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 mi^2.

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 ft^3/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	442	208	351	302	e290	616	782	472	309	304	261	184
2	278	278	331	301	e270	544	750	504	298	266	213	219
3	257	816	330	307	e260	495	729	473	279	249	204	177
4	341	337	328	364	e260	464	974	448	264	371	832	207
5	750	263	319	730	e255	423	792	441	272	264	288	158
6	400	259	588	402	e250	402	668	430	477	233	224	138
7	305	243	697	358	e240	380	620	411	455	222	220	131
8	270	223	401	336	e250	377	604	370	335	207	205	131
9	234	219	358	325	e240	374	1070	357	299	197	188	134
10	736	217	423	408	e250	369	879	378	281	227	184	134
11	779	213	553	593	e290	411	656	664	264	210	172	130
12	355	203	397	396	e380	741	621	399	258	191	187	132
13	302	202	375	361	e300	535	604	373	518	183	337	291
14	294	200	1130	330	e520	452	585	651	370	266	240	231
15	268	199	1230	e290	736	426	583	439	336	295	284	768
16	268	190	652	e290	547	412	658	396	332	258	204	270
17	296	186	531	e260	678	1110	792	400	313	258	181	180
18	386	184	473	e240	511	626	1010	352	479	216	170	159
19	269	181	442	e250	1160	447	691	593	1860	210	181	263
20	366	181	459	e260	1040	412	606	699	551	246	166	552
21	389	194	601	e250	690	987	787	706	389	207	154	229
22	286	193	450	e240	567	8860	1570	558	1050	191	150	177
23	303	192	396	e240	634	2570	818	982	505	175	147	165
24	278	212	358	e240	785	1690	716	955	368	174	155	171
25	248	221	319	e250	912	1320	659	672	320	188	153	180
26	232	274	319	e260	916	1170	629	512	297	466	141	1790
27	226	1610	322	e240	682	1120	562	465	283	546	137	691
28	213	629	312	e240	1170	1960	554	491	375	285	184	340
29	209	434	306	e260	803	1100	522	457	617	230	166	295
30	207	382	298	e250	---	908	492	342	447	215	149	257
31	205	---	299	e320	---	825	---	320	---	219	183	---
TOTAL	10392	9343	14348	9893	15886	32526	21983	15710	13201	7769	6660	8884
MEAN	335	311	463	319	548	1049	733	507	440	251	215	296
MAX	779	1610	1230	730	1170	8860	1570	982	1860	546	832	1790
MIN	205	181	298	240	240	369	492	320	258	174	137	130

e Estimated.

CHRISTINA RIVER BASIN

01481000 BRANDYWINE CREEK AT CHADDS FORD, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1974 - 2000, BY WATER YEAR (WY) (<u>SINCE REGULATION</u>)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	274	328	465	546	544	673	632	522	384	338	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 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1974 - 2000	
ANNUAL TOTAL	133073		166595			
ANNUAL MEAN	365		455		435	
<u>HIGHEST ANNUAL MEAN</u>					714	1984
LOWEST ANNUAL MEAN					199	1981
HIGHEST DAILY MEAN	10100	Sep 17	8860	Mar 22	10600	Jan 26 1978
<u>LOWEST DAILY MEAN</u>	47	Aug 5	130	Sep 11	47	Aug 5 1999
ANNUAL SEVEN-DAY MINIMUM	50	Aug 2	133	Sep 6	50	Aug 2 1999
INSTANTANEOUS PEAK FLOW			**a**13700	Mar 22	**a**26900	Sep 17 1999
INSTANTANEOUS PEAK STAGE			12.71	Mar 22	17.15	Sep 17 1999
<u>INSTANTANEOUS LOW FLOW</u>			126	Sep 7	8.4	Sep 13 1980
10 PERCENT EXCEEDS	589		788		816	
50 PERCENT EXCEEDS	261		329		299	
90 PERCENT EXCEEDS	82		184		126	

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

	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	**b**23800	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 ft^3/s on basis of area-velocity study at gage height 16.56 ft.
b From rating curve extended above 9,000 ft^3/s on basis of area-velocity study.
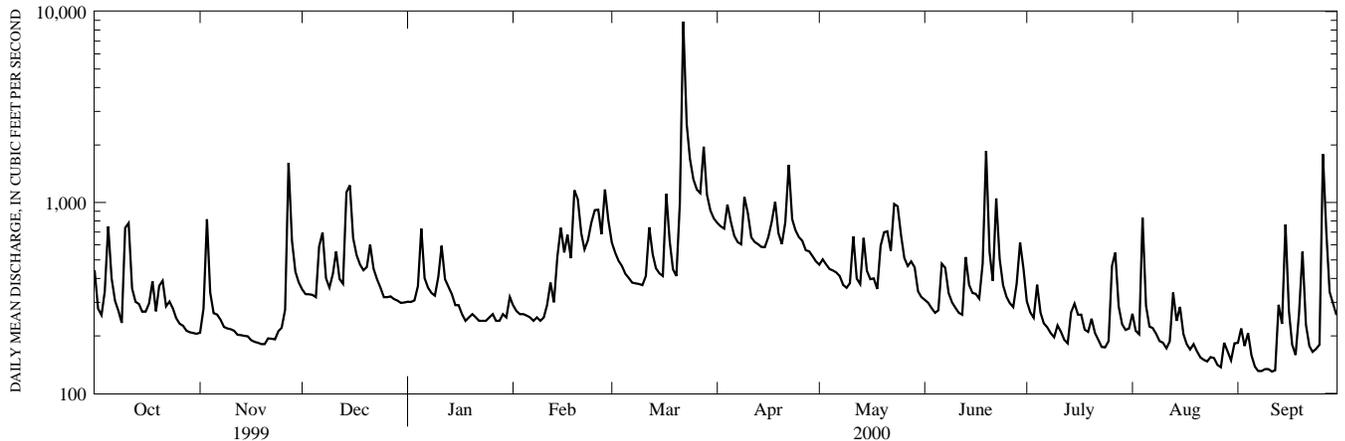
1-YEAR HYDROGRAPH
OCTOBER 1, 1999 TO SEPTEMBER 30, 2000

CHRISTINA RIVER BASIN

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.--Specific conductance records rated fair. pH records rated good. Water temperature and dissolved oxygen records rated 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, 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 1999 TO SEPTEMBER 2000

DATE	TIME	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	AGENCY COL- LECTING SAMPLE (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)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)
OCT 1999											
28...	1200	80020	1028	228	11.1	7.1	288	11.0	100	25	9.6

DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	SODIUM AD- SORP- TION RATIO (00931)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM PERCENT (00932)	ANC WATER UNFLTRD IT FIELD (MG/L AS CACO3) (00419)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)
OCT 1999									
28...	3.1	.6	14	23	56	25	.1	11	22

DATE	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	BORON, DIS- SOLVED (µG/L AS B) (01020)	IRON DIS- SOLVED (µG/L AS FE) (01046)
OCT 1999							
28...	<.020	3.30	<.010	.057	164	49	50

CHRISTINA RIVER BASIN

01481000 BRANDYWINE CREEK AT CHADDS FORD, PA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DATE	TIME	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	AGENCY COL- LECTING SAMPLE (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, 0.45 μM-MF (COLS./ 100 ML) (31616)
MAR 2000									
13...	1135	1028	1028	516	12.3	7.7	242	6.9	800
28...	1005	1028	1028	2450	9.4	7.3	175	10.8	830
APR									
10...	1230	1028	1028	858	11.8	7.7	208	9.8	220
26...	1330	1028	1028	632	11.0	7.6	229	11.4	36
MAY									
04...	1300	1028	1028	457	11.1	7.7	241	17.4	K72
16...	1400	1028	1028	406	10.0	7.5	235	16.3	170
23...	1600	1028	1028	936	9.6	7.5	190	14.6	K3200
JUN									
01...	1315	1028	1028	315	10.0	7.8	256	18.1	K44
13...	1215	1028	1028	599	7.2	7.4	244	20.4	1700
27...	1415	1028	1028	296	8.0	7.7	265	25.1	200
JUL									
12...	1500	1028	1028	199	9.6	8.0	281	24.3	K53
21...	1145	1028	1028	217	8.8	7.7	278	21.0	140
26...	1030	1028	1028	334	8.2	7.7	284	20.2	1900
AUG									
02...	1200	1028	1028	208	8.4	7.7	284	24.4	200
10...	1430	1028	1028	196	8.6	8.0	302	26.5	110
24...	1100	1028	1028	167	8.7	7.9	324	20.0	K71
SEP									
05...	1540	1028	1028	162	9.2	7.7	302	22.7	50
20...	1240	1028	1028	429	8.6	7.5	222	18.1	3900

CHRISTINA RIVER BASIN

01481000 BRANDYWINE CREEK AT CHADDS FORD, PA--Continued

BIOLOGICAL DATA
BENTHIC MACROINVERTEBRATES

REMARKS.--Samples were collected using a Hess sampler with a mesh size of 500 µm. Each sample covered a total area of 3.2 m^2.

```
                    Date                10/28/99

            Benthic Macroinvertebrate        Count
Nematoda (Nematodes)                           2
Nemertea  (Probosas Worms)
   Enopla
      Hoplonemertea
         Tetrastemmatidae
            Prostoma                           4
Mollusca
   Bivalvia (Clams)
      Veneroida
         Corbiculidae
            Corbicula                          7
         Sphaeriidae                          15
Annelida (Segmented Worms)
   Oligochaeta                                 4
Arthropoda
   Acariformes
      Hydrachnidia (Water Mites)               7
   Crustacea
      Amphipoda (Scuds)
         Gammaridae
            Gammarus                           3
      Isopoda (Sow Bugs)
         Asellidae
            Caecidotea                         1
   Insecta
      Ephemeroptera (Mayflies)
         Baetidae
            Baetis                             1
            Pseudocloeon                       5
         Caenidae
            Caenis                             3
         Ephemerellidae
            Serratella                        10
         Heptageniidae
            Stenonema                         13
         Isonychiidae
            Isonychia                          2
         Leptophlebiidae
            Tricorythodes                      1
      Odonata (Dragonflies and Damselflies)
         Corduliidae
            Somatochlora                       1
         Gomphidae
            Dromogomphus                       2
      Plecoptera (Stoneflies)
         Capniidae
            Allocapnia                         2
         Perlidae
            Acroneuria                         1
         Taeniopterygidae
            Taeniopteryx                      27
      Megaloptera
         Corydalidae (Fishflies and Dobsonflies)
            Corydalus                          1
```

Date	10/28/99
Benthic Macroinvertebrate	Count
Trichoptera (Caddisflies)	
Glossosomatidae	
Protoptila	12
Helicopsychidae	
Helicopsyche	4
Hydropsychidae	
Cheumatopsyche	45
Hydropsyche	39
Limnephilidae	
Hydatophylax	1
Philopotamidae	
Chimarra	4
Coleoptera (Beetles)	
Elmidae (Riffle Beetles)	
Dubiraphia	8
Optioservus	611
Oulimnius	24
Stenelmis	553
Hydrophilidae	
Berosus	9
Psephenidae (Water Pennies)	
Psephenus	27
Diptera (True Flies)	
Chironomidae (Midges)	174
Simuliidae (Black Flies)	
Simulium	7
Tipulidae (Crane Flies)	
Antocha	1
Total count	1631
Total number of taxa	36

CHRISTINA RIVER BASI

01481000 BRANDYWINE CREEK AT CHADDS FORD, PA--Continued

SPECIFIC CONDUCTANCE, MICROSIEMENS PER CENTIMETER AT 25° CELSIUS, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	243	202	225	356	325	341	264	249	253	---	---	---
2	266	243	257	---	---	---	---	---	---	---	---	---
3	278	266	272	---	---	---	---	---	---	---	---	---
4	273	259	269	269	234	253	---	---	---	---	---	---
5	259	217	235	271	260	266	---	---	---	---	---	---
6	249	218	236	273	266	270	---	---	---	---	---	---
7	263	249	259	280	271	277	---	---	---	---	---	---
8	270	262	267	289	276	280	---	---	---	---	---	---
9	274	267	270	293	280	285	---	---	---	---	---	---
10	276	216	261	294	280	284	---	---	---	---	---	---
11	219	201	211	294	279	287	---	---	---	---	---	---
12	252	219	236	298	289	293	---	---	---	---	---	---
13	264	252	260	299	290	293	---	---	---	---	---	---
14	275	263	272	294	282	290	---	---	---	---	---	---
15	277	273	276	297	281	288	---	---	---	---	---	---
16	277	272	275	290	285	288	---	---	---	---	---	---
17	279	262	271	294	289	292	---	---	---	---	---	---
18	278	261	270	294	289	291	---	---	---	---	---	---
19	266	250	258	292	284	289	---	---	---	---	---	---
20	270	262	266	288	282	286	---	---	---	---	---	---
21	270	254	260	287	279	283	---	---	---	---	---	---
22	271	256	263	286	280	283	---	---	---	---	---	---
23	316	271	286	286	279	283	---	---	---	---	---	---
24	289	278	284	285	278	280	---	---	---	---	---	---
25	290	275	281	279	271	275	---	---	---	---	---	---
26	289	280	285	274	263	271	---	---	---	---	---	---
27	288	281	285	264	178	207	---	---	---	---	---	---
28	292	284	287	232	197	218	---	---	---	---	---	---
29	286	281	284	251	231	246	---	---	---	---	---	---
30	286	281	284	261	246	256	---	---	---	---	---	---
31	334	283	288	---	---	---	---	---	---	---	---	---
MONTH	334	201	266	356	178	277	264	249	253	---	---	---

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	250	241	245	226	221	223	239	234	237
2	---	---	---	257	249	253	224	222	223	241	234	238
3	---	---	---	259	255	257	222	221	222	242	233	238
4	---	---	---	262	258	260	223	208	217	247	237	243
5	---	---	---	266	259	263	221	208	215	249	245	246
6	---	---	---	268	261	265	226	221	224	248	244	246
7	---	---	---	268	258	263	228	224	226	248	244	246
8	---	---	---	262	259	260	230	225	228	249	245	247
9	---	---	---	262	258	261	229	206	218	253	246	250
10	---	---	---	262	257	260	214	205	210	254	246	251
11	---	---	---	264	258	261	227	214	222	253	217	230
12	---	---	---	265	242	250	229	224	227	240	222	234
13	---	---	---	244	239	241	228	220	225	249	229	245
14	---	---	---	247	243	245	227	224	225	248	215	234
15	---	---	---	246	242	244	227	221	225	242	221	233
16	---	---	---	249	244	248	226	213	222	244	233	238
17	---	---	---	244	217	224	215	209	213	239	234	237
18	---	---	---	239	219	230	213	204	207	242	235	238
19	---	---	---	251	238	247	223	207	216	245	212	238
20	---	---	---	257	247	254	228	222	225	225	202	209
21	---	---	---	255	156	236	232	213	226	225	199	205
22	---	---	---	186	95	114	215	168	182	224	210	219
23	---	---	---	182	119	158	215	193	206	224	190	206
24	---	---	---	207	182	196	220	214	217	222	201	210
25	---	---	---	214	207	211	227	220	224	232	201	222
26	241	222	232	217	214	215	230	226	228	239	231	235
27	241	230	236	216	210	214	235	227	232	241	236	238
28	255	219	239	210	175	188	236	234	235	243	239	242
29	243	219	231	214	195	207	237	234	236	243	240	242
30	---	---	---	222	214	219	237	235	236	256	242	249
31	---	---	---	225	222	224	---	---	---	263	256	260
MONTH	255	219	234	268	95	233	237	168	221	263	190	236

CHRISTINA RIVER BASIN

01481000 BRANDYWINE CREEK AT CHADDS FORD, PA--Continued

SPECIFIC CONDUCTANCE, MICROSIEMENS PER CENTIMETER AT 25° CELSIUS, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	260	247	255	246	234	242	290	276	285	323	307	315
2	254	232	249	260	246	255	294	275	284	317	301	309
3	256	235	253	263	256	260	300	291	295	315	305	309
4	257	232	248	270	247	257	302	154	223	319	293	303
5	243	220	232	258	237	248	262	215	240	306	289	298
6	224	209	220	---	---	---	288	262	280	317	302	307
7	209	194	200	---	---	---	297	286	291	328	317	324
8	214	203	209	284	277	281	303	296	300	357	326	330
9	248	203	220	290	280	284	306	302	304	335	329	333
10	251	248	249	294	284	288	306	301	303	350	329	332
11	254	251	253	287	276	281	311	302	305	341	332	338
12	258	249	256	282	278	280	311	307	309	348	327	334
13	252	217	244	289	279	285	308	209	244	352	265	320
14	240	215	228	291	248	284	303	256	282	278	257	265
15	243	236	239	264	231	252	299	268	282	265	178	216
16	251	243	247	272	254	267	296	279	287	254	209	233
17	254	250	252	272	258	266	306	296	302	280	254	266
18	---	---	---	276	268	271	308	304	306	301	280	291
19	---	---	---	282	274	278	309	302	306	313	283	304
20	224	145	186	284	274	279	311	305	308	283	217	235
21	242	224	233	279	274	277	313	305	309	278	234	256
22	242	192	215	287	278	283	318	308	312	307	278	293
23	233	201	218	293	286	288	331	315	319	319	307	313
24	248	233	240	293	289	291	327	321	324	335	319	322
25	258	248	253	301	292	296	330	322	325	334	303	328
26	263	258	261	300	242	280	337	321	325	308	170	205
27	266	260	264	242	216	227	337	322	327	246	188	214
28	265	210	255	267	237	250	331	318	328	280	246	261
29	253	209	224	285	267	279	329	311	318	287	279	282
30	251	221	231	292	285	288	315	306	310	291	279	285
31	---	---	---	294	283	290	324	308	314	---	---	---
MONTH	266	145	237	301	216	273	337	154	298	357	170	291

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAY	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	7.6	7.5	7.5	7.0	6.9	7.0	7.4	7.2	7.3	---	---	---
2	7.6	7.5	7.6	---	---	---	---	---	---	---	---	---
3	7.6	7.5	7.6	---	---	---	---	---	---	---	---	---
4	7.5	7.5	7.5	7.1	7.0	7.1	---	---	---	---	---	---
5	7.5	7.4	7.5	7.3	7.1	7.2	---	---	---	---	---	---
6	7.6	7.5	7.5	7.3	7.2	7.2	---	---	---	---	---	---
7	7.7	7.6	7.6	7.3	7.2	7.2	---	---	---	---	---	---
8	7.7	7.6	7.7	7.4	7.2	7.3	---	---	---	---	---	---
9	7.7	7.6	7.6	7.4	7.3	7.3	---	---	---	---	---	---
10	7.6	7.4	7.5	7.4	7.2	7.3	---	---	---	---	---	---
11	7.4	7.1	7.2	7.3	7.1	7.2	---	---	---	---	---	---
12	7.3	7.2	7.2	7.4	7.2	7.3	---	---	---	---	---	---
13	7.4	7.3	7.3	7.4	7.3	7.4	---	---	---	---	---	---
14	7.4	7.3	7.3	7.5	7.3	7.4	---	---	---	---	---	---
15	7.4	7.3	7.3	7.5	7.3	7.4	---	---	---	---	---	---
16	7.4	7.3	7.3	7.6	7.4	7.5	---	---	---	---	---	---
17	7.3	7.2	7.3	7.7	7.4	7.6	---	---	---	---	---	---
18	7.3	7.2	7.2	7.7	7.5	7.6	---	---	---	---	---	---
19	7.3	7.2	7.3	7.7	7.4	7.6	---	---	---	---	---	---
20	7.3	7.3	7.3	7.8	7.5	7.6	---	---	---	---	---	---
21	7.3	7.2	7.3	7.6	7.4	7.4	---	---	---	---	---	---
22	7.4	7.3	7.3	7.4	7.3	7.3	---	---	---	---	---	---
23	7.4	7.2	7.3	7.4	7.2	7.3	---	---	---	---	---	---
24	7.4	7.3	7.3	7.3	7.2	7.2	---	---	---	---	---	---
25	7.4	7.3	7.4	7.2	7.1	7.2	---	---	---	---	---	---
26	7.4	7.3	7.4	7.3	7.2	7.2	---	---	---	---	---	---
27	7.4	7.3	7.4	7.2	6.9	7.0	---	---	---	---	---	---
28	7.4	7.3	7.3	7.1	7.0	7.1	---	---	---	---	---	---
29	7.4	7.3	7.3	7.2	7.1	7.1	---	---	---	---	---	---
30	7.4	7.2	7.3	7.3	7.1	7.2	---	---	---	---	---	---
31	7.4	7.0	7.3	---	---	---	---	---	---	---	---	---
MAX	7.7	7.6	7.7	7.8	7.5	7.6	7.4	7.2	7.3	---	---	---
MIN	7.3	7.0	7.2	7.0	6.9	7.0	7.4	7.2	7.3	---	---	---

CHRISTINA RIVER BASIN

01481000 BRANDYWINE CREEK AT CHADDS FORD, PA--Continued

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

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

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

CHRISTINA RIVER BASIN

01481000 BRANDYWINE CREEK AT CHADDS FORD, PA--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	17.5	16.0	16.5	14.0	13.0	13.5	6.0	4.0	4.5	---	---	---
2	17.0	15.5	16.0	---	---	---	---	---	---	---	---	---
3	17.5	16.0	17.0	---	---	---	---	---	---	---	---	---
4	17.5	17.0	17.0	11.5	9.5	10.5	---	---	---	---	---	---
5	17.0	14.5	15.5	9.5	8.5	9.0	---	---	---	---	---	---
6	14.5	13.0	14.0	11.0	9.0	10.0	---	---	---	---	---	---
7	14.0	12.5	13.5	10.5	9.5	10.0	---	---	---	---	---	---
8	13.0	11.5	12.5	9.5	8.5	9.0	---	---	---	---	---	---
9	14.5	12.5	13.5	9.0	8.0	8.5	---	---	---	---	---	---
10	16.0	14.5	15.0	11.5	9.0	10.0	---	---	---	---	---	---
11	17.5	16.0	16.5	12.0	10.5	11.5	---	---	---	---	---	---
12	16.5	15.0	15.5	10.5	9.5	9.5	---	---	---	---	---	---
13	15.0	13.5	14.5	10.5	9.5	10.0	---	---	---	---	---	---
14	15.0	14.0	14.5	10.5	9.5	10.0	---	---	---	---	---	---
15	14.0	12.5	13.0	10.0	9.0	9.5	---	---	---	---	---	---
16	13.5	11.5	12.5	9.0	6.5	8.0	---	---	---	---	---	---
17	15.0	13.5	14.0	6.5	5.5	6.0	---	---	---	---	---	---
18	15.5	14.5	15.0	6.0	5.0	5.5	---	---	---	---	---	---
19	14.5	13.0	13.0	6.5	5.0	6.0	---	---	---	---	---	---
20	13.0	12.5	12.5	8.5	6.0	7.5	---	---	---	---	---	---
21	13.0	12.0	12.5	11.0	8.5	10.0	---	---	---	---	---	---
22	12.5	11.0	12.0	11.5	10.5	11.0	---	---	---	---	---	---
23	12.5	11.5	12.0	13.0	11.5	12.5	---	---	---	---	---	---
24	11.5	10.5	11.0	14.0	13.0	13.5	---	---	---	---	---	---
25	11.0	10.0	10.5	14.0	13.5	14.0	---	---	---	---	---	---
26	11.5	10.0	10.5	14.0	13.0	13.5	---	---	---	---	---	---
27	11.5	10.5	11.0	14.0	12.0	13.5	---	---	---	---	---	---
28	11.5	10.5	11.0	12.0	9.5	10.5	---	---	---	---	---	---
29	11.0	10.0	10.5	9.5	8.0	8.5	---	---	---	---	---	---
30	12.0	10.5	11.0	8.0	6.0	7.0	---	---	---	---	---	---
31	13.0	11.5	12.5	---	---	---	---	---	---	---	---	---
MONTH	17.5	10.0	13.4	14.0	5.0	9.9	6.0	4.0	4.5	---	---	---

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	7.5	6.0	6.5	11.5	9.0	10.5	15.0	12.5	14.0
2	---	---	---	7.5	6.5	7.0	12.0	10.5	11.0	16.0	14.0	15.0
3	---	---	---	7.5	6.0	6.5	13.5	12.0	12.5	16.5	13.5	15.0
4	---	---	---	7.5	5.5	6.5	14.0	13.0	13.5	17.5	14.5	16.0
5	---	---	---	8.5	6.0	7.5	13.0	10.5	11.0	19.5	16.5	18.0
6	---	---	---	8.5	7.0	8.0	12.0	9.0	10.5	21.0	18.0	19.5
7	---	---	---	9.0	7.0	8.0	13.0	11.0	12.0	22.0	19.5	21.0
8	---	---	---	11.5	8.5	10.0	15.0	12.0	13.5	22.5	20.0	21.5
9	---	---	---	12.5	10.5	11.5	14.5	10.0	11.5	23.0	21.0	22.0
10	---	---	---	13.0	11.5	12.0	11.5	9.0	10.0	23.0	20.5	21.5
11	---	---	---	12.0	10.0	11.0	11.0	10.0	10.5	20.5	17.5	18.5
12	---	---	---	10.0	7.5	9.0	12.5	10.0	11.0	20.5	18.0	19.0
13	---	---	---	8.0	6.5	7.5	11.5	9.5	10.5	21.5	19.0	20.0
14	---	---	---	9.5	7.0	8.5	11.5	9.0	10.5	21.0	18.5	20.0
15	---	---	---	10.0	7.5	9.0	12.0	11.0	11.5	19.5	17.0	18.0
16	---	---	---	10.5	9.0	10.0	16.0	12.0	13.5	17.5	15.0	16.5
17	---	---	---	11.0	8.0	10.0	16.0	11.5	14.5	18.0	15.5	17.0
18	---	---	---	8.0	5.5	7.0	11.5	9.5	10.0	19.5	17.0	18.0
19	---	---	---	8.0	5.5	7.0	12.0	9.5	10.5	19.0	17.0	18.0
20	---	---	---	8.5	7.0	8.0	15.0	11.5	13.0	17.0	14.0	15.0
21	---	---	---	8.5	6.5	7.5	14.5	12.0	13.5	14.0	13.5	13.5
22	---	---	---	10.5	5.5	7.0	12.0	11.0	11.5	14.0	14.0	14.0
23	---	---	---	10.0	7.5	8.5	12.0	11.0	11.5	15.0	13.5	14.0
24	---	---	---	11.5	8.5	10.0	13.5	10.5	12.0	18.0	14.5	16.0
25	---	---	---	11.5	9.5	10.5	13.5	12.0	12.5	18.0	16.5	17.5
26	8.0	7.5	7.5	12.5	10.5	11.5	12.5	10.5	11.5	18.5	15.5	17.0
27	8.5	7.5	7.5	11.5	9.0	10.0	12.0	10.5	11.0	18.0	15.5	16.5
28	9.5	8.0	8.5	11.5	10.5	11.0	12.5	10.0	11.0	15.5	14.5	15.5
29	8.0	6.5	7.5	11.5	10.0	10.5	14.5	11.5	13.0	16.5	14.5	15.5
30	---	---	---	11.0	8.5	9.5	15.5	13.0	14.5	16.0	15.0	15.5
31	---	---	---	11.0	9.0	10.0	---	---	---	17.5	14.5	16.0
MONTH	9.5	6.5	7.8	13.0	5.5	8.9	16.0	9.0	11.8	23.0	12.5	17.2

CHRISTINA RIVER BASIN

01481000 BRANDYWINE CREEK AT CHADDS FORD, PA--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	19.5	16.0	18.0	23.0	20.5	22.0	25.0	24.0	24.5	24.5	22.5	23.5
2	22.0	19.0	20.5	23.5	21.0	22.5	26.0	24.0	25.0	24.5	23.5	24.0
3	22.5	20.5	21.5	24.0	22.0	23.0	25.5	24.0	24.5	24.5	23.0	24.0
4	21.5	19.5	20.5	24.5	22.5	23.5	24.0	22.0	23.0	24.5	23.5	24.0
5	19.5	18.5	19.0	26.0	23.0	24.5	23.5	21.5	22.5	23.5	21.0	22.0
6	18.5	16.0	17.0	---	---	---	23.0	21.0	21.5	21.0	18.5	19.5
7	18.5	15.0	16.5	---	---	---	24.0	21.0	22.5	20.0	17.0	18.5
8	19.5	17.0	18.5	23.0	20.5	22.0	25.5	23.0	24.5	19.5	17.0	18.5
9	21.5	18.5	20.0	23.0	20.5	22.0	26.5	24.5	25.5	21.0	18.0	19.5
10	23.5	20.5	22.0	25.0	22.5	23.5	26.5	25.0	25.5	22.5	20.0	21.0
11	25.0	22.5	24.0	25.0	23.5	24.5	26.0	24.5	25.5	22.5	21.0	21.5
12	25.0	23.0	24.5	24.5	22.0	23.5	25.0	23.0	24.0	23.5	21.0	22.5
13	23.0	19.0	21.0	23.5	22.0	23.0	23.0	19.5	20.5	23.0	21.5	22.5
14	19.0	18.0	18.0	22.5	21.0	21.5	20.0	19.5	20.0	21.5	19.5	21.0
15	18.5	17.5	18.0	21.5	20.5	21.0	22.0	19.0	20.5	21.0	19.5	20.0
16	21.0	18.5	19.5	21.5	20.0	21.0	23.5	21.5	22.5	19.5	17.5	18.0
17	23.5	20.5	22.0	22.0	20.0	21.0	23.0	21.0	22.0	17.5	15.5	17.0
18	---	---	---	23.5	21.0	22.5	22.0	20.0	21.0	17.5	16.0	17.0
19	---	---	---	23.0	20.0	21.5	20.5	18.5	20.0	17.5	16.5	17.0
20	22.0	19.0	20.5	21.5	19.0	20.0	21.0	19.0	20.0	19.5	17.0	18.0
21	22.0	20.5	21.0	22.5	20.0	21.0	21.0	18.0	19.5	20.0	18.5	19.0
22	22.0	20.5	21.5	23.5	21.0	22.5	21.0	18.0	19.5	19.0	17.5	18.5
23	23.5	21.0	22.0	23.5	21.0	22.5	20.5	19.0	20.0	18.0	17.0	17.0
24	23.5	21.5	22.5	22.5	21.0	21.5	21.0	19.5	20.5	18.5	17.0	17.5
25	25.5	22.5	23.5	21.5	20.0	21.0	22.5	20.0	21.5	18.5	15.5	17.5
26	26.0	24.0	25.0	21.0	19.5	20.5	22.5	20.0	21.5	15.5	13.0	13.5
27	25.5	24.5	25.0	20.5	19.5	20.0	22.5	20.5	21.5	14.5	12.5	13.5
28	24.5	22.0	23.5	23.0	20.0	21.5	22.5	21.0	22.0	15.0	13.5	14.5
29	22.5	21.0	21.5	23.5	22.0	22.5	22.0	21.5	22.0	14.5	13.5	14.0
30	22.5	20.5	21.5	24.5	22.5	23.5	23.0	21.0	22.0	14.0	12.5	13.5
31	---	---	---	25.0	23.5	24.0	23.5	22.0	23.0	---	---	---
MONTH	26.0	15.0	21.0	26.0	19.0	22.2	26.5	18.0	22.2	24.5	12.5	18.9

OXYGEN, DISSOLVED (MG/L), WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	---	---	---	9.9	8.4	9.1	13.1	11.9	12.6	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	10.0	8.9	9.5	---	---	---	---	---	---
5	---	---	---	10.9	9.9	10.4	---	---	---	---	---	---
6	---	---	---	10.8	9.9	10.3	---	---	---	---	---	---
7	---	---	---	10.6	9.5	10.1	---	---	---	---	---	---
8	---	---	---	11.3	10.0	10.7	---	---	---	---	---	---
9	---	---	---	11.6	10.4	11.0	---	---	---	---	---	---
10	---	---	---	11.3	10.0	10.6	---	---	---	---	---	---
11	---	---	---	10.2	9.1	9.7	---	---	---	---	---	---
12	---	---	---	11.6	9.7	10.6	---	---	---	---	---	---
13	---	---	---	11.9	10.1	11.0	---	---	---	---	---	---
14	---	---	---	11.7	10.2	10.9	---	---	---	---	---	---
15	---	---	---	12.0	10.1	11.1	---	---	---	---	---	---
16	---	---	---	12.5	10.6	11.6	---	---	---	---	---	---
17	---	---	---	13.5	11.6	12.5	---	---	---	---	---	---
18	---	---	---	13.8	12.4	13.1	---	---	---	---	---	---
19	---	---	---	13.8	12.4	13.1	---	---	---	---	---	---
20	---	---	---	13.4	11.8	12.5	---	---	---	---	---	---
21	---	---	---	12.3	10.6	11.4	---	---	---	---	---	---
22	---	---	---	11.2	9.9	10.5	---	---	---	---	---	---
23	---	---	---	10.9	9.3	10.0	---	---	---	---	---	---
24	---	---	---	10.1	8.7	9.4	---	---	---	---	---	---
25	---	---	---	9.2	8.4	8.8	---	---	---	---	---	---
26	---	---	---	9.9	8.7	9.2	---	---	---	---	---	---
27	---	---	---	9.4	8.5	9.0	---	---	---	---	---	---
28	---	---	---	10.3	9.4	9.9	---	---	---	---	---	---
29	10.9	9.6	10.3	11.2	10.3	10.8	---	---	---	---	---	---
30	10.9	9.6	10.2	12.1	11.0	11.6	---	---	---	---	---	---
31	10.7	9.2	9.9	---	---	---	---	---	---	---	---	---
MONTH	10.9	9.2	10.1	13.8	8.4	10.7	13.1	11.9	12.6	---	---	---

CHRISTINA RIVER BASIN

01481000 BRANDYWINE CREEK AT CHADDS FORD, PA--Continued

OXYGEN, DISSOLVED (MG/L), WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	12.9	10.9	11.9	11.5	10.0	10.8	11.1	9.6	10.3
2	---	---	---	12.3	10.7	11.4	11.5	10.0	10.6	10.6	9.4	10.0
3	---	---	---	12.6	10.1	11.7	11.2	9.8	10.4	11.1	9.3	10.1
4	---	---	---	13.0	11.5	12.4	10.1	9.2	9.5	11.4	9.2	10.2
5	---	---	---	12.6	11.2	11.9	11.8	9.6	10.7	11.2	8.7	9.8
6	---	---	---	12.8	10.3	11.7	12.0	10.4	11.1	11.1	8.1	9.4
7	---	---	---	13.0	11.2	12.1	12.1	9.8	10.8	10.7	7.7	9.1
8	---	---	---	13.0	10.4	11.7	11.6	9.6	10.4	10.4	7.3	8.7
9	---	---	---	12.8	9.7	11.2	11.6	9.2	10.5	9.9	7.0	8.4
10	---	---	---	13.1	9.6	11.4	12.4	10.8	11.5	9.5	6.8	7.9
11	---	---	---	11.5	10.0	10.8	12.0	10.3	11.1	8.7	7.5	8.0
12	---	---	---	11.8	10.0	10.8	12.3	10.4	11.3	9.0	7.7	8.2
13	---	---	---	15.1	11.0	12.8	12.7	10.5	11.5	8.9	7.4	8.0
14	---	---	---	15.3	11.8	13.6	12.8	10.7	11.7	8.2	7.4	7.7
15	---	---	---	14.3	12.4	13.5	11.7	10.1	10.9	9.2	7.8	8.6
16	---	---	---	14.1	10.0	12.3	11.4	9.6	10.4	10.0	8.6	9.2
17	---	---	---	12.1	9.4	10.6	9.9	8.5	9.2	9.7	8.8	9.2
18	---	---	---	13.5	10.9	12.3	11.2	9.9	10.6	9.4	8.4	8.8
19	---	---	---	14.1	11.7	12.8	12.1	10.6	11.2	8.6	8.0	8.3
20	---	---	---	14.0	11.1	12.5	11.0	9.7	10.4	9.7	8.5	9.1
21	---	---	---	12.1	10.7	11.5	9.8	9.2	9.5	9.9	9.7	9.8
22	---	---	---	---	---	---	10.2	9.8	10.0	9.8	9.6	9.6
23	---	---	---	---	---	---	10.6	10.0	10.3	9.7	9.2	9.6
24	---	---	---	10.3	9.5	10.0	10.8	9.8	10.4	9.2	8.5	9.0
25	---	---	---	10.1	9.5	9.8	10.5	9.6	10.0	9.0	8.4	8.7
26	12.5	11.4	11.9	10.0	9.4	9.7	11.2	10.3	10.7	9.4	8.6	8.9
27	12.8	11.7	12.3	10.6	9.5	10.1	11.0	10.3	10.7	9.1	8.4	8.8
28	12.3	9.1	11.4	9.6	9.3	9.5	11.3	10.5	10.9	9.5	8.8	9.1
29	13.4	12.2	12.9	10.4	9.5	10.0	10.9	9.9	10.5	9.4	8.7	9.1
30	---	---	---	11.1	10.2	10.6	10.6	9.6	10.1	9.8	8.7	9.2
31	---	---	---	11.3	10.2	10.7	---	---	---	10.1	8.8	9.3
MONTH	13.4	9.1	12.1	15.3	9.3	11.4	12.8	8.5	10.6	11.4	6.8	9.0

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	10.3	8.4	9.2	8.7	7.6	8.1	8.8	7.1	7.8	9.1	6.9	7.8
2	10.1	7.6	8.7	8.7	7.6	8.1	9.2	7.2	8.0	8.6	6.8	7.6
3	10.5	7.1	8.6	8.7	7.4	7.9	8.7	6.9	7.7	8.9	6.7	7.6
4	11.0	7.3	9.0	8.2	7.1	7.6	7.6	7.2	7.4	8.2	6.7	7.3
5	11.1	7.5	9.3	8.4	6.8	7.5	8.3	7.2	7.7	9.2	7.0	7.9
6	8.9	7.8	8.3	---	---	---	8.3	7.4	7.8	10.1	7.9	8.8
7	9.8	8.1	8.8	---	---	---	8.7	7.6	8.0	10.7	8.5	9.3
8	9.8	7.7	8.7	9.7	7.9	8.7	8.6	7.1	7.7	11.0	8.7	9.6
9	9.3	7.3	8.2	9.9	8.0	8.8	8.7	6.6	7.5	10.8	8.5	9.4
10	8.6	6.7	7.5	9.5	7.6	8.4	8.7	6.4	7.4	10.5	8.0	9.0
11	7.9	6.2	7.0	9.4	7.1	8.0	8.9	6.4	7.5	10.3	7.7	8.7
12	7.0	5.7	6.4	9.7	7.4	8.4	9.1	6.5	7.6	10.3	7.5	8.5
13	7.5	6.3	6.9	9.9	7.6	8.5	7.6	6.9	7.0	8.9	7.4	7.9
14	7.8	7.2	7.5	8.8	7.5	8.0	7.8	6.9	7.3	9.3	7.4	8.2
15	8.3	7.4	7.8	8.7	7.5	8.0	8.5	7.1	7.7	8.2	7.7	8.0
16	7.9	7.1	7.5	9.1	7.7	8.2	8.3	6.5	7.3	9.1	7.9	8.5
17	7.6	6.5	7.0	9.3	7.7	8.4	8.7	6.2	7.3	10.0	8.6	9.2
18	---	---	---	9.1	7.6	8.3	7.5	7.0	7.2	10.4	8.9	9.5
19	---	---	---	7.9	7.2	7.6	9.2	7.2	8.1	9.2	8.5	8.8
20	7.9	7.5	7.7	9.5	7.9	8.5	9.5	7.5	8.3	8.8	8.4	8.5
21	8.0	7.5	7.7	9.4	7.8	8.5	9.8	7.7	8.5	9.2	8.1	8.5
22	7.6	7.4	7.5	9.2	7.6	8.3	10.2	7.8	8.7	9.7	8.3	8.8
23	7.6	7.3	7.4	9.5	7.1	8.4	9.8	7.6	8.4	9.1	8.6	8.8
24	7.9	7.3	7.6	8.6	7.5	8.1	10.0	7.3	8.4	9.6	8.4	8.8
25	7.9	7.2	7.5	9.6	7.8	8.7	10.2	7.4	8.4	9.6	8.3	8.8
26	7.9	6.6	7.4	8.5	8.0	8.3	10.2	7.1	8.4	9.9	9.1	9.6
27	8.0	7.0	7.5	8.6	8.2	8.3	10.6	7.0	8.5	10.0	9.5	9.8
28	8.0	7.1	7.5	9.0	8.0	8.4	9.4	7.2	8.1	10.1	9.3	9.6
29	7.9	7.5	7.6	8.9	7.5	8.2	9.3	7.1	8.0	10.3	9.5	9.9
30	8.3	7.6	7.9	9.1	7.5	8.2	9.8	7.1	8.2	10.7	9.8	10.2
31	---	---	---	9.0	7.3	8.0	9.0	7.1	7.9	---	---	---
MONTH	11.1	5.7	7.8	9.9	6.8	8.2	10.6	6.2	7.9	11.0	6.7	8.8
YEAR	15.3	5.7	9.4									

CHRISTINA RIVER BASIN

01481000 BRANDYWINE CREEK AT CHADDS FORD, PA--Continued

CROSS-SECTION ANALYSES, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DATE	TIME	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)	SAMPLE LOC- ATION, CROSS SECTION (FT FM R BK) (72103)	SAM- PLING DEPTH (FEET) (00003)
AUG							
04...	1314	7.9	7.5	169	22.6	109	.5
04...	1316	7.9	7.5	169	22.6	104	.5
04...	1317	8.0	7.4	169	22.6	99	.5
04...	1319	8.0	7.4	169	22.6	94	.5
04...	1324	8.0	7.4	169	22.6	89	.5
04...	1326	8.0	7.4	170	22.6	84	.5
04...	1328	8.0	7.4	172	22.6	79	.5
04...	1330	8.0	7.4	171	22.6	74	.5
04...	1332	8.0	7.3	171	22.6	69	.5
04...	1333	8.0	7.3	171	22.6	64	.5
04...	1335	8.0	7.3	171	22.6	59	.5
04...	1337	7.8	7.3	171	22.6	54	.5
04...	1340	7.7	7.4	171	22.6	44	.5
04...	1343	7.9	7.3	172	22.6	39	.5
04...	1344	7.9	7.4	171	22.6	34	.5
04...	1345	7.9	7.4	172	22.6	29	.5
04...	1347	7.9	7.4	172	22.6	24	.5
04...	1348	7.9	7.4	173	22.6	19	.5
04...	1350	7.8	7.4	173	22.6	14	.5
04...	1351	7.9	7.3	173	22.6	9	.5
04...	1352	7.7	7.5	173	22.6	4	.5