

CHRISTINA RIVER BASIN

01481000 BRANDYWINE CREEK AT CHADDS FORD, PA

LOCATION.--Lat 39°52'11", long 75°35'37", Delaware County, Hydrologic Unit 02040205, on left bank 27 ft upstream from Penn Central Railroad bridge at Chadds Ford, 150 ft upstream from Harvey Run, and 1,200 ft downstream from highway bridge on U.S. Highway 1.

DRAINAGE AREA.--287 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1911 to September 1953, October 1962 to current year. Prior to October 1911, monthly discharge only, published in WSP 1302.

REVISED RECORDS.--WSP 756: Drainage area. WSP 1202: 1917-18(M), 1919-20, 1922-31(M), 1932-33, 1934(M), 1936, 1938(P), 1939(M), 1942, 1944-46(M), WDR PA-98-1: 1996-97 (M).

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 150.45 ft above sea level. Prior to May 21, 1927, nonrecording gage at same site and datum.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Flow regulated since November 1973 by Marsh Creek Reservoir (station 01480684) about 17 mi upstream. Satellite and landline telemetry at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Aug. 19, 1955, reached a stage of 14.64 ft, gage datum, discharge, about 16,400 ft³/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	86	101	119	105	199	705	354	251	173	117	56	79
2	80	101	115	140	552	401	378	241	169	145	54	74
3	81	101	112	1780	593	314	342	241	193	202	51	70
4	114	100	110	848	378	463	333	248	176	143	49	68
5	127	97	114	296	327	398	378	244	161	120	47	94
6	106	102	114	271	289	338	329	236	153	111	49	509
7	96	99	111	247	244	425	306	237	154	106	48	166
8	290	e98	116	193	329	314	295	247	151	101	49	156
9	651	e97	160	301	311	290	325	251	142	97	55	110
10	930	98	133	516	260	287	1020	233	140	97	54	425
11	255	123	118	223	232	285	553	220	144	98	52	153
12	159	133	113	189	231	267	834	217	140	94	51	99
13	138	114	112	249	446	255	534	333	144	97	49	88
14	133	108	110	339	302	265	440	261	187	95	88	85
15	120	103	107	1000	253	374	407	223	207	92	103	91
16	114	101	106	766	240	411	379	212	160	90	78	6360
17	116	100	106	541	236	435	427	211	150	88	64	10100
18	117	98	104	1870	804	560	346	205	163	83	57	1370
19	112	97	102	1840	626	371	323	291	158	77	52	606
20	106	100	104	517	357	317	346	269	144	120	55	560
21	103	105	104	402	304	456	344	218	158	95	74	590
22	100	103	108	406	270	2690	387	209	155	86	75	774
23	101	101	108	403	235	971	398	248	150	88	66	499
24	102	101	107	1170	240	682	440	490	144	81	61	407
25	101	98	102	936	236	588	354	427	137	76	60	449
26	100	224	96	470	233	466	328	282	135	70	388	416
27	102	220	100	381	223	421	306	229	127	66	1110	360
28	103	139	105	344	335	421	285	198	123	61	191	234
29	105	125	110	315	---	400	269	183	124	54	108	222
30	101	121	128	286	---	370	257	177	121	60	89	895
31	102	---	104	222	---	348	---	175	---	59	83	---
TOTAL	5051	3408	3458	17566	9285	15288	12017	7707	4583	2969	3466	26109
MEAN	163	114	112	567	332	493	401	249	153	95.8	112	870
MAX	930	224	160	1870	804	2690	1020	490	207	202	1110	10100
MIN	80	97	96	105	199	255	257	175	121	54	47	68

e Estimated.

CHRISTINA RIVER BASIN

01481000 BRANDYWINE CREEK AT CHADDS FORD, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1974 - 1999, BY WATER YEAR (WY) (SINCE REGULATION)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	272	329	465	555	544	659	628	523	382	342	238	280
MAX	924	751	1634	1664	1308	1713	1509	1097	833	1153	562	906
(WY)	1997	1997	1997	1979	1979	1994	1983	1989	1975	1975	1996	1979
MIN	113	114	112	106	217	195	200	249	153	95.8	94.5	93.2
(WY)	1998	1999	1999	1981	1992	1981	1985	1999	1999	1999	1995	1980

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR	FOR 1999 WATER YEAR	WATER YEARS 1974 - 1999
ANNUAL TOTAL	127963	110907	
ANNUAL MEAN	351	304	434
HIGHEST ANNUAL MEAN			714
LOWEST ANNUAL MEAN			199
HIGHEST DAILY MEAN	3280	Apr 2	10100
LOWEST DAILY MEAN	80	Oct 2	47
ANNUAL SEVEN-DAY MINIMUM	89	Sep 27	50
INSTANTANEOUS PEAK FLOW			a26900
INSTANTANEOUS PEAK STAGE			17.15
INSTANTANEOUS LOW FLOW			45
10 PERCENT EXCEEDS	709	512	818
50 PERCENT EXCEEDS	226	166	298
90 PERCENT EXCEEDS	101	81	125

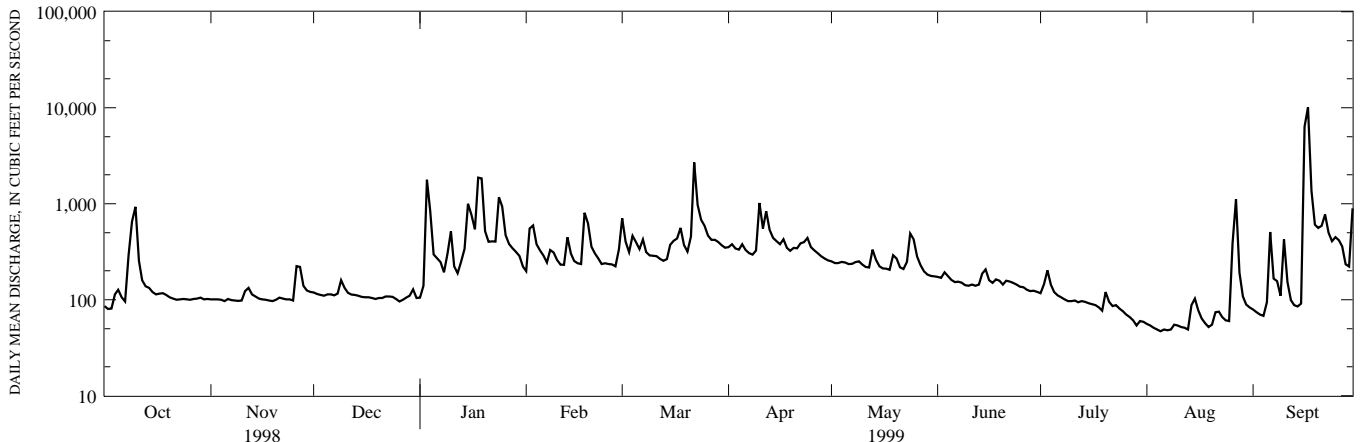
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1911-1953, 1963-1973, BY WATER YEAR (WY) (PRIOR TO REGULATION)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	219	301	348	444	570	605	530	435	364	309	278	230
MAX	666	625	827	1020	1130	1366	1043	946	1144	802	1089	1050
(WY)	1972	1972	1973	1936	1971	1920	1973	1952	1972	1919	1933	1971
MIN	67.7	98.3	114	145	214	247	226	175	149	91.1	82.1	59.4
(WY)	1964	1942	1966	1966	1934	1931	1963	1926	1963	1963	1930	1932

SUMMARY STATISTICS WATER YEARS 1911-1953 1963-1973

ANNUAL MEAN	385	
HIGHEST ANNUAL MEAN	625	1928
LOWEST ANNUAL MEAN	218	1932
HIGHEST DAILY MEAN	9590	Aug 24 1933
LOWEST DAILY MEAN	42	Sep 12 1966
ANNUAL SEVEN-DAY MINIMUM	45	Sep 7 1966
INSTANTANEOUS PEAK FLOW	b23800	Jun 22 1972
INSTANTANEOUS PEAK STAGE	16.56	Jun 22 1972
INSTANTANEOUS LOW FLOW	4.9	Oct 2 1942
ANNUAL RUNOFF (CFSM)	1.34	
ANNUAL RUNOFF (INCHES)	18.23	
10 PERCENT EXCEEDS	700	
50 PERCENT EXCEEDS	274	
90 PERCENT EXCEEDS	118	

- a From rating curve extended above 13,200 ft³/s on basis of area-velocity study at gage height 16.56 ft.
- b From rating curve extended above 9,000 ft³/s on basis of area-velocity study.



1-YEAR HYDROGRAPH
OCTOBER 1, 1998 TO SEPTEMBER 30, 1999

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01481000 BRANDYWINE CREEK AT CHADDS FORD, PA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1963 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1965 to current year.

pH: October 1965 to September 1966, December 1971 to current year.

WATER TEMPERATURES: October 1964 to current year.

DISSOLVED OXYGEN: October 1971 to current year.

SUSPENDED-SEDIMENT DISCHARGE: October 1963 to September 1978.

INSTRUMENTATION.--Water-quality monitor since August 1971.

REMARKS.--Data collection discontinued during winter months since 1981 water year. Other interruptions in the record were due to malfunctions of the recording instrument.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 556 microsiemens, June 16, 1991; minimum, 42 microsiemens, Nov. 26, 1979.

pH: Maximum, 9.8, Apr. 9, 1975; minimum, 6.1, Feb. 22, 1976.

WATER TEMPERATURE: Maximum, 31.0°C, July 18, 19, 1977, Aug. 15, 1988, July 6, 1999; minimum, 0.0°C, many days during winters.

DISSOLVED OXYGEN: Maximum, 17.1 mg/L, Dec. 5, 1976; minimum, 3.0 mg/L, June 21, 1984.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	TIME	AGENCY ANA- LYZING SAMPLE NUMBER (00028)	AGENCY COL- LECTING SAMPLE NUMBER (00027)	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	OXYGEN, DIS- SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	SPE- CIFIC CON- DUCT- ANCE (µS/CM) (00095)	TEMPER- ATURE WATER (DEG C) (00010)	COLI- FORM, FECAL, µM-MF (COLS./ 100 ML) (31616)	E. COLI WATER WHOLE TOTAL UREASE (COL / 100 ML) (31633)
MAR 1999										
11...	0935	1028	1028	286	10.0	6.3	267	4.0	27	--
22...	1015	1028	1028	3280	11.4	7.4	150	6.5	2200	--
APR										
07...	1356	1028	1028	305	12.3	7.9	241	13.5	K2	--
16...	0830	1028	1028	365	10.0	7.5	229	11.5	52	--
29...	0915	1028	1028	265	9.7	7.4	268	13.5	98	--
MAY										
03...	1130	1028	1028	238	9.3	7.4	276	14.5	78	--
18...	1315	1028	1028	204	10.1	7.7	275	18.5	K94	K44
25...	0930	1028	1028	404	8.6	7.4	210	16.0	K6700	--
JUN										
02...	1110	1028	1028	167	8.2	7.6	277	23.0	110	--
23...	1305	1028	1028	152	10.0	7.4	293	22.0	K150	--
28...	0725	1028	1028	124	6.5	7.3	303	25.0	100	--
JUL										
15...	1040	1028	1028	94	8.4	7.5	321	22.0	K2200	--
19...	0840	1028	1028	77	6.5	7.4	341	26.5	180	--
21...	1215	1028	1028	94	7.4	7.4	293	25.0	110	--
26...	1100	1028	1028	72	7.1	7.5	338	26.5	120	--
AUG										
03...	1020	1028	1028	49	6.0	7.4	372	26.0	180	--
16...	1203	1028	1028	82	7.8	7.5	316	26.0	100	--
26...	1043	1028	1028	760	7.3	7.4	300	22.0	2600	620
SEP										
08...	1127	1028	1028	157	7.6	7.4	274	24.5	210	--
15...	1023	1028	1028	87	7.8	7.7	335	21.5	140	180
16...	1040	1028	1028	2640	7.4	7.1	226	17.0	K960	K440
27...	1250	1028	1028	391	8.8	7.6	257	16.5	160	--

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01481000 BRANDYWINE CREEK AT CHADDS FORD, PA--Continued

SPECIFIC CONDUCTANCE, MICROSIEMENS PER CENTIMETER AT 25° CELSIUS, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	370	355	365	388	351	363	---	---	---	---	---	---
2	394	361	370	390	336	365	---	---	---	---	---	---
3	382	359	366	372	336	345	---	---	---	---	---	---
4	395	350	373	350	323	333	---	---	---	---	---	---
5	388	373	381	---	---	---	---	---	---	---	---	---
6	393	354	371	---	---	---	---	---	---	---	---	---
7	364	335	347	---	---	---	---	---	---	---	---	---
8	527	315	376	---	---	---	---	---	---	---	---	---
9	315	242	265	---	---	---	---	---	---	---	---	---
10	291	182	223	344	326	336	---	---	---	---	---	---
11	257	215	240	362	331	344	---	---	---	---	---	---
12	307	257	278	363	315	336	---	---	---	---	---	---
13	333	307	317	334	322	328	---	---	---	---	---	---
14	361	318	333	358	326	337	---	---	---	---	---	---
15	357	334	347	345	336	340	---	---	---	---	---	---
16	397	349	359	346	327	336	---	---	---	---	---	---
17	369	355	361	345	322	330	---	---	---	---	---	---
18	402	363	372	331	291	325	---	---	---	---	---	---
19	377	362	369	335	321	326	---	---	---	---	---	---
20	412	342	362	333	325	330	---	---	---	---	---	---
21	351	319	338	369	323	329	---	---	---	---	---	---
22	356	319	330	326	314	321	---	---	---	---	---	---
23	331	321	326	361	318	327	---	---	---	---	---	---
24	355	321	329	330	321	325	---	---	---	---	---	---
25	331	317	325	361	318	326	---	---	---	---	---	---
26	362	319	329	---	---	---	---	---	---	---	---	---
27	335	326	330	---	---	---	---	---	---	---	---	---
28	370	327	336	---	---	---	---	---	---	---	---	---
29	352	334	338	---	---	---	---	---	---	---	---	---
30	369	340	352	---	---	---	---	---	---	---	---	---
31	369	352	362	---	---	---	---	---	---	---	---	---
MONTH	527	182	338	390	291	335	---	---	---	---	---	---
	FEBRUARY			MARCH			APRIL			MAY		
1	---	---	---	259	214	230	247	234	243	275	266	271
2	---	---	---	240	216	229	249	233	241	278	268	272
3	---	---	---	255	240	250	243	234	239	276	271	273
4	---	---	---	261	240	254	246	236	241	282	270	274
5	---	---	---	244	237	240	247	229	239	277	262	269
6	---	---	---	257	242	252	241	229	237	275	262	271
7	---	---	---	264	245	256	247	235	240	278	273	275
8	---	---	---	254	245	251	250	219	237	280	269	274
9	---	---	---	267	253	261	252	233	244	274	265	270
10	---	---	---	265	259	261	234	180	200	271	264	267
11	---	---	---	272	260	265	210	189	203	271	263	266
12	---	---	---	271	263	267	211	193	201	273	262	268
13	---	---	---	269	260	263	221	204	215	265	249	259
14	---	---	---	267	257	263	231	220	225	262	250	255
15	---	---	---	356	257	291	233	225	230	269	262	266
16	---	---	---	386	329	365	236	227	232	278	265	271
17	---	---	---	---	---	---	238	220	230	277	268	272
18	---	---	---	---	---	---	236	224	230	274	268	271
19	---	---	---	---	---	---	243	225	235	273	253	268
20	---	---	---	---	---	---	238	227	232	272	254	259
21	---	---	---	---	---	---	240	232	237	274	259	269
22	---	---	---	---	---	---	248	236	240	280	270	275
23	---	---	---	206	165	192	245	232	239	285	275	279
24	---	---	---	216	206	212	244	234	239	284	224	270
25	---	---	---	227	214	220	246	237	244	229	209	219
26	279	260	270	229	221	226	261	244	251	252	229	245
27	277	263	270	237	229	234	256	249	254	280	252	266
28	276	255	264	239	232	236	269	255	261	283	272	276
29	---	---	---	245	227	234	269	261	265	283	275	279
30	---	---	---	241	232	237	276	263	266	287	278	282
31	---	---	---	242	233	238	---	---	---	286	275	280
MONTH	279	255	268	386	165	249	276	180	236	287	209	268

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01481000 BRANDYWINE CREEK AT CHADDS FORD, PA--Continued

SPECIFIC CONDUCTANCE, MICROSIEMENS PER CENTIMETER AT 25° CELSIUS, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	288	276	283	314	298	304	392	373	381	383	354	360
2	286	276	280	308	244	299	387	360	372	365	360	363
3	287	277	282	292	264	282	384	369	377	369	359	363
4	279	273	277	288	266	279	394	371	381	371	365	368
5	284	275	279	290	268	280	391	359	370	387	321	360
6	287	278	283	312	287	299	378	353	365	333	211	245
7	292	279	286	333	307	312	386	350	359	273	214	237
8	294	281	288	314	304	306	392	359	368	286	272	278
9	291	276	285	330	311	316	368	359	364	296	259	286
10	303	283	296	321	316	319	379	362	367	285	232	256
11	308	298	302	351	320	325	365	359	362	267	236	251
12	305	296	300	325	312	317	376	355	361	306	267	287
13	300	292	296	331	315	318	365	356	359	328	306	318
14	298	289	294	324	319	322	367	342	358	353	328	344
15	298	265	278	343	318	322	385	299	338	345	324	336
16	278	267	273	329	319	323	338	311	324	326	144	221
17	288	273	280	340	321	328	342	333	338	---	---	---
18	290	287	289	348	329	333	333	324	329	---	---	---
19	295	286	290	348	332	339	345	331	337	---	---	---
20	292	282	288	368	331	347	371	343	349	---	---	---
21	294	284	288	355	293	311	359	352	356	---	---	---
22	292	287	290	346	322	337	358	349	353	264	246	252
23	297	289	292	362	334	343	349	337	345	261	242	252
24	299	291	295	352	339	347	342	326	334	277	261	271
25	296	289	293	358	343	348	343	326	334	277	255	261
26	299	293	295	352	337	343	359	204	283	261	253	258
27	302	295	300	358	341	347	---	---	---	260	249	255
28	311	299	304	471	344	394	---	---	---	285	249	270
29	315	303	309	439	360	387	---	---	---	290	282	287
30	310	298	306	385	358	367	---	---	---	288	199	243
31	---	---	---	383	363	371	363	345	354	---	---	---
MONTH	315	265	290	471	244	328	394	204	353	387	144	289

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	7.8	7.4	7.6	7.5	7.2	7.3	---	---	---	---	---	---
2	7.8	7.4	7.6	7.6	7.2	7.4	---	---	---	---	---	---
3	7.8	7.5	7.6	7.7	7.3	7.5	---	---	---	---	---	---
4	7.6	7.5	7.5	7.9	7.3	7.6	---	---	---	---	---	---
5	7.7	7.5	7.6	---	---	---	---	---	---	---	---	---
6	7.7	7.5	7.6	---	---	---	---	---	---	---	---	---
7	7.8	7.4	7.6	---	---	---	---	---	---	---	---	---
8	7.6	7.2	7.5	---	---	---	---	---	---	---	---	---
9	7.4	7.2	7.3	---	---	---	---	---	---	---	---	---
10	7.4	7.2	7.3	7.5	6.9	7.2	---	---	---	---	---	---
11	7.4	7.4	7.4	7.4	7.2	7.3	---	---	---	---	---	---
12	7.4	7.3	7.4	7.4	7.1	7.2	---	---	---	---	---	---
13	7.5	7.4	7.4	7.5	7.2	7.3	---	---	---	---	---	---
14	7.6	7.4	7.5	7.5	7.2	7.3	---	---	---	---	---	---
15	7.6	7.5	7.5	7.6	7.2	7.4	---	---	---	---	---	---
16	7.6	7.5	7.5	7.7	7.2	7.5	---	---	---	---	---	---
17	7.6	7.5	7.5	7.8	6.8	7.5	---	---	---	---	---	---
18	7.6	7.5	7.5	7.8	7.0	7.5	---	---	---	---	---	---
19	7.7	7.4	7.5	8.0	7.2	7.5	---	---	---	---	---	---
20	8.2	7.4	7.7	7.9	7.2	7.5	---	---	---	---	---	---
21	8.0	7.6	7.8	8.0	7.2	7.5	---	---	---	---	---	---
22	8.0	7.5	7.7	8.1	7.2	7.6	---	---	---	---	---	---
23	8.1	7.5	7.7	8.2	7.2	7.6	---	---	---	---	---	---
24	8.1	7.5	7.7	7.9	7.4	7.6	---	---	---	---	---	---
25	8.1	7.4	7.7	8.1	7.1	7.6	---	---	---	---	---	---
26	7.9	7.1	7.5	7.8	6.5	7.4	---	---	---	---	---	---
27	7.8	7.3	7.5	7.1	6.8	7.0	---	---	---	---	---	---
28	7.7	7.2	7.4	7.2	6.9	7.0	---	---	---	---	---	---
29	7.7	7.2	7.4	7.2	7.0	7.1	---	---	---	---	---	---
30	7.5	7.2	7.3	7.4	7.1	7.2	---	---	---	---	---	---
31	7.5	7.1	7.3	---	---	---	---	---	---	---	---	---
MONTH	8.2	7.1	7.5	8.2	6.5	7.4	---	---	---	---	---	---

CHRISTINA RIVER BASIN

01481000 BRANDYWINE CREEK AT CHADDS FORD, PA--Continued

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	---	---	---	---	---	---	8.7	7.7	8.1	7.7	7.4	7.5
2	---	---	---	---	---	---	8.9	7.5	8.2	7.7	7.4	7.5
3	---	---	---	---	---	---	8.9	7.6	8.3	7.5	7.4	7.4
4	---	---	---	---	---	---	8.8	7.8	8.3	7.6	7.4	7.5
5	---	---	---	---	---	---	8.6	7.5	8.1	7.7	7.4	7.5
6	---	---	---	---	---	---	8.6	7.5	8.1	7.6	7.4	7.4
7	---	---	---	---	---	---	8.6	7.6	8.1	7.4	7.3	7.4
8	---	---	---	---	---	---	8.6	7.5	8.2	7.6	7.4	7.4
9	---	---	---	---	---	---	8.4	7.5	7.8	7.6	7.3	7.4
10	---	---	---	---	---	---	7.6	7.4	7.5	7.6	7.4	7.5
11	---	---	---	---	---	---	7.5	7.3	7.4	7.6	7.4	7.5
12	---	---	---	---	---	---	7.6	7.4	7.5	7.7	7.4	7.5
13	---	---	---	---	---	---	8.0	7.4	7.7	7.5	7.3	7.4
14	---	---	---	---	---	---	8.3	7.5	7.8	7.5	7.3	7.4
15	---	---	---	---	---	---	8.3	7.5	7.9	7.7	7.4	7.5
16	---	---	---	---	---	---	7.9	7.5	7.6	7.7	7.4	7.6
17	---	---	---	---	---	---	8.3	7.4	7.8	7.8	7.5	7.6
18	---	---	---	---	---	---	8.3	7.6	7.9	7.7	7.4	7.6
19	---	---	---	---	---	---	8.3	7.6	8.0	7.5	7.3	7.4
20	---	---	---	---	---	---	8.1	7.6	7.8	7.7	7.3	7.5
21	---	---	---	---	---	---	8.1	7.5	7.8	7.7	7.4	7.5
22	---	---	---	---	---	---	8.1	7.6	7.8	7.7	7.4	7.5
23	---	---	---	7.6	7.4	7.5	7.9	7.4	7.5	7.5	7.4	7.4
24	---	---	---	7.8	7.5	7.6	7.7	7.3	7.5	7.5	7.4	7.4
25	---	---	---	7.9	7.5	7.7	7.7	7.4	7.5	7.5	7.3	7.4
26	---	---	---	8.0	7.5	7.8	7.6	7.4	7.5	7.6	7.4	7.5
27	---	---	---	8.2	7.6	7.8	7.6	7.4	7.5	7.7	7.4	7.5
28	---	---	---	8.2	7.6	7.9	7.6	7.4	7.5	7.7	7.4	7.5
29	---	---	---	8.6	7.6	8.1	7.6	7.4	7.5	7.7	7.4	7.5
30	---	---	---	8.9	7.7	8.3	7.6	7.4	7.5	7.7	7.4	7.5
31	---	---	---	8.8	7.7	8.3	---	---	---	7.7	7.3	7.5
MONTH	---	---	---	8.9	7.4	7.9	8.9	7.3	7.8	7.8	7.3	7.5
	JUNE			JULY			AUGUST			SEPTEMBER		
1	7.8	7.3	7.5	7.5	7.2	7.4	8.2	7.4	7.7	8.1	7.5	7.8
2	7.9	7.3	7.6	7.7	7.2	7.4	8.3	7.4	7.8	8.3	7.7	7.9
3	7.8	7.4	7.5	7.6	7.2	7.4	8.4	7.4	7.8	8.5	7.7	8.0
4	8.1	7.4	7.6	7.6	7.2	7.4	8.2	7.4	7.8	8.4	7.7	8.0
5	8.2	7.4	7.8	7.6	7.2	7.3	8.4	7.4	7.8	8.2	7.6	7.8
6	8.5	7.5	7.9	7.6	7.2	7.3	8.4	7.4	7.8	7.7	7.4	7.5
7	8.6	7.5	8.0	7.7	7.2	7.4	8.5	7.5	7.9	7.5	7.3	7.4
8	8.7	7.5	8.0	7.8	7.3	7.5	7.9	7.4	7.6	7.7	7.4	7.5
9	8.7	7.4	8.0	7.9	7.3	7.5	8.1	7.4	7.6	7.8	7.5	7.6
10	8.1	7.5	7.7	7.6	7.3	7.4	8.2	7.4	7.7	7.6	7.4	7.5
11	8.6	7.5	7.9	7.8	7.3	7.5	8.2	7.4	7.7	7.6	7.4	7.5
12	8.3	7.7	8.0	7.7	7.4	7.5	8.3	7.4	7.8	7.8	7.5	7.6
13	8.0	7.6	7.8	7.9	7.4	7.6	8.1	7.4	7.7	7.9	7.6	7.7
14	8.0	7.5	7.7	7.9	7.5	7.6	7.7	7.3	7.5	8.0	7.7	7.8
15	7.9	7.3	7.6	8.1	7.4	7.7	7.6	7.3	7.4	7.8	7.6	7.7
16	7.9	7.3	7.6	8.2	7.5	7.7	7.7	7.3	7.5	7.6	7.1	7.4
17	7.8	7.4	7.5	8.2	7.4	7.7	7.9	7.3	7.5	---	---	---
18	7.8	7.3	7.5	8.1	7.4	7.6	8.0	7.3	7.6	---	---	---
19	7.9	7.4	7.7	8.2	7.4	7.6	8.2	7.3	7.6	---	---	---
20	7.8	7.5	7.6	7.6	7.4	7.5	7.7	7.2	7.5	---	---	---
21	7.7	7.4	7.5	7.6	7.2	7.4	7.8	7.3	7.5	---	---	---
22	8.0	7.4	7.7	7.7	7.3	7.5	7.9	7.4	7.6	7.7	7.6	7.6
23	7.7	7.0	7.5	7.9	7.4	7.6	8.1	7.5	7.7	7.7	7.7	7.7
24	7.8	7.2	7.5	7.8	7.5	7.6	8.1	7.4	7.7	7.8	7.7	7.7
25	7.8	7.2	7.5	8.0	7.4	7.6	8.1	7.4	7.7	7.7	7.7	7.7
26	8.0	7.2	7.6	8.0	7.4	7.6	7.6	7.2	7.4	7.7	7.6	7.7
27	7.9	7.2	7.5	8.2	7.4	7.7	---	---	---	7.7	7.6	7.6
28	7.6	7.3	7.4	8.3	7.4	7.7	---	---	---	7.7	7.6	7.6
29	7.7	7.3	7.5	8.3	7.4	7.7	---	---	---	7.8	7.6	7.7
30	7.7	7.3	7.5	8.2	7.5	7.7	---	---	---	7.7	7.5	7.6
31	---	---	---	8.3	7.4	7.8	8.0	7.6	7.8	---	---	---
MONTH	8.7	7.0	7.7	8.3	7.2	7.5	8.5	7.2	7.7	8.5	7.1	7.7

CHRISTINA RIVER BASIN

01481000 BRANDYWINE CREEK AT CHADDS FORD, PA--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	20.5	18.0	19.0	11.0	9.0	10.0	---	---	---	---	---	---
2	18.0	16.0	17.0	11.0	9.5	10.0	---	---	---	---	---	---
3	16.0	14.5	15.5	10.0	9.0	9.5	---	---	---	---	---	---
4	14.5	14.0	14.0	9.5	8.0	9.0	---	---	---	---	---	---
5	15.5	13.5	14.5	---	---	---	---	---	---	---	---	---
6	16.0	14.0	15.0	---	---	---	---	---	---	---	---	---
7	16.0	15.0	15.5	---	---	---	---	---	---	---	---	---
8	17.0	15.5	16.5	---	---	---	---	---	---	---	---	---
9	17.0	16.5	17.0	---	---	---	---	---	---	---	---	---
10	16.5	16.0	16.5	9.5	8.0	8.5	---	---	---	---	---	---
11	17.0	15.5	16.0	11.5	9.5	10.5	---	---	---	---	---	---
12	16.5	15.5	16.0	10.5	9.0	9.5	---	---	---	---	---	---
13	17.5	16.0	16.5	9.0	8.0	8.5	---	---	---	---	---	---
14	18.0	16.5	17.0	8.5	7.0	8.0	---	---	---	---	---	---
15	16.5	14.5	15.5	9.5	7.5	8.5	---	---	---	---	---	---
16	15.0	13.0	14.0	9.0	7.5	8.5	---	---	---	---	---	---
17	14.5	12.5	13.5	9.5	8.0	9.0	---	---	---	---	---	---
18	15.0	12.5	14.0	9.5	8.5	9.0	---	---	---	---	---	---
19	16.5	14.5	15.5	8.5	7.5	8.0	---	---	---	---	---	---
20	15.5	14.0	15.0	9.5	8.0	9.0	---	---	---	---	---	---
21	14.5	13.0	13.5	9.5	8.5	8.5	---	---	---	---	---	---
22	13.0	11.0	12.0	8.5	7.5	8.0	---	---	---	---	---	---
23	11.5	9.5	10.5	8.0	6.0	7.0	---	---	---	---	---	---
24	12.0	9.5	11.0	8.5	7.0	7.5	---	---	---	---	---	---
25	12.5	10.0	11.5	8.0	6.5	7.0	---	---	---	---	---	---
26	12.5	10.5	12.0	9.0	7.0	8.0	---	---	---	---	---	---
27	13.0	12.0	12.5	9.5	8.5	9.0	---	---	---	---	---	---
28	13.5	12.5	13.0	9.0	7.5	8.0	---	---	---	---	---	---
29	13.5	12.5	13.0	8.5	7.0	8.0	---	---	---	---	---	---
30	12.5	11.0	11.5	8.5	7.5	8.0	---	---	---	---	---	---
31	11.5	9.5	10.5	---	---	---	---	---	---	---	---	---
MONTH	20.5	9.5	14.3	11.5	6.0	8.6	---	---	---	---	---	---

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	---	---	---	6.5	6.0	6.0	12.0	11.0	11.5	16.5	14.5	15.5
2	---	---	---	6.5	4.5	6.0	13.5	11.0	12.5	16.5	14.5	15.5
3	---	---	---	9.0	5.5	7.0	14.5	12.5	13.5	16.0	14.0	14.5
4	---	---	---	9.0	6.0	8.0	16.0	13.5	14.5	15.5	13.5	14.5
5	---	---	---	6.0	4.5	5.5	15.5	13.5	14.5	18.5	15.0	16.5
6	---	---	---	6.0	5.0	5.5	14.5	12.0	13.0	18.5	17.0	17.5
7	---	---	---	6.0	4.0	5.0	15.0	12.5	13.5	17.0	16.0	16.5
8	---	---	---	4.0	2.0	3.0	16.5	13.5	15.0	18.0	16.0	17.0
9	---	---	---	3.5	2.5	3.0	16.0	12.5	14.5	19.0	17.0	18.0
10	---	---	---	5.5	3.0	4.5	13.0	10.5	12.0	19.0	17.0	18.0
11	---	---	---	5.5	4.0	5.0	12.5	10.0	11.0	19.5	17.0	18.5
12	---	---	---	5.0	3.5	4.5	11.5	9.5	10.0	20.0	17.5	19.0
13	---	---	---	6.0	3.5	4.5	12.5	10.0	11.0	19.5	17.0	18.5
14	---	---	---	6.0	3.5	5.0	13.5	10.5	12.0	17.5	15.5	16.5
15	---	---	---	4.5	2.5	3.5	13.0	11.0	12.0	17.0	15.5	16.0
16	---	---	---	6.5	3.5	5.0	12.0	11.5	11.5	17.0	15.0	16.0
17	---	---	---	---	---	---	12.0	10.5	11.5	18.0	15.5	16.5
18	---	---	---	---	---	---	12.0	10.5	11.5	19.5	16.5	18.0
19	---	---	---	---	---	---	12.0	10.5	11.0	19.5	18.5	19.0
20	---	---	---	---	---	---	11.5	10.0	10.5	19.5	17.0	18.5
21	---	---	---	---	---	---	11.0	9.0	10.0	19.5	17.0	18.5
22	---	---	---	---	---	---	15.0	10.5	12.5	20.5	18.0	19.5
23	---	---	---	8.0	5.5	6.5	14.5	13.0	14.0	20.0	19.0	19.5
24	---	---	---	9.5	8.0	8.5	14.0	11.5	12.5	19.0	17.0	18.5
25	---	---	---	10.0	8.5	9.5	14.5	11.5	13.0	18.0	16.0	17.0
26	5.0	3.5	4.0	10.0	7.5	9.0	15.5	12.0	14.0	18.0	16.5	17.5
27	5.0	4.0	4.5	9.5	7.5	8.0	16.5	13.5	15.0	18.5	16.5	17.5
28	6.0	5.0	5.5	9.0	8.0	8.5	16.0	14.0	15.0	19.5	16.5	18.5
29	---	---	---	11.5	8.0	10.0	16.0	13.5	15.0	21.5	18.0	20.0
30	---	---	---	12.0	10.0	11.0	16.5	14.5	15.5	23.0	20.0	21.5
31	---	---	---	12.5	9.5	11.5	---	---	---	23.5	21.0	22.5
MONTH	6.0	3.5	4.7	12.5	2.0	6.5	16.5	9.0	12.8	23.5	13.5	17.8

CHRISTINA RIVER BASIN

01481000 BRANDYWINE CREEK AT CHADDS FORD, PA--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	24.0	21.0	22.5	24.5	23.5	24.0	30.0	26.5	28.0	21.5	19.5	20.5
2	24.5	22.0	23.5	25.5	23.5	24.5	29.5	26.0	27.5	22.5	20.0	21.0
3	24.0	23.0	23.5	26.5	24.0	25.0	29.0	24.5	26.5	23.0	20.0	21.5
4	23.5	21.5	22.5	28.5	25.0	27.0	28.0	24.0	26.0	22.5	21.5	22.0
5	22.5	20.5	21.5	30.5	26.5	28.5	28.0	24.0	26.0	23.5	22.0	23.0
6	23.0	19.5	21.5	31.0	28.0	29.5	27.5	23.0	25.0	24.0	22.5	23.5
7	24.5	21.0	23.0	30.5	28.0	29.0	27.5	23.0	25.0	24.5	23.5	24.0
8	26.5	23.0	25.0	29.0	26.5	27.5	26.5	24.5	25.5	25.5	23.5	24.5
9	27.0	24.0	25.5	28.0	25.0	26.5	26.5	23.5	24.5	25.5	24.0	24.5
10	25.5	22.0	24.0	26.0	24.5	25.5	26.0	22.0	23.5	24.5	22.5	23.0
11	23.5	20.5	22.0	26.5	23.0	24.5	26.5	22.0	24.0	23.0	21.0	22.0
12	22.0	20.5	21.0	23.5	22.0	23.0	27.0	23.0	24.5	23.0	20.0	21.5
13	21.5	20.5	21.5	25.0	21.5	23.0	27.5	24.0	25.5	22.5	20.0	21.5
14	23.0	21.0	22.0	23.5	22.5	23.0	27.5	25.0	26.0	22.5	20.5	21.5
15	24.5	22.0	23.0	25.0	21.5	23.0	26.5	25.5	26.0	22.0	21.0	21.5
16	24.0	22.0	23.0	27.0	23.0	24.5	27.0	24.5	26.0	21.0	19.0	20.0
17	23.0	20.5	21.5	28.5	25.0	26.0	28.0	25.0	26.0	---	---	---
18	21.5	19.5	20.5	29.0	25.5	27.0	28.0	25.0	26.5	---	---	---
19	22.0	19.5	21.0	29.5	26.5	27.5	27.5	24.0	25.5	---	---	---
20	21.5	19.5	20.5	27.5	25.5	26.5	25.0	23.0	24.0	---	---	---
21	19.5	18.5	19.0	26.5	24.0	25.5	23.0	21.5	22.5	---	---	---
22	22.0	18.0	20.0	26.5	25.0	25.5	23.0	21.0	22.0	16.5	15.5	16.0
23	23.5	20.0	22.0	28.5	25.0	26.5	24.5	20.5	22.0	16.0	14.0	15.0
24	24.5	21.0	23.0	28.0	26.5	27.0	24.5	21.5	22.5	17.0	15.0	16.0
25	24.0	21.5	23.0	29.0	26.0	27.5	24.5	21.5	22.5	17.0	15.5	16.0
26	25.5	22.0	23.5	29.0	26.0	27.0	23.0	22.0	22.5	17.0	15.5	16.5
27	26.5	23.5	25.0	28.5	25.5	27.0	---	---	---	17.0	16.5	16.5
28	26.0	25.0	25.5	29.0	25.5	27.0	---	---	---	18.5	17.0	18.0
29	27.0	25.0	26.0	28.5	24.5	26.5	---	---	---	20.0	18.5	19.0
30	26.0	24.5	25.0	28.0	25.0	26.5	---	---	---	19.5	17.5	18.5
31	---	---	---	29.5	25.0	27.0	21.5	20.0	20.5	---	---	---
MONTH	27.0	18.0	22.7	31.0	21.5	26.1	30.0	20.0	24.7	25.5	14.0	20.3

OXYGEN, DISSOLVED (MG/L), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	8.7	7.2	7.8	---	---	---	---	---	---	---	---	---
2	9.3	5.8	7.8	---	---	---	---	---	---	---	---	---
3	9.3	7.4	8.5	---	---	---	---	---	---	---	---	---
4	10.0	6.6	8.1	---	---	---	---	---	---	---	---	---
5	9.0	7.1	8.0	---	---	---	---	---	---	---	---	---
6	10.8	7.2	9.1	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	---
19	---	---	---	13.2	9.4	11.5	---	---	---	---	---	---
20	---	---	---	12.0	9.6	10.8	---	---	---	---	---	---
21	---	---	---	12.9	6.1	10.9	---	---	---	---	---	---
22	---	---	---	13.9	10.5	12.4	---	---	---	---	---	---
23	---	---	---	12.9	7.2	11.8	---	---	---	---	---	---
24	---	---	---	13.7	10.4	12.0	---	---	---	---	---	---
25	---	---	---	13.7	7.0	12.0	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---	---	---	---
27	---	---	---	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	---	---	---	---
29	---	---	---	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	10.8	5.8	8.2	13.9	6.1	11.6	---	---	---	---	---	---

CHRISTINA RIVER BASIN

01481000 BRANDYWINE CREEK AT CHADDS FORD, PA--Continued

OXYGEN, DISSOLVED (MG/L), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	---	---	---	---	---	---	12.3	10.3	11.4	10.7	9.0	9.8
2	---	---	---	---	---	---	13.4	10.4	11.9	10.7	8.9	9.8
3	---	---	---	10.5	8.2	9.3	13.1	9.9	11.5	10.1	8.9	9.5
4	---	---	---	10.6	7.3	8.8	12.4	9.8	11.0	10.9	9.3	10.1
5	---	---	---	12.4	10.3	11.3	12.9	9.3	11.1	10.6	9.1	9.8
6	---	---	---	11.2	9.8	10.2	13.3	10.0	11.6	9.3	8.2	8.9
7	---	---	---	12.0	9.1	10.4	13.1	10.0	11.6	9.5	8.5	9.0
8	---	---	---	12.1	11.4	11.8	12.8	9.6	11.1	9.9	8.7	9.3
9	---	---	---	11.6	10.0	11.0	10.9	8.6	9.8	9.9	8.3	9.1
10	---	---	---	11.4	9.8	10.8	10.9	10.1	10.5	10.0	8.3	9.1
11	---	---	---	10.8	9.2	10.1	11.1	10.1	10.6	10.2	8.4	9.3
12	---	---	---	11.5	9.2	10.4	11.6	10.9	11.2	10.2	8.3	9.2
13	---	---	---	11.8	9.7	10.9	12.4	10.8	11.5	8.8	7.7	8.2
14	---	---	---	11.2	9.6	10.5	12.6	10.4	11.4	9.9	8.4	9.1
15	---	---	---	---	---	---	12.8	10.2	11.4	10.7	8.9	9.7
16	---	---	---	---	---	---	11.5	10.0	10.8	10.6	9.0	9.8
17	---	---	---	---	---	---	12.9	10.4	11.6	10.7	9.0	9.8
18	---	---	---	---	---	---	12.7	10.7	11.8	10.4	8.6	9.4
19	---	---	---	---	---	---	12.7	10.7	11.7	8.6	7.7	8.1
20	---	---	---	---	---	---	12.0	10.4	11.3	9.6	7.9	8.6
21	---	---	---	---	---	---	12.7	10.9	11.8	9.8	8.0	8.8
22	---	---	---	---	---	---	11.8	10.3	11.1	9.6	8.0	8.7
23	---	---	---	12.1	11.5	11.8	10.3	9.2	9.7	8.3	7.6	8.0
24	---	---	---	11.7	11.1	11.4	11.4	9.7	10.5	8.7	7.8	8.2
25	---	---	---	12.2	10.9	11.5	11.1	9.9	10.5	9.0	8.4	8.6
26	---	---	---	12.7	11.2	11.9	10.8	9.6	10.2	9.5	8.5	8.9
27	---	---	---	13.1	11.3	12.2	10.6	9.1	9.8	9.6	8.4	9.0
28	---	---	---	12.9	11.2	12.1	10.6	9.1	9.9	9.8	8.5	9.0
29	---	---	---	13.2	11.2	12.1	10.8	9.3	10.0	9.7	8.1	8.8
30	---	---	---	13.2	10.7	12.0	10.6	9.1	9.8	9.5	7.7	8.4
31	---	---	---	13.6	10.8	12.2	---	---	---	9.3	7.5	8.3
MONTH	---	---	---	13.6	7.3	11.1	13.4	8.6	10.9	10.9	7.5	9.0

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	9.5	7.4	8.3	8.7	6.3	7.2	9.5	5.5	7.2	10.1	6.2	8.6
2	9.0	7.1	8.0	9.3	6.7	7.7	9.5	5.4	7.1	10.3	7.7	8.8
3	8.6	6.6	7.5	8.7	6.6	7.5	9.7	5.6	7.3	10.8	7.6	8.9
4	9.4	6.8	7.9	8.9	6.4	7.4	9.4	5.8	7.4	10.2	7.4	8.5
5	9.8	7.2	8.3	8.7	5.9	6.9	9.8	5.7	7.5	10.1	7.1	7.9
6	10.0	7.5	8.6	8.8	5.6	6.7	9.9	6.0	7.7	7.6	6.8	7.2
7	10.0	7.4	8.5	9.0	5.5	6.8	10.1	6.1	7.8	7.6	6.4	6.9
8	9.9	6.9	8.3	9.2	5.8	7.1	8.7	6.0	7.1	8.3	6.6	7.3
9	9.7	6.6	7.9	9.9	6.2	7.6	9.8	5.7	7.4	8.4	6.8	7.4
10	8.7	6.6	7.5	8.5	6.2	7.1	10.0	6.3	7.7	7.6	7.2	7.4
11	9.5	7.1	8.2	9.9	6.5	7.8	10.2	6.2	7.9	8.4	7.1	7.7
12	8.8	7.3	8.1	9.1	6.9	7.8	10.3	6.3	8.0	9.1	7.6	8.1
13	8.5	7.3	7.9	10.3	7.1	8.3	9.7	6.0	7.6	9.5	7.7	8.3
14	8.4	7.1	7.7	9.9	7.3	8.4	8.2	5.3	6.6	9.6	7.7	8.4
15	---	---	---	10.7	7.4	8.6	8.1	5.5	6.6	8.5	7.6	7.9
16	---	---	---	10.8	7.3	8.5	9.0	5.9	7.2	8.1	4.7	6.7
17	---	---	---	10.6	6.7	8.2	9.3	6.0	7.3	---	---	---
18	---	---	---	10.2	6.5	7.8	9.4	5.8	7.4	---	---	---
19	---	---	---	10.2	6.2	7.6	9.9	6.0	7.6	---	---	---
20	---	---	---	7.6	5.9	6.7	8.5	6.2	7.0	---	---	---
21	---	---	---	8.8	5.6	7.0	9.2	6.3	7.4	---	---	---
22	---	---	---	9.1	6.4	7.4	10.1	7.1	8.3	9.0	8.5	8.8
23	---	---	---	9.7	6.4	7.6	10.8	7.4	8.7	9.3	8.9	9.1
24	10.5	7.7	8.9	9.0	6.3	7.4	10.5	7.2	8.5	9.1	8.8	9.0
25	10.2	7.5	8.7	9.6	6.1	7.4	10.8	7.2	8.4	9.1	8.7	8.9
26	10.7	7.6	8.8	9.5	6.1	7.4	7.7	6.8	7.4	9.2	8.6	8.9
27	9.7	7.0	8.2	10.1	6.0	7.6	---	---	---	8.9	8.5	8.7
28	8.6	6.5	7.5	9.9	6.1	7.5	---	---	---	9.1	8.4	8.7
29	9.1	6.3	7.4	9.9	5.7	7.3	---	---	---	8.9	8.1	8.5
30	8.5	6.3	7.2	9.8	5.8	7.4	---	---	---	8.2	7.7	7.9
31	---	---	---	10.1	5.8	7.6	9.6	7.6	8.5	---	---	---
MONTH	10.7	6.3	8.1	10.8	5.5	7.5	10.8	5.3	7.6	10.8	4.7	8.2