01428500 DELAWARE RIVER ABOVE LACKAWAXEN RIVER NEAR BARRYVILLE, NY

Upper Delaware Basin
Upper Delaware Subbasin

LOCATION.--Lat 41°30′32″, long 74°59′10″ referenced to North American Datum of 1927, Sullivan County, NY, Hydrologic Unit 02040101, on left bank, 1.6 mi upstream from Lackawaxen River, and 4.6 mi northwest of Barryville. Water-quality sampling site at discharge station.

DRAINAGE AREA.--2,020 mi^2.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--October 1940 to current year.

REVISED RECORDS.--WDR NY-82-1: Drainage area. WDR NY-04-1: 2003.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 600.22 ft above NGVD of 1929.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Subsequent to September 1954, entire flow from 371 mi^2 of drainage area controlled by Pepacton Reservoir (01416900), and subsequent to October 1963, entire flow from 454 mi^2 of drainage area controlled by Cannonsville Reservoir (01424997). Part of flow of these reservoirs diverted for New York City municipal supply. Remainder of flow (except for conservation releases and spill) impounded for release during periods of low flow in the lower Delaware River basin, as directed by the Delaware River Master. Satellite and telephone gage-height and temperature telemeter at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 151,000 ft^3/s, June 28, 2006, gage height, 28.97 ft, from floodmark in gage house, from rating curve extended above 55,000 ft^3/s on basis of slope-area measurement at gage height 23.19 ft; minimum discharge, 122 ft^3/s, Sept. 5, 1953, gage height, 1.11 ft.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 151,000 ft^3/s, Jun 28, gage height, 28.97 ft, from floodmark in gage house, from rating curve extended above 55,000 ft^3/s on basis of slope-area measurement at gage height 23.19 ft; minimum discharge, 945 ft^3/s, Aug 12, gage height, 2.63 ft.

01428500 DELAWARE RIVER ABOVE LACKAWAXEN RIVER NEAR BARRYVILLE, NY—Continued

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

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	1,500	2,940	11,800	5,610	8,500	e1,800	1,260	4,270	3,330	20,800	1,580	3,640
2	1,560	2,760	7,570	4,580	7,720	e1,500	1,350	3,700	3,010	13,600	1,610	3,040
3	1,560	2,840	5,750	4,320	9,230	e1,300	1,420	3,230	3,670	9,920	1,600	2,930
4	1,580	2,440	4,550	4,320	12,900	e1,300	1,550	2,820	5,790	8,240	1,530	2,780
5	1,580	2,210	3,850	3,730	14,400	e1,400	1,840	2,480	5,140	7,100	1,310	2,570
6	1,560	2,050	3,300	3,430	13,000	e1,500	1,880	2,140	4,440	5,770	1,120	2,360
7	1,530	2,060	2,870	2,980	10,700	e1,500	1,760	1,870	3,980	4,640	1,070	2,200
8	2,310	2,170	2,480	2,650	9,050	e1,400	1,920	1,650	4,460	3,850	1,110	1,990
9	7,650	1,940	2,210	2,460	7,800	1,450	2,170	1,480	4,540	3,270	1,100	1,820
10	4,790	2,420	e2,100	2,350	6,950	1,510	2,060	1,380	4,930	2,810	1,060	1,710
11	2,780	3,280	e2,000	2,390	6,150	1,630	e2,000	1,370	5,220	2,410	996	1,600
12	4,790	2,650	e1,900	4,590	5,500	1,660	e1,900	2,180	5,110	2,130	1,080	1,480
13	14,900	2,320	e1,500	6,500	4,830	1,680	e1,800	3,530	4,880	2,340	1,270	1,370
14	12,100	2,140	e1,200	11,600	4,430	2,400	1,790	3,330	4,480	2,540	1,280	1,420
15	10,100	2,140	e1,300	22,100	4,080	3,160	2,080	2,790	4,410	2,350	1,250	6,090
16	7,450	2,790	e2,000	13,600	3,870	2,940	2,230	2,990	4,560	2,350	1,310	7,880
17	5,110	6,980	e2,800	10,400	3,870	2,900	2,040	3,760	4,160	2,170	1,280	5,390
18	3,880	6,400	e2,500	17,800	4,000	2,790	1,850	3,830	3,560	1,960	1,270	4,190
19	3,080	4,860	e2,100	35,900	3,120	2,620	1,710	3,920	2,970	1,800	1,390	3,480
20	2,520	3,980	e1,900	23,300	e2,400	2,500	1,550	4,240	2,560	1,650	1,720	3,110
21	2,180	3,390	e1,900	16,400	e2,400	2,310	1,390	3,880	2,260	1,490	3,050	2,740
22	2,140	3,430	e1,800	12,600	e2,400	2,110	1,480	3,690	1,800	1,570	1,810	2,410
23	7,130	3,640	e1,800	10,200	e2,400	1,970	6,470	3,640	1,560	1,970	1,410	2,370
24	8,000	3,100	e1,800	8,840	e2,500	1,800	11,600	3,400	1,650	1,760	1,330	2,800
25	8,530	2,680	e1,900	7,680	e2,400	1,740	10,800	3,140	2,110	1,500	1,410	2,610
26	13,300	2,310	e3,100	6,860	e2,300	1,770	9,140	3,100	14,300	1,440	1,720	2,380
27	8,730	2,190	e4,600	5,910	e2,000	1,730	7,960	3,340	54,700	1,400	1,820	2,210
28	6,290	2,140	e4,000	5,250	e1,900	1,610	6,800	3,230	e140,000	1,340	2,310	2,170
29	4,900	2,450	e3,700	4,920	---	1,490	5,980	2,590	e96,000	1,420	2,400	6,360
30	4,040	12,100	e7,800	5,080	---	1,380	5,140	2,220	37,500	1,680	9,730	6,420
31	3,410	---	7,420	6,700	---	1,290	---	3,510	---	1,600	5,600	---
Total	160,980	98,800	105,500	275,050	160,800	58,140	102,920	92,700	437,080	118,870	58,526	93,520
Mean	5,193	3,293	3,403	8,873	5,743	1,875	3,431	2,990	14,570	3,835	1,888	3,117
Max	14,900	12,100	11,800	35,900	14,400	3,160	11,600	4,270	140,000	20,800	9,730	7,880
Min	1,500	1,940	1,200	2,350	1,900	1,290	1,260	1,370	1,560	1,340	996	1,370

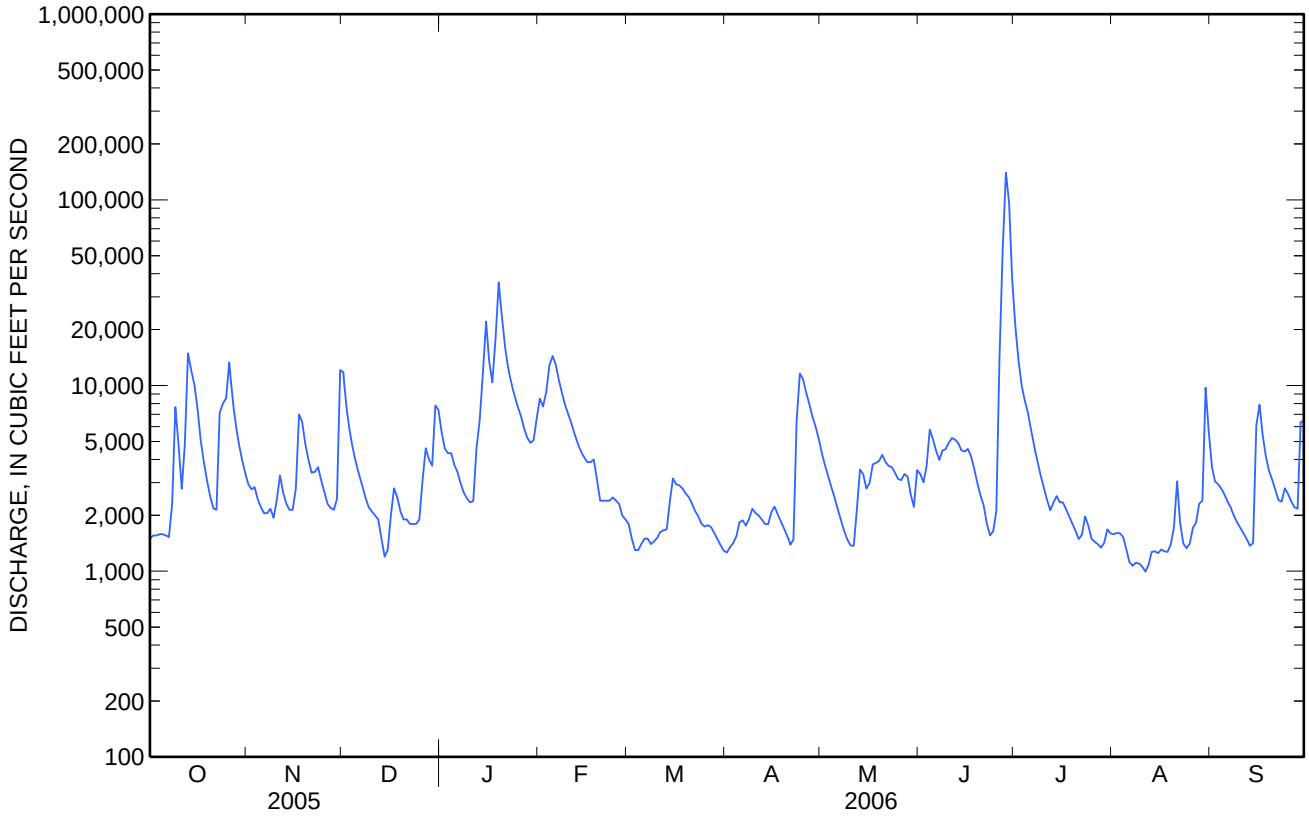
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 2006, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	2,249	2,865	3,334	2,997	2,967	5,121	6,511	4,004	2,673	1,674	1,520	1,867
Max	7,404	8,206	11,940	8,873	9,389	12,050	16,500	8,615	14,570	4,087	4,987	10,260
(WY)	(1978)	(2004)	(1997)	(2006)	(1976)	(1977)	(1993)	(1984)	(2006)	(1996)	(2004)	(2004)
Min	527	610	1,114	687	712	1,399	1,878	1,161	673	328	465	448
(WY)	(1964)	(1965)	(1999)	(1977)	(1980)	(1981)	(1985)	(1965)	(1965)	(1965)	(1965)	(1965)

01428500 DELAWARE RIVER ABOVE LACKAWAXEN RIVER NEAR BARRYVILLE, NY—Continued

SUMMARY STATISTICS

	Calendar Year 2005		Water Year 2006		Water Years 1964 - 2006	
Annual total	1,483,419		1,762,886			
Annual mean	4,064		4,830		3,146	
Highest annual mean					5,317	2004
Lowest annual mean					1,297	1965
Highest daily mean	104,000	Apr 3	140,000	Jun 28	140,000	Jun 28, 2006
Lowest daily mean	824	Jul 19	996	Aug 11	250	Oct 27, 1963
Annual seven-day minimum	868	Jul 16	1,080	Aug 6	264	Oct 23, 1963
10 percent exceeds	7,430		8,610		6,870	
50 percent exceeds	2,140		2,610		1,700	
90 percent exceeds	1,070		1,420		888	



WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1968 to current year.
CHEMICAL DATA: 1971-73 (a).
NUTRIENT DATA: 1971 (a).

PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: October 1967 to current year (no winter record for water years 1969-76).

INSTRUMENTATION.--Water-temperature recorder provides 15-minute-interval readings. From October 1975 to September 1995, water-temperature recorder provided one-hour-interval readings. Prior to October 1975, water-temperature recorder provided continuous readings.

REMARKS.--Interruptions of record were due to malfunction of recording instrument.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: Maximum (water years 1968-75, 1980-81, 1983, 1985-96, 1998-2001, 2003-06), 32.5°C, July 9, 10, 1993; minimum (water years 1968, 1977-2006), 0.0°C, on many days during winter periods, each year except water years 1980-82.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURE: Maximum, 31.0°C, Aug. 3; minimum, 0.0°C on many days during winter period.

01428500 DELAWARE RIVER ABOVE LACKAWAXEN RIVER NEAR BARRYVILLE, NY—Continued

TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2005 TO SEPTEMBER 2006

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
		October			November			December			January	
1	18.0	14.0	16.0	9.5	8.0	8.5	8.0	6.5	7.0	1.5	1.0	1.0
2	18.5	14.5	16.5	10.0	8.5	9.0	6.5	4.5	5.5	2.0	1.5	1.5
3	19.5	15.5	17.5	9.5	8.0	8.5	4.5	2.5	3.5	2.0	1.5	1.5
4	19.5	16.5	18.0	10.5	8.5	9.0	2.5	1.5	2.0	2.5	2.0	2.0
5	20.0	17.0	18.5	11.0	9.0	9.5	1.5	1.0	1.0	3.0	2.5	2.5
6	20.0	17.5	19.0	11.5	9.5	10.5	1.5	1.0	1.0	3.0	2.0	2.5
7	19.5	18.5	19.0	12.0	10.0	11.0	1.0	0.0	0.5	2.0	1.0	1.5
8	19.5	17.5	18.5	11.0	9.5	10.0	1.0	0.0	0.5	2.0	1.0	1.0
9	17.5	15.5	16.0	9.5	9.0	9.0	0.5	0.0	0.0	2.0	1.0	1.5
10	15.5	15.0	15.0	9.0	7.5	8.5	0.5	0.0	0.5	3.0	1.5	2.0
11	15.5	15.0	15.0	7.5	6.0	7.0	0.5	0.0	0.0	2.5	2.0	2.0
12	15.5	14.0	15.0	7.0	5.5	6.0	1.0	0.0	0.5	3.5	2.0	2.5
13	14.0	13.5	13.5	7.0	5.5	6.5	0.5	0.0	0.0	3.5	2.5	3.0
14	14.0	13.5	13.5	8.0	6.5	7.0	0.5	0.0	0.0	4.0	3.5	3.5
15	15.0	14.0	14.5	7.5	6.5	7.0	0.5	0.0	0.0	3.5	0.5	2.0
16	14.5	13.0	13.5	9.0	7.0	8.0	0.5	0.0	0.0	0.5	0.0	0.0
17	13.0	12.0	12.5	8.5	7.5	8.0	0.5	0.0	0.0	0.5	0.0	0.0
18	12.5	11.5	12.0	7.5	5.5	6.5	0.5	0.0	0.0	2.0	0.5	1.5
19	13.0	11.0	12.0	5.5	4.5	5.0	0.5	0.0	0.0	2.5	2.0	2.5
20	12.5	11.0	12.0	4.5	3.5	4.0	0.5	0.0	0.0	3.0	2.5	3.0
21	12.0	11.0	11.0	4.0	3.5	4.0	0.5	0.0	0.0	4.0	3.0	3.5
22	11.0	10.0	10.5	4.5	4.0	4.5	0.5	0.0	0.0	3.5	2.5	3.0
23	10.0	9.0	9.5	4.0	2.5	3.5	0.5	0.0	0.0	2.5	2.0	2.0
24	9.0	8.5	9.0	3.0	1.5	2.5	0.5	0.0	0.0	3.0	1.5	2.5
25	9.0	8.5	8.5	1.5	0.0	1.0	0.5	0.0	0.0	3.0	2.5	2.5
26	8.5	7.5	8.0	0.5	0.0	0.5	0.0	0.0	0.0	2.5	1.5	2.0
27	7.5	7.5	7.5	1.0	0.0	0.5	0.5	0.0	0.0	1.5	0.5	1.0
28	7.5	7.0	7.5	2.0	0.5	1.0	0.5	0.0	0.5	1.5	0.5	1.0
29	7.5	7.0	7.0	7.0	2.0	4.5	0.5	0.0	0.5	1.5	1.0	1.5
30	8.5	7.0	7.5	8.5	7.0	8.0	0.5	0.0	0.5	3.0	1.5	2.5
31	9.0	7.5	8.0	---	---	---	1.0	0.5	1.0	3.0	3.0	3.0
Month	20.0	7.0	13.0	12.0	0.0	6.3	8.0	0.0	0.8	4.0	0.0	2.0

01428500 DELAWARE RIVER ABOVE LACKAWAXEN RIVER NEAR BARRYVILLE, NY—Continued

TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2005 TO SEPTEMBER 2006

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
		February			March			April			May	
1	3.0	2.5	2.5	1.5	0.0	0.5	13.0	11.0	12.0	14.0	12.0	13.0
2	2.5	2.0	2.5	0.0	0.0	0.0	14.5	10.0	12.0	14.5	13.0	13.5
3	4.0	2.5	3.5	0.5	0.0	0.0	11.5	10.0	10.5	16.0	13.5	14.5
4	4.0	3.5	4.0	0.5	0.0	0.5	10.5	8.5	9.5	17.5	14.5	16.0
5	4.5	4.0	4.0	1.5	0.0	0.5	9.5	7.5	8.5	18.5	15.5	16.5
6	4.0	2.5	3.5	1.5	0.0	1.0	8.5	7.0	7.5	18.0	15.0	16.5
7	2.5	2.0	2.5	2.5	0.0	1.0	7.0	6.0	6.5	17.5	14.0	16.0
8	2.0	1.5	2.0	3.5	0.0	1.5	6.5	5.5	6.0	17.5	14.5	16.0
9	2.0	1.0	1.5	2.0	0.5	1.5	8.5	4.5	6.5	17.0	14.0	15.5
10	1.5	0.5	1.0	4.0	0.5	2.5	10.5	6.0	8.0	19.0	15.0	17.0
11	1.5	0.5	1.0	4.5	1.0	3.0	12.0	7.5	---	17.5	16.0	17.0
12	1.5	1.0	1.0	5.5	3.5	4.5	---	---	---	18.5	15.5	17.0
13	1.5	0.5	1.0	8.0	5.0	6.5	15.0	---	---	18.0	16.5	17.0
14	1.5	0.5	1.0	8.5	6.5	7.5	13.5	12.5	13.0	17.0	15.5	16.5
15	2.5	1.0	2.0	6.5	4.5	5.5	15.5	12.5	13.5	15.5	14.5	15.0
16	4.0	2.5	3.0	5.0	3.0	4.0	15.5	12.5	14.0	15.0	13.5	14.5
17	5.0	3.5	4.5	5.0	3.0	3.5	15.5	12.0	13.5	15.0	13.0	14.0
18	4.0	1.5	3.0	4.0	2.5	3.0	16.5	12.5	14.5	15.5	14.0	14.5
19	1.5	0.0	0.5	3.5	2.0	2.5	17.5	13.0	15.0	15.0	13.5	14.5
20	1.5	0.0	0.5	4.0	1.5	2.5	18.5	13.5	16.0	14.0	13.0	13.5
21	1.5	0.0	0.5	4.0	1.5	2.5	18.5	14.5	16.5	13.5	12.0	13.0
22	1.5	0.0	0.5	3.5	2.0	3.0	15.5	12.0	13.5	13.0	11.5	12.0
23	1.5	0.0	1.0	5.5	2.0	3.5	12.0	9.5	10.5	13.0	11.0	12.0
24	2.0	0.5	1.0	5.0	3.0	4.0	10.0	9.0	9.5	14.5	11.5	13.0
25	1.5	0.0	0.5	5.5	3.5	4.5	11.0	9.5	10.5	15.0	13.0	14.0
26	0.5	0.0	0.0	6.5	4.5	5.5	11.0	9.5	10.0	16.0	14.5	15.0
27	1.0	0.0	0.5	8.5	4.5	6.5	11.5	9.5	10.5	18.5	15.5	17.0
28	1.0	0.0	0.5	9.0	5.0	7.0	11.5	9.0	10.5	20.0	17.0	18.5
29	---	---	---	10.5	5.5	8.0	12.0	9.5	11.0	22.5	18.5	20.5
30	---	---	---	12.0	6.5	9.5	13.0	10.5	11.5	25.5	21.0	23.0
31	---	---	---	13.0	8.0	10.5	---	---	---	24.0	22.5	23.5
Month	5.0	0.0	1.8	13.0	0.0	3.7	---	---	---	25.5	11.0	15.8

01428500 DELAWARE RIVER ABOVE LACKAWAXEN RIVER NEAR BARRYVILLE, NY—Continued

TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2005 TO SEPTEMBER 2006

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
		June			July			August			September	
1	24.5	23.0	23.5	18.5	17.5	18.0	30.0	26.0	28.0	19.0	17.5	18.5
2	23.0	21.5	22.5	19.5	18.5	19.0	30.5	27.0	29.0	18.0	16.5	17.5
3	21.5	18.5	20.0	21.0	18.5	20.0	31.0	27.5	29.0	17.0	16.5	17.0
4	18.5	17.5	17.5	21.0	19.5	20.0	29.0	26.5	28.0	18.0	16.5	17.0
5	18.0	16.5	17.5	20.5	19.0	19.5	29.0	24.5	26.5	17.5	17.0	17.5
6	19.0	17.0	18.0	20.5	19.0	20.0	27.5	24.0	25.5	19.0	17.0	17.5
7	18.5	17.0	18.0	21.0	19.0	20.0	28.0	24.5	26.5	20.5	17.5	18.5
8	17.0	16.5	16.5	21.5	20.0	20.5	29.0	25.0	26.5	22.0	18.5	20.0
9	17.0	16.0	16.5	23.5	21.0	22.0	28.0	23.5	25.5	22.5	19.5	20.5
10	17.0	15.5	16.0	23.5	21.5	22.5	27.5	23.5	25.5	22.0	19.5	20.5
11	15.5	15.0	15.0	24.5	21.5	23.0	27.5	23.0	25.0	21.5	18.5	20.0
12	15.0	14.0	14.5	24.0	23.0	23.5	25.5	21.5	23.5	21.5	18.0	19.5
13	17.5	14.5	16.0	24.0	22.5	23.0	25.0	20.5	23.0	19.0	17.5	18.0
14	18.0	17.0	17.5	25.5	22.0	23.5	25.0	20.5	23.0	18.0	17.5	17.5
15	18.5	17.5	18.0	24.5	23.0	23.5	26.0	22.5	24.0	17.5	16.5	17.0
16	19.0	16.5	18.0	26.5	22.5	24.5	26.0	21.5	23.5	17.5	16.5	17.0
17	19.5	18.5	19.0	27.5	23.5	25.5	26.0	21.5	23.5	19.0	17.0	18.0
18	22.0	19.0	20.5	28.0	24.5	26.5	26.0	22.0	24.0	20.0	18.5	19.0
19	23.0	20.5	21.5	28.5	25.0	26.5	24.0	22.5	23.0	19.5	18.5	19.5
20	23.0	21.0	21.5	29.0	24.5	26.5	25.5	22.0	23.5	19.5	17.5	18.5
21	23.5	20.5	22.0	28.0	25.0	26.5	22.0	20.0	21.0	17.5	16.0	17.0
22	25.0	20.5	23.0	27.0	25.0	26.0	24.0	20.0	22.0	18.0	15.5	16.5
23	24.5	22.5	23.5	26.5	23.5	25.0	25.0	21.0	23.0	17.0	15.5	16.0
24	23.5	22.5	23.0	26.5	22.5	24.5	24.0	21.0	22.5	17.5	16.0	16.5
25	22.5	21.5	22.0	26.5	22.5	24.5	22.5	21.5	22.0	17.5	15.5	16.5
26	21.5	18.5	---	27.5	24.0	26.0	21.5	19.5	20.5	17.5	15.0	16.0
27	18.5	18.0	18.0	28.0	25.0	26.5	19.5	17.5	18.5	17.0	14.5	15.5
28	18.0	---	---	27.5	25.0	26.0	18.5	17.0	18.0	16.0	14.5	15.0
29	17.5	---	---	28.5	24.0	26.5	18.5	17.5	18.0	15.5	13.5	14.5
30	18.0	17.0	17.5	28.5	25.5	27.0	18.5	17.5	18.0	13.5	12.5	---
31	---	---	---	29.0	25.0	27.0	19.5	18.0	19.0	---	---	---
Month	25.0	---	---	29.0	17.5	23.6	31.0	17.0	23.5	22.5	12.5	---