

Water-Data Report 2012

12372000 FLATHEAD RIVER NEAR POLSON, MT

Pend Oreille Basin
Lower Flathead Subbasin

LOCATION.--Lat 47°40'49", long 114°14'48" referenced to North American Datum of 1983, in SW ¼ NE ¼ SE ¼ sec.11, T.22 N., R.21 W., Lake County, MT, Hydrologic Unit 17010212, on left bank 0.5 mi downstream from Kerr Dam, 4.0 mi west of Polson, 5.0 mi downstream from Flathead Lake, and at river mile 71.5.

DRAINAGE AREA.--7,096 mi².

SURFACE-WATER RECORDS

PERIOD OF RECORD.--July 1907 to current year.

REVISED RECORDS.--Water Supply Paper (WSP) 652: 1926. WSP 752: 1932. WSP 1182: 1948. WSP 1216: Drainage area. WSP 1246: 1928, maximum discharge. WSP 1636: 1958, adjusted runoff.

GAGE.--Water-stage recorder. Elevation of gage is 2,692.70 ft, referenced to the National Geodetic Vertical Datum of 1929 (levels by The Montana Power Co.). Prior to Oct. 1, 1941, nonrecording gages or water-stage recorder at several sites near highway bridge at old site of Michell's ferry 6 mi downstream from present site, all at elevation 2,629.20 ft (from river-profile survey).

REMARKS.--Records are good. Flow is regulated by Flathead Lake (Kerr Dam) since April 1938 (station number 12371500) and Hungry Horse Reservoir (station number 12362000) since September 1951. Diversions occur upstream from station for irrigation of about 10,000 acres. Flathead project pumps can divert up to 12,000 acre-ft per month when required for irrigation of lands downstream from station. U.S. Geological Survey satellite telemeter is located at the station. Several unpublished observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE FOR PERIOD OF RECORD.--105 years, 11,540ft³/s, 22.08 in/yr, 8,361,000 acre-ft/yr, adjusted for change in contents in Hungry Horse Reservoir and Flathead Lake.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 82,800 ft³/s, May 29, 1928, gage height, 17.2 ft, site and elevation then in use; minimum probably less than 5.0 ft³/s, Apr. 13, 1938; minimum daily, 32 ft³/s, Apr. 12, 1938.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in June 1894 reached a stage of about 21 ft, present elevation; discharge, about 110,000 ft³/s, from lake elevation-discharge study.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 56,100 ft³/s, June 28, gage height, 16.48 ft; minimum daily, 3,790 ft³/s, Sept. 16.

12372000 FLATHEAD RIVER NEAR POLSON, MT—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	5,510	12,500	5,720	9,620	9,500	7,100	9,010	30,800	22,500	46,900	10,300	4,340
2	5,490	12,100	5,760	9,590	9,600	7,910	9,230	31,400	21,100	40,300	9,850	4,330
3	5,460	11,400	5,750	9,540	9,650	8,950	9,830	31,900	20,500	37,300	9,550	4,320
4	5,510	10,500	5,770	9,240	9,650	9,300	10,300	31,700	20,800	36,500	9,600	4,150
5	5,540	9,440	6,210	9,210	9,660	9,310	10,500	31,600	22,300	34,600	9,540	3,930
6	5,560	8,950	7,170	9,360	9,650	9,300	11,000	31,600	26,000	30,600	9,030	3,930
7	5,580	8,790	8,110	9,620	9,650	9,270	11,100	31,300	31,300	27,000	8,300	3,910
8	5,590	8,130	8,400	9,590	9,080	9,520	11,400	30,900	33,800	25,500	8,230	3,880
9	5,590	7,660	8,410	9,590	8,040	9,870	11,600	30,200	33,400	25,500	8,180	3,890
10	5,590	7,670	8,370	9,580	7,170	9,840	11,800	30,100	32,100	25,000	8,130	3,890
11	6,110	7,640	8,390	9,580	6,320	9,790	11,900	30,400	31,400	24,700	8,160	3,870
12	7,080	7,180	8,960	9,670	5,700	9,600	12,200	30,400	30,900	24,100	8,190	3,840
13	8,130	6,650	9,460	9,610	5,700	9,490	12,800	30,300	30,800	23,600	8,040	3,810
14	9,200	6,640	9,460	9,600	5,540	9,610	13,100	30,200	32,500	22,700	8,070	3,820
15	10,200	6,600	9,430	9,600	5,240	9,600	13,400	30,300	35,300	22,200	7,760	3,800
16	10,700	6,620	9,420	9,580	5,150	9,440	13,600	30,500	37,500	23,000	7,550	3,790
17	11,000	6,640	9,510	9,540	5,180	9,370	13,900	30,900	40,400	23,500	7,560	3,830
18	11,600	6,650	9,640	9,510	5,150	9,410	14,500	31,200	43,700	22,000	7,550	3,880
19	11,600	6,640	9,650	9,600	5,160	9,160	15,500	31,400	51,300	18,500	7,590	3,870
20	11,800	6,660	9,610	9,620	5,160	8,800	15,700	31,300	53,800	17,100	7,560	3,860
21	12,000	6,240	9,640	9,590	5,000	8,360	15,800	31,000	54,600	16,100	7,050	3,860
22	12,000	5,680	9,680	9,570	4,700	8,370	15,900	30,700	54,200	15,200	6,610	3,870
23	12,000	5,700	9,690	9,530	4,740	8,480	15,900	31,100	53,700	14,600	6,420	3,900
24	12,000	5,830	9,670	9,540	4,750	8,510	16,800	32,000	53,500	14,100	6,290	3,880
25	12,100	5,840	9,680	9,550	4,760	8,510	18,900	32,600	53,400	13,500	6,040	4,010
26	12,100	5,840	9,680	9,510	4,770	8,310	21,300	32,600	53,400	12,100	6,030	3,990
27	12,300	5,820	9,670	9,510	5,120	7,760	23,800	32,200	54,400	12,100	5,980	4,020
28	12,500	5,780	9,640	9,490	5,910	7,820	27,000	31,800	55,500	12,000	5,840	3,980
29	12,500	5,770	9,610	9,500	6,490	8,010	29,100	29,900	55,300	12,100	5,350	3,990
30	12,500	5,710	9,600	9,480	---	8,100	30,400	27,800	52,700	11,500	4,750	3,890
31	12,500	---	9,590	9,490	---	8,650	---	25,000	---	11,000	4,360	---
Total	287,340	223,270	269,350	295,610	192,190	275,520	457,270	955,100	1,192,100	694,900	233,460	118,330
Mean	9,269	7,442	8,689	9,536	6,627	8,888	15,240	30,810	39,740	22,420	7,531	3,944
Max	12,500	12,500	9,690	9,670	9,660	9,870	30,400	32,600	55,500	46,900	10,300	4,340
Min	5,460	5,680	5,720	9,210	4,700	7,100	9,010	25,000	20,500	11,000	4,360	3,790
Ac-ft	569,900	442,900	534,300	586,300	381,200	546,500	907,000	1,894,000	2,365,000	1,378,000	463,100	234,700
Cfsm	1.31	1.05	1.22	1.34	0.93	1.25	2.15	4.34	5.60	3.16	1.06	0.56
In.	1.51	1.17	1.41	1.55	1.01	1.44	2.40	5.01	6.25	3.64	1.22	0.62

CHANGE IN CONTENTS IN ACRE-FEET, IN HUNGRY HORSE RESERVOIR AND FLATHEAD LAKE

-278,000	-195,000	-326,000	-362,000	-195,000	-197,000	672,000	351,000	731,000	-47,000	-126,000	-81,000
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ADJUSTED FOR CHANGE IN CONTENTS IN HUNGRY HORSE RESERVOIR AND FLATHEAD LAKE

Mean	4,747	4,166	3,388	3,648	3,327	5,653	26,540	36,510	52,030	21,650	5,482	2,583
Ac-Ft	291,900	247,900	208,300	224,300	186,200	347,600	1,579,000	2,245,000	3,096,000	1,331,000	337,100	153,700
Cfsm	0.67	0.59	0.48	0.51	0.46	0.80	3.74	5.15	7.33	3.05	0.77	0.36
In	0.77	0.66	0.55	0.59	0.49	0.92	4.17	5.93	8.18	3.52	0.89	0.41

12372000 FLATHEAD RIVER NEAR POLSON, MT—Continued

OBSERVED								
Calendar Year 2011	Total	6,273,170	Mean	17,190	Max	51,800	Min 5,380	Ac-ft ^a 12,440,000
Water Year 2012	Total	5,194,440	Mean	14,190	Max	55,500	Min 3,790	Ac-ft ^b 10,300,000

ADJUSTED								
Calendar Year 2011	Total	6,301,000	Mean	17,260	Cfsm	2.43	In 33.02	Ac-ft 12,498,000
Water Year 2012	Total	5,180,000	Mean	14,150	Cfsm	1.99	In 27.15	Ac-ft 10,274,000

^aChange in contents in Hungry Horse Reservoir and Flathead Lake was 58,000 ac-ft.

^bChange in contents in Hungry Horse Reservoir and Flathead Lake was -26,000 ac-ft.

