

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 2000 TO SEPTEMBER 2001
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	237	150	246	213	812	351	931	323	349	189	108	106
2	206	149	229	202	557	342	815	313	733	194	105	101
3	188	148	178	190	449	330	723	304	438	169	100	96
4	180	147	165	212	365	361	644	297	360	166	99	111
5	1010	148	171	211	964	489	553	293	329	178	197	162
6	308	146	165	207	868	424	555	285	312	192	119	107
7	236	146	161	202	685	387	562	273	302	165	112	100
8	204	149	159	211	619	457	526	273	285	158	108	100
9	193	151	158	227	536	469	522	276	270	168	101	96
10	185	274	154	207	1440	424	625	277	255	179	106	96
11	180	225	161	200	698	366	568	265	248	236	200	104
12	172	172	162	203	500	344	724	258	299	179	279	101
13	168	159	155	214	484	987	625	250	264	151	799	95
14	164	187	641	216	477	608	547	242	246	142	223	116
15	160	207	472	307	495	457	515	238	244	135	163	110
16	160	175	268	321	490	542	711	233	400	134	147	96
17	160	169	4680	243	744	895	620	229	508	133	136	92
18	203	163	2300	223	486	594	671	243	305	137	131	91
19	226	158	646	1040	419	499	640	251	259	151	129	90
20	229	159	495	1900	412	465	534	242	240	135	140	176
21	221	162	e400	681	412	980	463	425	231	125	141	627
22	194	157	e370	388	383	1460	446	765	234	122	123	177
23	160	152	e310	349	393	730	425	624	480	120	118	124
24	161	151	e300	347	339	605	412	389	335	117	118	118
25	164	151	e280	310	367	514	389	321	245	113	113	680
26	162	554	e270	279	622	479	370	1070	219	113	112	285
27	154	415	e260	284	460	442	374	1980	201	121	110	210
28	158	242	e260	269	382	422	425	801	195	113	106	186
29	154	249	e250	252	---	416	409	534	187	109	104	172
30	153	271	e220	1310	---	2500	398	400	183	119	101	122
31	156	---	213	1440	---	1280	---	354	---	114	138	---
TOTAL	6606	5886	14899	12858	15858	19619	16722	13028	9156	4577	4786	4847
MEAN	213	196	481	415	566	633	557	420	305	148	154	162
MAX	1010	554	4680	1900	1440	2500	931	1980	733	236	799	680
MIN	153	146	154	190	339	330	370	229	183	109	99	90

e Estimated.

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01481000 BRANDYWINE CREEK AT CHADDS FORD, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1974 - 2001, BY WATER YEAR (WY) (SINCE REGULATION)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	272	323	465	541	545	672	630	519	382	332	235	276
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 2000 CALENDAR YEAR		FOR 2001 WATER YEAR		WATER YEARS 1974 - 2001	
ANNUAL TOTAL	159903		128842			
ANNUAL MEAN	437		353		432	
HIGHEST ANNUAL MEAN					714	
LOWEST ANNUAL MEAN					199	
HIGHEST DAILY MEAN	8860	Mar 22	4680	Dec 17	10600	Jan 26 1978
LOWEST DAILY MEAN	130	Sep 11	90	Sep 19	47	Aug 5 1999
ANNUAL SEVEN-DAY MINIMUM	133	Sep 6	99	Sep 13	50	Aug 2 1999
MAXIMUM PEAK FLOW			8400	Dec 17	a26900	Sep 17 1999
MAXIMUM PEAK STAGE			10.65	Dec 17	17.15	Sep 17 1999
INSTANTANEOUS LOW FLOW			87	Sep 19	8.4	Sep 13 1980
10 PERCENT EXCEEDS	786		645		810	
50 PERCENT EXCEEDS	284		242		297	
90 PERCENT EXCEEDS	158		115		126	

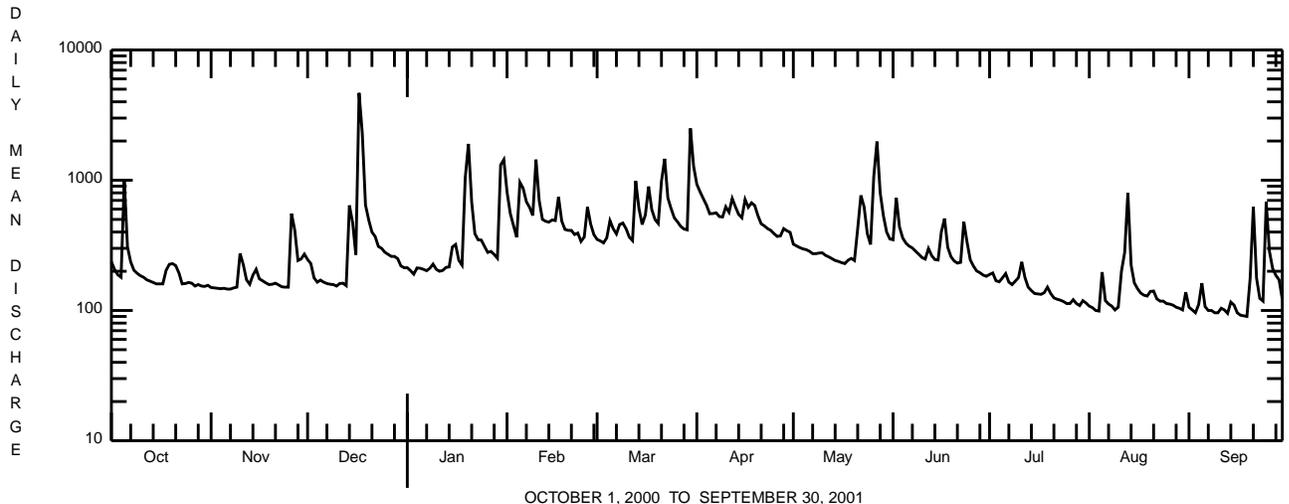
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1911-1953, 1963-1973, BY WATER YEAR (WY) (PRIOR TO REGULATION)

	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
MAXIMUM PEAK FLOW	b23800	Jun 22 1972
MAXIMUM 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.



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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.--Specific conductance records rated good except for period, Oct. 20 to Nov. 15, which is fair. pH and water temperature records rated good. Dissolved oxygen records rated good except for periods, Mar. 6-8, Apr. 4-13, May 8-23, Aug. 15 to Sept. 13, and Sept. 25-30, which are fair. Data collection discontinued during winter months since 1981 water year. Other interruptions in the record were due to malfunctions of the equipment.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 689 microsiemens, Mar. 6, 2001; 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 2000 TO SEPTEMBER 2001

DATE	TIME	AGENCY ANA- LYZING SAMPLE NUMBER (CODE NUMBER) (00028)	AGENCY COL- LECTING SAMPLE NUMBER (CODE 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) (31625)
MAR 2001									
08...	1345	1028	1028	469	14.0	8.3	363	5.3	120
21...	1330	1028	1028	555	11.4	7.7	269	7.1	E46
APR									
03...	1400	1028	1028	707	11.8	7.4	271	8.7	62
17...	1400	1028	1028	583	11.2	7.6	266	11.5	70
MAY									
02...	1330	1028	1028	315	9.8	7.5	295	17.9	50
14...	1330	1028	1028	241	10.6	7.7	314	17.4	85
23...	1200	1028	1028	659	8.7	7.3	247	16.9	2900
JUN									
05...	1200	1028	1028	330	9.4	7.4	280	18.4	140
13...	1530	1028	1028	274	9.1	7.6	295	24.8	240
26...	1345	1028	1028	217	8.9	7.4	296	23.9	320
JUL									
09...	1220	1028	1028	167	9.2	7.3	326	22.8	110
16...	1330	1028	1028	135	9.7	7.3	329	24.0	E62
23...	1500	1028	1028	121	10.4	7.9	343	25.8	60
AUG									
01...	1200	1028	1028	106	8.9	7.4	358	22.6	88
15...	1130	1028	1028	159	7.2	7.1	264	24.5	410
SEP									
13...	1250	1028	1028	95	9.0	7.4	366	21.7	31
25...	1310	1028	1028	1140	7.3	7.0	325	20.0	2400

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01481000 BRANDYWINE CREEK AT CHADDS FORD, PA--Continued

SPECIFIC CONDUCTANCE, MICROSIEMENS PER CENTIMETER AT 25° CELSIUS, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	296	285	292	337	324	329	---	---	---	---	---	---
2	300	294	296	326	313	320	---	---	---	---	---	---
3	321	300	314	338	322	332	---	---	---	---	---	---
4	324	315	322	330	314	323	---	---	---	---	---	---
5	---	---	---	320	315	318	---	---	---	---	---	---
6	---	---	---	330	320	324	---	---	---	---	---	---
7	---	---	---	358	316	324	---	---	---	---	---	---
8	---	---	---	320	305	312	---	---	---	---	---	---
9	---	---	---	309	297	303	---	---	---	---	---	---
10	325	320	322	352	297	317	---	---	---	---	---	---
11	333	324	329	311	284	292	---	---	---	---	---	---
12	344	327	335	304	279	289	---	---	---	---	---	---
13	347	338	342	309	290	300	---	---	---	---	---	---
14	351	320	338	314	297	304	---	---	---	---	---	---
15	331	302	318	319	294	304	---	---	---	---	---	---
16	318	306	312	311	298	304	---	---	---	---	---	---
17	341	316	328	313	305	309	---	---	---	---	---	---
18	355	335	343	318	312	315	---	---	---	---	---	---
19	370	331	350	325	315	318	---	---	---	---	---	---
20	332	299	315	331	320	324	---	---	---	---	---	---
21	325	296	306	328	322	326	---	---	---	---	---	---
22	321	292	307	328	323	326	---	---	---	---	---	---
23	325	310	316	339	323	328	---	---	---	---	---	---
24	328	315	322	333	315	324	---	---	---	---	---	---
25	328	317	323	322	316	319	---	---	---	---	---	---
26	323	311	318	326	237	292	---	---	---	---	---	---
27	335	319	326	270	236	248	---	---	---	---	---	---
28	358	332	342	294	262	277	---	---	---	---	---	---
29	365	333	343	306	288	295	---	---	---	---	---	---
30	340	335	337	292	285	289	---	---	---	---	---	---
31	344	327	333	---	---	---	---	---	---	---	---	---
MONTH	370	285	324	358	236	310	---	---	---	---	---	---

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	---	---	---	312	303	308	265	244	252	291	284	288
2	---	---	---	311	302	307	273	258	264	295	288	292
3	---	---	---	305	296	300	275	251	265	307	294	303
4	---	---	---	307	296	301	264	252	257	312	299	304
5	---	---	---	451	298	359	270	261	267	319	307	314
6	---	---	---	689	451	599	275	265	269	315	305	310
7	---	---	---	526	390	439	277	265	271	318	305	314
8	---	---	---	395	356	381	271	265	268	318	306	312
9	---	---	---	357	326	343	279	262	270	320	308	316
10	---	---	---	383	331	350	270	260	263	323	314	319
11	---	---	---	331	311	321	273	263	268	334	317	325
12	---	---	---	323	308	315	265	252	260	321	311	316
13	---	---	---	320	265	289	270	259	265	321	312	318
14	---	---	---	295	266	282	274	266	269	315	309	313
15	---	---	---	300	295	297	277	267	272	316	306	312
16	---	---	---	304	280	295	269	253	262	316	306	311
17	---	---	---	291	269	276	272	252	261	309	299	304
18	---	---	---	287	278	283	272	259	264	305	297	302
19	---	---	---	291	283	287	264	256	260	307	303	305
20	---	---	---	293	280	287	271	264	268	310	305	308
21	---	---	---	286	224	269	277	268	273	314	279	294
22	---	---	---	278	213	250	284	273	277	279	231	259
23	---	---	---	275	259	267	290	283	287	249	229	241
24	---	---	---	277	269	273	293	283	287	274	248	258
25	---	---	---	285	272	277	299	291	295	285	274	281
26	---	---	---	287	282	285	292	287	289	291	191	252
27	---	---	---	287	278	283	296	289	293	204	155	179
28	324	310	316	289	282	286	299	281	291	242	191	223
29	---	---	---	296	283	287	289	282	286	258	242	250
30	---	---	---	291	153	196	286	280	283	276	258	268
31	---	---	---	246	176	216	---	---	---	282	275	278
MONTH	324	310	316	689	153	307	299	244	272	334	155	289

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01481000 BRANDYWINE CREEK AT CHADDS FORD, PA--Continued

SPECIFIC CONDUCTANCE, MICROSIEMENS PER CENTIMETER AT 25° CELSIUS, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	287	271	281	348	322	324	394	343	352	339	305	318
2	271	230	246	325	320	322	392	342	352	356	339	352
3	268	239	255	328	320	324	373	354	363	361	353	356
4	276	268	272	335	324	327	399	360	368	369	338	356
5	283	274	278	335	317	325	363	351	358	343	325	333
6	286	281	284	332	318	326	361	300	328	341	327	332
7	288	283	286	325	310	319	327	301	315	343	307	324
8	291	284	288	322	307	311	390	325	346	364	315	344
9	289	284	287	339	322	328	377	353	362	369	362	364
10	288	283	286	341	318	334	433	346	373	366	358	362
11	297	285	289	329	305	319	395	337	351	365	356	360
12	---	---	---	325	291	311	337	268	298	368	362	365
13	308	293	301	323	291	307	330	191	231	367	358	362
14	309	304	307	318	269	298	256	201	222	373	345	354
15	328	305	321	298	237	268	293	253	273	375	345	356
16	352	252	314	---	---	---	326	292	308	362	355	358
17	275	252	267	335	325	329	342	326	334	393	361	368
18	281	265	273	336	327	332	351	341	344	372	365	368
19	293	281	289	339	330	334	351	346	348	394	367	372
20	309	293	301	337	328	331	378	336	347	394	342	373
21	306	300	303	339	321	327	351	345	348	342	210	247
22	309	301	304	345	331	337	347	327	340	318	250	289
23	310	211	287	381	338	344	353	327	340	364	318	338
24	260	211	240	364	343	349	344	331	336	411	358	372
25	277	260	270	372	344	350	346	339	342	379	211	298
26	298	277	290	353	342	347	348	339	345	267	214	246
27	309	297	303	368	341	345	380	344	350	298	261	283
28	317	304	311	353	343	347	374	351	357	321	298	309
29	324	313	319	374	345	350	361	351	356	327	321	325
30	326	319	323	359	347	351	387	341	355	339	327	334
31	---	---	---	382	349	355	352	334	340	---	---	---
MONTH	352	211	289	382	237	329	433	191	335	411	210	337

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DAY	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	7.8	7.7	7.7	7.9	7.6	7.7	---	---	---	---	---	---
2	7.7	7.6	7.7	8.0	7.6	7.7	---	---	---	---	---	---
3	7.8	7.6	7.7	7.9	7.5	7.6	---	---	---	---	---	---
4	7.8	7.5	7.7	8.0	7.5	7.6	---	---	---	---	---	---
5	---	---	---	8.0	7.6	7.6	---	---	---	---	---	---
6	---	---	---	8.0	7.6	7.7	---	---	---	---	---	---
7	---	---	---	8.3	7.5	7.8	---	---	---	---	---	---
8	---	---	---	8.4	7.6	7.8	---	---	---	---	---	---
9	---	---	---	8.2	7.5	7.6	---	---	---	---	---	---
10	7.8	7.7	7.7	7.5	7.2	7.3	---	---	---	---	---	---
11	7.8	7.7	7.7	7.3	7.2	7.3	---	---	---	---	---	---
12	7.7	7.5	7.6	7.5	7.3	7.3	---	---	---	---	---	---
13	7.7	7.5	7.6	7.6	7.3	7.4	---	---	---	---	---	---
14	7.8	7.5	7.6	7.4	7.3	7.4	---	---	---	---	---	---
15	8.0	7.5	7.7	7.7	7.3	7.4	---	---	---	---	---	---
16	7.8	7.5	7.6	7.9	7.5	7.6	---	---	---	---	---	---
17	7.6	7.4	7.5	7.9	7.5	7.7	---	---	---	---	---	---
18	7.5	7.4	7.4	8.2	7.6	7.8	---	---	---	---	---	---
19	7.5	7.3	7.4	8.2	7.6	7.8	---	---	---	---	---	---
20	7.6	7.4	7.5	8.3	7.7	7.9	---	---	---	---	---	---
21	7.6	7.3	7.5	8.4	7.8	8.0	---	---	---	---	---	---
22	7.5	7.3	7.4	8.4	7.8	8.0	---	---	---	---	---	---
23	7.5	7.4	7.4	8.3	7.8	7.9	---	---	---	---	---	---
24	7.6	7.4	7.5	8.2	7.7	7.9	---	---	---	---	---	---
25	7.6	7.5	7.5	8.2	7.8	7.8	---	---	---	---	---	---
26	7.6	7.4	7.4	7.8	7.2	7.5	---	---	---	---	---	---
27	7.8	7.4	7.5	7.2	7.2	7.2	---	---	---	---	---	---
28	7.8	7.5	7.6	7.3	7.2	7.3	---	---	---	---	---	---
29	7.8	7.5	7.6	7.4	7.3	7.3	---	---	---	---	---	---
30	7.8	7.6	7.6	7.4	7.3	7.4	---	---	---	---	---	---
31	7.9	7.6	7.7	---	---	---	---	---	---	---	---	---
MAX	8.0	7.7	7.7	8.4	7.8	8.0	---	---	---	---	---	---
MIN	7.5	7.3	7.4	7.2	7.2	7.2	---	---	---	---	---	---

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01481000 BRANDYWINE CREEK AT CHADDS FORD, PA--Continued

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DAY	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN
	FEBRUARY			MARCH			APRIL			MAY		
1	---	---	---	8.0	7.6	7.8	7.4	7.3	7.3	7.5	7.2	7.4
2	---	---	---	8.1	7.7	7.9	7.4	7.2	7.3	7.5	7.2	7.4
3	---	---	---	8.3	7.7	7.9	7.7	7.3	7.3	7.5	7.2	7.3
4	---	---	---	8.2	7.7	7.8	7.9	7.4	7.6	7.6	7.2	7.3
5	---	---	---	8.1	7.6	7.7	8.0	7.4	7.6	7.4	7.2	7.3
6	---	---	---	8.3	7.7	8.0	7.8	7.4	7.6	7.5	7.2	7.3
7	---	---	---	8.5	7.7	8.2	7.8	7.4	7.6	7.5	7.3	7.4
8	---	---	---	8.6	7.7	8.3	8.0	7.4	7.6	7.6	7.2	7.4
9	---	---	---	8.6	7.7	8.3	8.3	7.4	7.8	7.5	7.3	7.4
10	---	---	---	8.7	7.7	8.3	8.2	7.4	7.7	7.6	7.3	7.4
11	---	---	---	8.8	7.8	8.5	7.9	7.4	7.5	7.7	7.3	7.5
12	---	---	---	8.8	7.9	8.6	7.7	7.3	7.4	7.6	7.3	7.4
13	---	---	---	8.7	7.6	7.7	7.7	7.3	7.4	7.7	7.3	7.5
14	---	---	---	7.7	7.4	7.6	8.0	7.3	7.6	7.7	7.3	7.5
15	---	---	---	7.8	7.4	7.6	7.8	7.3	7.7	7.8	7.4	7.5
16	---	---	---	7.8	7.4	7.6	7.7	7.3	7.5	7.7	7.4	7.5
17	---	---	---	7.6	7.4	7.5	7.9	7.3	7.5	7.5	7.4	7.4
18	---	---	---	8.1	7.4	7.6	8.1	7.4	7.7	7.4	7.3	7.3
19	---	---	---	8.2	7.5	7.8	8.1	7.4	7.7	7.6	7.3	7.4
20	---	---	---	8.3	7.5	7.9	8.0	7.4	7.7	7.4	7.3	7.4
21	---	---	---	8.3	7.3	7.5	7.8	7.3	7.6	7.3	7.3	7.3
22	---	---	---	7.4	7.2	7.2	8.2	7.3	7.6	7.3	7.2	7.2
23	---	---	---	7.5	7.2	7.3	8.0	7.3	7.7	7.4	7.2	7.3
24	---	---	---	7.5	7.3	7.4	7.7	7.3	7.5	7.4	7.3	7.3
25	---	---	---	7.7	7.3	7.4	7.6	7.3	7.4	7.4	7.3	7.3
26	---	---	---	7.8	7.4	7.6	7.6	7.4	7.5	7.3	7.2	7.3
27	---	---	---	7.9	7.5	7.7	7.6	7.3	7.5	7.3	7.1	7.2
28	7.9	7.6	7.7	8.0	7.5	7.7	7.6	7.3	7.4	7.3	7.2	7.3
29	---	---	---	8.0	7.5	7.8	7.5	7.3	7.4	7.4	7.2	7.3
30	---	---	---	7.8	7.3	7.3	7.5	7.3	7.4	7.5	7.3	7.4
31	---	---	---	7.3	7.3	7.3	---	---	---	7.5	7.4	7.4
MAX	7.9	7.6	7.7	8.8	7.9	8.6	8.3	7.4	7.8	7.8	7.4	7.5
MIN	7.9	7.6	7.7	7.3	7.2	7.2	7.4	7.2	7.3	7.3	7.1	7.2
	JUNE			JULY			AUGUST			SEPTEMBER		
1	7.5	7.4	7.4	7.8	7.2	7.3	8.0	7.2	7.4	8.0	7.1	7.3
2	7.4	7.3	7.3	7.6	7.2	7.3	8.0	7.3	7.4	8.2	7.2	7.4
3	7.4	7.2	7.3	7.7	7.2	7.4	8.0	7.3	7.4	8.2	7.3	7.4
4	7.5	7.3	7.4	7.6	7.2	7.3	7.7	7.3	7.4	8.2	7.3	7.4
5	7.6	7.3	7.4	7.6	7.2	7.3	7.6	7.2	7.4	8.0	7.2	7.4
6	7.6	7.3	7.4	7.6	7.2	7.3	7.6	7.1	7.2	8.1	7.3	7.3
7	7.8	7.3	7.5	7.6	7.2	7.3	7.4	7.0	7.1	8.1	7.3	7.3
8	7.9	7.4	7.6	7.4	7.2	7.2	7.7	7.1	7.2	8.1	7.3	7.4
9	8.1	7.4	7.6	7.7	7.1	7.3	7.7	7.1	7.2	8.1	7.3	7.4
10	8.2	7.3	7.7	7.6	7.2	7.3	7.6	7.2	7.2	7.9	7.2	7.4
11	8.4	7.4	7.8	7.4	7.2	7.2	7.2	7.1	7.1	7.8	7.2	7.3
12	---	---	---	7.4	7.1	7.2	7.2	7.0	7.1	7.8	7.2	7.3
13	7.7	7.2	7.5	7.5	7.1	7.2	7.1	6.8	7.0	7.8	7.2	7.3
14	7.7	7.2	7.4	7.5	7.2	7.2	6.9	6.8	6.8	7.4	7.2	7.2
15	7.5	7.2	7.3	7.5	7.2	7.3	7.3	6.9	7.1	7.6	7.2	7.2
16	7.3	7.1	7.2	---	---	---	7.3	7.1	7.2	7.6	7.2	7.3
17	7.2	7.1	7.1	7.8	7.2	7.4	7.4	7.1	7.2	7.7	7.3	7.3
18	7.3	7.1	7.2	7.4	7.2	7.3	7.4	7.1	7.2	7.7	7.3	7.4
19	7.4	7.2	7.2	7.6	7.2	7.3	7.3	7.2	7.2	7.8	7.3	7.4
20	7.6	7.2	7.3	7.7	7.2	7.3	7.5	7.1	7.3	7.4	7.1	7.4
21	7.6	7.3	7.4	7.7	7.2	7.3	7.6	7.2	7.3	7.1	6.9	7.0
22	7.6	7.3	7.3	7.8	7.2	7.3	7.6	7.2	7.3	7.0	6.9	6.9
23	7.5	7.1	7.3	8.0	7.2	7.4	7.6	7.2	7.3	7.2	6.9	7.0
24	7.2	7.1	7.2	8.1	7.3	7.4	7.9	7.3	7.4	7.2	7.0	7.0
25	7.4	7.2	7.3	8.1	7.2	7.4	8.0	7.3	7.4	7.1	7.0	7.0
26	7.5	7.2	7.3	7.5	7.2	7.3	8.1	7.3	7.4	7.1	7.0	7.0
27	7.6	7.2	7.3	7.8	7.2	7.3	8.0	7.3	7.4	7.2	7.1	7.2
28	7.6	7.2	7.3	7.7	7.2	7.3	8.2	7.3	7.4	7.2	7.1	7.2
29	7.7	7.2	7.4	7.4	7.2	7.3	8.3	7.3	7.5	7.3	7.1	7.2
30	7.7	7.2	7.4	7.7	7.2	7.3	8.2	7.3	7.4	7.3	7.1	7.2
31	---	---	---	7.8	7.2	7.3	8.2	7.2	7.4	---	---	---
MAX	8.4	7.4	7.8	8.1	7.3	7.4	8.3	7.3	7.5	8.2	7.3	7.4
MIN	7.2	7.1	7.1	7.4	7.1	7.2	6.9	6.8	6.8	7.0	6.9	6.9

CHRISTINA RIVER BASIN

01481000 BRANDYWINE CREEK AT CHADDS FORD, PA--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	15.0	13.5	14.0	10.0	8.5	9.0	---	---	---	---	---	---
2	16.5	14.5	15.5	10.0	8.0	9.0	---	---	---	---	---	---
3	17.0	15.0	16.0	10.5	8.5	9.5	---	---	---	---	---	---
4	18.0	16.0	17.0	11.0	9.5	10.5	---	---	---	---	---	---
5	---	---	---	11.0	9.5	10.0	---	---	---	---	---	---
6	---	---	---	9.5	8.0	9.0	---	---	---	---	---	---
7	---	---	---	8.5	7.5	8.0	---	---	---	---	---	---
8	---	---	---	9.5	8.0	8.5	---	---	---	---	---	---
9	---	---	---	11.5	9.5	10.5	---	---	---	---	---	---
10	10.0	9.5	10.0	13.0	11.5	12.5	---	---	---	---	---	---
11	11.0	9.0	10.0	12.5	11.5	12.0	---	---	---	---	---	---
12	12.0	10.0	11.0	11.5	10.5	11.0	---	---	---	---	---	---
13	12.5	10.5	12.0	11.5	10.5	11.0	---	---	---	---	---	---
14	13.5	11.5	12.5	11.0	9.5	10.5	---	---	---	---	---	---
15	14.5	12.5	13.5	9.5	7.5	8.5	---	---	---	---	---	---
16	14.5	13.5	14.0	7.5	6.5	7.0	---	---	---	---	---	---
17	14.5	14.0	14.5	8.0	7.0	7.5	---	---	---	---	---	---
18	15.0	14.5	14.5	7.0	6.0	6.5	---	---	---	---	---	---
19	14.5	13.5	14.0	6.0	4.5	5.5	---	---	---	---	---	---
20	13.5	12.0	13.0	4.5	3.5	4.0	---	---	---	---	---	---
21	14.0	12.5	13.0	4.0	3.0	3.5	---	---	---	---	---	---
22	14.5	13.0	13.5	3.0	2.0	2.5	---	---	---	---	---	---
23	13.5	11.5	12.5	2.0	1.0	1.5	---	---	---	---	---	---
24	12.5	11.0	12.0	2.5	1.0	1.5	---	---	---	---	---	---
25	13.5	11.5	12.5	2.5	1.0	1.5	---	---	---	---	---	---
26	14.5	13.0	13.5	7.5	2.5	5.0	---	---	---	---	---	---
27	14.5	13.0	14.0	7.5	6.5	7.0	---	---	---	---	---	---
28	14.5	12.5	14.0	8.0	7.0	7.5	---	---	---	---	---	---
29	12.5	10.0	11.5	7.5	6.5	7.0	---	---	---	---	---	---
30	10.5	9.0	9.5	7.0	6.5	7.0	---	---	---	---	---	---
31	10.0	8.5	9.0	---	---	---	---	---	---	---	---	---
MONTH	18.0	8.5	12.9	13.0	1.0	7.5	---	---	---	---	---	---
	FEBRUARY			MARCH			APRIL			MAY		
1	---	---	---	5.5	3.5	4.5	8.0	7.0	7.5	17.5	14.0	16.0
2	---	---	---	5.5	4.0	5.0	8.5	7.5	8.0	19.5	16.5	18.0
3	---	---	---	6.5	5.5	6.0	10.0	7.0	8.0	20.5	18.0	19.5
4	---	---	---	6.5	4.0	5.5	11.5	9.0	10.0	22.0	19.5	20.5
5	---	---	---	4.0	3.0	3.5	12.0	9.0	10.5	21.5	20.0	20.5
6	---	---	---	3.0	2.0	2.5	11.5	10.0	10.5	20.0	17.5	18.5
7	---	---	---	5.5	3.0	4.0	10.5	9.5	10.0	18.0	15.5	17.0
8	---	---	---	6.0	4.0	5.0	10.0	9.0	9.5	17.0	15.0	16.5
9	---	---	---	6.0	5.0	5.5	14.5	9.5	11.5	17.5	16.0	17.0
10	---	---	---	6.0	4.0	5.0	15.0	13.5	14.5	18.5	16.0	17.5
11	---	---	---	6.0	4.0	5.0	14.0	12.0	13.0	20.0	17.5	19.0
12	---	---	---	6.5	4.5	6.0	12.0	11.0	11.5	20.0	18.5	19.5
13	---	---	---	6.5	6.0	6.5	14.5	11.5	13.0	19.5	17.5	18.5
14	---	---	---	7.5	6.0	6.5	15.0	12.5	13.5	18.0	16.0	17.0
15	---	---	---	7.0	5.5	6.0	14.5	12.5	13.5	17.0	15.0	16.5
16	---	---	---	8.0	6.0	7.0	13.5	12.0	12.5	17.0	15.0	16.5
17	---	---	---	7.5	7.0	7.0	12.0	10.5	11.0	17.0	15.0	16.0
18	---	---	---	8.0	6.0	7.0	11.0	9.0	10.0	15.0	14.5	15.0
19	---	---	---	8.0	5.5	7.0	11.0	8.5	10.0	17.5	14.5	16.0
20	---	---	---	8.0	6.0	7.0	11.0	9.5	10.5	17.0	16.0	16.5
21	---	---	---	8.0	6.5	7.0	13.5	11.0	12.0	16.0	14.5	15.0
22	---	---	---	7.0	6.5	6.5	17.5	13.0	15.0	16.5	14.5	15.0
23	---	---	---	8.5	6.0	7.5	20.0	16.0	18.0	18.5	16.0	17.0
24	---	---	---	8.0	6.5	7.0	20.0	18.0	19.5	20.0	17.5	18.5
25	---	---	---	7.0	5.0	6.0	19.0	14.5	16.0	19.5	18.0	19.0
26	---	---	---	7.5	6.0	7.0	15.0	12.0	13.5	18.5	16.0	17.0
27	---	---	---	6.5	4.5	6.0	15.5	12.5	14.0	17.0	15.0	16.0
28	6.0	5.0	5.5	7.5	4.5	6.0	16.0	14.0	15.5	18.5	16.5	17.5
29	---	---	---	7.0	5.5	6.5	15.0	12.5	14.0	18.0	16.5	17.0
30	---	---	---	6.5	5.5	6.0	15.5	12.5	14.0	18.5	16.5	17.5
31	---	---	---	7.0	5.5	6.5	---	---	---	17.5	15.5	16.5
MONTH	6.0	5.0	5.5	8.5	2.0	5.9	20.0	7.0	12.3	22.0	14.0	17.3

CHRISTINA RIVER BASIN

01481000 BRANDYWINE CREEK AT CHADDS FORD, PA--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DAY	MAX	MIN	MEAN									
1	17.0	15.0	15.5	27.5	25.0	26.0	25.0	21.5	23.0	26.0	23.5	25.0
2	17.0	15.0	15.5	25.5	23.0	24.0	25.5	22.0	23.5	24.5	22.0	23.0
3	18.0	16.5	17.0	23.5	21.0	22.0	26.0	23.0	24.0	24.0	21.0	22.5
4	18.5	16.0	17.0	23.0	21.0	22.0	25.5	24.0	25.0	23.5	21.5	22.5
5	20.0	17.5	19.0	23.5	21.5	22.5	26.0	23.5	25.0	23.5	21.0	22.0
6	20.0	19.0	19.5	23.5	21.5	22.5	27.5	24.5	25.5	23.0	20.0	21.5
7	20.5	18.5	19.5	23.5	20.5	22.0	28.5	25.5	27.0	23.0	20.5	21.5
8	20.5	18.0	19.5	23.0	21.5	22.0	29.5	26.5	27.5	23.0	21.0	22.0
9	20.0	18.0	19.5	25.0	21.5	23.0	30.0	26.5	28.0	23.5	21.5	22.5
10	20.5	18.5	19.5	26.0	23.0	24.5	29.5	27.5	28.0	24.0	22.0	23.0
11	22.0	19.0	20.5	25.0	23.0	24.0	27.5	25.0	26.5	24.5	22.0	23.0
12	---	---	---	24.0	22.0	23.0	25.0	23.5	24.0	23.5	21.0	22.0
13	24.5	22.0	23.5	24.0	21.0	22.5	24.0	23.0	23.5	23.0	20.5	21.5
14	24.5	23.0	23.5	23.5	20.5	22.5	25.5	23.0	24.5	21.5	18.5	20.0
15	24.0	22.5	23.5	24.0	20.5	22.5	26.5	23.5	25.0	19.5	17.0	18.0
16	23.5	22.0	22.5	---	---	---	26.5	23.5	25.0	19.5	16.5	17.5
17	23.0	21.0	22.0	25.5	23.0	24.5	26.0	24.0	25.0	19.0	17.0	17.5
18	24.0	21.5	23.0	25.0	23.5	24.5	25.5	23.5	24.5	19.0	17.0	17.5
19	24.5	22.0	23.5	25.0	22.5	23.5	24.5	23.5	24.0	19.5	17.0	18.0
20	25.5	22.5	24.0	25.0	22.0	23.5	25.5	23.0	24.0	19.0	18.0	18.5
21	25.0	23.5	24.5	25.0	21.5	23.5	25.5	23.5	24.5	20.5	19.0	20.0
22	25.0	23.5	24.0	25.5	22.0	24.0	25.5	22.5	24.0	21.5	20.0	20.5
23	24.0	22.5	23.5	26.5	23.0	25.0	24.5	23.0	24.0	22.0	20.0	21.0
24	23.5	21.5	22.5	28.0	24.5	26.0	25.5	22.5	24.0	22.0	20.5	21.0
25	23.5	21.0	22.5	29.0	26.0	27.5	26.0	23.5	24.5	21.5	18.5	20.0
26	25.0	22.0	23.5	28.0	25.5	27.0	25.5	23.0	24.0	18.5	16.5	17.5
27	26.0	22.5	24.5	26.0	23.5	24.5	25.5	23.5	24.5	16.5	15.5	16.0
28	27.0	24.0	25.5	24.5	22.5	23.5	26.5	24.5	25.0	16.0	14.5	15.5
29	27.0	24.5	26.0	23.0	21.5	22.5	26.5	24.0	25.0	16.0	14.5	15.0
30	27.5	25.0	26.5	23.5	21.0	22.0	25.0	24.0	24.5	15.0	14.0	14.5
31	---	---	---	24.0	21.0	22.5	25.5	23.0	24.5	---	---	---
MONTH	27.5	15.0	21.7	29.0	20.5	23.6	30.0	21.5	24.9	26.0	14.0	20.0

OXYGEN, DISSOLVED (MG/L), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	10.6	9.8	10.1	13.2	11.0	11.7	---	---	---	---	---	---
2	10.2	9.3	9.7	13.4	11.1	11.8	---	---	---	---	---	---
3	10.4	9.1	9.6	13.6	11.0	11.9	---	---	---	---	---	---
4	10.4	8.9	9.5	13.3	10.7	11.6	---	---	---	---	---	---
5	---	---	---	12.9	10.3	11.3	---	---	---	---	---	---
6	---	---	---	13.6	10.7	11.8	---	---	---	---	---	---
7	---	---	---	13.9	11.0	12.1	---	---	---	---	---	---
8	---	---	---	13.7	11.1	12.0	---	---	---	---	---	---
9	---	---	---	12.7	9.8	11.0	---	---	---	---	---	---
10	11.8	---	11.5	9.8	8.5	9.2	---	---	---	---	---	---
11	11.9	10.9	11.3	10.0	8.4	9.1	---	---	---	---	---	---
12	11.9	10.7	11.1	11.1	9.1	9.9	---	---	---	---	---	---
13	11.9	10.5	11.0	11.6	9.6	10.3	---	---	---	---	---	---
14	11.9	10.2	10.9	10.2	9.6	9.8	---	---	---	---	---	---
15	12.3	9.9	10.8	12.5	9.6	10.9	---	---	---	---	---	---
16	11.2	9.6	10.2	13.3	11.3	12.1	---	---	---	---	---	---
17	10.6	9.1	9.6	13.3	11.5	12.2	---	---	---	---	---	---
18	9.8	8.9	9.2	14.0	11.6	12.6	---	---	---	---	---	---
19	10.2	8.8	9.4	14.4	12.2	13.0	---	---	---	---	---	---
20	10.8	9.4	10.0	15.1	12.7	13.6	---	---	---	---	---	---
21	10.8	9.5	10.1	15.3	13.2	14.0	---	---	---	---	---	---
22	10.6	9.3	9.8	15.6	13.7	14.5	---	---	---	---	---	---
23	11.2	9.6	10.2	15.8	14.1	14.8	---	---	---	---	---	---
24	11.7	10.1	10.7	16.1	14.3	14.9	---	---	---	---	---	---
25	11.6	9.9	10.5	15.7	14.2	14.8	---	---	---	---	---	---
26	11.4	9.5	10.1	14.2	10.7	12.1	---	---	---	---	---	---
27	11.7	9.4	10.1	11.1	10.7	10.9	---	---	---	---	---	---
28	11.4	9.3	10.0	11.6	10.6	11.1	---	---	---	---	---	---
29	12.0	9.6	10.6	12.1	10.8	11.5	---	---	---	---	---	---
30	12.6	10.6	11.3	12.0	11.0	11.5	---	---	---	---	---	---
31	13.0	11.0	11.6	---	---	---	---	---	---	---	---	---
MONTH	13.0	8.8	10.3	16.1	8.4	11.9	---	---	---	---	---	---

CHRISTINA RIVER BASIN

01481000 BRANDYWINE CREEK AT CHADDS FORD, PA--Continued

OXYGEN, DISSOLVED (MG/L), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	---	---	---	---	---	---	11.3	10.3	10.9	10.2	8.4	9.2
2	---	---	---	---	---	---	11.7	10.0	11.0	10.0	7.9	8.8
3	---	---	---	---	---	---	11.9	10.9	11.3	9.6	7.5	8.4
4	---	---	---	---	---	---	11.6	10.4	11.0	9.5	7.2	8.2
5	---	---	---	---	---	---	11.9	10.3	11.1	9.3	7.1	8.1
6	---	---	---	---	---	---	11.6	10.2	10.9	10.6	8.0	9.2
7	---	---	---	15.0	12.9	14.0	12.1	10.2	11.2	11.1	8.4	9.6
8	---	---	---	14.0	12.0	12.9	12.8	10.6	11.5	10.4	8.5	9.3
9	---	---	---	13.1	11.6	12.3	12.9	10.7	11.6	9.5	7.6	8.5
10	---	---	---	13.3	11.2	12.1	11.6	9.3	10.4	9.4	7.3	8.3
11	---	---	---	12.9	10.8	11.7	11.1	9.9	10.5	10.5	7.2	8.7
12	---	---	---	12.4	10.3	11.3	11.3	9.7	10.7	8.8	6.7	7.7
13	---	---	---	---	---	---	11.3	9.7	10.4	9.4	6.7	7.9
14	---	---	---	---	---	---	11.5	9.3	10.3	9.8	7.5	8.6
15	---	---	---	12.4	10.7	11.6	11.4	9.2	10.2	9.5	7.5	8.4
16	---	---	---	12.6	10.8	11.7	10.6	9.1	9.8	10.1	7.6	8.7
17	---	---	---	11.1	10.4	10.8	11.5	9.6	10.5	9.4	7.5	8.2
18	---	---	---	12.7	10.8	11.7	11.8	10.0	10.9	8.7	7.7	8.2
19	---	---	---	13.2	11.1	12.1	12.1	10.1	11.0	10.2	8.0	9.0
20	---	---	---	13.3	11.0	12.2	11.9	9.9	10.9	8.5	7.1	7.7
21	---	---	---	12.1	10.7	11.2	11.3	9.7	10.5	7.9	7.1	7.6
22	---	---	---	10.9	10.6	10.7	11.2	9.0	10.0	8.5	7.1	7.9
23	---	---	---	11.5	10.6	11.0	10.2	8.0	9.1	8.7	8.0	8.4
24	---	---	---	11.8	10.5	11.1	9.2	7.3	8.3	8.7	7.9	8.2
25	---	---	---	12.6	11.1	11.8	10.1	7.6	8.8	8.7	7.7	8.1
26	---	---	---	12.4	10.9	11.7	10.6	9.0	9.8	8.6	7.8	8.2
27	---	---	---	13.0	11.2	12.1	10.3	8.8	9.5	8.8	8.3	8.5
28	---	---	---	13.2	11.4	12.3	10.3	8.2	9.3	8.7	8.3	8.5
29	---	---	---	12.9	11.0	12.0	10.5	8.8	9.6	9.0	8.2	8.6
30	---	---	---	11.8	10.9	11.1	10.5	8.8	9.6	9.1	8.3	8.7
31	---	---	---	11.4	11.0	11.2	---	---	---	9.7	8.4	9.0
MONTH	---	---	---	15.0	10.3	11.8	12.9	7.3	10.4	11.1	6.7	8.5
	JUNE			JULY			AUGUST			SEPTEMBER		
1	9.6	8.7	9.2	9.4	6.7	7.8	10.7	7.4	8.5	10.9	6.4	7.9
2	9.1	8.6	9.0	9.4	6.7	7.9	10.5	7.0	8.2	11.1	6.9	8.4
3	9.2	8.5	8.9	9.9	7.3	8.5	10.7	6.8	8.2	11.5	7.1	8.8
4	9.9	8.6	9.2	9.7	7.5	8.3	9.5	6.5	7.5	11.0	7.4	8.7
5	9.7	8.4	9.0	9.5	7.2	8.3	9.0	6.7	7.6	10.8	7.2	8.6
6	9.6	8.0	8.6	9.6	7.3	8.3	9.3	5.9	7.2	11.3	7.3	8.8
7	10.0	7.8	8.7	9.8	7.4	8.4	8.6	5.4	6.6	10.6	7.0	8.4
8	10.1	8.0	8.9	8.7	7.1	7.7	9.3	5.4	6.8	10.7	6.7	8.1
9	10.3	8.0	9.1	9.8	7.0	8.1	9.3	5.5	6.8	10.4	6.8	8.1
10	11.1	7.9	9.3	9.3	7.0	7.7	9.1	5.5	6.5	9.7	6.6	7.8
11	11.2	7.7	9.3	8.8	6.9	7.7	6.8	5.4	6.1	10.2	6.5	7.9
12	---	---	---	9.1	7.0	7.9	7.3	6.5	6.8	10.2	7.0	8.2
13	9.3	6.8	8.1	9.5	7.2	8.1	7.5	6.6	7.0	9.6	6.9	8.1
14	9.6	6.7	7.9	9.7	7.3	8.2	7.1	6.1	6.6	8.4	6.6	7.3
15	9.3	6.9	8.0	9.6	7.3	8.2	7.9	6.0	6.8	9.7	7.0	8.1
16	8.0	6.9	7.4	---	---	---	8.5	6.3	7.2	10.1	7.5	8.5
17	8.5	7.4	7.8	10.0	7.1	8.2	8.5	6.5	7.2	10.3	7.8	8.6
18	8.9	7.3	7.9	8.3	6.7	7.4	8.8	6.6	7.5	10.3	7.8	8.7
19	8.9	7.3	8.0	9.6	6.9	8.1	8.6	6.7	7.6	10.5	7.7	8.9
20	9.0	7.3	8.0	10.1	7.1	8.2	9.5	6.9	7.9	8.4	7.6	8.0
21	9.0	7.1	7.9	10.1	7.0	8.2	9.4	6.9	7.9	7.8	7.3	7.6
22	9.0	7.1	7.8	10.3	7.0	8.2	10.0	6.9	8.0	8.0	7.0	7.4
23	8.3	7.1	7.5	10.3	6.9	8.2	9.7	7.0	8.0	8.6	6.9	7.5
24	8.0	7.3	7.6	10.3	6.6	7.9	10.5	7.1	8.3	8.5	6.8	7.3
25	8.9	7.4	8.0	10.5	6.3	7.8	10.5	7.1	8.3	7.8	6.9	7.4
26	9.2	7.4	8.1	8.3	6.0	6.8	11.0	7.2	8.5	8.7	7.8	8.2
27	9.3	7.3	8.1	10.2	6.5	7.9	11.0	7.2	8.4	9.2	8.3	8.7
28	9.3	7.1	8.0	10.1	7.1	8.3	11.5	6.8	8.5	9.5	8.7	9.0
29	9.4	6.8	8.0	9.2	7.2	7.9	10.8	6.9	8.3	9.9	8.8	9.3
30	9.4	6.8	8.0	10.5	7.3	8.5	10.6	6.7	8.1	10.2	8.9	9.4
31	---	---	---	10.6	7.4	8.6	10.3	6.6	8.1	---	---	---
MONTH	11.2	6.7	8.3	10.6	6.0	8.0	11.5	5.4	7.6	11.5	6.4	8.3