

14174000 WILLAMETTE RIVER AT ALBANY, OR

Willamette Basin
Upper Willamette Subbasin

LOCATION.--Lat 44°38'20", long 123°06'20" referenced to North American Datum of 1927, in SW ¼ sec.6, T.11 S., R.3 W., Linn County, OR, Hydrologic Unit 17090003, on right bank, 5 ft upstream from bridge on U.S. Highway 20 (Ellsworth Street) in Albany, 0.2 mi downstream from Calapooia River and at mile 119.31.

DRAINAGE AREA.--4,840 mi², approximately.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--November 1878 to April 1888 (fragmentary), January to June 1892, November 1892 to September 1894, December 1894 to current year. Monthly discharge only for some periods, published in WSP 1318.

REVISED RECORDS.--WSP 694: Drainage area. WSP 904: 1939. WSP 964: 1881, 1890, 1894, 1897, 1901, 1903, 1908, 1910, 1916, 1923, 1927, 1932(M). WSP 984: 1916. WSP 1248: 1895, 1902, 1907, 1915(M), 1917(M), 1918-19, 1934(M). WSP 1318 (monthly and annual figures only): 1894, 1897, 1901-3, 1907-8, 1910, 1916, 1918-19, 1923, 1927.

GAGE.--Water-stage recorder. Datum of gage is 167.18 ft above NGVD of 1929. Prior to Sept. 27, 1906, nonrecording gage at site 0.2 mi upstream at datum 5.00 ft higher. Sept. 27, 1906 to Nov. 12, 1934, nonrecording gage at site 300 ft upstream at datum 5.00 ft higher. Nov. 14, 1934 to Sept. 30, 1962, at datum 5.00 ft higher.

REMARKS.--No estimated daily discharges. Records good. Flow regulated by nine reservoirs upstream from station. Albany power canal diverts water from South Santiam River at Lebanon and discharges into Calapooia River near mouth; small diversions for irrigation and municipal water supply.

AVERAGE DISCHARGE FOR PERIOD OF RECORD.--47 years (water years 1894, 1896-1941), 13,760 ft³/s, 38.63 in/yr, 9,969,000 acre-ft/yr. 115 years (water years 1894, 1896-2009), 14,210 ft³/s, 10,300,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 266,000 ft³/s Jan. 14, 1881, gage height, 37.8 ft, present datum; minimum discharge, 1,840 ft³/s Sept. 1, 2, 1940.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Dec. 4, 1861, reached a stage of 41.0 ft, discharge, 340,000 ft³/s, from rating curve extended above 220,000 ft³/s. Flood of Feb. 4, 1890, reached a stage of 38.9 ft, discharge, 291,000 ft³/s.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 54,500 ft³/s Jan. 3, gage height, 18.77 ft; minimum discharge, 4,510 ft³/s July 22.

14174000 WILLAMETTE RIVER AT ALBANY, OR—Continued

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2008 TO SEPTEMBER 2009
DAILY MEAN VALUES

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	6,030	9,220	6,620	45,600	11,300	15,200	13,600	9,030	9,670	5,210	5,140	6,050
2	6,200	9,550	6,410	49,000	10,800	15,000	12,700	9,220	9,780	4,910	5,330	6,020
3	7,190	9,470	6,750	53,200	10,600	15,700	14,800	9,800	10,000	5,140	5,380	6,360
4	8,450	9,960	7,140	50,800	10,100	14,300	15,300	10,500	10,600	5,100	5,330	6,200
5	9,500	11,900	6,710	49,100	9,200	12,900	14,200	13,000	11,300	5,060	5,380	6,400
6	9,620	13,700	6,000	49,100	8,340	13,100	13,800	20,400	10,700	5,050	5,330	6,820
7	9,290	16,000	5,260	50,200	7,990	12,900	13,600	22,500	9,640	5,070	5,380	6,990
8	9,930	16,400	5,030	47,300	7,330	12,100	13,300	22,200	8,860	4,930	5,630	7,000
9	9,810	16,400	5,010	47,500	7,060	11,600	12,900	19,700	8,510	4,670	5,600	6,790
10	9,760	16,900	4,910	48,100	6,890	11,000	13,300	17,500	8,990	5,000	5,590	6,500
11	8,980	16,400	4,830	47,900	6,850	10,100	13,400	15,700	9,040	4,840	5,530	6,470
12	7,510	18,300	4,810	44,500	6,850	9,460	12,900	14,600	9,110	4,830	5,560	6,410
13	6,840	23,300	5,090	39,000	6,790	9,030	12,600	15,500	8,850	5,080	5,500	6,640
14	6,810	26,500	5,690	34,900	6,700	8,790	13,500	16,100	8,080	5,000	5,420	6,680
15	7,730	21,400	6,090	31,800	6,760	10,300	12,900	16,900	7,380	4,960	5,320	6,650
16	8,820	18,200	6,480	29,500	6,610	18,900	11,900	16,000	6,680	4,850	5,330	6,690
17	9,830	16,200	6,410	26,400	6,540	23,200	11,200	14,800	6,540	4,760	5,420	6,460
18	10,200	14,600	6,370	23,000	6,620	20,800	11,300	14,400	6,300	4,700	5,380	6,050
19	9,890	13,200	7,090	20,800	6,460	18,200	11,600	15,100	6,200	4,700	5,230	5,790
20	9,620	12,200	7,030	19,500	6,350	16,500	11,400	15,400	6,100	4,680	5,200	5,480
21	10,200	11,800	7,690	18,300	6,170	15,300	11,400	14,600	6,060	4,620	5,240	5,310
22	10,200	11,900	12,600	17,200	6,120	15,100	11,700	13,500	6,180	4,540	5,310	5,550
23	9,800	12,100	15,500	16,000	6,760	15,600	11,600	12,700	6,060	4,600	5,250	5,580
24	9,280	11,800	13,800	14,800	11,400	14,700	11,300	12,100	5,910	4,730	5,310	5,470
25	8,770	11,400	13,800	14,300	17,800	14,400	10,800	11,900	6,180	4,760	5,280	5,460
26	9,070	10,600	14,500	14,100	24,600	15,200	10,500	11,700	6,060	4,810	6,290	5,520
27	9,080	9,450	13,200	13,700	25,400	15,700	10,100	11,400	5,810	4,760	6,120	5,540
28	8,650	8,410	19,200	13,200	18,300	14,900	9,930	10,700	5,570	4,760	5,980	5,560
29	8,270	7,490	37,900	12,900	---	15,300	9,860	9,910	5,570	4,860	6,000	5,680
30	8,290	6,860	49,600	12,500	---	16,200	9,610	9,280	5,460	4,830	5,980	6,270
31	8,960	---	51,700	11,700	---	15,000	---	9,680	---	4,980	5,940	---
Total	272,580	411,610	369,220	965,900	272,690	446,480	367,000	435,820	231,190	150,790	170,680	184,390
Mean	8,793	13,720	11,910	31,160	9,739	14,400	12,230	14,060	7,706	4,864	5,506	6,146
Max	10,200	26,500	51,700	53,200	25,400	23,200	15,300	22,500	11,300	5,210	6,290	7,000
Min	6,030	6,860	4,810	11,700	6,120	8,790	9,610	9,030	5,460	4,540	5,140	5,310
Ac-ft	540,700	816,400	732,300	1,916,000	540,900	885,600	727,900	864,400	458,600	299,100	338,500	365,700

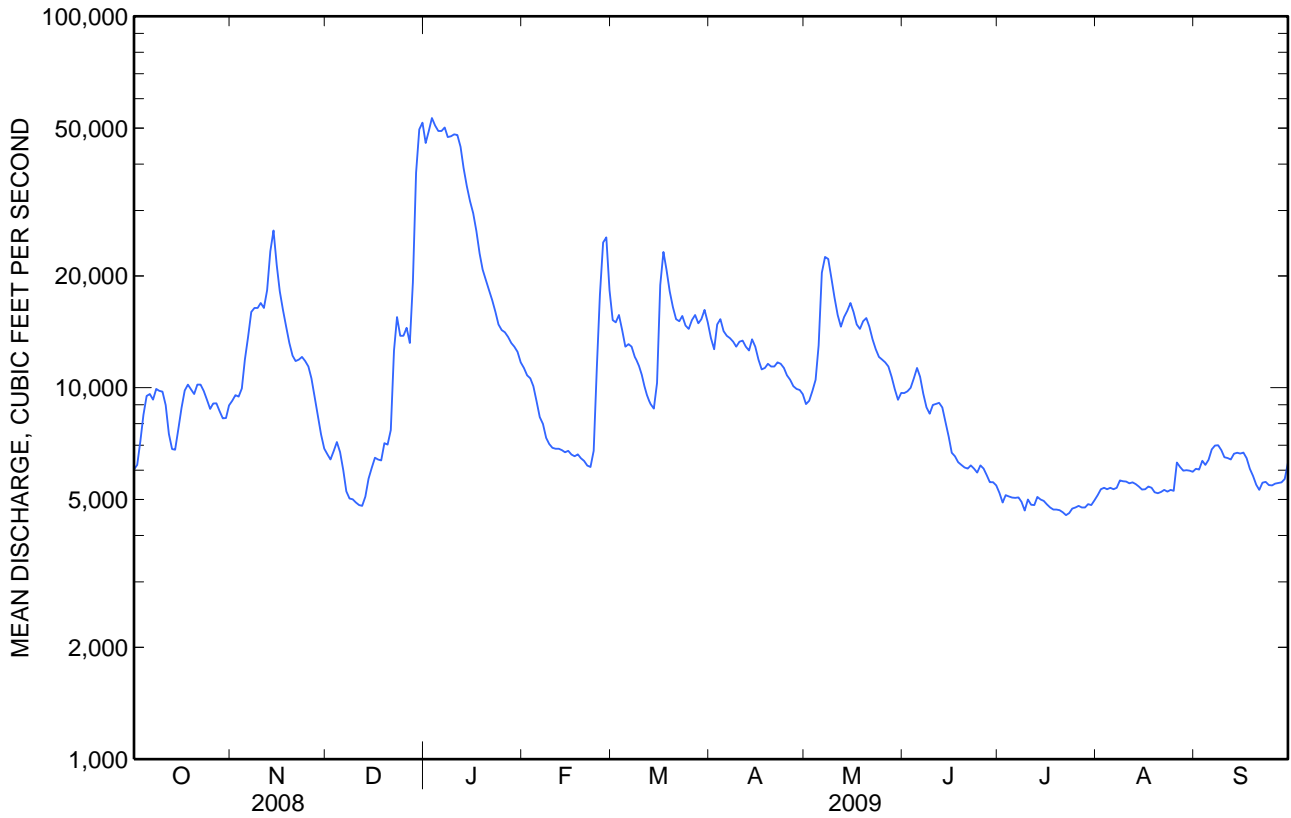
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1894 - 2009, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	6,540	15,280	24,820	28,260	23,900	19,690	16,190	12,800	9,173	5,229	4,307	4,788
Max	17,070	46,180	69,630	61,930	51,960	51,030	38,020	28,950	22,680	10,780	7,313	8,985
(WY)	(1948)	(1951)	(1956)	(2006)	(1961)	(1904)	(1937)	(1896)	(1933)	(1916)	(1971)	(1972)
Min	2,313	2,242	4,150	3,901	3,208	6,571	5,630	4,733	3,316	2,497	2,034	2,153
(WY)	(1937)	(1937)	(1977)	(1977)	(1977)	(2001)	(1977)	(1973)	(1926)	(1926)	(1940)	(1931)

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SUMMARY STATISTICS

	Calendar Year 2008		Water Year 2009		Water Years 1894 - 2009	
Annual total	4,853,950		4,278,350			
Annual mean	13,260		11,720		14,210	
Highest annual mean					24,170	1894
Lowest annual mean					5,831	1977
Highest daily mean	51,700	Dec 31	53,200	Jan 3	233,000	Jan 26, 1903
Lowest daily mean	4,700	Jul 25	4,540	Jul 22	1,860	Sep 1, 1940
Annual seven-day minimum	4,740	Jul 23	4,650	Jul 18	1,900	Aug 28, 1940
Annual runoff (ac-ft)	9,628,000		8,486,000		10,300,000	
10 percent exceeds	24,700		18,500		31,000	
50 percent exceeds	11,400		9,290		9,320	
90 percent exceeds	5,180		5,140		3,530	



14174000 WILLAMETTE RIVER AT ALBANY, OR—Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: August 2001 to current year.

INSTRUMENTATION.--Temperature probe and data logger.

REMARKS.--

WATER TEMPERATURE: Records fair.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: Maximum, 24.5°C July 24, 2006; minimum, 1.2°C Dec. 17, 2008.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum, 24.2°C July 29; minimum, 1.2°C Dec. 17.

TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2008 TO SEPTEMBER 2009

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
	October			November			December			January		
1	15.5	14.1	14.7	---	---	---	10.1	9.1	9.5	7.4	6.0	6.6
2	15.6	14.2	14.9	---	---	---	10.2	8.9	9.6	7.8	6.7	7.4
3	15.5	14.1	14.7	12.5	11.2	12.0	9.8	8.7	9.2	7.3	5.3	6.2
4	15.0	13.9	14.5	12.0	10.7	11.2	9.4	8.1	8.7	5.9	4.7	5.3
5	14.8	13.7	14.2	11.2	9.9	10.5	8.5	6.8	7.6	6.3	4.6	5.4
6	15.4	13.6	14.5	11.6	10.0	10.7	7.5	6.3	6.8	7.2	5.7	6.5
7	15.7	14.2	14.9	12.0	10.7	11.3	7.2	6.3	6.7	8.1	6.6	7.3
8	15.2	13.2	14.1	12.1	11.1	11.6	7.3	6.3	6.7	8.2	7.2	7.8
9	13.9	12.5	13.1	12.0	11.0	11.5	7.1	6.1	6.5	7.9	6.1	7.0
10	13.1	11.6	12.3	11.9	10.7	11.3	7.2	6.0	6.6	6.7	5.6	6.1
11	12.6	11.2	11.8	11.6	10.4	11.0	7.1	5.9	6.6	6.8	5.6	6.2
12	12.8	11.0	11.8	11.7	10.7	11.3	6.8	5.8	6.2	7.3	6.1	6.7
13	13.3	11.5	12.3	12.1	10.8	11.6	6.5	5.3	5.9	7.3	6.6	7.0
14	13.7	12.2	12.9	11.5	9.4	10.4	6.0	4.6	5.3	7.1	5.9	6.6
15	13.6	12.1	12.6	10.2	9.1	9.6	4.8	2.7	3.8	6.5	5.5	6.0
16	14.0	11.8	12.9	9.8	8.9	9.3	3.0	1.8	2.2	6.1	5.0	5.6
17	14.1	12.8	13.4	10.3	8.9	9.6	2.5	1.2	1.9	5.7	4.8	5.3
18	14.0	12.8	13.3	10.5	9.3	9.9	3.4	1.9	2.6	5.4	4.5	4.9
19	13.0	12.0	12.5	10.6	9.6	10.2	3.5	2.2	2.8	5.2	4.2	4.6
20	13.0	11.8	12.4	10.8	9.6	10.2	4.0	2.5	3.2	5.0	4.0	4.5
21	12.9	11.8	12.3	10.1	8.9	9.5	4.2	3.0	3.7	4.8	3.9	4.3
22	12.5	11.0	11.7	9.8	8.7	9.3	4.7	3.5	4.2	5.1	3.9	4.4
23	12.3	11.1	11.6	9.5	8.2	9.0	4.5	3.7	4.1	5.5	4.3	4.8
24	12.3	10.6	11.5	8.8	7.7	8.3	4.9	3.7	4.3	5.6	4.7	5.1
25	12.3	10.8	11.4	8.4	7.5	8.0	4.7	3.8	4.3	5.8	4.8	5.3
26	12.7	11.1	11.8	8.5	7.4	7.9	4.7	3.6	4.1	5.5	4.2	4.8
27	12.9	11.5	12.1	8.7	7.2	7.9	5.8	3.8	4.8	4.8	3.9	4.3
28	12.8	11.3	12.1	9.4	7.9	8.6	6.9	5.2	6.3	5.1	3.9	4.4
29	12.3	11.2	11.6	10.0	8.5	9.3	7.2	6.2	6.7	5.3	4.2	4.7
30	12.7	11.3	12.0	10.1	9.0	9.5	7.1	5.6	6.4	5.3	4.1	4.7
31	12.8	11.3	12.1	---	---	---	6.8	5.6	6.2	5.3	4.4	4.9
Month	15.7	10.6	12.8	---	---	---	10.2	1.2	5.6	8.2	3.9	5.6

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TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2008 TO SEPTEMBER 2009

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
	February			March			April			May		
1	5.2	4.0	4.6	7.5	5.6	6.6	8.0	7.4	7.6	12.4	10.7	11.6
2	5.0	3.9	4.5	8.5	6.6	7.6	8.5	7.5	7.9	13.4	12.2	12.8
3	5.4	4.1	4.6	8.9	7.7	8.4	8.4	7.8	8.1	14.2	12.8	13.4
4	5.6	4.1	4.9	8.4	6.7	7.7	8.6	7.3	7.9	13.5	12.2	12.6
5	5.9	4.3	5.1	7.6	6.4	7.0	10.0	7.8	8.8	12.2	10.8	11.7
6	6.6	4.9	5.8	7.8	6.3	7.1	11.2	9.0	9.9	11.2	10.7	10.9
7	6.8	5.6	6.2	7.5	6.3	7.0	11.4	9.9	10.6	11.5	10.8	11.1
8	6.8	5.7	6.2	7.1	5.9	6.5	10.7	9.9	10.3	11.7	10.6	11.1
9	6.5	5.2	5.8	6.7	5.9	6.3	10.5	9.6	10.0	12.5	10.7	11.5
10	5.9	4.6	5.1	6.4	5.6	6.0	10.5	9.3	9.8	12.8	11.3	12.0
11	5.8	4.3	5.1	6.7	5.3	6.0	10.3	9.4	9.8	13.5	11.9	12.6
12	5.6	4.4	4.9	7.2	5.4	6.2	10.2	9.7	10.0	13.6	12.4	12.9
13	6.0	4.7	5.3	7.7	5.8	6.7	10.3	9.4	9.8	12.6	10.7	11.4
14	6.2	4.7	5.4	7.6	6.9	7.3	9.6	8.8	9.2	12.4	10.4	11.2
15	6.6	5.1	5.9	7.6	7.1	7.3	9.3	8.1	8.7	13.7	11.6	12.5
16	6.8	5.5	6.0	7.3	7.0	7.1	10.0	8.1	9.0	14.4	12.2	13.2
17	7.2	6.0	6.6	7.8	7.0	7.4	11.2	9.3	10.0	15.5	13.3	14.3
18	7.8	6.1	6.8	9.0	7.6	8.3	11.3	9.7	10.5	16.0	14.2	15.0
19	7.5	6.4	6.9	9.3	8.5	8.8	12.6	10.0	11.2	15.1	13.7	14.5
20	7.4	6.0	6.6	9.9	8.7	9.2	13.9	11.4	12.6	13.7	12.4	13.1
21	7.3	6.0	6.5	9.9	9.3	9.5	14.9	12.6	13.7	14.2	12.4	13.3
22	7.6	6.3	6.8	9.3	8.6	9.0	14.3	13.2	13.8	15.3	13.1	14.1
23	7.9	6.5	7.2	8.6	7.4	8.0	13.3	12.1	12.6	15.6	13.8	14.6
24	8.2	6.9	7.6	8.0	7.1	7.5	12.4	10.9	11.7	15.6	14.1	14.8
25	9.0	7.7	8.4	8.9	7.9	8.3	11.8	10.6	10.9	15.7	14.0	14.8
26	8.5	6.2	7.4	9.0	8.1	8.5	10.7	9.8	10.3	15.9	14.3	15.0
27	6.9	5.4	6.3	9.3	8.2	8.7	10.5	9.9	10.2	16.6	14.7	15.5
28	6.7	5.4	6.0	9.5	8.9	9.1	10.3	9.9	10.1	17.4	15.0	16.2
29	---	---	---	9.1	8.3	8.7	10.7	9.3	10.0	18.7	16.1	17.3
30	---	---	---	8.3	7.6	7.9	11.7	9.6	10.5	19.3	17.0	18.1
31	---	---	---	8.4	7.6	8.0	---	---	---	19.0	17.0	18.0
Month	9.0	3.9	6.0	9.9	5.3	7.7	14.9	7.3	10.2	19.3	10.4	13.6

14174000 WILLAMETTE RIVER AT ALBANY, OR—Continued

TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2008 TO SEPTEMBER 2009

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
	June			July			August			September		
1	18.3	17.0	17.7	19.7	17.4	18.5	22.8	20.8	21.7	19.8	18.4	19.2
2	17.8	16.6	16.9	20.6	18.2	19.3	22.8	21.0	21.8	19.4	18.1	18.8
3	18.0	16.4	17.0	21.5	19.1	20.2	22.3	20.1	21.3	19.3	17.9	18.7
4	17.6	16.6	16.9	21.4	19.3	20.4	21.7	19.7	20.5	19.1	17.7	18.5
5	16.6	15.3	15.9	21.2	19.5	20.3	21.1	18.8	20.0	18.8	17.5	17.9
6	15.3	14.6	14.9	20.7	18.8	19.4	20.4	17.7	18.8	17.6	16.7	17.0
7	15.2	14.4	14.7	19.2	17.7	18.5	18.4	16.5	17.4	17.4	16.1	16.7
8	16.2	14.6	15.3	18.8	17.1	17.8	17.7	15.7	16.6	17.8	16.0	16.9
9	16.2	15.3	15.7	19.0	16.9	17.9	19.5	17.0	18.0	18.1	16.3	17.2
10	16.0	15.1	15.4	20.0	17.8	18.9	20.4	17.6	18.9	18.5	16.9	17.7
11	16.1	14.8	15.4	19.6	18.3	18.8	20.5	18.9	19.7	19.1	17.2	18.1
12	16.8	15.2	15.9	19.2	16.7	18.1	20.5	19.1	19.9	19.6	17.9	18.8
13	17.6	15.6	16.4	17.2	16.1	16.6	20.5	18.5	19.4	19.5	18.3	18.7
14	17.9	15.8	16.7	18.7	16.0	17.2	19.1	17.4	18.0	18.8	17.5	18.2
15	19.2	16.8	17.9	20.1	17.5	18.7	18.3	16.8	17.6	18.7	17.4	18.1
16	19.0	17.4	18.2	21.4	19.0	20.2	18.6	16.8	17.7	18.4	17.2	17.7
17	18.5	16.9	17.8	22.0	19.9	20.9	19.4	17.5	18.4	17.6	16.2	16.9
18	18.9	16.7	17.7	21.9	20.2	21.1	20.5	18.4	19.3	17.5	15.9	16.8
19	19.3	17.2	18.3	21.5	19.7	20.5	21.1	19.0	20.1	17.4	16.4	16.8
20	18.9	16.5	17.5	21.6	19.6	20.5	21.1	19.4	20.2	16.7	15.2	15.8
21	17.0	15.7	16.3	22.0	19.8	20.9	20.3	18.8	19.5	16.1	14.8	15.5
22	17.0	15.0	16.0	21.8	19.8	20.8	19.9	18.4	19.1	16.5	15.2	15.9
23	18.1	15.1	16.6	21.2	19.5	20.3	19.4	17.8	18.6	16.8	15.6	16.2
24	19.2	16.7	17.9	20.9	18.9	19.9	19.2	17.6	18.5	16.7	15.8	16.3
25	18.9	17.3	18.0	21.8	19.4	20.5	---	---	---	16.7	15.8	16.4
26	18.4	16.1	17.2	22.4	20.5	21.4	18.9	17.2	18.0	16.6	15.6	16.1
27	19.2	16.6	17.9	23.4	21.2	22.2	19.6	17.6	18.6	16.2	15.2	15.8
28	19.4	17.2	18.3	24.1	22.0	22.9	19.4	18.0	18.4	16.1	15.2	15.5
29	19.3	17.4	18.4	24.2	22.3	23.3	18.2	17.1	17.7	15.4	14.6	15.0
30	19.3	17.4	18.3	23.8	21.8	22.6	18.9	17.4	18.1	14.7	14.1	14.4
31	---	---	---	22.8	21.0	22.0	19.5	17.5	18.5	---	---	---
Month	19.4	14.4	16.9	24.2	16.0	20.0	---	---	---	19.8	14.1	17.1