

12372000 FLATHEAD RIVER NEAR POLSON, MT

Pend Oreille Basin
Lower Flathead Subbasin

LOCATION.--Lat 47°40'49", long 114°14'45" referenced to North American Datum of 1927, 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 Mitchell'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 Several unpublished observations of water temperature and specific conductance were made during the year.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.--99 years, 11,490 ft³/s, 21.99 in/yr, 8,325,000 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, 49,100 ft³/s, June 17, gage height, 15.50 ft; minimum daily, 4,210 ft³/s, Oct. 1.

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DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2005 TO SEPTEMBER 2006
DAILY MEAN VALUES

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	4,210	8,480	10,800	6,580	10,800	12,000	7,570	23,700	27,100	18,200	7,060	4,670
2	4,740	8,400	10,600	6,620	10,900	12,000	7,660	25,100	24,700	19,300	6,820	4,620
3	7,440	8,400	10,500	6,620	11,000	12,000	8,000	25,900	24,000	19,200	6,340	4,620
4	10,300	8,410	10,500	6,660	11,000	11,900	7,780	26,200	24,100	17,200	6,040	4,600
5	10,200	8,430	10,600	6,660	11,000	11,600	8,150	26,100	24,400	14,800	5,980	4,610
6	9,650	8,450	10,600	6,620	11,600	11,200	8,760	25,400	24,400	14,600	5,950	4,600
7	8,650	8,470	10,500	6,620	12,000	11,000	9,390	23,800	24,500	14,600	5,590	4,600
8	8,190	8,470	10,500	6,620	12,700	10,500	9,960	21,500	26,500	14,400	4,890	4,580
9	8,190	8,500	10,500	6,640	13,000	9,750	10,700	20,800	30,300	14,200	4,530	4,520
10	8,290	8,510	10,500	6,680	13,100	9,480	11,200	20,800	31,000	13,500	4,530	4,480
11	8,230	8,510	10,500	6,710	13,100	9,590	10,800	21,400	31,000	12,900	4,550	4,510
12	8,230	8,490	10,400	6,680	13,100	9,640	9,860	22,200	29,900	12,900	4,560	4,530
13	8,310	8,490	10,500	6,690	13,100	9,570	11,800	22,400	29,000	13,100	4,580	4,530
14	8,270	8,530	10,600	6,710	13,000	9,370	13,700	23,200	28,800	13,100	4,590	4,530
15	8,280	8,510	10,500	6,730	13,000	9,130	14,400	24,900	28,400	13,000	4,560	4,600
16	8,280	8,520	10,400	7,290	13,000	8,760	14,600	26,500	33,200	13,100	4,530	4,650
17	8,330	9,160	10,600	8,410	12,700	8,570	14,700	27,300	43,000	12,700	4,610	4,660
18	8,280	10,100	10,600	9,370	12,700	8,560	14,800	28,400	48,100	11,100	4,650	4,660
19	8,370	10,500	10,700	10,400	12,800	8,600	14,900	29,700	46,700	10,300	4,610	4,660
20	8,460	10,500	10,700	10,900	13,000	8,500	14,900	30,900	41,200	10,400	4,630	4,980
21	8,500	10,600	9,880	10,900	13,000	8,130	15,900	32,200	37,300	9,450	4,630	5,500
22	8,470	10,500	8,060	10,900	13,100	7,970	18,300	32,900	33,600	9,410	4,620	6,100
23	8,500	10,500	7,520	10,900	13,000	7,830	20,400	32,700	28,400	9,060	4,590	6,110
24	8,490	10,400	7,530	11,000	13,000	7,680	21,300	34,100	23,300	9,050	4,590	6,130
25	8,410	10,500	7,520	11,000	13,000	7,610	21,600	35,400	20,200	9,120	4,590	6,120
26	8,410	10,500	7,520	10,900	13,000	7,430	21,700	36,200	19,800	8,620	4,610	6,110
27	8,390	10,500	7,510	10,900	12,600	7,700	21,900	36,900	18,000	7,620	4,610	6,150
28	8,400	10,600	7,200	10,900	12,000	7,540	22,300	35,200	17,100	7,100	4,610	6,220
29	8,450	10,700	6,610	10,900	---	7,420	22,600	32,000	17,400	7,080	4,610	6,240
30	8,440	10,600	6,610	10,900	---	7,480	22,900	30,600	17,900	7,080	5,000	6,290
31	8,530	---	6,580	10,900	---	7,580	---	29,500	---	7,040	4,930	---
Total	255,890	281,230	293,640	266,310	349,300	286,090	432,530	863,900	853,300	373,230	154,990	153,180
Mean	8,255	9,374	9,472	8,591	12,480	9,229	14,420	27,870	28,440	12,040	5,000	5,106
Max	10,300	10,700	10,800	11,000	13,100	12,000	22,900	36,900	48,100	19,300	7,060	6,290
Min	4,210	8,400	6,580	6,580	10,800	7,420	7,570	20,800	17,100	7,040	4,530	4,480
Ac-ft	507,600	557,800	582,400	528,200	692,800	567,500	857,900	1,714,000	1,693,000	740,300	307,400	303,800
Cfsm	1.16	1.32	1.33	1.21	1.76	1.30	2.03	3.93	4.01	1.70	0.70	0.72
In.	1.34	1.47	1.54	1.40	1.83	1.50	2.27	4.53	4.47	1.96	0.81	0.80
CHANGE IN CONTENTS IN ACRE-FEET, IN HUNGRY HORSE RESERVOIR AND FLATHEAD LAKE												
Ac-ft	-28,000	-193,000	-321,000	-72,000	-452,000	-228,000	+265,000	+951,000	+558,000	-159,000	-120,000	-143,000
ADJUSTED FOR CHANGE IN CONTENTS IN HUNGRY HORSE RESERVOIR AND FLATHEAD LAKE												
Mean	7,800	6,131	4,251	7,419	4,336	5,521	18,870	43,340	38,330	9,454	3,048	2,702
Ac-ft	479,600	364,800	261,400	456,200	240,800	339,500	1,123,000	2,665,000	2,281,000	581,300	187,400	160,800
Cfsm	1.10	0.86	0.60	1.05	0.61	0.78	2.66	6.11	5.40	1.33	0.43	0.38
In	1.27	0.96	0.69	1.21	0.64	0.90	2.97	7.04	6.03	1.54	0.50	0.42

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OBSERVED										
Calendar Year 2005	Total	3,858,570	Mean	10,570	Max	47,500	Min	3,530	Ac-ft	^a 7,653,000
Water Year 2006	Total	4,563,590	Mean	12,500	Max	48,100	Min	4,210	Ac-ft	^b 9,052,000
ADJUSTED										
Calendar Year 2005	Total	3,774,338	Mean	10,340	Cfsm	1.46	In	19.78	Ac-ft	7,485,000
Water Year 2006	Total	4,608,419	Mean	12,630	Cfsm	1.78	In	24.15	Ac-ft	9,140,000

^aChange in contents in Hungry Horse Reservoir and Flathead Lake was -168,000 ac-ft.

^bChange in contents in Hungry Horse Reservoir and Flathead Lake was +88,000 ac-ft.

