

Water-Data Report 2011

14162500 MCKENZIE RIVER NEAR VIDA, OR

Willamette Basin
Mckenzie Subbasin

LOCATION.--Lat 44°07'30", long 122°28'10" referenced to North American Datum of 1927, in NE ¼ NE ¼ sec.5, T.17 S., R.3 E., Lane County, OR, Hydrologic Unit 17090004, on right bank, 0.4 mi downstream from Mason Creek, 5.4 mi east of Vida and at mile 47.7.

DRAINAGE AREA.--930 mi², at cableway, 0.4 mi downstream, where all discharge measurement are made.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--July 1910 to March 1911 (published as "at Martins Rapids, near Vida"), September 1924 to current year. Monthly discharge only for some periods (water years 1910-11, 1924-25), published in WSP 1318.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 855.71 ft above NGVD of 1929 (levels by Eugene Water and Electric Board). July 1, 1910 to Mar. 31, 1911, nonrecording gage at site 3 mi downstream at different datum. Sept. 1, 1924 to Nov. 16, 1928, nonrecording gage at site 20 ft upstream at datum 0.15 ft lower. Nov. 17, 1928 to Sept. 23, 1968, water-stage recorder at present site on left bank at datum 0.15 ft lower.

REMARKS.--Records good except for estimated daily discharges, which are fair. Flow regulated since 1963 by Smith River Reservoir (station 14158795) and Cougar Lake (active capacity, 164,800 acre-ft), and since 1968 by Blue River Lake (active capacity, 85,550 acre-ft). No diversion upstream from station. All records given herein are for measuring site.

AVERAGE DISCHARGE FOR PERIOD OF RECORD.--38 years (water years 1925-1962), 4,001 ft³/s, 58.41 in/yr, 2,898,000 acre-ft/yr. 87 years (water years 1925-2011), 4,049 ft³/s, 2,934,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 64,400 ft³/s Dec. 28, 1945, gage height, 17.70 ft, site and datum then in use, from rating curve extended above 32,000 ft³/s; minimum discharge, 1,260 ft³/s Nov. 7, 1930, Sept. 17, Oct. 4, 8, 9, 1931.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in January 1923 reached a stage of 17.2 ft, from floodmarks, discharge, 62,000 ft³/s.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 27,300 ft³/s Jan. 16, gage height, 9.25 ft; minimum discharge, 2,160 ft³/s Sept. 1.

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DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011
DAILY MEAN VALUES
[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	2,510	4,940	9,050	6,610	4,750	3,440	7,080	5,070	6,830	4,140	3,110	e2,400
2	2,490	4,800	8,810	5,680	4,330	3,660	7,680	4,850	7,040	4,000	3,090	2,360
3	2,470	4,480	7,490	4,950	4,130	3,700	7,220	4,430	6,720	3,910	3,060	2,490
4	2,450	4,220	6,300	4,640	3,730	3,660	6,550	4,110	6,490	3,820	3,030	2,730
5	2,450	4,150	5,540	4,370	3,510	4,570	8,320	4,270	6,590	3,810	3,040	2,840
6	2,440	3,950	5,460	4,160	3,570	4,240	7,650	4,510	6,840	3,850	3,020	2,820
7	2,440	4,260	5,500	4,010	3,580	3,890	6,360	4,640	6,370	3,800	3,010	2,810
8	2,440	4,490	5,670	4,200	3,580	4,210	5,610	4,930	5,850	3,640	2,980	2,810
9	2,540	4,000	6,520	4,050	3,500	4,660	5,180	5,010	5,650	3,510	3,010	2,810
10	2,570	5,450	8,710	3,990	3,440	5,810	4,920	5,120	5,520	3,440	2,980	2,820
11	e2,600	5,070	8,650	3,910	3,390	6,040	5,020	5,420	5,380	3,520	2,950	2,760
12	2,810	4,780	10,700	3,970	3,240	5,300	4,890	6,120	5,330	3,410	2,950	2,720
13	3,040	4,610	12,700	5,770	3,220	5,010	4,680	6,480	5,350	3,400	3,000	2,730
14	3,090	4,500	12,600	8,690	3,210	4,960	4,600	7,090	5,490	3,350	2,940	2,750
15	3,090	4,760	10,400	8,620	4,020	5,380	5,190	6,720	5,680	3,400	2,920	2,760
16	3,080	5,150	10,400	19,600	4,060	6,580	8,420	6,600	5,600	3,340	2,950	2,770
17	3,090	4,980	11,000	18,000	3,730	6,010	11,300	5,970	5,340	3,290	2,890	2,770
18	3,120	6,570	10,600	12,100	3,580	5,450	9,490	5,760	5,130	3,350	2,870	2,760
19	3,090	6,150	10,300	11,800	3,370	4,950	8,530	5,800	5,170	4,010	2,880	2,730
20	3,050	5,300	9,800	11,500	3,270	4,540	7,290	5,740	5,170	3,720	2,900	2,710
21	3,040	4,780	9,540	12,000	3,220	4,520	5,880	5,720	5,100	3,530	2,880	2,710
22	3,110	4,720	8,380	11,700	3,230	4,400	5,030	5,580	5,100	3,410	2,660	2,730
23	3,930	4,880	7,200	11,100	3,250	4,170	4,530	5,610	5,030	3,340	2,490	2,700
24	4,800	4,530	5,540	10,700	3,300	4,120	4,570	6,340	5,060	3,360	2,520	2,690
25	5,030	4,110	5,460	10,200	3,170	4,100	5,060	6,870	4,870	3,280	2,530	2,700
26	5,430	3,840	5,410	9,380	3,120	4,310	5,950	7,090	4,680	3,240	2,660	2,710
27	5,410	4,200	5,360	8,560	2,940	4,430	5,730	7,380	4,660	3,210	2,690	2,730
28	5,260	4,200	8,210	7,520	2,940	4,820	5,490	7,870	4,790	3,200	2,620	2,720
29	5,120	3,760	11,000	6,350	---	5,090	5,460	7,240	4,610	3,130	2,840	2,710
30	5,090	4,860	8,570	5,450	---	6,780	5,250	6,760	4,150	3,110	2,930	2,690
31	5,150	---	7,360	5,160	---	7,000	---	6,670	---	3,100	e2,700	---
Total	106,230	140,490	258,230	248,740	98,380	149,800	188,930	181,770	165,590	108,620	89,100	81,440
Mean	3,427	4,683	8,330	8,024	3,514	4,832	6,298	5,864	5,520	3,504	2,874	2,715
Max	5,430	6,570	12,700	19,600	4,750	7,000	11,300	7,870	7,040	4,140	3,110	2,840
Min	2,440	3,760	5,360	3,910	2,940	3,440	4,530	4,110	4,150	3,100	2,490	2,360
Ac-ft	210,700	278,700	512,200	493,400	195,100	297,100	374,700	360,500	328,400	215,400	176,700	161,500

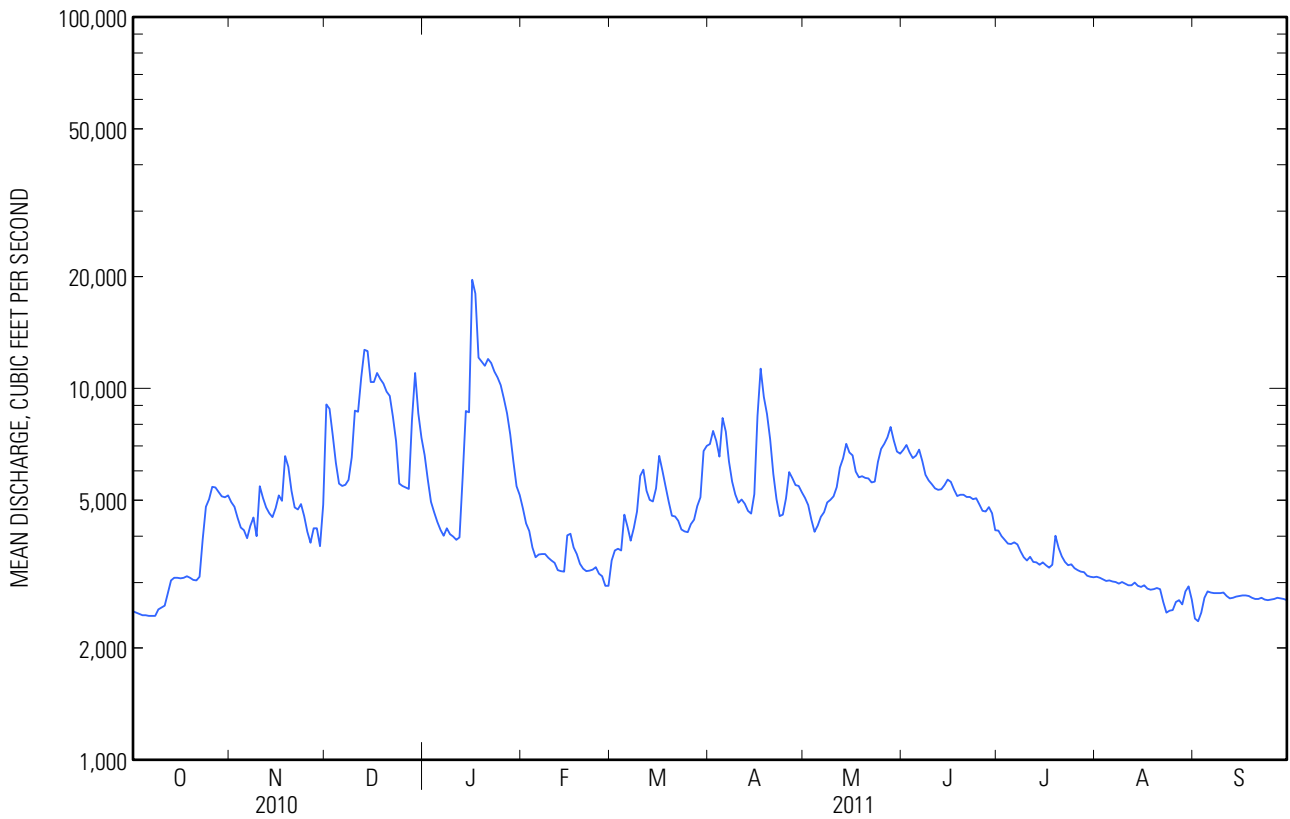
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1925 - 2011, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	2,509	4,337	5,822	5,828	5,143	4,739	4,809	4,752	3,737	2,508	2,279	2,190
Max	5,062	8,718	14,430	11,940	11,510	11,210	7,496	8,394	8,986	3,589	3,510	3,358
(WY)	(1951)	(1985)	(1965)	(2006)	(1996)	(1972)	(1937)	(1949)	(1933)	(1950)	(1971)	(1972)
Min	1,330	1,367	1,840	1,658	1,542	2,250	2,312	2,268	1,750	1,505	1,361	1,314
(WY)	(1945)	(1930)	(1945)	(1937)	(1977)	(1941)	(1941)	(1992)	(1940)	(1940)	(1940)	(1931)

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SUMMARY STATISTICS

	Calendar Year 2010		Water Year 2011		Water Years 1925 - 2011	
Annual total	1,579,350		1,817,320			
Annual mean	4,327		4,979		4,049	
Highest annual mean					6,211 1956	
Lowest annual mean					2,447 1977	
Highest daily mean	13,500	Jun 4	19,600	Jan 16	50,000	Dec 22, 1955
Lowest daily mean	2,190	Aug 16	2,360	Sep 2	1,260	Nov 7, 1930
Annual seven-day minimum	2,390	Sep 10	2,450	Oct 2	1,270	Oct 7, 1931
Annual runoff (ac-ft)	3,133,000		3,605,000		2,934,000	
10 percent exceeds	7,470		8,250		7,000	
50 percent exceeds	3,760		4,530		3,200	
90 percent exceeds	2,520		2,730		1,860	



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WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: November 1976 to September 1985.

WATER TEMPERATURE: June 1961 to September 1985, November 2000 to current year.

TURBIDITY: January 2003 to June 2007.

INSTRUMENTATION.--Temperature probe and data logger.

REMARKS.--

WATER TEMPERATURE: Records good.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 72 microsiemens Nov. 20, 1980; minimum recorded, 2.4 microsiemens Nov. 25, 1977.

WATER TEMPERATURE: Maximum, 17.3°C July 18, 2005; minimum recorded, 0.5°C Jan. 1, 1979.

TURBIDITY: Maximum, >338 FNU Dec. 30, 2005, Jan. 11, Feb. 1, 2006; minimum, <1 FNU on many days each year.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum, 15.2°C Aug. 1, 6; minimum, 2.2°C Feb. 26.

TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
	October			November			December			January		
1	12.6	10.3	11.3	9.5	9.1	9.3	6.4	5.9	6.1	5.0	4.5	4.7
2	12.1	10.2	11.1	9.9	9.1	9.4	6.4	6.2	6.3	4.7	4.3	4.5
3	11.3	10.2	10.7	9.7	8.9	9.2	6.2	5.6	5.9	4.4	4.0	4.2
4	11.3	10.2	10.7	9.3	8.5	8.8	6.1	5.6	5.8	4.7	4.0	4.3
5	11.2	9.4	10.3	9.2	8.4	8.7	6.1	5.6	5.8	5.2	4.6	4.9
6	11.6	9.3	10.4	9.5	8.7	9.0	6.3	5.7	6.0	5.1	4.5	4.8
7	11.8	10.0	10.8	9.2	8.7	9.0	6.3	5.9	6.1	5.1	4.6	4.8
8	11.6	10.1	10.8	8.7	8.1	8.4	6.5	6.1	6.3	5.4	4.9	5.1
9	10.7	10.2	10.5	8.1	7.6	7.8	6.6	6.2	6.4	5.2	4.7	4.9
10	11.1	10.4	10.7	8.2	7.6	7.8	6.6	6.3	6.4	4.8	4.1	4.5
11	11.4	10.0	10.6	7.9	7.1	7.5	6.9	6.3	6.5	4.6	3.9	4.3
12	11.2	9.1	10.1	8.0	7.2	7.7	7.1	6.9	7.0	5.0	4.6	4.8
13	11.4	9.6	10.4	7.6	7.1	7.3	7.3	7.0	7.2	5.5	5.0	5.2
14	11.4	9.7	10.4	7.8	7.4	7.6	7.2	6.1	6.7	5.9	5.5	5.7
15	11.3	10.2	10.6	8.2	7.8	8.0	6.4	6.0	6.2	6.2	5.7	5.9
16	11.0	9.9	10.4	8.2	7.8	8.0	6.2	5.9	6.0	6.6	6.2	6.4
17	11.1	10.1	10.5	7.8	7.3	7.5	6.0	5.7	5.9	6.5	6.2	6.4
18	10.8	9.4	10.1	7.5	7.0	7.2	6.0	5.9	6.0	6.2	5.9	6.1
19	10.9	9.4	10.0	7.1	6.7	6.9	5.9	5.7	5.8	6.2	5.8	6.1
20	10.9	9.5	10.1	7.0	6.3	6.6	5.9	5.7	5.8	5.9	5.4	5.7
21	10.7	9.5	10.0	6.3	5.8	6.1	5.8	5.5	5.6	6.1	5.8	5.9
22	10.9	10.0	10.4	5.8	5.1	5.7	6.0	5.6	5.7	6.0	5.6	5.9
23	10.8	10.1	10.4	5.1	4.6	4.8	5.8	5.3	5.6	6.0	5.4	5.7
24	10.5	9.8	10.1	5.1	4.6	4.9	6.0	5.4	5.7	6.2	5.8	5.9
25	9.8	8.9	9.4	5.4	4.8	5.1	6.0	5.5	5.8	5.9	5.5	5.7
26	9.3	8.0	8.6	5.6	5.2	5.4	5.9	5.2	5.6	5.9	5.3	5.6
27	9.4	8.7	9.1	5.8	5.2	5.4	5.6	5.2	5.4	5.8	5.2	5.5
28	9.7	9.2	9.4	5.8	5.2	5.5	6.1	5.5	5.8	5.9	5.2	5.5
29	10.2	9.4	9.7	5.8	5.2	5.5	6.1	5.2	5.6	6.1	5.6	5.8
30	9.5	9.2	9.4	5.9	5.4	5.6	5.4	5.1	5.2	6.1	5.5	5.8
31	9.7	9.2	9.4	---	---	---	5.1	4.3	4.6	6.1	5.6	5.8
Month	12.6	8.0	10.2	9.9	4.6	7.2	7.3	4.3	6.0	6.6	3.9	5.4

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TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
	February			March			April			May		
1	5.9	4.8	5.3	6.5	4.8	5.4	8.4	6.3	7.2	9.1	5.6	7.2
2	5.3	4.3	4.7	5.9	4.9	5.4	7.3	5.8	6.4	8.2	6.7	7.2
3	5.8	4.5	5.1	5.7	4.7	5.2	7.0	5.5	6.2	9.5	6.3	7.8
4	6.2	4.9	5.6	6.1	5.0	5.6	6.5	6.0	6.2	10.3	6.2	8.1
5	6.6	6.2	6.4	6.6	5.4	5.9	6.9	6.1	6.4	8.7	7.1	7.8
6	7.0	6.2	6.5	7.0	5.5	6.2	6.2	5.2	5.8	8.0	7.2	7.5
7	6.4	5.8	6.2	6.5	5.3	5.8	6.8	5.0	5.7	8.0	6.8	7.3
8	6.3	5.3	5.7	5.8	5.1	5.5	7.2	5.2	6.0	7.9	6.6	7.2
9	5.6	4.6	5.1	6.7	5.6	6.2	7.3	5.6	6.3	8.4	6.5	7.3
10	5.7	4.4	5.0	6.3	5.7	6.0	7.8	5.9	6.7	10.0	6.8	8.1
11	6.2	4.8	5.4	6.6	5.4	5.9	7.3	6.2	6.7	8.7	7.2	7.9
12	6.3	5.0	5.7	6.0	5.0	5.5	8.1	5.6	6.7	9.2	6.8	7.8
13	6.8	6.0	6.3	6.2	5.6	5.9	7.0	6.0	6.5	9.3	6.6	7.8
14	6.3	5.5	6.1	6.9	5.6	6.2	6.8	5.8	6.3	7.8	7.2	7.5
15	5.5	3.0	4.0	6.4	5.8	6.1	6.9	6.1	6.5	8.1	7.0	7.5
16	5.6	4.5	4.9	5.8	5.4	5.6	7.1	6.6	6.8	8.6	6.9	7.6
17	5.6	4.5	5.0	6.5	5.2	5.7	7.2	6.3	6.6	8.2	7.0	7.5
18	6.0	4.8	5.3	6.0	5.5	5.7	7.6	5.9	6.6	9.0	7.1	7.8
19	5.5	4.7	5.1	6.6	5.3	5.8	7.7	5.6	6.5	9.9	7.1	8.2
20	5.4	4.6	5.0	6.6	5.1	5.8	7.3	5.9	6.5	9.8	6.9	8.2
21	6.1	4.7	5.3	6.6	5.8	6.2	7.8	6.2	6.8	8.4	7.5	7.8
22	5.4	4.9	5.1	7.2	5.4	6.1	8.7	5.6	7.0	8.7	7.2	7.8
23	5.0	4.2	4.7	6.9	5.1	6.0	9.2	5.8	7.4	8.9	7.2	7.9
24	4.4	3.8	4.1	6.5	5.6	6.0	7.8	6.6	7.1	9.8	7.4	8.4
25	4.4	3.0	3.7	6.1	5.4	5.8	7.6	6.6	6.9	8.2	7.4	7.7
26	4.0	2.2	3.1	6.8	5.5	6.0	7.3	6.0	6.6	7.8	7.0	7.4
27	4.8	3.8	4.3	6.3	5.5	5.9	8.2	6.2	7.0	8.0	7.2	7.5
28	5.2	4.5	4.9	7.0	5.4	6.1	7.0	6.0	6.4	8.4	6.8	7.3
29	---	---	---	6.5	5.9	6.2	7.4	5.2	6.2	7.5	6.9	7.1
30	---	---	---	7.1	6.3	6.6	8.3	5.9	6.9	8.8	7.1	7.7
31	---	---	---	7.8	6.5	7.1	---	---	---	9.2	7.2	7.8
Month	7.0	2.2	5.1	7.8	4.7	5.9	9.2	5.0	6.6	10.3	5.6	7.7

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TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
	June			July			August			September		
1	8.0	7.3	7.5	12.5	8.6	10.4	15.2	10.8	12.8	---	---	---
2	8.8	7.1	7.8	13.2	9.3	11.0	14.9	11.1	12.8	13.2	9.7	11.4
3	9.6	7.0	8.2	13.1	9.4	11.1	14.8	10.9	12.7	13.0	9.6	11.3
4	9.7	7.6	8.5	13.3	9.5	11.2	15.1	10.9	12.8	12.6	9.6	11.1
5	9.1	8.0	8.4	13.5	9.5	11.3	15.0	11.3	13.0	12.9	9.8	11.2
6	8.5	7.7	8.0	13.9	9.8	11.6	15.2	11.0	12.9	12.8	9.7	11.2
7	9.1	7.7	8.2	13.5	10.0	11.6	15.0	11.1	12.9	12.6	9.9	11.3
8	9.8	7.4	8.4	13.5	10.0	11.5	14.8	11.0	12.8	13.0	10.2	11.6
9	10.6	7.2	8.8	13.6	9.6	11.4	14.6	11.2	12.8	13.2	10.2	11.6
10	10.8	8.1	9.2	13.6	9.7	11.4	14.5	10.9	12.5	12.6	10.0	11.3
11	10.3	8.1	9.0	13.0	10.1	11.4	14.5	10.6	12.4	12.8	10.0	11.3
12	9.7	7.8	8.6	11.7	10.4	11.0	14.6	10.6	12.5	12.5	10.0	11.3
13	10.9	8.1	9.2	13.3	10.1	11.4	14.3	10.7	12.4	12.8	10.0	11.3
14	11.2	8.2	9.4	13.5	9.9	11.5	14.4	11.2	12.6	11.5	10.1	10.7
15	10.5	8.2	9.1	13.8	9.7	11.5	14.4	10.6	12.4	11.2	10.0	10.6
16	10.9	7.7	9.1	12.0	10.3	11.1	14.4	10.6	12.4	11.5	9.2	10.2
17	11.2	8.1	9.4	11.4	10.2	10.6	14.5	10.8	12.6	10.9	9.1	10.0
18	9.2	8.4	8.8	11.6	9.9	10.6	14.2	10.5	12.3	11.9	9.5	10.6
19	10.9	8.4	9.4	11.4	10.2	10.7	14.4	10.6	12.4	12.1	9.6	10.7
20	12.1	8.7	10.1	13.4	9.8	11.3	14.8	10.7	12.6	11.9	9.4	10.6
21	11.9	8.9	10.2	12.1	10.0	11.0	14.7	11.2	12.9	11.9	9.3	10.6
22	12.1	9.0	10.4	13.8	9.9	11.6	14.5	11.2	12.8	11.5	9.3	10.4
23	10.5	9.2	9.8	14.2	10.0	11.9	14.6	10.6	12.5	11.8	9.3	10.5
24	11.6	8.5	9.8	14.6	10.4	12.3	14.4	10.8	12.6	11.9	9.5	10.6
25	11.7	8.5	9.9	12.8	10.9	11.6	14.8	11.2	12.9	10.9	9.9	10.4
26	11.8	8.7	10.1	14.4	10.7	12.3	14.8	11.0	12.9	11.1	9.4	10.1
27	11.8	9.3	10.4	14.4	10.4	12.3	14.8	11.1	12.9	10.6	9.6	10.1
28	10.8	9.7	10.1	14.8	10.4	12.5	14.8	11.4	13.0	11.2	9.3	10.2
29	10.6	9.5	10.0	15.1	10.8	12.8	14.2	11.0	12.5	11.5	9.1	10.3
30	11.4	9.2	10.1	15.1	10.9	12.8	13.4	10.9	12.0	11.8	9.6	10.5
31	---	---	---	15.0	10.8	12.8	---	---	---	---	---	---
Month	12.1	7.0	9.2	15.1	8.6	11.5	---	---	---	---	---	---