26, Aug. 5, 23, 1988.

EXTREMES FOR CURRENT PERIOD.--

WATER TEMPERATURE: Maximum, 17.7 °C Aug. 8; minimum, 0.0 °C Jan. 20.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	Instan- taneous dis- charge, cfs (00061)	Specif. conduc- tance, uS/cm 25 degC (00095)	pH, water, unfltrd std units (00400)	Temper- ature, air, deg C (00020)	Temper- ature, water, deg C (00010)	Turbdty white light, 90+/-30 corrctd NTRU (63676)	Dis- solved oxygen, of sat- uration mg/L (00300)	E coli, modif. m-TEC, water, col/ 100 mL (00301)	Ammonia water, fltrd, mg/L as N (90902)	Ammonia + org-N, water, unfltrd mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00625)	
(00631)													
APR													
14...	1000	7980	171	7.9	12.0	6.7	<2.0	11.4	100	<1	<.010	.21	.042
MAY													
10...	1015	14600	115	7.6	14.0	9.4	<2.0	10.6	99	35	E.005	.12	.053
JUN													
07...	1000	18300	209	8.1	9.0	11.4	<2.0	10.0	99	S2	<.010	E.09	.056
JUL													
12...	1020	24500	214	8.2	16.0	12.5	2.4	10.3	103	S10	<.010	E.07	.113
AUG													
03...	0830	19500	225	8.2	13.0	16.0	<2.0	9.6	103	S4	<.010	E.08	.079
SEP													
14...	1015	7790	230	8.2	11.5	13.5	<2.0	9.7	99	24	<.010	E.10	.076

Date	Ortho- phos- phate, water, fltrd, mg/L as P (00671)	Phos- phorus, water, unfltrd mg/L (00665)	Hard- ness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnes- ium, water, fltrd, mg/L (00925)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent mg/L (00932)	Potas- sium, water, fltrd, mg/L (00935)	Bicar- bonate, fixed end pt, field, mg/L (00935)	Carbon- ate, wat unf fixed end pt, field, mg/L (00440)	ANC, wat unf fixed end pt, field, mg/L as CaCO3 (00445)	Sulfate water, fltrd, mg/L (00410)	Chlor- ide, water, fltrd, mg/L (00945)
(00940)													
APR													
14...	<.006	.007	--	--	--	--	--	--	--	--	--	--	--
MAY													
10...	<.006	.009	--	--	--	--	--	--	--	--	--	--	--
JUN													
07...	<.006	.007	--	--	--	--	--	--	--	--	--	--	--
JUL													
12...	<.006	.009	--	--	--	--	--	--	--	--	--	--	--
AUG													
03...	<.006	.007	--	--	--	--	--	--	--	--	--	--	--
SEP													
14...	<.006	.005	120	33.5	8.05	2.56	5	.46	120	.0	99	16.7	1.84

Date	Fluor- ide, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sus- pended sedi- ment concent- ration mg/L (80154)
APR			
14...	--	--	3
MAY			
10...	--	--	5
JUN			
07...	--	--	3
JUL			
12...	--	--	4
AUG			
03...	--	--	2
SEP			
14...	E.1	4.5	1

< Less than.
E Estimated.
S Most probable value.

KOOTENAI RIVER BASIN

12322500 KOOTENAY LAKE AT KUSKONOOK, BRITISH COLUMBIA
(International gaging station)

LOCATION.--Lat 49°17'56", long 116°39'31", on east shore of Kootenay Lake at Kuskonook, British Columbia, and at mile 74.5.

PERIOD OF RECORD.--May 1936 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,735.20 ft above NGVD of 1929, which is the same at Porthill as datum of 1929, supplementary adjustment of 1947, and 0.03 ft higher than datum in use at station Kootenai River at Porthill. Prior to April 25, 1938, nonrecording gages at same site at datum 3.00 ft higher. Add 1,700 ft to published gage heights to obtain sea level.

REMARKS.--Elevation is subject to partial regulation by Corra Linn Dam on Kootenay River below outlet. Major inflow is from Kootenai River (see sta 12322000). Diversions for irrigation of about 14,600 acres above Kootenay Lake.

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

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation 1,762.42 ft, June 9, 1961; minimum daily 1,737.86 ft, April 5, 6, 1944.

EXTREMES FOR CURRENT YEAR.--Maximum elevation, 1,747.80 ft, June 23; minimum daily, 1,739.08 ft, Apr. 20.

DAY	Gage height, feet											
	WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	45.32	42.89	44.78	45.32	43.92	42.20	39.61	40.86	46.64	47.67	45.27	43.67
2	45.40	42.84	44.75	45.34	43.81	42.14	39.59	40.90	46.86	47.70	45.25	43.70
3	45.43	42.91	44.77	45.26	43.68	42.04	39.52	40.93	46.96	47.67	45.19	43.76
4	45.39	43.05	44.81	45.10	43.60	41.91	39.46	40.97	46.97	47.62	45.09	43.88
5	45.35	43.19	44.76	44.88	43.60	41.75	39.39	41.05	46.92	47.54	44.99	43.97
6	45.30	43.37	44.65	44.70	43.60	41.62	39.33	41.16	46.93	47.42	44.86	44.06
7	45.28	43.51	44.52	44.60	43.59	41.54	39.26	41.32	46.89	47.33	44.75	44.09
8	45.26	43.62	44.52	44.44	43.52	41.48	39.23	41.56	46.86	47.20	44.68	44.12
9	45.22	43.72	44.54	44.37	43.52	41.43	39.22	41.80	46.84	47.03	44.62	44.16
10	45.20	43.89	44.63	44.32	43.44	41.39	39.19	42.03	46.78	46.91	44.57	44.24
11	45.13	44.04	44.81	44.24	43.36	41.34	39.17	42.22	46.74	46.81	44.48	44.36
12	45.09	44.20	44.98	44.21	43.29	41.27	39.17	42.36	46.75	46.69	44.38	44.43
13	44.97	44.35	45.11	44.20	43.27	41.16	39.16	42.54	46.81	46.64	44.31	44.51
14	44.86	44.44	45.19	44.01	43.26	41.06	39.15	42.75	46.82	46.58	44.24	44.59
15	44.73	44.49	45.31	43.90	43.18	41.03	39.12	42.96	46.82	46.57	44.16	44.65
16	44.63	44.53	45.43	43.82	43.07	41.02	39.10	43.26	46.83	46.57	44.11	44.71
17	44.50	44.67	45.51	43.73	42.91	40.96	39.10	43.61	46.92	46.49	44.11	44.72
18	44.40	44.78	45.51	43.68	42.73	40.79	39.10	43.84	47.28	46.42	44.16	44.73
19	44.30	44.87	45.44	43.68	42.57	40.64	39.08	43.98	47.54	46.36	44.18	44.77
20	44.21	44.90	45.36	43.76	42.54	40.55	39.08	44.17	47.64	46.29	44.17	44.84
21	44.10	44.88	45.25	43.93	42.53	40.44	39.09	44.38	47.68	46.24	44.13	44.90
22	43.99	44.86	45.25	44.08	42.52	40.35	39.13	44.60	47.74	46.19	44.13	44.88
23	43.89	44.84	45.26	44.24	42.49	40.23	39.22	44.82	47.80	46.19	44.17	44.83
24	43.79	44.82	45.25	44.40	42.51	40.10	39.38	45.05	47.76	46.11	44.15	44.83
25	43.70	44.90	45.22	44.43	42.44	40.00	39.58	45.27	47.72	45.99	44.12	44.83
26	43.60	44.93	45.20	44.46	42.39	39.92	39.85	45.42	47.63	45.89	44.08	44.84
27	43.51	44.94	45.15	44.48	42.32	39.86	40.16	45.58	47.55	45.76	43.96	44.86
28	43.39	44.95	45.14	44.39	42.25	39.81	40.47	45.75	47.54	45.60	43.84	44.83
29	43.26	44.92	45.20	44.26	---	39.80	40.67	45.90	47.55	45.46	43.75	44.83
30	43.13	44.90	45.32	44.17	---	39.74	40.79	46.09	47.61	45.38	43.69	44.97
31	43.03	---	45.36	44.06	---	39.67	---	46.34	---	45.31	43.68	---
MEAN	44.50	44.24	45.06	44.34	43.07	40.88	39.45	43.34	47.18	46.57	44.36	44.49
MAX	45.43	44.95	45.51	45.34	43.92	42.20	40.79	46.34	47.80	47.70	45.27	44.97
MIN	43.03	42.84	44.52	43.68	42.25	39.67	39.08	40.86	46.64	45.31	43.68	43.67
CAL YR 2004	MEAN 43.54	MAX 46.61	MIN 39.46									
WTR YR 2005	MEAN 43.96	MAX 47.80	MIN 39.08									

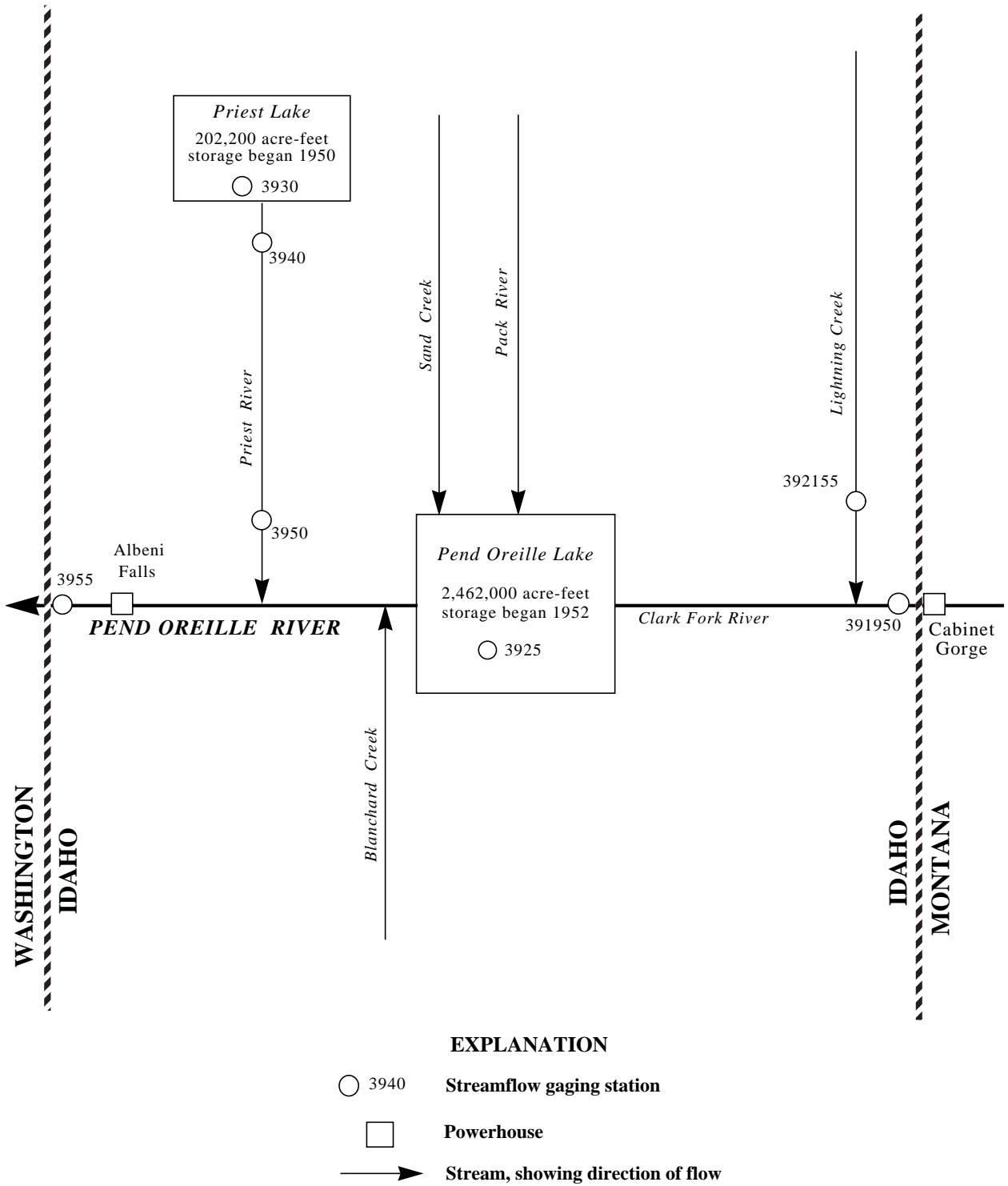


Figure 14. Schematic diagram showing gaging stations in Pend Oreille River Basin.

PEND OREILLE RIVER BASIN

12391950 CLARK FORK BELOW CABINET GORGE DAM, NEAR CABINET, ID

LOCATION.--Lat 48°05'17", long 116°04'22", (NAD83), in SW¹/₄SW¹/₄NW¹/₄ sec.27, T.55 N., R.3 E., Cabinet Quad., Bonner County, Hydrologic Unit 17010213, on right bank 0.7 mi downstream from Cabinet Gorge Dam at cableway, 2.1 mi downstream from Blue Creek, 6.1 mi southeast of Clark Fork, and at mile 149.2.

DRAINAGE AREA.--22,067 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1995 to current year.

GAGE.--Water-stage recorder. Datum of gage is 2,060.00 ft above NGVD of 1929 (levels by Washington Water Power Co). See WSP 1933 for history of changes made prior to Sept. 30, 1952. Water-stage recorder at site 0.4 mi upstream at datum 60.00 ft lower Oct. 1, 1952, to Sept. 30, 1964, and at present datum Oct. 1, 1964, to May 21, 1973.

REMARKS.--No estimated daily discharges. Records good. Flow regulated by Hungry Horse Reservoir, Flathead Lake, and Noxon Rapids Reservoir. Extreme diurnal fluctuation caused by powerplant at Cabinet Gorge Dam. Diversions above station for irrigation of about 354,000 acres.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 134,000 ft³/s May 18, 1997, gage height, 29.14 ft; minimum daily, 3,330 ft³/s Feb. 8, 1998.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 79,300 ft³/s June 7, gage height, 21.78 ft; minimum daily, 5,070 ft³/s Sept. 16.

Discharge, cubic feet per second
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15900	15400	12700	13900	14100	10700	7890	29500	32900	33900	14300	8420
2	11600	14300	17200	12100	14400	9530	10600	30000	32400	31200	11800	10400
3	11800	12400	15600	16200	17100	9160	11300	27600	39300	32200	14700	5650
4	16600	15800	9560	18000	10300	12200	14800	26800	41300	31400	14300	5970
5	17500	12000	11400	16800	10700	5170	12000	28300	46500	29900	14600	8860
6	11800	5430	14400	17900	10900	6200	8050	27800	59200	29000	11200	7370
7	12800	5710	14900	10400	15900	8000	11600	20600	66500	25900	10500	5420
8	12100	12000	16000	7830	15400	8330	10900	22600	72100	23100	12400	5440
9	6120	13500	15000	7480	15000	7870	9420	31600	68300	18200	10900	5240
10	6110	11600	11400	11900	10500	7820	6940	34600	63300	18300	10500	5540
11	13400	11700	12700	11700	12400	7540	11000	36200	55500	21600	9870	5120
12	13100	11300	14000	5740	6660	5150	14700	37800	53800	21500	9170	5180
13	13100	5210	16600	11900	9100	5710	13700	41800	52000	19500	7930	5220
14	11800	8970	19300	13100	13200	10000	14900	46600	52500	23900	9620	6290
15	12100	13000	20900	9340	14400	8510	16200	44400	52100	23400	14400	5140
16	5780	12200	21700	10300	12200	11200	7740	44700	48800	12200	11100	5070
17	7610	11300	21100	12300	14000	6080	8080	45500	40400	11900	6220	5430
18	14000	11600	13600	9510	9770	12000	15300	48600	43500	17400	8050	5680
19	13100	12000	13900	13200	6470	6480	14100	53200	43400	18300	10400	5680
20	12800	5680	19300	16400	11200	6680	18900	53100	46600	12100	9030	5720
21	14100	9600	19800	20400	12100	9290	19200	53200	45800	16100	11000	5970
22	14900	14000	21500	10700	12400	11200	15300	53300	39200	12000	13900	5920
23	8640	12800	18800	14900	13700	8660	18000	54500	40400	13500	12500	7060
24	11000	10900	15600	15900	11900	7300	16000	52800	40900	11800	10100	5430
25	17100	6330	11400	15200	10500	7140	24000	48100	34800	11200	11200	6710
26	11700	7650	12500	16300	9720	6260	25800	42700	33200	13400	10600	7030
27	14300	12100	14900	18300	13500	5650	27400	39100	33600	15600	6330	7630
28	12900	10700	19800	17500	17400	6880	31900	36200	30500	17400	10200	8180
29	12000	13900	17800	5550	---	9180	30800	33400	33700	12900	6860	7070
30	7890	12400	15200	13900	---	7690	28800	31900	33800	14700	7550	9460
31	11600	---	15500	16900	---	7940	---	31600	---	12500	9930	---
TOTAL	375250	331480	494060	411550	344920	251520	475320	1208100	1376300	606000	331160	193300
MEAN	12100	11050	15940	13280	12320	8114	15840	38970	45880	19550	10680	6443
MAX	17500	15800	21700	20400	17400	12200	31900	54500	72100	33900	14700	10400
MIN	5780	5210	9560	5550	6470	5150	6940	20600	30500	11200	6220	5070
AC-FT	744300	657500	980000	816300	684100	498900	942800	2396000	2730000	1202000	656900	383400
CAL YR 2004	TOTAL	6256610	MEAN	17090	MAX	52400	MIN	5180	AC-FT	12410000		
WTR YR 2005	TOTAL	6398960	MEAN	17530	MAX	72100	MIN	5070	AC-FT	12690000		

PEND OREILLE RIVER BASIN

12391950 CLARK FORK BELOW CABINET GORGE DAM, NEAR CABINET, ID--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--May 1984 to October 2002, July to September 2003, April to September 2004, April to September 2005.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: May to July 1998, April to September 2000, November 2001 to October 2002, July to September 2003, April to September 2004, October 2004 to March 2005.

INSTRUMENTATION.--Temperature recording data logger.

REMARKS.--Water-quality data previously published as Clark Fork at Whitehorse Rapids near Cabinet, ID (sta 12392000). Data missing due to lost equipment.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: Maximum, 25.4 °C Aug. 14, 2004; minimum, 0.5°C Jan. 17, 2005.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum, 12.9 °C Oct. 27; minimum, 0.5°C Jan. 17.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, uS/cm 25 degC (00095)	pH, water, unfltrd field, std units (00400)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Turbidity white light, det ang 90+/-30 corrctd NTRU (63676)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	E coli, modif. m-TEC, col/100 mL (90902)	Ammonia, fltrd, mg/L as N (00608)	Ammonia + org-N, unfltrd, mg/L as N (00625)	Nitrite + nitrate, fltrd, mg/L as N (00631)	
APR	13...	1530	6560	181	8.1	10.0	6.3	<2.0	11.6	102	<1	<.010	.32	E.015
MAY	09...	1600	35700	160	7.8	17.0	10.6	<2.0	10.0	98	S2	E.009	.11	.020
JUN	06...	1540	62200	151	8.0	15.0	13.6	<2.0	11.0	115	S1	E.006	E.09	.031
JUL	11...	1530	27300	172	8.1	23.5	17.9	<2.0	8.3	95	S2	<.010	E.09	E.010
AUG	02...	1030	5720	185	8.2	21.0	20.6	<2.0	8.0	96	S1	<.010	.12	E.015
SEP	13...	0950	5090	188	8.3	12.0	16.5	2.9	8.5	94	S1	E.009	.21	.033

Date	Ortho-phosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd, mg/L (00665)	Hardness, water, mg/L as CaCO3 (00900)	Calcium, water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Sodium, water, fltrd, mg/L (00930)	Sulfate, water, fltrd, percent (00932)	Potassium, water, fltrd, mg/L (00935)	Bicarbonate, water, unfltrd, end pt, mg/L (00440)	Carbonate, water, unfltrd, end pt, mg/L (00445)	ANC, fixed end pt, field, mg/L as CaCO3 (00410)	Sulfate, water, fltrd, mg/L (00945)	Chloride, water, fltrd, mg/L (00940)	
APR	13...	<.006	.009	--	--	--	--	--	--	--	--	--	--	
MAY	09...	<.006	.011	--	--	--	--	--	--	--	--	--	--	
JUN	06...	E.003	.014	--	--	--	--	--	--	--	--	--	--	
JUL	11...	<.006	.011	--	--	--	--	--	--	--	--	--	--	
AUG	02...	<.006	.012	--	--	--	--	--	--	--	--	--	--	
SEP	13...	.006	.039	93	26.6	6.42	2.60	6	.75	111	.0	91	5.4	1.00

Date	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Suspended sediment concentration, mg/L (80154)	
APR	13...	--	--	1
MAY	09...	--	--	6
JUN	06...	--	--	3
JUL	11...	--	--	2
AUG	02...	--	--	1
SEP	13...	E.1	7.6	2

< Less than.
 E Estimated.
 S Most probable value.

PEND OREILLE RIVER BASIN

12391950 CLARK FORK BELOW CABINET GORGE DAM, NEAR CABINET, ID--Continued

Temperature, water, degrees Celsius
 WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	---	---	12.4	10.6	8.7	5.3	7.2	2.6	6.7	1.5	8.1	2.9
2	---	---	11.8	10.3	8.6	5.3	7.3	2.6	7.0	1.3	8.2	2.8
3	---	---	11.5	9.8	8.4	5.3	6.8	2.1	6.5	1.2	8.2	2.8
4	---	---	11.7	9.5	8.7	5.3	6.5	1.5	6.5	1.3	7.9	2.8
5	---	---	11.7	9.3	8.9	5.0	6.8	1.3	6.5	1.2	9.3	6.7
6	---	---	11.0	10.1	8.6	4.8	7.8	1.3	6.4	1.2	9.2	3.4
7	---	---	10.9	9.9	8.6	4.7	7.0	1.5	5.9	1.2	8.1	3.2
8	---	---	11.5	8.9	8.4	4.5	7.5	2.0	6.4	1.3	9.5	3.6
9	---	---	10.6	8.7	8.7	4.8	7.8	1.5	6.5	1.3	9.5	3.6
10	---	---	11.2	8.4	7.9	4.3	7.5	1.2	6.5	1.5	9.2	3.7
11	---	---	10.6	8.1	8.4	4.2	7.0	1.3	6.4	1.6	7.8	3.6
12	---	---	10.9	7.8	7.8	4.6	7.2	1.8	6.4	2.1	10.9	5.7
13	---	---	9.5	8.7	7.5	4.0	7.3	1.5	6.8	2.0	10.4	3.8
14	---	---	10.6	7.3	7.2	3.1	6.5	1.2	6.5	2.1	7.3	3.7
15	---	---	10.1	7.5	7.0	3.1	6.8	1.2	6.4	2.3	7.3	3.7
16	---	---	9.8	7.3	6.8	3.1	7.5	0.8	6.7	2.4	7.0	3.9
17	---	---	9.8	7.3	7.6	3.4	6.7	0.5	6.5	2.3	7.3	3.9
18	---	---	9.9	7.3	7.2	3.2	6.8	0.7	6.8	2.3	6.1	3.6
19	---	---	10.3	7.2	7.3	3.2	7.0	0.7	7.2	2.8	6.8	3.7
20	---	---	9.5	8.2	7.2	3.1	7.2	0.8	6.8	2.4	8.1	3.6
21	---	---	9.5	6.7	6.5	3.2	7.0	1.5	6.7	2.4	7.2	3.6
22	---	---	9.6	6.7	7.5	3.1	7.0	1.5	6.4	2.4	6.8	3.6
23	---	---	9.6	7.0	6.5	3.1	6.5	1.5	6.4	2.6	6.5	3.7
24	---	---	10.4	6.4	7.5	2.9	7.2	1.3	6.4	2.4	6.5	4.0
25	---	---	9.3	6.7	6.8	3.1	7.2	1.5	6.5	2.6	7.3	4.0
26	12.7	11.5	9.3	6.2	7.5	2.8	7.0	1.3	6.5	2.8	6.7	4.7
27	12.9	11.2	9.0	6.1	6.5	3.1	7.0	1.2	8.6	2.8	6.8	5.0
28	12.4	11.0	8.9	5.8	6.4	2.8	6.8	1.3	7.9	2.9	8.4	5.1
29	12.7	11.0	9.3	6.1	7.3	2.8	6.8	4.3	---	---	6.5	5.1
30	12.7	10.9	9.6	5.4	6.7	2.8	6.8	1.3	---	---	6.5	5.1
31	12.1	10.9	---	---	7.0	2.8	6.7	1.5	---	---	7.2	5.3
MONTH	---	---	12.4	5.4	8.9	2.8	7.8	0.5	8.6	1.2	10.9	2.8

PEND OREILLE RIVER BASIN

12392000 CLARK FORK AT WHITEHORSE RAPIDS, NEAR CABINET, ID

LOCATION.--Lat 48°05'30", long 116°07'00", in NE¹/₄ sec.30, T.55 N., R.3 E., Cabinet Quad., Bonner County, Hydrologic Unit 17010213, on right bank 3.0 mi downstream from Cabinet Gorge Dam, 4.5 mi southeast of Clark Fork, and at mile 146.9.

DRAINAGE AREA.--22,073 mi².

PERIOD OF RECORD.--September 1928 to current year. Prior to October 1952, published as "near Heron, Mont."

REVISED RECORDS.--WSP 1182: 1936. WSP 1736: 1931, 1936(m), 1937. WRD-ID-1973-1: 1972(M).

REMARKS.--Flow regulated by Hungry Horse Reservoir, Flathead Lake, and Noxon Rapids Reservoir. Extreme diurnal fluctuation caused by powerplant at Cabinet Gorge Dam. Diversions above station for irrigation of about 354,000 acres. Discharge measurements made at Whitehorse Rapids indicate about 600 ft³/s ground-water inflow between the measuring cableway for Clark Fork River below Cabinet Gorge Dam (sta 12391950) and Whitehorse Rapids. Records given herein represent flow at Whitehorse Rapids, computed by adding this 600 ft³/s to observed flows at 12391950, and are considered comparable to records at former site near Heron, except for minor surface inflow from additional drainage area.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 153,000 ft³/s May 29 to June 1, 1948; maximum gage height, 50.97 ft, May 31, 1948, site and datum then in use; minimum observed, 270 ft³/s Aug. 12, 1952 (discharge measurement), at sites in use since October 1952, during filling of Cabinet Gorge Reservoir; minimum daily since reservoir filled, 762 ft³/s Sept. 2, 1962.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in June 1894 reached a discharge of 195,000 ft³/s from floodmark, elevation of 2,137.1 ft, at site about 4 mi upstream and 0.1 mi below "near Heron" site.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 72,700 ft³/s June 8; minimum daily, 5,670 ft³/s Sept. 16.

Discharge, cubic feet per second
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16500	16000	13300	14500	14700	11300	8490	30100	33500	34500	14900	9020
2	12200	14900	17800	12700	15000	10100	11200	30600	33000	31800	12400	11000
3	12400	13000	16200	16800	17700	9760	11900	28200	39900	32800	15300	6250
4	17200	16400	10200	18600	10900	12800	15400	27400	41900	32000	14900	6570
5	18100	12600	12000	17400	11300	5770	12600	28900	47100	30500	15200	9460
6	12400	6030	15000	18500	11500	6800	8650	28400	59800	29600	11800	7970
7	13400	6310	15500	11000	16500	8600	12200	21200	67100	26500	11100	6020
8	12700	12600	16600	8430	16000	8930	11500	23200	72700	23700	13000	6040
9	6720	14100	15600	8080	15600	8470	10000	32200	68900	18800	11500	5840
10	6710	12200	12000	12500	11100	8420	7540	35200	63900	18900	11100	6140
11	14000	12300	13300	12300	13000	8140	11600	36800	56100	22200	10500	5720
12	13700	11900	14600	6340	7260	5750	15300	38400	54400	22100	9770	5780
13	13700	5810	17200	12500	9700	6310	14300	42400	52600	20100	8530	5820
14	12400	9570	19900	13700	13800	10600	15500	47200	53100	24500	10200	6890
15	12700	13600	21500	9940	15000	9110	16800	45000	52700	24000	15000	5740
16	6380	12800	22300	10900	12800	11800	8340	45300	49400	12800	11700	5670
17	8210	11900	21700	12900	14600	6680	8680	46100	41000	12500	6820	6030
18	14600	12200	14200	10100	10400	12600	15900	49200	44100	18000	8650	6280
19	13700	12600	14500	13800	7070	7080	14700	53800	44000	18900	11000	6280
20	13400	6280	19900	17000	11800	7280	19500	53700	47200	12700	9630	6320
21	14700	10200	20400	21000	12700	9890	19800	53800	46400	16700	11600	6570
22	15500	14600	22100	11300	13000	11800	15900	53900	39800	12600	14500	6520
23	9240	13400	19400	15500	14300	9260	18600	55100	41000	14100	13100	7660
24	11600	11500	16200	16500	12500	7900	16600	53400	41500	12400	10700	6030
25	17700	6930	12000	15800	11100	7740	24600	48700	35400	11800	11800	7310
26	12300	8250	13100	16900	10300	6860	26400	43300	33800	14000	11200	7630
27	14900	12700	15500	18900	14100	6250	28000	39700	34200	16200	6930	8230
28	13500	11300	20400	18100	18000	7480	32500	36800	31100	18000	10800	8780
29	12600	14500	18400	6150	---	9780	31400	34000	34300	13500	7460	7670
30	8490	13000	15800	14500	---	8290	29400	32500	34400	15300	8150	10100
31	12200	---	16100	17500	---	8540	---	32200	---	13100	10500	---
TOTAL	393850	349480	512700	430140	361730	270090	493300	1226700	1394300	624600	349740	211340
MEAN	12700	11650	16540	13880	12920	8713	16440	39570	46480	20150	11280	7045
MAX	18100	16400	22300	21000	18000	12800	32500	55100	72700	34500	15300	11000
MIN	6380	5810	10200	6150	7070	5750	7540	21200	31100	11800	6820	5670
AC-FT	781200	693200	1017000	853200	717500	535700	978500	2433000	2766000	1239000	693700	419200

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1929 - 2005, BY WATER YEAR (WY)

	11840	13170	14400	14270	14740	15680	24620	48690	56690	26210	11680	10530
MEAN	11840	13170	14400	14270	14740	15680	24620	48690	56690	26210	11680	10530
MAX	25670	21970	34850	28020	38150	36480	59140	93830	115800	57650	19680	18300
(WY)	1960	1996	1996	1934	1996	1996	1934	1997	1948	1950	1997	1985
MIN	5466	5008	4732	3527	4217	5122	6165	16450	15480	9214	6320	5448
(WY)	1937	1937	1937	1937	1936	1937	1977	1941	1977	1940	1994	1994

SUMMARY STATISTICS

	FOR 2004 CALENDAR YEAR	FOR 2005 WATER YEAR	WATER YEARS 1929 - 2005
ANNUAL TOTAL	6476220	6617970	
ANNUAL MEAN	17690	18130	21880
HIGHEST ANNUAL MEAN			34250
LOWEST ANNUAL MEAN			10180
HIGHEST DAILY MEAN	53000	72700	153000
LOWEST DAILY MEAN	5780	5670	762
ANNUAL SEVEN-DAY MINIMUM	7880	5910	2710
ANNUAL RUNOFF (AC-FT)	12850000	13130000	15850000
10 PERCENT EXCEEDS	33900	39700	47600
50 PERCENT EXCEEDS	14400	13400	15500
90 PERCENT EXCEEDS	8720	6910	7180

PEND OREILLE RIVER BASIN

12392155 LIGHTNING CREEK AT CLARK FORK, ID

LOCATION.--Lat 48°09'04", long 116°10'56", (NAD27), in NE¹/₄NE¹/₄NE¹/₄ sec.3, T.55 N., R.2 E., Bonner County, Clark Fork quad., Hydrologic Unit 17010213, on left bank, at Clark Fork, 20 ft upstream from Idaho Highway 200 bridge, 1 mi upstream from mouth.

DRAINAGE AREA.--115 mi².

PERIOD OF RECORD.--October 1988 to September 1990, June 1991 to current year. Miscellaneous measurements made at this site 1974-78, 1987-88.

GAGE.--Water-stage recorder. Datum of gage is 2,093.66 ft above NGVD of 1929.

REMARKS.--Records poor.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,220 ft³/s May 25, 2003, gage height, 9.92 ft; maximum gage height, 10.81 ft, June 1, 1997; no flow Sept. 14 to Oct. 12, 2001.

EXTREMES OUTSIDE PERIOD OF RECORD.--Indirect determination for peak of May 27 or 28, 1948 was 5,100 ft³/s, 5 mi upstream. Indirect determination for peak of January 1974 was 5,530 ft³/s, 5 mi upstream.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 4,180 ft³/s Dec. 11; minimum daily, 3.0 ft³/s Sept. 28.

Discharge, cubic feet per second
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	176	288	422	202	401	117	295	672	674	162	33	e8.5
2	162	602	383	187	370	115	323	691	827	147	30	e8.0
3	150	797	355	180	350	112	291	756	788	146	26	e8.0
4	139	602	336	151	343	114	280	813	631	128	22	e7.0
5	130	511	315	129	337	117	260	880	573	117	e20	e7.5
6	129	452	295	150	307	121	246	1110	511	110	e18	e7.0
7	132	424	280	153	274	127	298	1210	487	103	e16	e6.5
8	118	402	285	141	254	140	512	1130	485	95	e13	e5.5
9	187	378	270	132	238	151	466	1190	427	155	e11	e6.0
10	241	359	821	128	225	160	428	1240	398	182	e14	e10
11	188	342	4180	124	214	166	426	1150	368	157	e28	e13
12	166	326	2090	120	207	197	395	1110	340	130	e23	e17
13	152	309	1470	110	204	198	360	1200	301	115	e22	e18
14	142	294	1230	79	188	191	337	1290	290	105	e19	e19
15	135	283	1030	69	165	186	313	1290	268	97	e17	e20
16	196	317	888	113	153	184	312	1840	241	107	e16	e19
17	533	297	774	134	153	188	447	1680	457	102	e20	e17
18	539	298	674	697	150	175	410	1220	425	90	e23	e14
19	508	294	611	1600	149	163	384	1320	345	82	e22	e11
20	448	269	539	1460	139	165	406	1170	308	76	e18	e8.5
21	662	258	472	1310	131	160	451	1050	285	70	e16	e7.0
22	693	249	423	1100	126	147	546	1110	261	68	e15	e6.0
23	643	240	379	981	124	140	744	1020	263	65	e15	e5.0
24	551	341	365	891	121	132	1170	896	220	60	e15	e4.5
25	482	1810	349	783	118	128	1450	816	196	57	e13	e4.0
26	425	1180	318	695	114	128	1540	806	179	54	e13	e4.0
27	384	819	295	635	112	231	1590	829	173	50	e12	e3.5
28	356	640	275	577	112	506	1160	849	180	46	e10	e3.0
29	331	543	255	516	---	377	892	838	185	42	e9.5	e3.5
30	335	481	240	475	---	340	741	748	198	39	e13	e9.0
31	313	---	226	444	---	288	---	680	---	36	e10	---
TOTAL	9746	14405	20845	14466	5779	5664	17473	32604	11284	2993	552.5	280.0
MEAN	314	480	672	467	206	183	582	1052	376	96.5	17.8	9.33
MAX	693	1810	4180	1600	401	506	1590	1840	827	182	33	20
MIN	118	240	226	69	112	112	246	672	173	36	9.5	3.0
AC-FT	19330	28570	41350	28690	11460	11230	34660	64670	22380	5940	1100	555

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 2005, BY WATER YEAR (WY)

	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
MEAN	97.4	289	257	223	252	294	804	1451	977	197	46.6	41.8					
MAX	381	1374	1242	570	1133	539	1203	1864	1899	597	240	326					
(WY)	1998	1996	1996	2002	1996	1995	1989	1997	1997	1999	2004	2004					
MIN	6.31	22.4	9.21	8.60	6.36	85.7	400	1031	230	58.2	8.92	0.89					
(WY)	2003	2001	2001	2001	2001	2001	2001	1994	1992	1992	2003	2001					

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR	FOR 2005 WATER YEAR	FOR 2006 WATER YEAR	FOR 2007 WATER YEAR	FOR 2008 WATER YEAR	FOR 2009 WATER YEAR	FOR 2010 WATER YEAR	FOR 2011 WATER YEAR	FOR 2012 WATER YEAR	FOR 2013 WATER YEAR	FOR 2014 WATER YEAR	FOR 2015 WATER YEAR	FOR 2016 WATER YEAR	FOR 2017 WATER YEAR	FOR 2018 WATER YEAR	FOR 2019 WATER YEAR	FOR 2020 WATER YEAR
ANNUAL TOTAL	183732	136091.5															
ANNUAL MEAN	502	373															
HIGHEST ANNUAL MEAN																	
LOWEST ANNUAL MEAN																	
HIGHEST DAILY MEAN	4180	Dec 11	4180	Dec 11	4970	Feb 9	1996										
LOWEST DAILY MEAN	13	Aug 17	3.0	Sep 28	0.00	Sep 14	2001										
ANNUAL SEVEN-DAY MINIMUM	14	Aug 15	3.9	Sep 23	0.00	Sep 14	2001										
ANNUAL RUNOFF (AC-FT)	364400	269900	297300														
10 PERCENT EXCEEDS	1320	894	1230														
50 PERCENT EXCEEDS	300	241	154														
90 PERCENT EXCEEDS	56	15	14														

e Estimated

PEND OREILLE RIVER BASIN

12392500 LAKE PEND OREILLE NEAR HOPE, ID

LOCATION.--Lat 48°16'35", long 116°20'47", in NW¼SE¼NW¼ sec.21, T.57 N., R.1 E., Bonner County, Trout Peak quad., Hydrologic Unit 17010214, 0.5 mi southeast of Trestle Creek and 2.5 mi northwest of Hope.

DRAINAGE AREA.--22,900 mi², approximately (natural drainage area above mouth of lake at Sandpoint).

PERIOD OF RECORD.--March 1914 to current year. Published as "at Sandpoint" 1914-22. Records published for both sites September 1921 to September 1922. Published as "at Hope" September 1921 to December 1974.

REVISED RECORDS.--WSP 1122: 1946.

GAGE.--Water-stage recorder. Datum of gage is 2,000.00 ft above NGVD of 1929; gage readings have been reduced to elevations of that datum. Prior to Oct. 1, 1921, nonrecording gage at Sandpoint at datum 42.18 ft higher. Oct. 1, 1921, to Sept. 30, 1929, nonrecording gage "at Hope" site at datum 45.47 ft higher than present datum. Oct. 1, 1929, to Sept. 30, 1950, water-stage recorder "at Hope" site at datum 0.20 ft lower than present datum. Oct. 1, 1950, to Dec. 23, 1974, water-stage recorder "at Hope" site at present datum. Add 2,000 ft to gage heights to obtain elevations.

REMARKS.--Station equipment includes satellite telemetry. Regulation at Albeni Falls Dam beginning June 4, 1952. Contents shown is that above elevation 2,044.8 ft, but does not include storage in Pend Oreille River above Albeni Falls Dam.

COOPERATION.--Capacity table provided by U.S. Army Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation, 2,071.62 ft, present datum, June 9, 1948, contents, 2,462,000 acre-ft; minimum, 2,046.27 ft, present datum, Feb. 17, 1936, contents, 117,700 acre-ft.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum elevation known, 2,075.88 ft, present datum, June 1894, contents, 2,905,000 acre-ft.

EXTREMES FOR CURRENT YEAR.--Maximum elevation, 2,062.44 ft, July 16, contents, 1,555,600 acre-ft; minimum elevation, 2,055.03 ft, Dec. 20, contents, 874,500 acre-ft.

Capacity table (elevation, in feet, and contents, in acre-feet)

2,054	782,500	2,060	1,327,000
2,056	961,600	2,062	1,514,000
2,058	1,143,000	2,063	1,609,000

Gage height, feet
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	60.77	55.94	55.23	55.36	55.27	55.64	55.40	56.05	60.66	62.24	62.33	62.10
2	60.51	55.96	55.34	55.30	55.30	55.60	55.53	56.21	60.70	62.23	62.25	62.17
3	60.23	55.85	55.42	55.31	55.45	55.56	55.58	56.30	60.77	62.29	62.22	62.16
4	60.06	55.84	55.38	55.37	55.26	55.60	55.72	56.40	60.86	62.30	62.22	62.11
5	59.89	55.76	55.34	55.46	55.45	55.46	55.70	56.58	61.04	62.31	62.25	62.15
6	59.64	55.60	55.37	55.60	55.41	55.41	55.59	56.75	61.35	62.31	62.25	62.13
7	59.40	55.45	55.37	55.57	55.49	55.38	55.58	56.78	61.60	62.29	62.26	62.13
8	59.20	55.43	55.42	55.55	55.55	55.40	55.60	56.85	61.76	62.29	62.28	62.12
9	58.97	55.45	55.41	55.53	55.58	55.44	55.54	57.02	61.76	62.28	62.27	62.12
10	58.66	55.43	55.38	55.55	55.55	55.51	55.41	57.15	61.70	62.20	62.25	62.13
11	58.51	55.40	55.50	55.56	55.60	55.57	55.37	57.30	61.61	62.22	62.22	62.18
12	58.41	55.39	55.38	55.48	55.52	55.56	55.45	57.45	61.66	62.28	62.17	62.20
13	58.32	55.24	55.33	55.56	55.47	55.53	55.40	57.67	61.73	62.27	62.14	62.16
14	58.23	55.15	55.35	55.62	55.48	55.58	55.38	57.99	61.84	62.30	62.14	62.20
15	58.14	55.21	55.35	55.59	55.50	55.56	55.54	58.15	61.94	62.36	62.26	62.16
16	57.95	55.28	55.36	55.64	55.49	55.66	55.44	58.42	62.05	62.35	62.27	62.14
17	57.77	55.29	55.40	55.77	55.54	55.58	55.36	58.64	62.08	62.19	62.21	62.14
18	57.81	55.34	55.28	55.68	55.52	55.65	55.41	58.77	62.15	62.19	62.13	62.10
19	57.72	55.38	55.12	55.64	55.42	55.59	55.37	59.05	62.17	62.24	62.18	62.12
20	57.64	55.30	55.15	55.71	55.42	55.51	55.38	59.22	62.22	62.13	62.18	62.03
21	57.64	55.26	55.26	55.83	55.44	55.55	55.43	59.38	62.25	62.23	62.22	61.88
22	57.60	55.34	55.38	55.76	55.46	55.56	55.42	59.53	62.20	62.25	62.29	61.76
23	57.42	55.42	55.32	55.75	55.52	55.54	55.43	59.67	62.20	62.26	62.32	61.65
24	57.27	55.43	55.29	55.75	55.53	55.54	55.46	59.80	62.30	62.23	62.20	61.55
25	57.21	55.35	55.24	55.72	55.51	55.50	55.59	59.89	62.22	62.23	62.22	61.49
26	57.04	55.29	55.20	55.70	55.47	55.46	55.66	59.97	62.20	62.18	62.21	61.42
27	56.93	55.36	55.23	55.73	55.51	55.64	55.75	60.11	62.25	62.23	62.14	61.34
28	56.76	55.33	55.32	55.68	55.64	55.66	55.90	60.23	62.19	62.36	62.16	61.23
29	56.57	55.35	55.42	55.35	---	55.67	55.88	60.32	62.20	62.36	62.11	61.17
30	56.31	55.29	55.41	55.21	---	55.57	55.88	60.40	62.22	62.36	62.04	61.17
31	56.08	---	55.38	55.22	---	55.48	---	60.51	---	62.34	62.07	---
MEAN	58.21	55.44	55.33	55.57	55.48	55.55	55.54	58.34	61.80	62.27	62.21	61.91
MAX	60.77	55.96	55.50	55.83	55.64	55.67	55.90	60.51	62.30	62.36	62.33	62.20
MIN	56.08	55.15	55.12	55.21	55.26	55.38	55.36	56.05	60.66	62.13	62.04	61.17
†	968800	897800	905900	891500	929300	914900	950800	1375000	1535000	1546000	1521000	1436000
†	-446200	-71000	8100	-14400	37800	-14400	35900	424200	160000	11000	-25000	-85000
CAL YR 2004	MEAN 56.99	MAX 62.60	MIN 51.32	† 343800								
WTR YR 2005	MEAN 58.15	MAX 62.36	MIN 55.12	† 21000								

† Contents, in acre-feet, at end of month.
† Change in contents, in acre-feet.

PEND OREILLE RIVER BASIN

12393000 PRIEST LAKE AT OUTLET, NEAR COOLIN, ID

LOCATION.--Lat 48°29'36", long 116°53'04" (revised), (NAD83), in NE¹/₄NE¹/₄SW¹/₄ sec.5, T.59 N., R.4 W., Bonner County, Outlet Bay quad., Hydrologic Unit 17010215, 0.5 mi east of outlet, 1.8 mi northwest of Coolin, and 44 mi upstream from mouth of Priest River.

DRAINAGE AREA.--572 mi².

PERIOD OF RECORD.--June 1911 to September 1913 (fragmentary gage-height records at Coolin, published as part of records for "Priest River at outlet of Priest Lake, at Coolin"), April 1928 to July 1950 (gage-height record only), August 1950 to current year.

GAGE.--Water-stage recorder. Datum of gage is 2,434.64 ft above NGVD of 1929. June 18, 1911 to Sept. 30, 1913, nonrecording gages at Coolin at different datums. Apr. 21, 1928 to Oct. 18, 1939, nonrecording gage at site 400 ft north of lake outlet at present datum.

REMARKS.--Flow from Priest Lake is regulated to hold lake at heights desirable for recreation interests during summer months and storage is released for power use downstream during winter months. Storage began Aug. 9, 1950. Prior to Aug. 9, 1950, some regulation resulted from logging operations in the outlet channel. Figures given herein represent contents above gage height of about -2 ft. Capacity table is based on area measured from Priest Lake quadrangle (scale 1:250,000) and reconnaissance survey of marginal areas and is only approximate. New dam completed Nov. 27, 1978.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 6.68 ft, June 20, 1974, contents, 207,500 acre-ft; minimum, -0.46 ft Jan. 5, 6, 1977, Feb. 26, Mar. 2, 2001, contents, 37,500 acre-ft.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 3.50 ft, June 19, contents, 131,200 acre-ft; minimum, 0.15 ft, Jan. 16, 17, contents, 51,800 acre-ft.

Capacity table (gage height, in feet, and contents, in acre-feet)

0.0	48,300	3.0	119,300
1.0	71,900	4.0	143,100
2.0	95,500		

Gage height, feet
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.98	0.69	0.42	0.48	0.57	0.28	0.73	1.84	3.33	3.19	3.06	3.01
2	2.99	0.76	0.45	0.45	0.59	0.28	0.74	1.83	3.31	3.16	3.06	3.02
3	3.00	0.75	0.53	0.42	0.55	0.28	0.74	1.84	3.31	3.13	3.05	3.00
4	2.98	0.74	0.43	0.40	0.57	0.28	0.76	1.84	3.28	3.11	3.04	2.99
5	2.94	0.71	0.42	0.34	0.59	0.28	0.77	1.85	3.22	3.09	3.04	2.98
6	2.88	0.70	0.45	0.35	0.57	0.24	0.75	1.91	3.24	3.08	3.04	2.98
7	2.80	0.66	0.43	0.32	0.59	0.30	0.76	1.98	3.22	3.07	3.04	2.98
8	2.70	0.70	0.47	0.43	0.58	0.24	0.81	2.07	3.22	3.08	3.04	2.96
9	2.63	0.62	0.46	0.35	0.51	0.27	0.81	2.15	3.20	3.15	3.06	2.94
10	2.48	0.63	0.51	0.29	0.54	0.30	0.84	2.23	3.18	3.21	3.11	2.98
11	2.33	0.60	0.58	0.27	0.55	0.30	0.90	2.32	3.16	3.18	3.07	3.02
12	2.16	0.57	0.57	0.24	0.50	0.29	0.91	2.40	3.14	3.16	3.07	3.07
13	2.02	0.54	0.60	0.23	0.52	0.33	0.93	2.47	3.11	3.14	3.05	3.06
14	1.92	0.53	0.67	0.18	0.49	0.31	0.94	2.57	3.15	3.10	3.05	3.08
15	1.75	0.56	0.64	0.18	0.50	0.33	0.94	2.70	3.14	3.05	3.05	3.10
16	1.64	0.51	0.64	0.18	0.47	0.37	0.96	2.92	3.17	3.03	3.05	3.09
17	1.58	0.53	0.66	0.22	0.45	0.37	0.99	3.10	3.34	3.07	3.08	3.10
18	1.49	0.45	0.63	0.27	0.43	0.39	1.02	3.20	3.46	3.06	3.09	3.09
19	1.39	0.47	0.65	0.26	0.41	0.47	1.03	3.23	3.47	3.05	3.08	3.10
20	1.30	0.44	0.60	0.29	0.39	0.38	1.06	3.28	3.43	3.03	3.08	3.09
21	1.27	0.38	0.61	0.32	0.39	0.43	1.08	3.27	3.30	3.05	3.07	3.08
22	1.25	0.40	0.58	0.36	0.37	0.53	1.10	3.28	3.28	3.09	3.07	3.06
23	1.17	0.41	0.58	0.38	0.36	0.50	1.22	3.27	3.24	3.07	3.10	3.06
24	1.11	0.42	0.54	0.41	0.35	0.40	1.28	3.23	3.22	3.08	3.10	3.04
25	1.04	0.46	0.57	0.43	0.36	0.40	1.43	3.23	3.19	3.09	3.07	3.03
26	0.98	0.48	0.54	0.46	0.32	0.44	1.58	3.24	3.18	3.08	3.07	3.01
27	0.89	0.47	0.56	0.48	0.32	0.60	1.71	3.26	3.19	3.09	3.06	3.00
28	0.85	0.48	0.51	0.53	0.31	0.64	1.81	3.30	3.20	3.09	3.06	3.00
29	0.79	0.47	0.52	0.50	---	0.68	1.83	3.29	3.26	3.08	3.05	3.02
30	0.75	0.47	0.51	0.56	---	0.69	1.84	3.31	3.22	3.08	3.02	3.02
31	0.71	---	0.52	0.55	---	0.70	---	3.31	---	3.08	3.03	---
MEAN	1.83	0.55	0.54	0.36	0.47	0.40	1.08	2.70	3.25	3.10	3.06	3.03
MAX	3.00	0.76	0.67	0.56	0.59	0.70	1.84	3.31	3.47	3.21	3.11	3.10
MIN	0.71	0.38	0.42	0.18	0.31	0.24	0.73	1.83	3.11	3.03	3.02	2.94
†	65000	59400	60600	61300	55600	64800	91700	126600	124500	121200	120000	119700
‡	-54000	-5600	1200	700	-5700	9200	26900	34900	-2100	-3300	-1200	-300
CAL YR 2004	MEAN 1.75	MAX 3.42	MIN 0.19	† -2300								
WTR YR 2005	MEAN 1.70	MAX 3.47	MIN 0.18	† 700								

† Contents, in acre-feet, at end of month.
‡ Change in contents, in acre-feet.

PEND OREILLE RIVER BASIN

12394000 PRIEST RIVER NEAR COOLIN, ID

LOCATION.--Lat 48°27'07", long 116°53'58", (NAD27), in SE¹/₄SW¹/₄NE¹/₄ sec.19, T.59 N., R.4 W., Bonner County, Outlet Bay quad., Hydrologic Unit 17010215, in Dickensheet campground, on left bank 190 ft downstream from Dickensheet Bridge, 2.5 mi downstream from Binarch Creek, 3 mi southwest of Coolin, 5.2 mi downstream from outlet of Priest Lake, and at mile 38.8.

DRAINAGE AREA.--611 mi².

PERIOD OF RECORD.--October 1948 to current year.

GAGE.--Water-stage recorder. Datum of gage is 2,338.24 ft above NGVD of 1929. Prior to Feb. 23, 1949, nonrecording gage at same site and datum.

REMARKS.--No estimated daily discharges. Records good. No diversion above station. Flow partly regulated by Priest Lake (sta 12393000) 5.2 mi upstream.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,280 ft³/s June 3, 1997, gage height, 8.02 ft; maximum gage height, 8.44 ft, June 18, 1974; minimum observed discharge, 26 ft³/s Sept. 25, 1958, gage height, 1.16 ft, but may have been less Sept. 11, 1953 and Sept. 24, 1958, when stage was below intake.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of May 29, 1948, reached a stage of 8.40 ft, present site and datum, discharge, 8,670 ft³/s.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 2,750 ft³/s May 20-24; minimum daily, 114 ft³/s Sept. 19.

Discharge, cubic feet per second
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	223	1110	898	910	1010	790	1190	2240	1840	1500	361	199
2	222	1130	889	892	1020	784	1210	2240	2070	1500	361	200
3	221	1170	878	871	1020	777	1210	2230	2290	1490	360	199
4	573	1150	888	846	1020	771	1230	2240	2290	1170	359	199
5	824	1120	891	825	1020	764	1230	2240	2280	966	271	199
6	1150	1100	891	813	1030	761	1230	2280	1940	962	209	199
7	1370	1100	882	804	1020	762	1230	2350	1740	961	207	199
8	1620	1080	902	797	1010	771	1250	2430	1740	800	207	152
9	1770	1070	901	787	992	778	1280	2460	1740	715	207	116
10	2050	1040	938	782	983	787	1300	2150	1740	961	207	115
11	2230	1020	965	764	973	799	1330	2010	1730	1220	207	116
12	2360	1010	1000	752	968	812	1370	2020	1730	1220	207	115
13	2350	983	1020	740	968	820	1380	2040	1720	1210	206	115
14	2260	963	1050	717	963	823	1380	2060	1500	1210	204	115
15	2140	952	1060	703	947	829	1390	2080	1380	1210	205	115
16	2010	966	1060	698	928	844	1390	2130	1380	910	204	115
17	1940	950	1060	706	913	865	1420	2180	1390	700	206	115
18	1870	939	1060	753	899	877	1450	2200	1830	695	204	115
19	1790	926	1040	771	889	883	1460	2530	2420	694	204	114
20	1700	914	1030	780	875	899	1480	2750	2590	693	203	169
21	1660	893	1030	799	863	909	1490	2750	2570	509	203	219
22	1620	874	1010	815	849	912	1520	2750	2320	377	202	219
23	1580	859	987	843	837	921	1570	2750	2140	375	203	219
24	1510	871	976	866	827	893	1650	2740	1810	369	201	219
25	1450	891	978	884	820	880	1760	2170	1500	362	201	219
26	1390	913	978	900	814	885	1890	1830	1500	361	201	219
27	1320	922	964	927	803	975	2030	1830	1500	362	201	219
28	1260	919	953	949	792	1110	2140	1840	1500	362	201	217
29	1210	910	940	965	---	1150	2210	1840	1500	362	201	216
30	1170	910	939	979	---	1160	2240	1840	1500	362	201	217
31	1140	---	929	993	---	1170	---	1840	---	361	200	---
TOTAL	45983	29655	29987	25631	26053	27161	44910	69040	55180	24949	7014	5164
MEAN	1483	988	967	827	930	876	1497	2227	1839	805	226	172
MAX	2360	1170	1060	993	1030	1170	2240	2750	2590	1500	361	219
MIN	221	859	878	698	792	761	1190	1830	1380	361	200	114
AC-FT	91210	58820	59480	50840	51680	53870	89080	136900	109400	49490	13910	10240

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1949 - 2005, BY WATER YEAR (WY)

MEAN	953	1017	725	619	631	781	1646	3824	3505	996	308	262
MAX	1518	2385	2028	1868	1935	1887	2571	6453	7207	2739	727	1219
(WY)	1982	1984	1996	1974	1951	1983	1960	1997	1974	1955	1983	1959
MIN	258	294	237	203	250	115	515	1242	929	239	95.6	66.9
(WY)	1950	1949	1992	1993	1977	2001	1977	1977	1992	1985	1994	2003

SUMMARY STATISTICS FOR 2004 CALENDAR YEAR FOR 2005 WATER YEAR WATER YEARS 1949 - 2005

ANNUAL TOTAL	411764	390727	
ANNUAL MEAN	1125	1070	1274
HIGHEST ANNUAL MEAN			2174
LOWEST ANNUAL MEAN			534
HIGHEST DAILY MEAN	3360	May 8	2750
LOWEST DAILY MEAN	134	Aug 21	114
ANNUAL SEVEN-DAY MINIMUM	136	Aug 18	115
ANNUAL RUNOFF (AC-FT)	816700	775000	922600
10 PERCENT EXCEEDS	2690	2100	3370
50 PERCENT EXCEEDS	934	961	744
90 PERCENT EXCEEDS	264	205	194

PEND OREILLE RIVER BASIN

12395000 PRIEST RIVER NEAR PRIEST RIVER, ID

LOCATION.--Lat 48°12'31", long 116°54'49", (NAD27), in NW¹/₄SW¹/₄NW¹/₄ sec.12, T.56 N., R.5 W., Bonner County, Priest River quad., Hydrologic Unit 17010215, on right bank, 500 ft downstream from Saddler Creek, 0.4 mi downstream from Lower West Branch, 2.7 mi north of Priest River, and at mile 3.8.

DRAINAGE AREA.--902 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1903 to April 1905, November 1910 to April 1911, May to December 1923, February 1929 to current year. Prior to October 1930, published as "at Priest River."

REVISED RECORDS.--WSP 572: 1903-5.

GAGE.--Water-stage recorder. Elevation of gage is 2,090 ft above NGVD of 1929, from river-profile map. Prior to May 15, 1929, and Sept. 18, 1929, to Apr. 28, 1930, nonrecording gages at site 3 mi downstream at elevation of about 40 ft lower. June 4 to Sept. 17, 1929, and Apr. 29 to Sept. 11, 1930, nonrecording gages at or near present site at present datum.

REMARKS.--Records good except for estimated daily discharges, which are fair. Station equipment includes satellite telemetry. Some regulation on tributaries and, since Aug. 9, 1950, flow partly regulated by Priest Lake (see sta 12393000).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge (1913-49), 10,500 ft³/s May 29, 30, 1948; maximum gage height, 8.97 ft, May 29, 1948; minimum daily, 191 ft³/s Jan 7, 1937.

Maximum discharge since regulation began in 1950, 10,800 ft³/s May 18, 1997, gage height, 9.13 ft; minimum, 150 ft³/s Nov. 29, 1979, gage height, 0.38 ft.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,550 ft³/s May 20, 21, 22, gage height, 4.34 ft; minimum daily, 242 ft³/s Sept. 20.

Discharge, cubic feet per second
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	376	1300	1150	1150	1480	1020	2240	2900	2270	1730	517	328
2	370	1400	1130	e1100	1470	1020	2330	2870	2330	1730	515	328
3	366	1680	1110	e1040	1440	1010	2200	2860	2760	1720	511	328
4	365	1530	1110	e980	1440	999	2170	2870	2730	1630	511	328
5	857	1430	1130	e960	1430	998	2140	2860	2720	1160	504	326
6	962	1380	1100	e940	1410	1010	2050	2900	2610	1140	386	324
7	1480	1360	1100	e950	1370	1030	2020	2980	2130	1130	352	323
8	1550	1350	1150	e950	1340	1060	2080	3050	2130	1090	351	323
9	1960	1310	1160	e950	1320	1080	2060	3150	2100	909	350	275
10	2030	1280	1280	e920	1300	1090	2030	3010	2080	961	346	244
11	2470	1250	1570	e950	1280	1100	2060	2630	2060	1460	346	259
12	2470	1220	1560	933	1290	1130	2180	2640	2070	1440	347	276
13	2640	1230	1480	e900	1290	1150	2140	2630	2040	1410	351	270
14	2520	1230	1500	e780	1280	1140	2080	2660	1980	1390	351	260
15	2430	1190	1510	e740	1210	1140	2040	2750	1700	1390	347	249
16	2290	1250	1480	e720	1170	1160	2030	3020	1660	1350	344	247
17	2250	1220	1470	e800	1160	1240	2120	3020	1770	870	348	245
18	2280	1190	1440	e1000	1140	1250	2100	2950	1900	843	369	245
19	2150	1190	1430	1180	1150	1230	2080	3080	2630	826	352	243
20	2000	1150	1390	1200	1120	1240	2060	3510	3000	826	344	242
21	1940	1120	1350	1190	1090	1280	2060	3500	2960	815	337	299
22	1930	1090	1320	1180	1070	1280	2080	3510	2860	582	332	343
23	1910	1070	e1240	1260	1060	1260	2130	3460	2470	564	332	346
24	1810	1130	e1200	1320	1050	1220	2210	3400	2400	555	348	346
25	1710	1230	e1210	1340	1040	1180	2360	3170	1780	538	341	345
26	1640	1270	e1220	1350	1020	1170	2520	2380	1750	534	332	345
27	1560	1230	e1220	1380	1020	1850	2720	2340	1750	527	332	345
28	1490	1200	1220	1420	1010	3180	2840	2330	1780	521	332	341
29	1430	1170	1200	1440	---	2920	2910	2300	1790	517	331	346
30	1380	1180	1190	1460	---	2570	2920	2280	1760	517	330	354
31	1340	---	1180	1470	---	2290	---	2260	---	517	329	---
TOTAL	51956	37830	39800	33953	34450	42297	66960	89270	65970	31192	11518	9073
MEAN	1676	1261	1284	1095	1230	1364	2232	2880	2199	1006	372	302
MAX	2640	1680	1570	1470	1480	3180	2920	3510	3000	1730	517	354
MIN	365	1070	1100	720	1010	998	2020	2260	1660	517	329	242
AC-FT	103100	75040	78940	67350	68330	83900	132800	177100	130900	61870	22850	18000

PEND OREILLE RIVER BASIN
12395000 PRIEST RIVER NEAR PRIEST RIVER, ID--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1913 - 1949, BY WATER YEAR (WY) (UNREGULATED)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	448	642	812	806	734	1006	2486	4737	3632	1448	619	424
MAX	1230	1785	2574	2742	1884	2008	4452	7422	6635	2503	1117	721
(WY)	1948	1948	1942	1934	1934	1934	1934	1946	1948	1933	1948	1941
MIN	253	227	293	284	360	459	958	2712	1611	751	372	266
(WY)	1937	1937	1937	1937	1936	1937	1929	1930	1930	1940	1940	1931

SUMMARY STATISTICS

^a WATER YEARS 1913 - 1949

ANNUAL MEAN	1503
HIGHEST ANNUAL MEAN	2217
LOWEST ANNUAL MEAN	824
HIGHEST DAILY MEAN	10400
LOWEST DAILY MEAN	191
ANNUAL SEVEN-DAY MINIMUM	215
ANNUAL RUNOFF (AC-FT)	1089000
10 PERCENT EXCEEDS	3960
50 PERCENT EXCEEDS	780
90 PERCENT EXCEEDS	333

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1950 - 2005, BY WATER YEAR (WY) (REGULATED, UNADJUSTED)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1108	1276	1024	921	1024	1397	2655	4769	4142	1277	468	404
MAX	1768	2951	2612	2960	2794	3629	4250	8405	8528	3144	1026	1350
(WY)	1998	1984	1996	1974	1951	1982	1997	1997	1974	1974	1983	1959
MIN	426	473	357	310	350	374	810	1563	1167	399	206	173
(WY)	1950	2003	1993	1993	1985	2001	1977	1977	1992	1977	1994	2001

SUMMARY STATISTICS

FOR 2004 CALENDAR YEAR

FOR 2005 WATER YEAR

^b WATER YEARS 1950 - 2005

ANNUAL TOTAL	540611	514269	
ANNUAL MEAN	1477	1409	1706
HIGHEST ANNUAL MEAN			2947
LOWEST ANNUAL MEAN			711
HIGHEST DAILY MEAN	4130	May 6	3510
LOWEST DAILY MEAN	259	Aug 20	242
ANNUAL SEVEN-DAY MINIMUM	267	Aug 17	247
ANNUAL RUNOFF (AC-FT)	1072000	1020000	1236000
10 PERCENT EXCEEDS	3460	2630	4290
50 PERCENT EXCEEDS	1190	1250	1080
90 PERCENT EXCEEDS	404	345	330

a Unregulated

b Regulated, unadjusted.

e Estimated

PEND OREILLE RIVER BASIN
12395000 PRIEST RIVER NEAR PRIEST RIVER, ID

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1988 to 1996, April to September 1998, April to September 2000, April to June 2002, April to September 2005 (discontinued).

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: May to September 1998, May to September 2000, April to September 2005 (discontinued).

INSTRUMENTATION.--Temperature recording data logger.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: Maximum, 25.3 °C July 27, 1998.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum, 23.2 °C Aug. 9-10.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, uS/cm 25 degC (00095)	pH, unfltrd water, std field, (00400)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Turbidity white light, 90+/-30 det ang, corrctd (63676)	Dissolved oxygen, percent (00300)	Dissolved oxygen, of saturation (00301)	E coli, m-TEC, col/100 mL (00301)	Ammonia water, fltrd, unfltrd, mg/L as N (90902)	Ammonia + org-N, water, unfltrd, mg/L as N (00608)	Nitrite + nitrate, water, fltrd, mg/L as N (00625)
(00631)													
APR 13...	1030	2140	47	7.3	4.0	5.3	4.8	11.4	97	S4	<.010	.33	<.016
MAY 09...	1030	3130	47	7.3	14.5	9.0	5.5	10.3	97	S9	<.010	.12	<.016
JUN 06...	1030	2710	48	7.5	13.5	12.3	4.5	9.9	100	32	<.010	E.07	<.016
JUL 11...	1030	1490	51	7.6	17.0	15.4	<2.0	9.2	99	450	<.010	.13	<.016
AUG 04...	1238	505	56	7.8	25.0	19.8	<2.0	8.5	102	--	<.010	E.10	<.016
SEP 15...	1015	251	71	7.2	11.5	13.4	<2.0	9.2	95	S8	<.010	.10	<.016

Date	Ortho-phosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd, mg/L (00665)	Hardness, mg/L as CaCO3 (00900)	Calcium, water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Sodium, water, fltrd, mg/L (00930)	Sulfate, water, fltrd, mg/L (00932)	Bicarbonate, water, fixed end pt, mg/L (00935)	Carbonate, water, fixed end pt, mg/L (00440)	ANC, water, fixed end pt, mg/L as CaCO3 (00445)	Sulfate, water, fltrd, mg/L (00410)	Chloride, water, fltrd, mg/L (00945)
(00940)												
APR 13...	<.006	.020	--	--	--	--	--	--	--	--	--	--
MAY 09...	<.006	.022	--	--	--	--	--	--	--	--	--	--
JUN 06...	<.006	.020	--	--	--	--	--	--	--	--	--	--
JUL 11...	<.006	.018	--	--	--	--	--	--	--	--	--	--
AUG 04...	<.006	.007	--	--	--	--	--	--	--	--	--	--
SEP 15...	<.006	.007	29	8.71	1.87	2.25	14	.78	41	.0	33	2.6

Date	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Suspended sediment concentration, mg/L (80154)
APR 13...	--	--	11
MAY 09...	--	--	18
JUN 06...	--	--	70
JUL 11...	--	--	6
AUG 04...	--	--	1
SEP 15...	E.1	11.6	1

< Less than.
E Estimated.
S Most probable value.

PEND OREILLE RIVER BASIN
 12395000 PRIEST RIVER NEAR PRIEST RIVER, ID

Temperature, water, degrees Celsius
 WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	10.1	7.8	14.0	11.6	19.9	17.9	22.2	19.9	17.6	13.8
2	---	---	10.7	8.7	12.0	11.3	18.9	17.1	22.0	18.6	17.4	14.4
3	---	---	11.3	10.3	12.4	11.5	18.1	15.1	21.7	17.9	17.3	14.6
4	---	---	10.6	9.6	14.9	11.8	19.0	16.5	22.3	18.1	16.5	14.1
5	---	---	10.7	9.5	14.9	12.3	20.7	16.6	22.7	18.7	16.8	13.5
6	---	---	11.5	10.7	13.7	12.1	20.0	18.2	22.7	18.9	16.6	13.4
7	---	---	11.3	10.4	13.0	12.6	20.2	16.8	22.7	18.4	16.6	13.2
8	---	---	10.9	9.5	13.5	12.0	20.2	16.8	23.0	18.9	16.5	13.2
9	---	---	11.0	8.9	14.9	12.3	18.9	16.8	23.2	19.0	15.9	13.8
10	---	---	11.3	10.6	16.2	13.2	17.0	15.4	23.2	19.4	14.4	12.9
11	---	---	12.9	9.9	15.5	14.4	19.4	14.9	23.0	19.0	13.2	12.0
12	---	---	13.2	11.2	14.9	13.8	21.0	17.6	21.8	18.7	12.4	11.6
13	---	---	13.7	12.3	14.9	13.0	21.2	18.6	20.0	16.2	13.8	11.3
14	7.3	5.9	13.2	11.3	14.7	12.9	20.8	17.8	20.3	16.2	15.2	11.6
15	6.5	5.0	13.4	11.0	15.9	12.0	21.0	17.9	20.2	16.6	15.4	12.4
16	6.7	5.8	13.4	11.6	15.9	14.1	20.3	18.9	20.8	17.0	14.4	12.4
17	7.2	6.1	11.6	9.8	15.5	14.6	21.5	16.8	20.2	17.8	15.2	12.7
18	7.8	5.9	10.4	8.6	15.1	13.4	---	---	19.9	16.5	15.1	12.6
19	7.9	5.5	11.5	8.2	16.8	14.1	---	---	19.5	16.2	14.7	11.8
20	8.1	6.2	11.5	9.0	17.8	15.2	22.2	18.6	20.5	16.0	14.4	11.5
21	8.4	6.7	11.2	9.2	19.2	16.8	22.7	18.4	21.2	16.8	13.8	10.9
22	9.9	7.2	11.3	10.1	19.0	17.4	21.8	19.0	20.3	17.8	13.7	11.0
23	9.6	8.4	11.2	9.6	17.4	15.4	20.7	17.4	18.7	16.6	13.4	10.7
24	11.8	8.9	11.3	9.5	17.0	15.7	21.3	17.4	18.6	15.4	12.6	9.8
25	11.6	9.5	12.9	10.4	19.4	15.9	21.3	17.9	18.9	14.9	12.4	9.5
26	11.5	9.8	14.3	11.6	18.9	16.5	21.3	17.8	19.0	15.1	12.7	9.8
27	11.0	9.6	16.2	12.4	18.7	16.2	21.8	18.1	19.2	15.4	12.9	9.9
28	9.6	8.1	17.3	14.0	17.0	15.5	22.7	18.7	---	---	12.3	9.6
29	9.0	7.2	17.9	14.9	18.4	15.9	22.2	19.0	18.6	15.9	12.0	11.3
30	8.9	7.5	17.9	15.2	19.2	16.6	22.2	17.6	16.8	14.0	12.7	11.6
31	---	---	17.3	14.0	---	---	22.8	18.6	17.3	13.8	---	---
MONTH	---	---	17.9	7.8	19.4	11.3	---	---	---	---	17.6	9.5

PEND OREILLE RIVER BASIN

12395500 PEND OREILLE RIVER AT NEWPORT, WA

LOCATION.--Lat 48°10'56", long 117°02'00", (NAD27), in SE¹/₄SE¹/₄SW¹/₄ sec.24, T.56 N., R.6 W. (Boise Meridian), Bonner County, Newport quad., Hydrologic Unit 17010216, on left bank, at Newport, 0.2 mi upstream from bridge on U.S. Highway 2, 0.2 mi east of Idaho-Washington State line, 1.6 mi downstream from Albeni Falls Dam, and at mile 88.5.

DRAINAGE AREA.--24,200 mi², approximately.

PERIOD OF RECORD.--June 1903 to September 1912, October 1929 to October 1941, October 1952 to current year. Prior to October 1921, published as "Clark Fork at Newport, Wash.," October 1921 to September 1937, as "Clark Fork at Priest River, Idaho," and October 1937 to September 1941, as "Pend Oreille River at Priest River, Idaho."

REVISED RECORDS.--WSP 532: 1903-11.

GAGE.--Water-stage recorder. Datum of gage is 1,999.7 ft above NGVD of 1929. Prior to Sept. 22, 1928, nonrecording gages at Priest River, Newport, or Metaline Falls at various datums (see description, WSP 532, p. 92). Sept. 22, 1928, to Sept. 30, 1935, at datum 40.44 ft higher, and Oct. 1, 1935, to Sept. 30, 1941, water-stage recorder at datum 0.30 ft higher. Since December 1952, auxiliary water-stage recorder 2.74 mi downstream from base gage.

REMARKS.--Records good except for estimated daily discharges, which are fair. Flow regulated at Albeni Falls Dam and affected by storage in Pend Oreille Lake (see sta 12392500), Flathead Lake, Hungry Horse Reservoir, and several smaller reservoirs. Diversions above station for irrigation of about 354,000 acres. Stage-discharge relation affected by backwater from Box Canyon dam 54 mi downstream. Discharge computed from slope and conveyance of reach between base and auxiliary gage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 136,000 ft³/s June 15, 1933, June 21, 1933, June 12, 1972; minimum, 1,280 ft³/s Sept. 1, 1961,

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 1894 reached a stage of about 64.0 ft, present site and datum, (from water surface profiles) discharge, about 200,000 ft³/s.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 74,500 ft³/s June 9, gage height, 44.20 ft; minimum daily, 4,620 ft³/s Sept. 11.

Discharge, cubic feet per second
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	26400	24200	17800	16300	17300	13900	16000	25700	30400	34800	16000	8180
2	26200	24000	16000	16500	15700	14000	14900	26200	33900	32700	16400	8140
3	26300	21900	15400	16600	14900	13800	14100	28900	38900	29700	16300	8100
4	26600	20300	15500	16500	14700	13300	15000	26900	41100	31900	15800	8060
5	26700	19100	15500	15000	14500	13000	17800	25100	41200	32500	14300	8040
6	26700	17100	16300	13400	15400	12300	17600	24700	48100	29500	12300	8090
7	26700	15900	17700	13600	15700	12100	16400	24400	57400	28500	11500	7310
8	24300	15800	19000	12700	16300	10500	16500	24900	66800	26100	12100	6900
9	22400	15900	19600	12600	16500	8200	17400	29100	71100	23600	12400	6290
10	22600	15800	19200	e12800	15100	7770	17900	32200	69000	23400	12400	4840
11	22800	15500	19000	e12600	13900	7600	17800	34200	63000	22100	12500	4620
12	22700	15400	25800	11600	13800	8420	17700	35100	55300	21500	11900	6580
13	20900	15500	26100	11600	14200	9280	18300	36100	50300	22800	11000	7340
14	19800	15200	25400	e12000	15400	10400	18000	36200	50500	22500	10100	7230
15	19800	14400	25500	e12000	15800	11700	17200	40100	48900	20800	10000	7130
16	19900	13800	25400	e12000	15500	12100	16900	42800	48000	19600	11900	7120
17	19700	13900	24500	e13000	14400	12000	16700	42900	44700	19100	12300	6900
18	19900	13300	23800	e19000	13800	12500	18300	44900	43500	19100	11400	6960
19	19900	12700	23700	19500	13800	13000	20400	48400	46000	18000	10400	6960
20	19700	12800	21500	19300	13700	12800	21200	51200	48000	16700	10000	10300
21	20600	12900	19000	19400	13700	12400	20500	52700	47800	13700	10700	13200
22	21300	12500	19500	19400	13800	11900	20100	52800	46600	13400	11900	13500
23	21000	12500	23800	19400	13900	12000	20200	53000	42500	14300	13400	12400
24	21100	16700	20700	20400	13900	11700	21000	51500	38400	14200	14600	11000
25	21100	18800	17800	21400	13800	11800	24000	48300	39500	13700	13000	11000
26	22500	14800	17200	21600	13800	11600	25900	42100	36700	13100	11700	11000
27	23100	13000	16700	21800	13800	11700	27800	36500	34800	13300	11100	12200
28	23800	15200	16900	24400	13900	16300	31200	34200	34800	13400	10800	13100
29	23500	16700	17500	25300	---	18000	36500	32300	35000	14600	10800	14300
30	23300	18500	18900	23000	---	18600	32600	30700	35000	15400	10400	15700
31	24100	---	18000	20700	---	16700	---	30500	---	15600	8670	---
TOTAL	705400	484100	618700	525400	411000	381370	605900	1144600	1387200	649600	378070	272490
MEAN	22750	16140	19960	16950	14680	12300	20200	36920	46240	20950	12200	9083
MAX	26700	24200	26100	25300	17300	18600	36500	53000	71100	34800	16400	15700
MIN	19700	12500	15400	11600	13700	7600	14100	24400	30400	13100	8670	4620
AC-FT	1399000	960200	1227000	1042000	815200	756400	1202000	2270000	2752000	1288000	749900	540500

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1903 - 2005, BY WATER YEAR (WY)

	1903	1904	1905	1906	1907	1908	1909	1910	1911	1912	1913	1914	1915	1916	1917	1918	1919	1920	1921	1922	1923	1924	1925	1926	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
MEAN	17680	18320	16310	15480	16330	18970	27220	49140	61220	31740	14070	13440																																																																																											
MAX	31330	32280	36790	40010	41290	42260	56940	97850	114900	73730	45210	21990																																																																																											
(WY)	1960	1960	1996	1934	1996	1996	1956	1997	1933	1907	1907	1907																																																																																											
MIN	6208	6049	5987	4271	4380	6622	5507	15320	15220	7295	5875	6353																																																																																											
(WY)	1932	1937	1937	1937	1936	1937	1977	1977	1977	1977	1988	1931																																																																																											

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR	FOR 2005 WATER YEAR	WATER YEARS 1903 - 2005
ANNUAL TOTAL	7462190	7563830	
ANNUAL MEAN	20390	20720	24940
HIGHEST ANNUAL MEAN			38600
LOWEST ANNUAL MEAN			12920
HIGHEST DAILY MEAN	49800	May 31	71100
LOWEST DAILY MEAN	7830	Jan 13	4620
ANNUAL SEVEN-DAY MINIMUM	8350	Jan 10	6260
ANNUAL RUNOFF (AC-FT)	14800000		15000000
10 PERCENT EXCEEDS	34600		51900
50 PERCENT EXCEEDS	17900		18700
90 PERCENT EXCEEDS	11400		8640

e Estimated