Water-Data Report 2007

12363000 FLATHEAD RIVER AT COLUMBIA FALLS, MT

Pend Oreille Basin
Flathead Lake Subbasin

LOCATION.--Lat 48°21′43″, long 114°11′02″ referenced to North American Datum of 1927, in NW ¼ NW ¼ SE ¼ sec.17, T.30 N., R.20 W., Flathead County, MT, Hydrologic Unit 17010208, on right bank 200 ft downstream from county road bridge at Columbia Falls, 5.7 mi downstream from South Fork, and at river mile 143.0.

DRAINAGE AREA.--4,464 mi^2.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--May 1922 to September 1923 (fragmentary), June 1928 to current year. Monthly discharge only for some periods, published in Water Supply Paper (WSP) 1316.

REVISED RECORDS.-- WSP 1092: 1923. WSP 1216: Drainage area. WSP 1636: 1958, adjusted runoff.

GAGE.--Water-stage recorder. Elevation of gage is 2,977.67 ft, referenced to the National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers). Prior to Nov. 12, 1928, nonrecording gage on bridge 200 ft upstream at elevation 0.19 ft higher.

REMARKS.--Records are good. South Fork Flathead River, which contributes about one-third of flow, is completely regulated by Hungry Horse Reservoir 10.9 mi upstream since Sept. 21, 1951 (see station number 12362000). Bureau of Reclamation satellite telemeter is located at the station.

AVERAGE DISCHARGE FOR PERIOD OF RECORD.--79 years, 9,583 ft^3/s, 29.15 in/yr, 6,942,900 acre-ft/yr, adjusted for change in contents in Hungry Horse Reservoir since Oct. 1, 1951.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 176,000 ft^3/s, June 9, 1964, gage height, 25.58 ft, from floodmarks, from rating curve extended above 95,000 ft^3/s on basis of slope-area measurement of peak flow; minimum, 798 ft^3/s, Dec. 8, 1929, gage height, -0.08 ft.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in June 1894 reached a stage of 22.7 ft, from floodmarks, discharge, 142,000 ft^3/s, from rating curve extended above 95,000 ft^3/s on basis of slope-area measurement of peak flow in 1964.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 37,900 ft^3/s, Nov. 8, gage height, 12.01 ft; minimum daily, 3,610 ft^3/s, Sept. 17.

12363000 FLATHEAD RIVER AT COLUMBIA FALLS, MT—Continued

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007
DAILY MEAN VALUES

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	3,690	3,640	4,610	3,950	3,990	3,760	14,500	21,400	23,900	13,000	7,110	5,490
2	3,690	3,680	4,440	4,080	3,880	3,750	14,000	23,900	26,000	12,500	6,990	5,100
3	3,650	3,770	4,210	4,160	3,840	3,820	14,800	27,700	27,900	12,200	6,860	4,610
4	3,680	3,760	4,220	4,090	3,870	3,870	13,300	28,300	29,300	11,900	6,760	4,230
5	3,690	3,800	4,180	3,940	3,950	3,870	12,100	25,200	28,900	11,700	6,660	4,020
6	3,700	4,120	4,060	3,950	3,960	3,900	11,700	22,600	30,000	11,500	6,570	3,800
7	3,700	14,400	4,100	3,880	3,850	3,950	11,400	21,200	27,400	11,400	6,480	3,750
8	3,690	35,000	4,040	3,950	3,820	3,950	11,400	21,100	23,900	11,200	6,400	3,770
9	3,680	24,200	4,030	3,890	3,820	3,950	11,800	25,000	21,200	10,900	6,330	3,740
10	3,680	16,500	3,970	3,880	3,840	3,930	12,600	31,400	20,600	10,300	6,270	3,720
11	3,720	13,300	3,940	3,800	3,860	3,960	12,600	31,500	21,900	9,920	6,190	3,710
12	3,720	11,200	3,930	3,730	3,830	4,610	12,400	31,400	20,400	9,600	6,130	3,670
13	3,650	9,750	3,980	3,720	3,800	9,810	12,000	33,300	18,800	9,360	6,050	3,700
14	3,700	8,740	3,990	3,920	3,850	10,000	10,200	34,000	17,600	9,150	5,980	3,720
15	3,730	7,770	4,090	3,880	3,870	8,460	9,960	29,200	17,400	9,060	5,920	3,670
16	3,680	7,360	4,080	4,010	3,940	7,540	10,200	27,300	16,700	8,930	5,880	3,630
17	3,660	7,110	3,820	4,070	3,910	7,030	10,500	28,000	16,500	8,790	5,870	3,610
18	3,650	6,420	3,870	4,150	3,860	7,680	11,000	31,100	17,200	8,670	5,840	3,630
19	3,670	5,910	4,110	4,090	3,870	10,400	11,300	32,600	17,400	8,680	5,830	3,680
20	3,720	5,900	4,120	4,040	3,880	12,800	11,100	31,200	17,100	8,610	5,820	3,650
21	3,750	6,770	4,120	4,000	3,820	13,300	10,600	28,500	16,900	8,490	5,830	3,710
22	3,720	6,880	4,180	4,000	3,780	12,400	10,300	25,500	17,100	8,290	5,880	3,690
23	3,680	6,590	4,060	4,020	3,810	11,400	10,200	23,100	17,500	8,100	5,880	3,660
24	3,680	6,350	3,950	4,040	3,820	10,900	10,600	21,700	17,000	8,000	5,850	4,380
25	3,670	5,920	3,860	4,030	3,820	13,500	11,700	21,300	16,300	7,920	5,880	4,710
26	3,670	5,430	3,940	3,900	3,830	19,900	13,100	20,100	15,500	7,790	5,810	4,260
27	3,670	4,950	3,910	3,820	3,820	20,400	14,100	19,600	14,200	7,680	5,780	3,840
28	3,680	4,340	3,890	3,850	3,770	18,200	14,500	20,800	13,400	7,570	5,740	3,730
29	3,690	4,370	3,820	3,880	---	16,500	16,100	22,800	13,200	7,450	5,720	3,770
30	3,710	4,510	3,850	3,950	---	15,500	18,900	22,200	13,200	7,330	5,680	3,700
31	3,690	---	3,930	4,040	---	14,800	---	22,400	---	7,220	5,670	---
Total	114,360	252,440	125,300	122,710	107,960	287,840	368,960	805,400	594,400	293,210	189,660	118,350
Mean	3,689	8,415	4,042	3,958	3,856	9,285	12,300	25,980	19,810	9,458	6,118	3,945
Max	3,750	35,000	4,610	4,160	3,990	20,400	18,900	34,000	30,000	13,000	7,110	5,490
Min	3,650	3,640	3,820	3,720	3,770	3,750	9,960	19,600	13,200	7,220	5,670	3,610
Ac-ft	226,800	500,700	248,500	243,400	214,100	570,900	731,800	1,598,000	1,179,000	581,600	376,200	234,700
Cfsm	0.83	1.89	0.91	0.89	0.86	2.08	2.76	5.82	4.44	2.12	1.37	0.88
In.	0.95	2.10	1.04	1.02	0.90	2.40	3.07	6.71	4.95	2.44	1.58	0.99

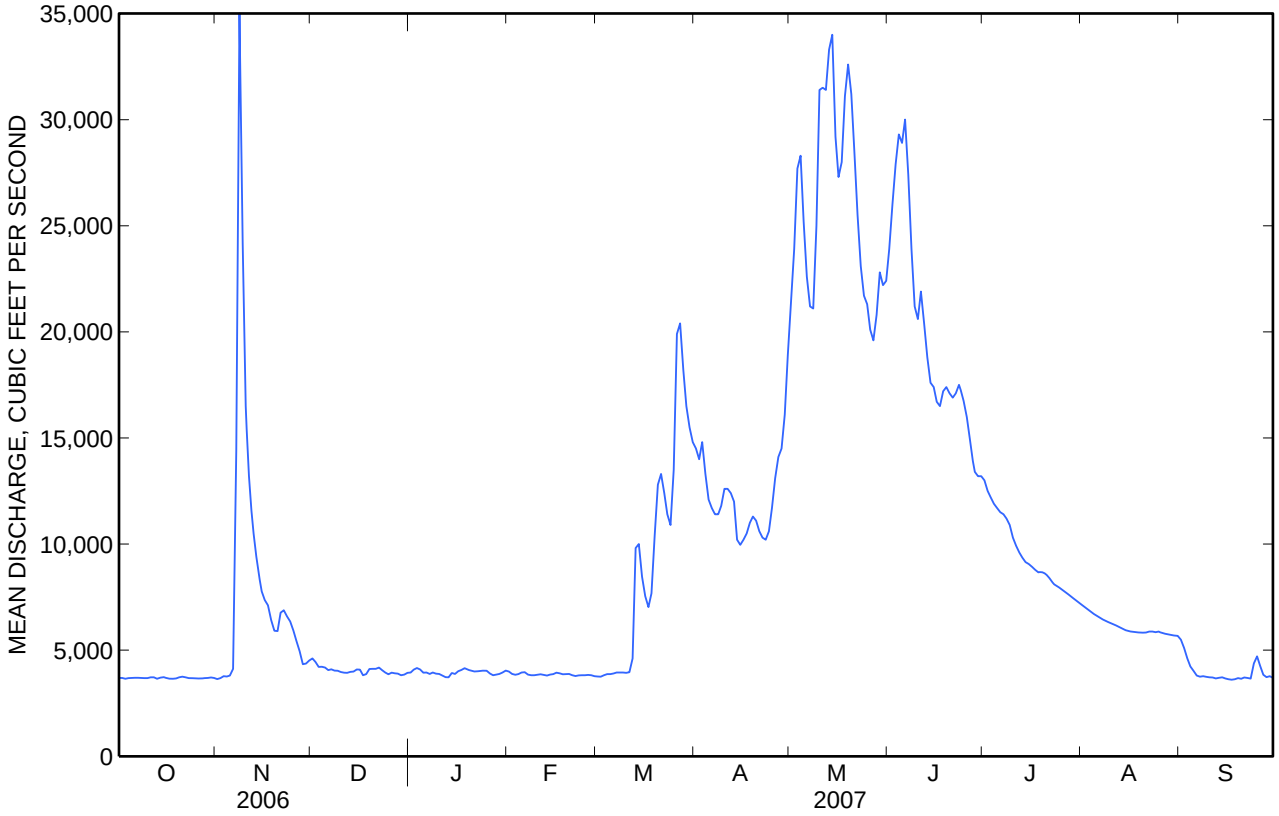
ADJUSTED FOR CHANGE IN CONTENTS IN HUNGRY HORSE RESERVOIR

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	34,790	10,300	3,684	2,641	2,379	10,680	12,990	30,920	22,870	6,857	2,475	1,760
Ac-ft	2,139,000	612,700	226,500	162,400	132,100	656,900	772,800	1,901,000	1,361,000	421,600	152,200	104,700
Cfsm	7.79	2.31	0.83	0.59	0.53	2.39	2.91	6.93	5.12	1.54	0.55	0.39
In.	8.98	2.57	0.95	0.68	0.55	2.76	3.25	7.98	5.72	1.77	0.64	0.44

12363000 FLATHEAD RIVER AT COLUMBIA FALLS, MT—Continued

					OBSERVED					
Calendar Year 2006	Total	3,829,970	Mean	10,490	Max	44,700	Min	3,370	Ac-ft	7,597,000
Water Year 2007	Total	3,380,590	Mean	9,262	Max	35,000	Min	3,610	Ac-ft	6,705,000

					ADJUSTED					
Calendar Year 2006	Total	3,840,686	Mean	10,520	Cfsm	2.36	In	32.00	Ac-ft	7,618,000
Water Year 2007	Total	3,326,947	Mean	9,115	Cfsm	2.04	In	27.72	Ac-ft	6,599,000



WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1949-50, 1963-67, 1970, 1979 to September 1994, March 2002 to current year. Water years 1968-69 published as Flathead River near Kalispell (station 12363500) 15 mi downstream. No appreciable inflow or outflow occurs between the two points.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1964 to September 1967, March 1979 to September 1981.
WATER TEMPERATURE: January 1949 to September 1950, August 1963 to September 1969, March 1979 to current year.
SUSPENDED-SEDIMENT DISCHARGE: July 1965 to September 1969.

INSTRUMENTATION.--Temperature recorder since Mar. 27, 1979.

REMARKS.--Daily water temperature records are rated good. Missing water temperature data for Feb. 17 due to equipment problems. Several unpublished observations of specific conductance and water temperature were made during the year.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 290 microsiemens per centimeter (µS/cm) at 25.0°C, April 6, 1980; minimum daily, 121 µS/cm at 25.0°C, May 28, 1979.
WATER TEMPERATURE: Maximum, 21.0°C, Aug. 23, 1963, Aug. 8, 1968; minimum, 0.0°C on several days during winter periods most years.
SEDIMENT CONCENTRATION: Maximum daily, 980 mg/L, May 21, 1967; Minimum daily, 1 mg/L on several days most years.
SEDIMENT LOAD: Maximum daily, 140,000 tons, May 23, 1967; minimum daily, 4 tons, Mar. 4-6, 1967.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURE: Maximum, 20.0°C, July 18 and 27; minimum, 0.0°C, Nov. 26-30 and Jan. 11 and 12.

WATER-QUALITY DATA
WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007

Part 1 of 2

[Remark codes: <, less than; E, estimated.]

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specific conductance, wat unf µS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Total nitrogen, water, unfltrd, mg/L (62855)
Apr													
16...	1200	10,300	687	12.3	107	8.1	164	9.5	5.0	<.020	.066	<.002	.11
May													
15...	1400	28,700	687	11.6	105	8.1	146	20.0	6.5	<.020	.095	<.002	.20
Jul													
17...	0930	8,830	683	9.1	104	8.2	157	25.5	16.5	<.020	.039	E.002	.10
Aug													
07...	0800	6,510	683	8.9	100	8.3	159	17.0	15.5	<.020	.023	E.001	.08

12363000 FLATHEAD RIVER AT COLUMBIA FALLS, MT—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007
Part 2 of 2
[Remark codes: <, less than; E, estimated.]

Date	Ortho-phos-phate, water, fltrd, mg/L as P (00671)	Total phos-phorus, water, unfltrd mg/L (00665)	Suspnd. sedi-ment, sieve diametr percent <.063mm (70331)	Sus-pended sedi-ment concen-tration mg/L (80154)	Sus-pended sedi-ment dis-charge, tons/d (80155)
Apr					
16...	E.003	<.008	88	3	83
May					
15...	E.004	.065	72	56	4,340
Jul					
17...	E.003	<.008	71	1	24
Aug					
07...	<.006	<.008	71	1	18

12363000 FLATHEAD RIVER AT COLUMBIA FALLS, MT—Continued

TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
		October			November			December			January	
1	13.5	11.5	12.5	4.0	2.5	3.0	1.0	0.5	0.5	2.0	1.5	2.0
2	13.0	11.0	11.5	3.5	2.5	3.0	1.0	0.5	1.0	2.5	2.0	2.0
3	12.5	10.5	11.5	3.5	3.0	3.5	1.0	1.0	1.0	2.5	2.0	2.5
4	13.0	11.0	11.5	4.5	3.5	4.0	1.5	1.0	1.5	2.5	2.0	2.0
5	13.0	11.0	12.0	5.5	4.5	5.0	2.0	1.5	1.5	2.0	1.5	1.5
6	12.5	11.0	12.0	6.0	5.0	5.5	2.0	1.5	2.0	2.0	1.0	1.5
7	12.5	10.5	11.5	7.5	6.0	7.0	2.0	2.0	2.0	2.0	1.0	1.5
8	11.5	10.0	10.5	7.0	5.0	6.0	2.5	2.0	2.0	2.0	1.5	2.0
9	11.5	9.5	10.0	5.0	4.5	5.0	2.0	2.0	2.0	2.5	2.0	2.0
10	10.5	9.5	10.0	5.0	4.5	5.0	2.0	2.0	2.0	2.5	1.0	2.0
11	11.0	9.0	10.0	5.0	4.5	4.5	2.5	2.0	2.5	1.5	0.0	1.0
12	11.0	8.5	9.5	4.5	4.0	4.5	3.0	2.5	3.0	1.5	0.0	0.5
13	9.5	7.5	8.5	4.5	4.0	4.0	3.0	2.5	3.0	1.5	0.5	1.0
14	9.0	6.5	7.5	4.0	3.5	3.5	3.0	2.5	2.5	1.5	1.0	1.0
15	7.0	6.5	6.5	4.0	3.5	4.0	2.5	2.0	2.5	2.0	1.0	1.5
16	7.0	5.5	6.5	5.0	4.0	4.5	2.0	1.0	2.0	2.0	1.5	1.5
17	6.0	5.0	5.5	4.0	3.5	3.5	1.5	0.5	1.0	2.0	1.5	2.0
18	5.0	5.0	5.0	4.0	3.0	3.5	2.0	1.0	1.0	2.0	1.5	1.5
19	5.5	5.0	5.0	3.0	2.5	3.0	1.5	1.0	1.0	2.0	1.5	2.0
20	6.5	5.0	5.5	4.5	3.0	4.0	1.5	0.5	1.0	2.0	1.5	2.0
21	7.0	5.0	5.5	4.5	4.0	4.0	1.5	1.0	1.0	2.5	1.5	2.0
22	6.5	4.5	5.5	4.0	3.5	4.0	1.5	1.0	1.5	2.0	1.5	2.0
23	6.0	4.5	5.0	4.0	3.0	3.5	1.5	1.0	1.5	2.5	2.0	2.0
24	6.0	4.0	5.0	3.0	2.5	3.0	2.0	1.5	1.5	3.0	2.0	2.0
25	5.0	4.5	5.0	2.5	1.0	2.0	2.0	1.5	1.5	2.5	1.5	2.0
26	5.5	4.5	5.0	1.0	0.0	0.5	2.0	1.5	2.0	2.5	1.5	2.0
27	5.5	4.5	5.0	0.0	0.0	0.0	2.5	2.0	2.0	2.5	1.0	1.5
28	6.5	4.5	5.5	0.0	0.0	0.0	2.0	1.5	2.0	2.5	1.0	2.0
29	5.0	2.5	4.0	0.0	0.0	0.0	2.0	1.0	1.5	2.0	1.5	1.5
30	4.5	2.5	3.0	0.5	0.0	0.0	2.0	1.5	1.5	2.0	1.0	1.5
31	3.5	3.0	3.0	---	---	---	2.0	1.5	2.0	2.0	1.5	1.5
Month	13.5	2.5	7.5	7.5	0.0	3.5	3.0	0.5	1.5	3.0	0.0	1.5

12363000 FLATHEAD RIVER AT COLUMBIA FALLS, MT—Continued

TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
		February			March			April			May	
1	2.0	1.5	1.5	3.5	2.0	2.5	4.5	4.0	4.0	7.0	6.0	6.5
2	2.0	1.5	2.0	4.0	2.0	3.0	4.5	3.5	4.0	7.0	6.5	6.5
3	2.5	1.5	2.0	3.0	2.0	2.5	4.0	3.0	3.5	6.5	4.5	5.5
4	2.5	1.5	2.0	4.5	2.5	3.0	4.0	3.0	3.5	5.0	4.5	4.5
5	3.5	2.0	2.5	4.0	3.0	3.5	4.5	3.5	4.0	6.0	4.5	5.0
6	3.0	2.0	2.5	5.5	3.5	4.0	5.5	4.0	4.5	7.0	5.0	6.0
7	3.0	2.0	2.5	5.5	3.0	4.0	5.5	4.0	5.0	7.0	6.0	6.5
8	2.5	2.0	2.0	5.5	3.5	4.0	6.0	4.5	5.0	8.0	6.0	7.0
9	2.5	2.0	2.0	5.5	3.5	4.0	5.5	4.5	5.0	8.5	7.5	8.0
10	4.0	2.5	3.0	5.5	3.0	4.0	4.5	3.5	4.0	8.0	6.5	7.0
11	3.0	1.5	2.5	4.5	4.0	4.0	4.5	3.5	4.0	7.5	6.5	7.0
12	1.5	1.0	1.0	5.5	3.5	4.5	5.0	3.5	4.5	8.0	7.0	7.5
13	2.0	1.0	1.5	3.5	1.5	2.5	5.0	4.5	4.5	8.0	6.0	7.0
14	2.5	1.5	2.0	2.5	2.0	2.5	6.0	4.5	5.5	7.5	5.5	6.5
15	2.5	2.0	2.5	3.0	1.5	2.5	6.0	5.5	5.5	8.0	6.5	7.0
16	3.5	2.0	3.0	3.0	2.5	3.0	6.0	4.5	5.5	8.5	7.0	8.0
17	---	---	---	5.0	3.0	3.5	6.5	5.5	6.0	9.0	8.0	8.5
18	4.0	2.5	3.0	5.0	4.5	5.0	6.0	5.0	5.0	9.0	7.5	8.0
19	3.0	2.5	2.5	4.5	3.5	4.0	5.0	4.5	4.5	8.5	7.0	7.5
20	3.5	2.0	2.5	4.0	3.5	3.5	5.5	4.5	5.0	7.0	6.5	7.0
21	4.0	2.0	2.5	3.5	2.5	3.0	6.0	4.0	5.0	7.0	6.0	6.5
22	2.5	2.0	2.0	3.5	3.0	3.5	6.5	5.0	6.0	7.5	6.5	7.0
23	3.5	2.0	2.5	4.5	3.0	3.5	7.5	5.5	6.5	7.5	6.5	7.0
24	4.0	2.5	3.0	4.5	4.0	4.5	7.0	6.0	6.5	7.5	7.0	7.0
25	4.0	2.5	3.0	4.5	4.0	4.5	6.5	6.0	6.5	7.0	5.5	6.5
26	3.5	2.5	3.0	4.0	3.0	3.5	6.5	5.5	6.0	8.0	6.5	7.5
27	4.0	1.5	2.5	4.0	3.5	3.5	6.5	6.0	6.0	8.0	7.5	7.5
28	4.0	2.0	3.0	4.5	3.5	4.0	6.5	5.5	6.0	7.5	6.5	7.0
29	---	---	---	4.5	3.5	4.0	7.0	6.5	6.5	8.5	6.0	7.0
30	---	---	---	4.5	3.5	4.0	6.5	5.5	6.0	9.0	7.5	8.5
31	---	---	---	4.0	4.0	4.0	---	---	---	10.0	8.5	9.0
Month	---	---	---	5.5	1.5	3.5	7.5	3.0	5.0	10.0	4.5	7.0

12363000 FLATHEAD RIVER AT COLUMBIA FALLS, MT—Continued

TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007

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