

DELAWARE RIVER BASIN

01428500 DELAWARE RIVER ABOVE LACKAWAXEN RIVER NEAR BARRYVILLE, NY

LOCATION.--Lat 41°30'32", long 74°59'10", Sullivan County, 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 mi².

WATER-DISCHARGE RECORDS

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

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

GAGE.--Water-stage recorder. Datum of gage is 600.22 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Subsequent to September 1954, entire flow from 371 mi² of drainage area controlled by Pepacton Reservoir, and subsequent to October 1963, entire flow from 454 mi² of drainage area controlled by Cannonsville Reservoir. 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 gage-height and temperature telemeter and National Weather Service telephone gage-height telemeter at station. Information on the above reservoirs can be found in the annual Water-Data Report NY-02-1.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 130,000 ft³/s, Aug. 19, 1955, gage height, 26.40 ft, from floodmarks in gage house, from rating curve extended above 55,000 ft³/s, on basis of slope-area measurement at gage height 23.19 ft; minimum discharge, 122 ft³/s, Sept. 5, 1953, gage height, 1.11 ft.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 35,300 ft³/s, Mar. 22, Sept. 4, gage height, 12.26 ft; minimum, 642 ft³/s, Oct. 3, gage height, 2.34 ft.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	884	1,770	2,590	2,760	e1,100	e1,800	11,300	4,160	6,380	2,000	1,260	1,240
2	734	1,640	2,340	8,870	e1,100	e1,800	9,820	4,970	8,620	1,670	2,140	10,900
3	662	1,540	e1,800	8,170	e1,200	e1,900	9,420	8,220	6,870	1,440	2,600	15,300
4	932	1,450	e1,400	6,180	e1,400	e1,800	8,760	8,060	6,230	1,310	2,620	26,300
5	1,010	1,360	e1,300	5,020	e1,500	e1,600	8,680	6,920	5,770	1,270	4,060	22,000
6	913	1,760	e1,300	4,290	e1,400	e1,500	8,680	6,080	5,130	1,260	4,800	13,800
7	972	2,430	e1,300	3,820	e1,300	e1,500	8,420	5,290	4,820	1,170	4,480	9,900
8	946	2,210	e1,200	3,460	e1,200	e1,400	7,730	4,600	5,040	1,220	3,300	7,610
9	888	1,890	e1,100	e3,100	e1,100	e1,300	6,980	4,020	4,330	1,540	3,690	6,030
10	974	1,730	e1,000	e2,800	e1,100	e1,300	6,350	3,520	3,700	1,410	3,290	5,080
11	1,170	1,670	1,100	e2,400	e1,100	e1,400	6,360	3,010	3,330	1,560	4,310	4,230
12	5,190	1,710	1,310	e2,000	e1,100	e1,300	7,420	3,910	3,750	2,940	8,400	3,270
13	7,030	3,020	2,260	e1,700	e1,100	e1,200	6,940	4,510	5,970	1,750	6,410	2,530
14	4,370	3,460	2,650	e1,500	e1,000	e1,200	6,110	4,300	9,810	1,280	5,830	2,240
15	3,120	2,920	4,130	e1,500	e940	e1,300	5,490	4,100	10,600	1,130	4,980	3,340
16	3,680	2,670	3,940	e1,400	e900	e1,600	5,090	3,800	8,170	1,080	3,970	7,090
17	14,600	5,650	3,120	e1,400	e900	e2,800	4,650	3,480	6,620	1,330	3,240	5,050
18	8,980	8,610	2,330	e1,300	e900	10,200	4,220	3,110	5,520	1,290	3,000	4,180
19	5,800	7,030	2,010	e1,400	e920	16,800	3,860	2,780	4,890	1,190	2,520	3,950
20	4,430	5,590	3,050	e1,500	e960	14,300	3,510	2,470	4,320	1,350	2,230	3,910
21	3,520	5,070	6,950	e1,500	e1,100	28,200	3,140	2,340	8,370	1,090	1,910	2,980
22	2,810	5,040	5,430	e1,500	e1,200	34,100	3,030	2,310	9,680	1,730	1,590	2,320
23	2,340	6,400	4,520	e1,300	e1,500	30,500	3,050	2,100	9,390	3,290	1,420	9,190
24	2,010	5,990	3,850	e1,200	e2,000	21,300	2,880	1,910	7,440	2,920	1,230	15,300
25	1,760	4,960	3,420	e1,200	e2,100	16,500	2,680	2,110	5,870	2,200	1,090	9,580
26	2,500	4,290	2,820	e1,200	e2,200	15,400	2,620	2,450	4,800	1,730	1,040	7,480
27	3,650	3,840	2,990	e1,200	e2,000	13,800	5,530	3,040	4,230	1,560	999	6,220
28	2,930	3,420	2,880	e1,200	e1,900	11,200	5,600	2,820	3,480	1,570	1,090	8,770
29	2,440	2,980	2,700	e1,300	---	10,200	5,100	2,650	2,680	1,450	1,110	13,200
30	2,160	2,710	2,470	e1,300	---	14,100	4,580	2,380	2,320	1,270	1,470	9,880
31	1,960	---	2,380	e1,200	---	13,500	---	2,290	---	1,150	1,310	---
TOTAL	95,365	104,810	81,640	78,670	36,220	276,800	178,000	117,710	178,130	49,150	91,389	242,870
MEAN	3,076	3,494	2,634	2,538	1,294	8,929	5,933	3,797	5,938	1,585	2,948	8,096
MAX	14,600	8,610	6,950	8,870	2,200	34,100	11,300	8,220	10,600	3,290	8,400	26,300
MIN	662	1,360	1,000	1,200	900	1,200	2,620	1,910	2,320	1,080	999	1,240

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 2003, BY WATER YEAR (WY)

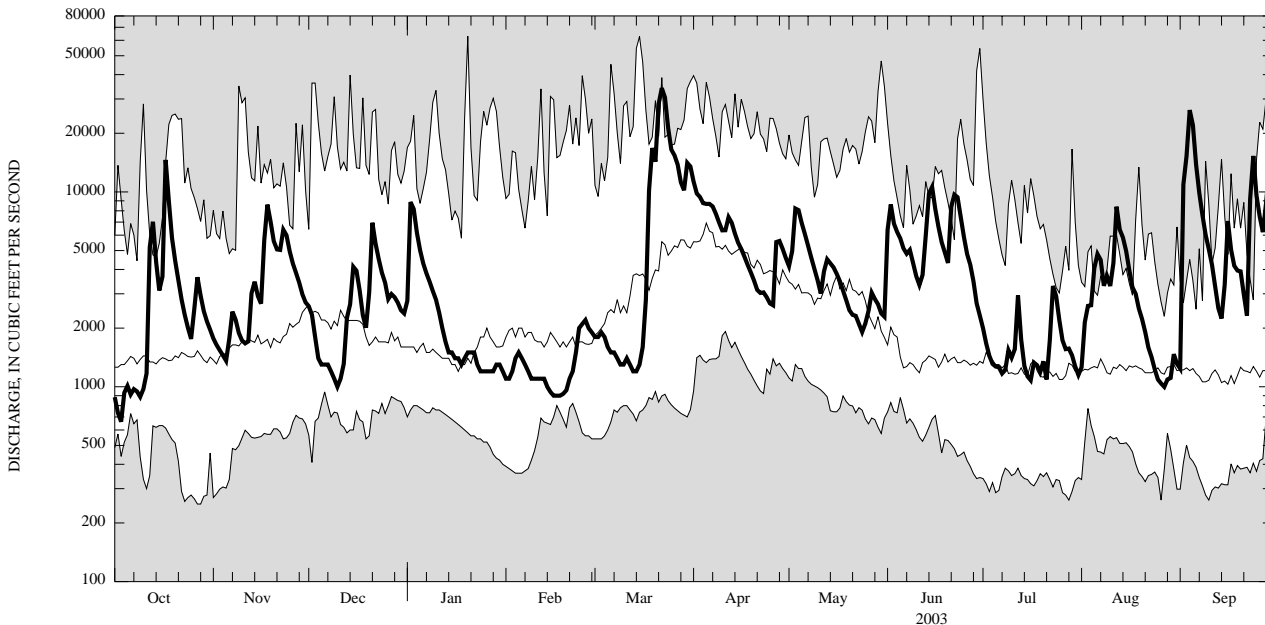
MEAN	2,018	2,708	3,052	2,719	2,914	5,185	6,448	4,066	2,436	1,616	1,426	1,640
MAX	7,404	7,448	11,940	8,335	9,389	12,050	16,500	8,615	6,701	4,087	3,033	8,096
(WY)	(1978)	(1997)	(1997)	(1978)	(1976)	(1977)	(1993)	(1984)	(1972)	(1996)	(1994)	(2003)
MIN	527	610	1,114	687	712	1,399	1,878	1,161	673	328	465	448
(WY)	(1964)	(1965)	(1999)	(1977)	(1980)	(1981)	(1985)	(1965)	(1965)	(1965)	(1965)	(1965)

e Estimated.

DELAWARE RIVER BASIN

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SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1964 - 2003	
ANNUAL TOTAL	936,154		1,530,754		3,017	
ANNUAL MEAN	2,565		4,194		1,297	
HIGHEST ANNUAL MEAN					4,650	
LOWEST ANNUAL MEAN					1,297	
HIGHEST DAILY MEAN	14,600	Oct 17	34,100	Mar 22	63,000	Jan 20, 1996
LOWEST DAILY MEAN	606	Sep 20	662	Oct 3	250	Oct 27, 1963
ANNUAL SEVEN-DAY MINIMUM	690	Sep 17	872	Oct 1	264	Oct 23, 1963
10 PERCENT EXCEEDS	5,600		8,760		6,710	
50 PERCENT EXCEEDS	1,890		2,800		1,630	
90 PERCENT EXCEEDS	819		1,140		873	



CURRENT WATER YEAR DAILY MEAN DISCHARGE (BOLD) WITH DAILY MEDIAN FOR PERIOD OF RECORD.
 SHADED AREAS SHOW HIGHEST AND LOWEST DAILY MEAN FOR PERIOD OF RECORD THROUGH PREVIOUS WATER YEAR.

DELAWARE RIVER BASIN

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

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 TEMPERATURES: 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 TEMPERATURES: Maximum (water years 1968-75, 1980-81, 1983, 1985-96, 1999-2001, 2003), 32.5°C, July 9, 10, 1993; minimum (water years 1968, 1977-2003), 0.0°C, on many days during winters, each year except water years 1980-82.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum recorded, 29.0°C, July 6, 8; minimum, 0.0°C on many days during winter.

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	21.0	16.0	18.5	6.5	5.5	6.0	2.0	1.0	1.5	1.5	0.5	1.0
2	22.0	18.0	20.0	6.0	5.0	5.5	1.5	0.5	1.0	1.5	1.5	1.5
3	22.0	19.5	20.5	5.0	4.5	5.0	0.5	0.0	0.0	1.5	0.5	1.0
4	19.5	18.0	18.5	5.5	4.0	5.0	0.5	0.0	0.0	0.5	0.0	0.5
5	22.5	17.5	19.0	6.0	4.0	5.0	0.0	0.0	0.0	1.0	0.5	0.5
6	20.5	16.5	18.0	6.0	5.0	5.5	0.0	0.0	0.0	1.0	0.5	1.0
7	19.0	15.5	17.5	6.5	5.0	5.5	0.0	0.0	0.0	1.0	0.5	1.0
8	18.5	14.0	16.0	6.5	4.5	5.5	0.0	0.0	0.0	0.5	0.0	0.5
9	16.0	14.0	15.0	6.5	5.0	5.5	0.0	0.0	0.0	1.5	0.5	1.0
10	15.0	14.5	15.0	8.0	5.5	7.0	0.0	0.0	0.0	2.0	1.0	1.5
11	14.5	14.0	14.0	10.0	8.0	9.0	0.0	0.0	0.0	1.0	0.0	0.5
12	14.0	13.5	14.0	9.5	9.0	9.0	0.0	0.0	0.0	0.5	0.0	0.0
13	14.0	13.5	14.0	9.0	8.5	9.0	0.0	0.0	0.0	0.0	0.0	0.0
14	13.5	12.0	13.0	8.5	7.5	8.0	0.0	0.0	0.0	0.5	0.0	0.0
15	12.0	11.0	11.5	8.5	7.5	8.0	0.5	0.0	0.0	0.5	0.0	0.0
16	11.0	10.5	11.0	7.5	6.5	7.5	0.5	0.0	0.0	0.5	0.0	0.0
17	10.5	10.0	10.5	6.5	6.0	6.0	0.0	0.0	0.0	0.0	0.0	0.0
18	10.5	9.5	10.0	6.0	5.0	5.5	0.5	0.0	0.0	0.0	0.0	0.0
19	10.0	9.5	9.5	5.0	4.5	4.5	1.0	0.0	0.0	0.0	0.0	0.0
20	10.0	9.0	9.5	5.0	4.5	4.5	0.5	0.0	0.5	0.0	0.0	0.0
21	10.0	9.0	9.5	5.0	4.5	5.0	0.5	0.0	0.0	0.0	0.0	0.0
22	10.0	8.5	9.0	5.5	5.0	5.0	1.0	0.0	0.5	0.0	0.0	0.0
23	10.0	8.0	9.0	5.5	4.5	5.0	2.0	1.0	1.5	0.0	0.0	0.0
24	9.0	7.5	8.5	4.5	4.0	4.5	2.0	1.5	2.0	0.0	0.0	0.0
25	8.5	8.0	8.0	4.5	4.0	4.0	1.5	0.0	0.5	0.0	0.0	0.0
26	8.5	7.5	8.0	4.5	4.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0
27	9.0	7.5	8.0	4.0	3.0	3.5	0.0	0.0	0.0	0.0	0.0	0.0
28	9.0	7.5	8.0	3.0	2.0	2.5	0.5	0.0	0.0	0.0	0.0	0.0
29	7.5	6.5	7.5	2.0	1.5	2.0	0.5	0.0	0.0	0.0	0.0	0.0
30	7.0	6.0	6.5	2.5	1.5	2.0	1.0	0.0	0.5	0.5	0.0	0.0
31	7.5	5.5	6.5	---	---	---	1.0	0.5	0.5	0.0	0.0	0.0
MONTH	22.5	5.5	12.4	10.0	1.5	5.5	2.0	0.0	0.3	2.0	0.0	0.3

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

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	0.0	0.0	0.0	0.0	0.0	0.0	6.0	2.5	3.0	13.5	11.5	12.5
2	0.0	0.0	0.0	0.0	0.0	0.0	3.5	2.0	3.0	14.5	13.5	14.0
3	0.0	0.0	0.0	0.0	0.0	0.0	5.0	3.5	4.5	14.0	12.5	13.0
4	0.0	0.0	0.0	0.5	0.0	0.0	4.5	4.0	4.5	13.0	11.0	12.0
5	0.0	0.0	0.0	0.5	0.0	0.0	4.0	2.5	3.0	12.5	11.0	11.5
6	0.0	0.0	0.0	0.0	0.0	0.0	4.0	2.0	3.0	11.0	10.0	10.0
7	0.0	0.0	0.0	0.0	0.0	0.0	4.0	3.0	3.5	12.0	9.5	11.0
8	0.0	0.0	0.0	0.5	0.0	0.0	3.0	2.0	2.5	13.0	12.0	12.5
9	0.0	0.0	0.0	0.5	0.0	0.0	3.5	2.5	3.0	14.0	13.0	13.5
10	0.0	0.0	0.0	0.5	0.0	0.0	5.5	3.5	4.5	15.0	13.5	14.0
11	0.0	0.0	0.0	0.5	0.0	0.0	6.0	5.5	5.5	15.0	14.5	15.0
12	0.0	0.0	0.0	0.5	0.0	0.0	8.0	5.5	6.5	14.5	13.5	14.0
13	0.0	0.0	0.0	0.0	0.0	0.0	9.0	7.0	8.0	13.5	12.5	13.0
14	0.0	0.0	0.0	0.5	0.0	0.0	9.0	7.0	8.5	12.5	11.5	12.0
15	0.0	0.0	0.0	1.0	0.0	0.5	10.5	8.0	9.5	12.5	11.0	12.0
16	0.0	0.0	0.0	1.5	0.0	0.5	12.5	10.0	11.5	12.5	12.0	12.5
17	0.0	0.0	0.0	1.0	0.0	0.5	12.0	9.0	10.5	14.5	12.5	13.0
18	0.0	0.0	0.0	1.0	0.0	0.5	9.0	7.0	7.5	16.5	13.0	14.5
19	0.0	0.0	0.0	1.0	0.0	0.5	9.0	6.5	7.5	18.0	14.5	16.0
20	0.0	0.0	0.0	2.0	1.0	2.0	11.0	8.0	9.5	18.5	15.5	17.0
21	0.0	0.0	0.0	3.0	1.5	2.0	12.0	10.0	11.0	17.0	16.0	16.5
22	0.0	0.0	0.0	4.5	3.0	4.0	12.0	10.5	11.0	16.0	14.5	15.0
23	0.0	0.0	0.0	4.5	4.0	4.0	10.5	8.0	9.5	14.5	13.5	14.0
24	0.0	0.0	0.0	4.5	3.5	4.0	10.0	7.5	8.5	14.0	13.5	13.5
25	0.0	0.0	0.0	6.0	4.5	5.0	11.0	8.0	9.5	15.0	13.5	14.5
26	0.0	0.0	0.0	6.0	5.0	5.5	11.0	10.0	10.5	14.5	14.0	14.5
27	0.0	0.0	0.0	5.5	4.5	5.0	12.0	10.0	11.0	16.0	14.0	15.0
28	0.0	0.0	0.0	6.5	5.0	6.0	13.5	11.0	12.0	17.0	15.5	16.5
29	---	---	---	7.5	6.0	7.0	13.0	12.0	12.5	19.0	16.0	17.5
30	---	---	---	7.0	5.0	6.0	12.5	11.5	12.0	20.0	17.0	18.5
31	---	---	---	5.0	3.5	4.0	---	---	---	18.5	17.0	18.0
MONTH	0.0	0.0	0.0	7.5	0.0	1.8	13.5	2.0	7.5	20.0	9.5	14.1
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	17.0	14.0	15.5	24.5	20.5	22.5	24.5	23.0	23.5	20.5	18.5	19.0
2	14.0	13.0	13.5	25.0	21.0	23.0	25.0	22.0	23.5	18.5	15.5	17.0
3	14.5	13.0	14.0	26.0	21.5	24.0	24.0	22.5	---	15.5	15.5	15.5
4	14.0	13.5	13.5	27.5	23.0	25.5	---	---	---	16.0	15.5	15.5
5	15.0	13.0	14.0	28.5	24.5	26.5	---	---	---	17.5	15.5	16.5
6	16.5	14.5	15.0	29.0	25.5	27.0	---	---	---	18.5	17.0	17.5
7	16.0	15.5	15.5	28.5	25.0	26.5	22.0	---	---	19.5	17.5	18.5
8	15.5	15.0	15.0	29.0	25.0	26.5	23.5	21.5	22.5	19.5	18.0	19.0
9	16.5	15.0	15.5	26.5	24.0	25.0	23.0	22.5	22.5	20.0	18.5	19.0
10	18.5	16.0	17.5	24.5	21.5	23.0	23.5	22.0	22.5	20.0	18.0	19.0
11	19.0	18.0	18.5	23.0	21.0	22.0	23.0	21.5	22.5	19.5	18.0	19.0
12	18.5	17.5	18.0	22.0	20.0	21.0	21.5	20.5	21.0	19.5	18.0	18.5
13	18.0	16.5	17.0	23.0	20.0	21.5	21.5	20.0	20.5	18.5	17.5	18.0
14	17.5	16.5	17.0	25.0	20.0	22.5	21.5	20.0	21.0	20.0	17.5	19.0
15	18.5	16.5	17.5	26.0	21.5	23.5	22.0	20.5	21.0	20.5	19.5	20.0
16	18.5	16.5	17.5	26.5	23.0	24.5	21.5	20.5	21.0	20.0	18.5	19.0
17	18.5	17.0	18.0	27.0	23.0	24.5	22.0	20.5	21.0	19.5	18.0	18.5
18	18.5	17.5	18.0	24.5	22.5	23.5	21.5	20.0	20.5	18.5	17.5	18.0
19	18.5	17.0	17.5	25.5	21.5	23.5	23.0	20.5	21.5	18.5	17.5	18.0
20	18.0	17.5	17.5	25.5	21.5	23.5	24.5	21.0	22.5	19.0	18.0	18.5
21	17.5	16.0	16.5	26.5	22.0	24.0	25.5	22.0	23.5	19.5	17.5	18.5
22	16.0	15.5	15.5	24.5	22.5	23.5	26.0	23.0	24.5	18.0	17.5	18.0
23	18.5	15.5	16.5	23.0	21.0	22.0	25.5	22.5	23.5	17.5	17.0	17.5
24	20.5	17.5	19.0	23.0	21.0	22.0	24.5	20.5	22.5	17.0	15.5	16.0
25	22.0	19.5	20.5	25.0	21.5	23.0	24.5	20.5	22.5	16.0	15.0	15.5
26	23.5	21.0	22.0	25.5	22.5	24.0	24.0	21.5	23.0	16.5	15.0	15.5
27	24.0	23.0	23.5	25.5	23.0	24.0	25.5	22.0	23.5	17.5	16.0	17.0
28	23.5	22.0	---	26.0	23.0	24.5	25.5	21.5	23.5	17.5	16.5	17.0
29	---	---	---	26.5	22.0	24.5	24.5	21.0	23.0	16.5	15.5	16.0
30	23.0	21.5	---	27.0	22.5	24.5	23.5	20.5	22.0	15.5	14.5	15.0
31	---	---	---	26.5	22.5	24.5	22.5	19.0	20.5	---	---	---
MONTH	---	---	---	29.0	20.0	23.9	---	---	---	20.5	14.5	17.6