



2005 Water Year
CHRISTINA RIVER BASIN

01480617 West Branch Brandywine Creek at Modena, PA

Latitude: 39° 57 ' 42"

Longitude: 075° 48 ' 06"

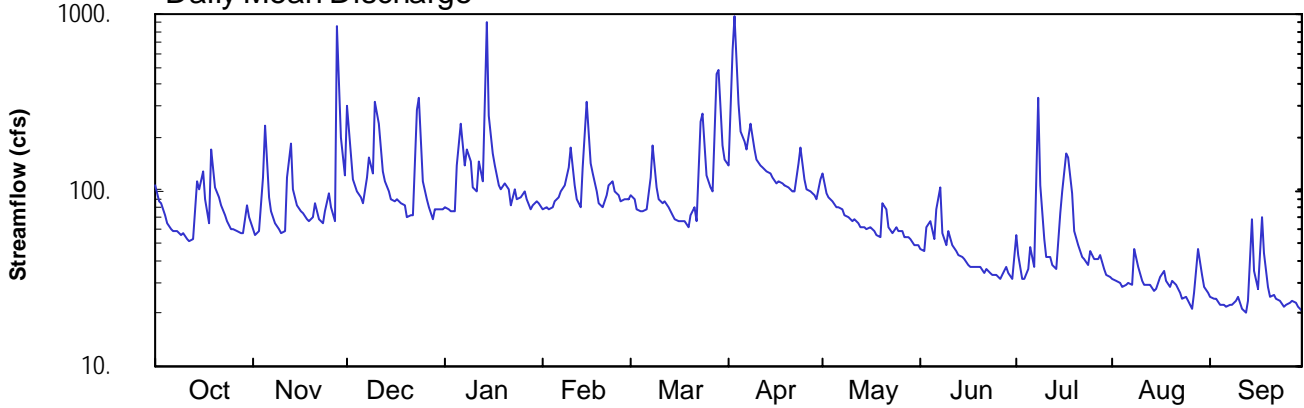
Hydrologic Unit Code: 02040205

Chester County

Datum: 265 feet

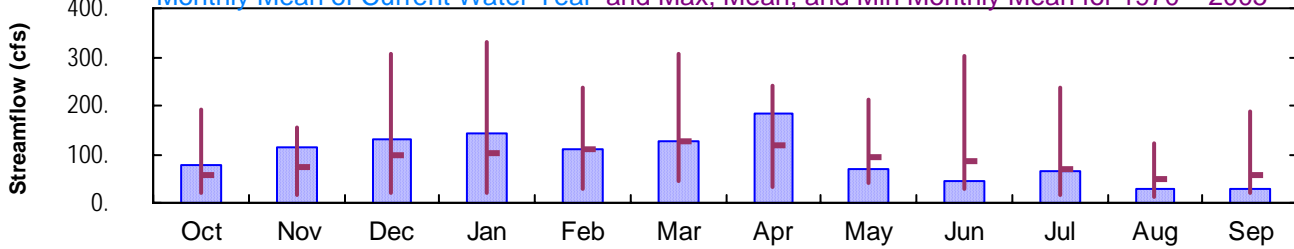
Drainage Area: 55. mi²

Daily Mean Discharge

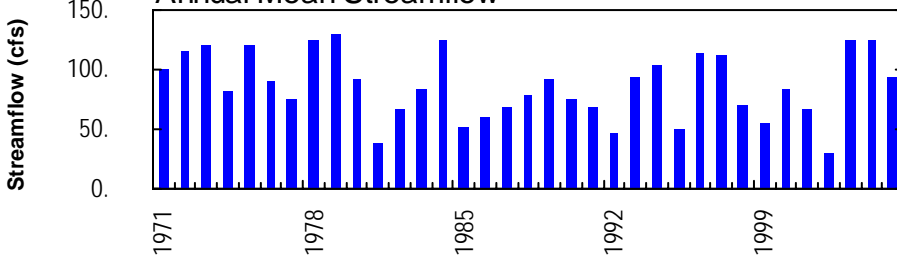


Monthly Statistics

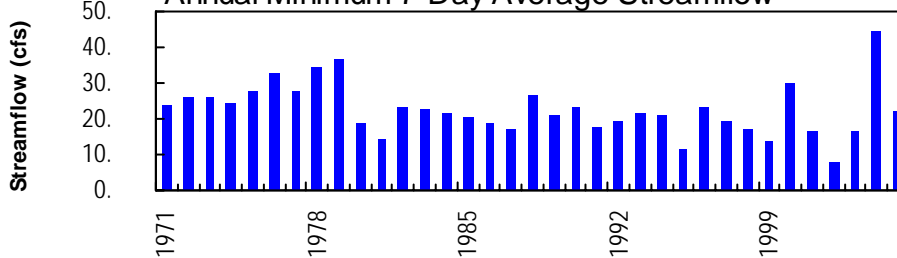
Monthly Mean of Current Water Year and Max, Mean, and Min Monthly Mean for 1970 – 2005



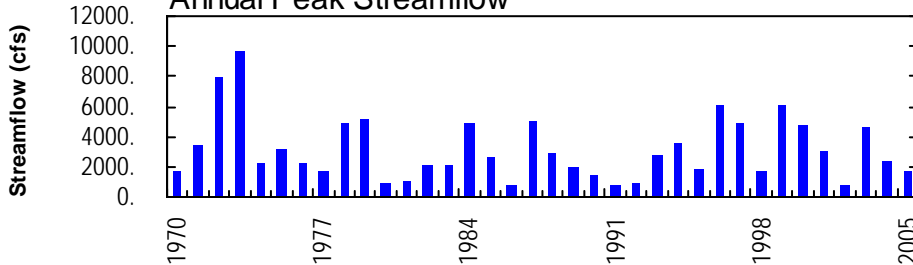
Annual Mean Streamflow



Annual Minimum 7-Day Average Streamflow



Annual Peak Streamflow



01480617-WB Brandywine Creek at Modena

CHRISTINA RIVER BASIN

01480617 WEST BRANCH BRANDYWINE CREEK AT MODENA, PA

LOCATION.--Lat 39°57'42", long 75°48'06", Chester County, Hydrologic Unit 02040205, on left bank at bridge on SR 15068 at Modena, and 300 ft upstream from Dennis Run.

DRAINAGE AREA.--55.0 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--January 1970 to current year.

REVISED RECORDS.--WDR PA-74-1: 1971-72(P), 1973. WDR PA-75-1: 1974(m).

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 265 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records fair. Slight regulation from Rock Run Reservoir 5.6 mi upstream, capacity, 982 acre-ft, and by Lukens Steel Company. Diversion from Rock Run Reservoir for municipal supply of city of Coatesville reenters creek upstream from gage. Satellite and landline telemetry at station.

COOPERATION.--Records of diversion provided by the Pennsylvania American Water Company.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,000 ft³/s and maximum (*):

Date	Time	Discharge ft ³ /s	Gage Height (ft)	Date	Time	Discharge ft ³ /s	Gage Height (ft)
Nov. 28	1000	1,410	6.08	Apr. 3	0345	*1,680	*6.45
Jan. 14	1200	1,490	6.19	July 17	0615	1,220	5.79
Mar. 29	0045	1,110	5.61				

**DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES**

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	107	60	e300	80	79	95	139	125	46	55	32	25
2	87	56	158	79	80	89	625	97	46	43	31	24
3	86	58	115	76	78	79	986	92	62	31	30	24
4	72	120	100	77	80	76	310	86	66	31	28	22
5	66	234	92	e140	86	76	217	80	53	36	29	22
6	61	91	85	e240	91	79	190	80	78	47	29	22
7	59	75	120	e140	98	118	173	78	103	37	29	22
8	58	65	153	e170	108	178	237	72	57	338	46	22
9	55	61	125	e145	134	104	169	71	49	108	37	23
10	57	58	319	e105	173	89	152	67	59	53	31	25
11	52	59	241	99	106	84	140	68	48	42	29	21
12	51	118	129	145	88	87	134	66	45	42	29	20
13	52	186	112	113	81	79	128	61	43	38	29	24
14	113	102	100	910	136	72	126	62	42	36	27	69
15	102	82	90	266	316	68	118	60	41	75	28	35
16	129	77	86	164	140	66	111	61	38	98	32	27
17	88	74	89	138	126	67	112	58	37	e160	35	70
18	65	68	84	106	100	66	109	56	37	e155	30	45
19	169	66	83	102	83	62	106	54	36	e95	28	28
20	103	70	71	111	81	73	103	84	36	58	30	25
21	91	84	72	100	94	81	100	78	34	49	29	25
22	82	69	73	83	105	67	99	62	36	42	26	24
23	72	65	289	102	114	247	141	57	34	41	24	23
24	67	75	335	89	99	274	176	61	33	37	25	22
25	61	97	112	92	95	122	115	59	33	45	24	22
26	60	79	90	99	87	104	103	58	31	40	21	23
27	59	66	80	89	89	99	99	55	33	41	26	24
28	58	849	69	78	90	453	95	55	36	42	47	23
29	57	200	79	82	---	488	90	53	34	36	33	22
30	83	123	78	87	---	182	116	49	32	33	28	21
31	71	---	78	84	---	149	---	48	---	33	26	---
TOTAL	2393	3487	4007	4391	3037	3973	5519	2113	1358	2017	928	824
MEAN	77.2	116	129	142	108	128	184	68.2	45.3	65.1	29.9	27.5
MAX	169	849	335	910	316	488	986	125	103	338	47	70
MIN	51	56	69	76	78	62	90	48	31	31	21	20
CFSM	1.40	2.11	2.35	2.58	1.97	2.33	3.34	1.24	0.82	1.18	0.54	0.50
IN.	1.62	2.36	2.71	2.97	2.05	2.69	3.73	1.43	0.92	1.36	0.63	0.56

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1970 - 2005, BY WATER YEAR (WY)

MEAN	57.6	74.2	96.3	102	108	127	118	92.8	85.0	67.5	47.7	58.8
MAX	190	157	306	330	235	308	241	213	302	236	123	186
(WY)	1997	2004	1997	1979	1971	1994	1983	1989	1972	1984	1971	1979
MIN	20.0	17.8	21.5	20.1	30.2	43.0	34.7	41.5	28.4	15.4	11.8	20.6
(WY)	2002	2002	1999	1981	2002	1985	2002	1999	1999	2002	2002	2002

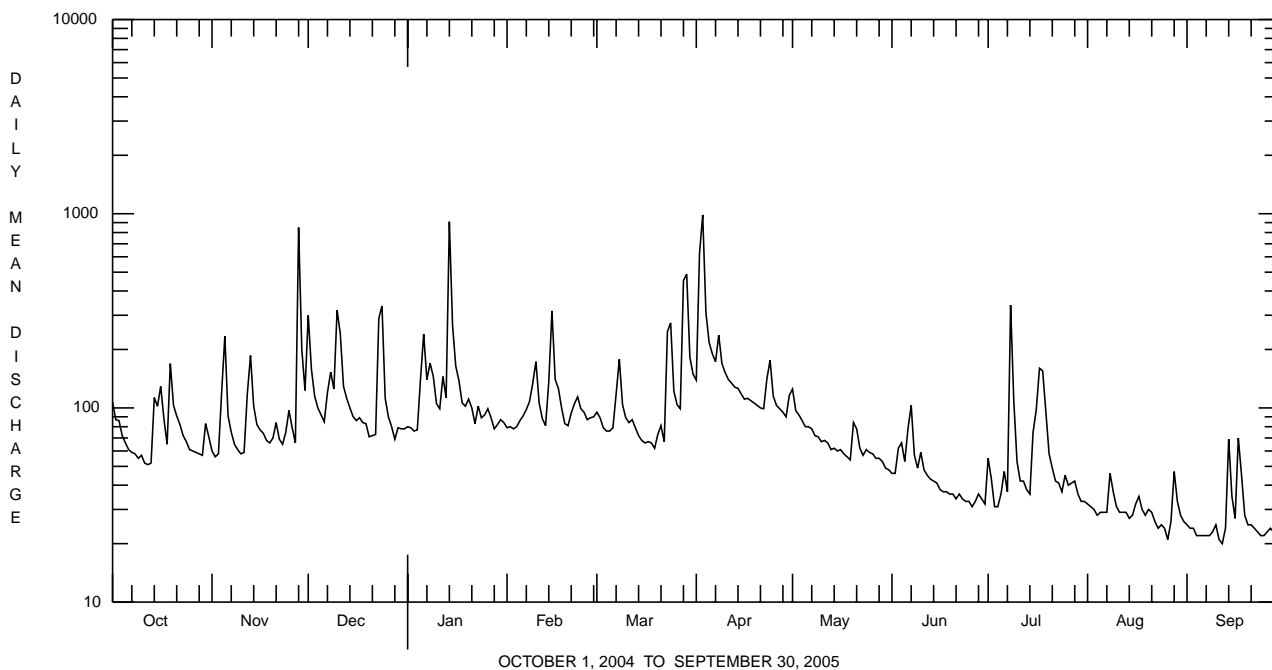
e Estimated.

CHRISTINA RIVER BASIN

01480617 WEST BRANCH BRANDYWINE CREEK AT MODENA, PA--Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1970 - 2005	
ANNUAL TOTAL	39879		34047			
ANNUAL MEAN	109		93.3		86.3	
HIGHEST ANNUAL MEAN					130	1979
LOWEST ANNUAL MEAN					29.7	2002
HIGHEST DAILY MEAN	850	Sep 18	986	Apr 3	4010	Jun 22 1972
LOWEST DAILY MEAN	39	Jul 11	20	Sep 12	7.4	Aug 23 2002
ANNUAL SEVEN-DAY MINIMUM	44	Sep 11	22	Sep 6	8.1	Aug 17 2002
MAXIMUM PEAK FLOW			1680	Apr 3	a9600	Jun 29 1973
MAXIMUM PEAK STAGE			6.45	Apr 3	12.47	Jun 29 1973
ANNUAL RUNOFF (CFSM)	1.98		1.70		1.57	
ANNUAL RUNOFF (INCHES)	26.97		23.03		21.31	
10 PERCENT EXCEEDS	161		154		149	
50 PERCENT EXCEEDS	88		75		57	
90 PERCENT EXCEEDS	50		28		25	

a From rating curve extended above 7,800 ft³/s on basis of slope-area measurement at gage height 11.48 ft.



CHRISTINA RIVER BASIN

01480617 WEST BRANCH BRANDYWINE CREEK AT MODENA, PA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1969 to October 1978, August 1981 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: May 1971 to October 1977, August 1981 to current year.

pH: May 1971 to October 1977, August 1981 to current year.

WATER TEMPERATURES: May 1971 to October 1977, August 1981 to current year.

DISSOLVED OXYGEN: May 1971 to October 1977, August 1981 to current year.

INSTRUMENTATION.--Water-quality monitor May 1971 to October 1977, August 1981 to current year.

REMARKS.--Specific conductance record rated fair except for period Feb. 28 to Apr. 19, which is poor. pH record rated good except for periods June 2-7 and Aug. 11 to Sept. 14, which are fair. Water temperature record rated fair except for periods Oct. 14-21, Mar. 29-31, and Apr. 1, 4, 5, which are poor. Dissolved oxygen record rated fair except for periods Oct. 1 to Mar. 28 and July 16-19, which are poor. 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, 858 microsiemens, Jan. 10, 1977; minimum, 72 microsiemens, Nov. 16, 1985.

pH: Maximum, 10.0, Dec. 21, 1971; minimum, 5.9, July 14, 1991.

WATER TEMPERATURE: Maximum, 33.5°C, July 19, 1977; minimum, 0.0°C, many days during winters.

DISSOLVED OXYGEN: Maximum, 19.5 mg/L, Sept. 2, 1990; minimum, 0.6 mg/L, Nov. 1, 3, 1974.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	Agency col- lecting sample, code (00027)	Agency ana- lyzing sample, code (00028)	Instan- taneous dis- charge, cfs (00061)	Dis- solved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conduc- tance, wat unfl- trd µS/cm 25 degC (00095)	Temper- ature, deg C (00010)	Fecal coli- form, M-FC 0.7µ MF col/ 100 mL (31625)
MAR 2005									
08...	1320	1028	1028	172	13.2	7.8	292	6.0	740
28...	1415	1028	1028	292	11.2	7.9	241	7.2	4100
APR									
12...	1210	1028	1028	133	10.5	8.3	256	11.6	720
26...	1140	1028	1028	102	13.4	7.9	275	11.0	8300
MAY									
04...	1050	1028	1028	88	12.9	7.8	302	11.3	2500
17...	1025	1028	1028	59	13.2	8.0	300	14.7	590
24...	0905	1028	1028	59	9.4	7.5	293	14.1	600
JUN									
07...	0830	1028	1028	119	9.0	7.5	241	19.2	6000
20...	0800	1028	1028	36	8.5	7.6	338	17.1	4700
27...	1250	1028	1028	38	9.4	7.7	341	22.4	3100
JUL									
07...	0740	1028	1028	36	7.1	7.5	320	21.6	3300
19...	1000	1028	1028	E95	8.1	7.7	319	22.9	3000
28...	1220	1028	1028	46	11.3	8.5	338	23.9	1300
AUG									
03...	1115	1028	1028	31	9.5	8.0	382	24.0	430
25...	0900	1028	1028	25	7.9	7.7	466	19.0	E1500
31...	0930	1028	1028	26	6.5	7.6	419	23.3	1200
SEP									
08...	0825	1028	1028	22	7.5	7.6	465	18.1	E670
22...	0755	1028	1028	E24	7.1	7.7	443	18.7	470

CHRISTINA RIVER BASIN

01480617 WEST BRANCH BRANDYWINE CREEK AT MODENA, PA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	Agency collecting sample, code (00027)	Agency analyzing sample, code (00028)	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)	Specif. conductance, wat unfltrd lab, μ S/cm 25 degC (90095)	Specif. conductance, wat unfltrd lab, μ S/cm 25 degC (00095)	Temperature, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	
NOV 2004 03...	0930	1028	80020	59	10.4	8.0	7.8	307	327	13.0	29.2	9.86	4.43	
Date		Sodium, water, fltrd, mg/L (00930)	ANC, wat unfltrd fixed end pt, lab, mg/L as CaCO3 (90410)	ANC, wat unfltrd incrm. titr., field, mg/L as CaCO3 (00419)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate, water, fltrd, mg/L (00945)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water, fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Orthophosphate, water, fltrd, mg/L as P (00671)	Aluminum, water, fltrd, μ g/L (01106)	Arsenic, water, fltrd, μ g/L (01000)
NOV 2004 03...	16.1	67	85	30.7	.2	12.0	23.7	<.04	4.40	.019	.05	15	<2	
Date		Boron, water, fltrd, μ g/L (01020)	Cadmium, water, fltrd, μ g/L (01025)	Chromium, water, fltrd, μ g/L (01030)	Copper, water, fltrd, μ g/L (01040)	Iron, water, fltrd, μ g/L (01046)	Lead, water, fltrd, μ g/L (01049)	Manganese, water, fltrd, μ g/L (01056)	Mercury, water, fltrd, μ g/L (71890)	Molybdenum, water, fltrd, μ g/L (01060)	Nickel, water, fltrd, μ g/L (01065)			
NOV 2004 03...		42	<.2	3.3	3.9	38	E.6	14.4	<.01	13.4	E1.9			

CHRISTINA RIVER BASIN

01480617 WEST BRANCH BRANDYWINE CREEK AT MODENA, PA--Continued

BIOLOGICAL DATA
BENTHIC MACROINVERTEBRATESREMARKS.--Samples were collected using a Hess sampler with a mesh size of 500 µm. Each sample covered a total area of 2.4 m².

Date	11/03/04
Benthic macroinvertebrate	Count
Platyhelminthes	
Turbellaria (FLATWORMS)	
Tricladida	
Planariidae	31
Nematoda (NEMATODES)	33
Nemertea (PROBOSCIS WORMS)	
Enopla	
Hoploneuridae	
Tetrastemmatidae	
<i>Prostoma</i>	5
Mollusca	
Gastropoda (SNAILS)	
Basommatophora	
Ancylidae	
<i>Ferrissia</i>	4
Bivalvia (CLAMS)	
Veneroida	
Sphaeriidae	1
Annelida	
Oligochaeta (AQUATIC EARTHWORMS)	
Lumbriculida	
Lumbriculidae	7
Arthropoda	
Acariformes	
Hydrachnidia (WATER MITES)	3
Crustacea	
Amphipoda (SCUDS)	
Gammaridae	
<i>Gammarus</i>	2
Insecta	
Ephemeroptera (MAYFLIES)	
Heptageniidae	
<i>Stenonema</i>	3
Trichoptera (CADDISFLIES)	
Hydropsychidae	
<i>Cheumatopsyche</i>	13
<i>Hydropsyche</i>	69
Hydroptilidae	
<i>Leucotrichia</i>	1
Lepidoptera	
Pyralidae (MOTHS)	
<i>Petrophila</i>	1

CHRISTINA RIVER BASIN

01480617 WEST BRANCH BRANDYWINE CREEK AT MODENA, PA--Continued

BIOLOGICAL DATA
BENTHIC MACROINVERTEBRATES--Continued

Date	11/03/04
Benthic macroinvertebrate	Count
Coleoptera (BEETLES)	
Elmidae (RIFFLE BEETLES)	
<i>Optioservus</i>	14
<i>Oulimnius</i>	6
<i>Stenelmis</i>	27
Psephenidae (WATER PENNIES)	
<i>Psephenus</i>	1
Diptera (TRUE FLIES)	
Chironomidae (MIDGES)	178
Empididae (DANCE FLIES)	
<i>Hemerodromia</i>	11
Tipulidae (CRANE FLIES)	
<i>Antocha</i>	1
Total organisms	411
Total number of taxa	20

CHRISTINA RIVER BASIN

01480617 WEST BRANCH BRANDYWINE CREEK AT MODENA, PA--Continued

SPECIFIC CONDUCTANCE, MICROSIEMENS PER CENTIMETER AT 25° CELSIUS, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	315	285	299	340	311	326	---	---	---	---	---	---
2	327	312	320	341	325	333	---	---	---	---	---	---
3	338	310	324	353	317	337	---	---	---	---	---	---
4	345	325	333	350	219	305	---	---	---	---	---	---
5	343	309	327	256	202	233	---	---	---	---	---	---
6	341	328	334	306	256	274	---	---	---	---	---	---
7	338	320	330	308	283	295	---	---	---	---	---	---
8	338	323	332	334	293	310	---	---	---	---	---	---
9	345	326	336	336	317	330	---	---	---	---	---	---
10	336	315	328	392	316	337	---	---	---	---	---	---
11	350	315	331	339	322	332	---	---	---	---	---	---
12	352	331	341	339	234	294	---	---	---	---	---	---
13	400	333	350	254	216	233	---	---	---	---	---	---
14	349	188	285	284	246	267	---	---	---	---	---	---
15	324	190	294	303	268	287	---	---	---	---	---	---
16	290	231	268	321	296	307	---	---	---	---	---	---
17	307	274	291	320	299	310	---	---	---	---	---	---
18	---	---	---	327	307	318	---	---	---	---	---	---
19	---	---	---	327	311	317	---	---	---	---	---	---
20	---	---	---	318	285	312	---	---	---	---	---	---
21	---	---	---	304	285	294	---	---	---	---	---	---
22	322	307	313	321	290	304	---	---	---	---	---	---
23	379	313	329	329	302	315	---	---	---	---	---	---
24	396	330	350	329	306	317	---	---	---	---	---	---
25	337	313	326	313	284	298	---	---	---	---	---	---
26	337	318	328	316	277	295	---	---	---	---	---	---
27	339	323	331	316	294	304	---	---	---	---	---	---
28	338	322	330	---	---	---	---	---	---	---	---	---
29	338	322	332	---	---	---	---	---	---	---	---	---
30	339	263	311	---	---	---	---	---	---	---	---	---
31	330	300	316	---	---	---	---	---	---	---	---	---
MONTH	400	188	322	392	202	303	---	---	---	---	---	---
	FEBRUARY			MARCH			APRIL			MAY		
1	---	---	---	784	338	449	299	289	294	289	259	270
2	---	---	---	404	336	355	296	152	218	292	273	283
3	---	---	---	361	334	350	191	137	157	297	278	287
4	---	---	---	338	324	331	---	---	---	304	286	296
5	---	---	---	328	313	322	278	258	268	306	280	295
6	---	---	---	327	302	315	294	278	284	309	296	303
7	---	---	---	320	254	298	294	243	279	308	294	301
8	---	---	---	339	244	278	278	237	250	308	295	303
9	---	---	---	331	282	305	272	261	266	313	295	304
10	---	---	---	313	288	301	274	268	271	317	298	307
11	---	---	---	328	293	300	280	268	273	317	285	306
12	---	---	---	339	286	299	281	272	276	322	308	315
13	---	---	---	295	280	289	286	271	276	321	286	310
14	---	---	---	298	281	290	286	270	277	322	304	314
15	---	---	---	302	286	293	286	274	280	321	302	312
16	---	---	---	302	287	294	287	278	282	320	297	307
17	---	---	---	310	287	296	287	273	278	318	298	307
18	---	---	---	303	288	294	286	270	277	322	300	309
19	---	---	---	306	287	297	297	274	283	324	300	314
20	---	---	---	302	289	295	299	286	291	328	261	301
21	---	---	---	293	274	281	309	289	296	308	272	287
22	---	---	---	296	281	287	301	289	295	310	291	302
23	---	---	---	297	213	263	301	208	277	320	292	306
24	---	---	---	266	213	235	255	229	244	323	298	309
25	---	---	---	286	266	277	275	255	266	318	289	308
26	---	---	---	300	280	290	293	268	276	319	296	309
27	---	---	---	303	286	295	296	280	286	325	304	315
28	---	---	---	298	171	242	301	283	290	336	303	317
29	---	---	---	242	164	201	305	292	298	337	306	322
30	---	---	---	279	242	260	303	259	285	333	310	323
31	---	---	---	295	273	283	---	---	---	334	310	323
MONTH	---	---	---	784	164	296	309	137	272	337	259	305

CHRISTINA RIVER BASIN

01480617 WEST BRANCH BRANDYWINE CREEK AT MODENA, PA--Continued

SPECIFIC CONDUCTANCE, MICROSIEMENS PER CENTIMETER AT 25° CELSIUS, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	347	314	331	384	224	338	403	365	387	428	387	408
2	348	314	333	342	262	311	413	364	392	404	366	387
3	345	270	320	373	331	350	424	380	400	413	375	395
4	325	294	310	411	343	372	426	398	412	421	386	407
5	350	323	335	411	311	366	406	370	388	459	382	413
6	356	176	325	371	296	337	402	360	384	460	426	450
7	297	254	274	358	316	335	396	363	382	468	443	459
8	316	281	299	358	141	228	400	240	350	469	439	456
9	347	305	321	290	217	260	364	326	348	455	409	431
10	335	290	318	339	290	314	384	351	369	416	388	405
11	336	312	325	354	327	342	387	354	377	406	363	392
12	343	310	327	377	320	348	399	360	381	433	375	406
13	348	319	336	383	320	355	397	361	382	432	382	408
14	348	315	332	390	357	376	397	369	387	418	135	347
15	358	320	336	394	157	340	400	364	384	381	264	327
16	357	328	346	307	181	274	402	367	385	393	354	378
17	366	331	351	294	114	230	374	354	365	400	160	305
18	363	333	349	290	198	250	393	351	375	360	256	309
19	354	330	345	354	260	317	424	386	404	444	356	388
20	352	330	344	383	341	361	430	375	395	470	403	440
21	353	325	343	407	375	388	445	357	389	434	408	421
22	363	330	347	413	382	398	433	364	390	465	409	440
23	369	336	355	416	384	400	465	406	436	463	385	442
24	366	333	354	415	388	402	434	400	420	414	381	396
25	368	335	355	417	310	372	471	423	455	426	390	409
26	366	335	355	392	344	370	472	416	448	455	385	417
27	373	339	360	385	270	362	466	421	444	442	394	414
28	365	329	345	348	283	337	445	213	365	467	408	427
29	361	324	342	411	347	371	414	355	378	538	400	484
30	370	342	360	417	382	398	429	407	416	493	421	472
31	---	---	---	403	371	391	439	406	421	---	---	---
MONTH	373	176	336	417	114	342	472	213	394	538	135	408

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

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

CHRISTINA RIVER BASIN

01480617 WEST BRANCH BRANDYWINE CREEK AT MODENA, PA--Continued

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DAY	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN
	FEBRUARY			MARCH			APRIL			MAY		
1	---	---	---	8.5	7.6	7.7	8.2	7.5	7.8	8.5	7.3	7.5
2	---	---	---	8.6	7.6	7.8	7.8	7.5	7.6	8.2	7.3	7.5
3	---	---	---	8.5	7.6	7.7	7.5	7.4	7.4	8.6	7.4	7.7
4	---	---	---	8.6	7.6	7.8	---	---	---	8.6	7.4	7.6
5	---	---	---	8.6	7.6	7.7	---	---	---	8.7	7.4	7.7
6	---	---	---	8.7	7.6	7.8	7.8	7.4	7.5	8.5	7.4	7.6
7	---	---	---	8.8	7.6	7.7	8.0	7.4	7.6	8.7	7.4	7.6
8	---	---	---	8.0	7.6	7.7	8.1	7.4	7.6	8.7	7.3	7.6
9	---	---	---	8.4	7.6	7.8	8.3	7.5	7.6	8.7	7.3	7.7
10	---	---	---	8.6	7.6	7.8	8.5	7.5	7.7	8.8	7.4	7.8
11	---	---	---	8.7	7.6	7.8	8.8	7.5	7.8	8.8	7.3	7.6
12	---	---	---	8.8	7.6	7.8	8.8	7.5	7.8	8.7	7.3	7.6
13	---	---	---	8.9	7.6	7.9	9.0	7.5	7.8	8.8	7.3	7.8
14	---	---	---	9.0	7.6	8.0	8.9	7.5	7.9	9.0	7.3	7.8
15	---	---	---	9.0	7.6	7.9	9.1	7.6	8.0	8.8	7.3	7.8
16	---	---	---	9.1	7.5	7.9	9.1	7.5	8.0	8.9	7.3	7.8
17	---	---	---	9.2	7.5	8.0	9.1	7.5	8.0	9.1	7.3	8.0
18	---	---	---	9.1	7.5	8.0	9.2	7.5	8.0	9.1	7.3	8.0
19	---	---	---	9.0	7.5	8.0	9.1	7.4	7.8	9.3	7.3	8.4
20	---	---	---	8.2	7.5	7.6	9.2	7.2	7.8	7.6	7.3	7.5
21	---	---	---	8.8	7.4	7.7	9.1	7.2	7.8	8.7	7.4	7.7
22	---	---	---	8.9	7.5	7.9	8.5	7.2	7.6	8.8	7.4	7.8
23	---	---	---	7.8	7.4	7.5	8.5	7.3	7.5	8.8	7.4	7.7
24	---	---	---	7.7	7.4	7.5	8.0	7.2	7.4	8.0	7.4	7.5
25	---	---	---	8.1	7.6	7.7	8.4	7.2	7.5	8.0	7.4	7.6
26	---	---	---	8.3	7.6	7.8	9.0	7.2	7.6	8.5	7.4	7.7
27	---	---	---	8.2	7.6	7.7	9.1	7.3	7.7	8.7	7.2	7.7
28	---	---	---	8.4	7.4	7.7	9.0	7.2	7.8	8.6	7.3	7.5
29	---	---	---	7.8	7.6	7.6	9.1	7.2	7.8	8.5	7.3	7.6
30	---	---	---	8.0	7.7	7.8	7.5	7.3	7.4	8.6	7.2	7.6
31	---	---	---	8.1	7.7	7.8	---	---	---	8.5	7.3	7.6
MAX	---	---	---	9.2	7.7	8.0	9.2	7.6	8.0	9.3	7.4	8.4
MIN	---	---	---	7.7	7.4	7.5	7.5	7.2	7.4	7.6	7.2	7.5
	JUNE			JULY			AUGUST			SEPTEMBER		
1	8.5	7.3	7.6	8.3	7.2	7.4	9.0	7.5	8.3	8.2	7.6	7.9
2	8.7	7.3	7.7	7.8	7.2	7.4	9.0	7.5	8.2	8.4	7.6	7.9
3	7.7	7.4	7.5	8.4	7.3	7.7	8.9	7.5	8.2	8.3	7.6	7.9
4	7.9	7.5	7.6	8.6	7.3	7.8	8.9	7.4	8.2	8.3	7.6	7.9
5	8.2	7.4	7.6	8.2	7.3	7.5	8.9	7.4	8.2	8.4	7.6	7.9
6	8.2	7.4	7.6	8.2	7.3	7.6	8.8	7.5	8.3	8.3	7.6	7.9
7	8.0	7.4	7.6	8.2	7.3	7.6	8.7	7.5	8.1	8.4	7.6	8.0
8	8.1	7.5	7.7	8.2	7.4	7.4	8.1	7.4	7.6	8.4	7.6	8.0
9	8.1	7.5	7.7	7.7	7.4	7.5	8.5	7.4	7.8	8.5	7.6	8.0
10	8.1	7.5	7.7	7.9	7.4	7.6	8.6	7.5	7.9	8.7	7.7	8.2
11	8.1	7.5	7.7	8.3	7.5	7.7	8.9	7.5	8.0	8.7	7.7	8.2
12	8.1	7.5	7.7	8.5	7.4	7.7	8.9	7.6	8.2	8.7	7.7	8.1
13	8.1	7.4	7.6	8.5	7.4	7.8	9.0	7.6	8.3	8.7	7.7	8.1
14	8.2	7.4	7.7	8.5	7.4	7.9	9.0	7.6	8.3	8.5	7.6	7.8
15	8.1	7.5	7.7	8.5	7.4	7.7	8.8	7.6	8.2	8.0	7.6	7.7
16	8.0	7.5	7.7	7.6	7.5	7.5	8.2	7.6	7.8	8.2	7.7	7.9
17	8.1	7.5	7.8	7.9	7.3	7.4	8.7	7.6	8.0	8.5	7.7	8.0
18	8.2	7.6	7.8	8.1	7.3	7.4	8.8	7.6	8.1	8.1	7.8	7.9
19	8.0	7.5	7.7	7.8	7.5	7.6	8.2	7.6	7.8	8.2	7.8	7.9
20	8.3	7.5	7.8	8.1	7.6	7.7	8.5	7.7	7.9	8.3	7.7	8.0
21	8.3	7.5	7.8	8.3	7.6	7.8	8.6	7.6	8.0	8.3	7.7	8.0
22	8.4	7.5	7.8	8.6	7.6	8.0	8.6	7.6	8.0	8.4	7.7	8.0
23	8.5	7.5	7.9	8.8	7.6	8.1	8.7	7.6	8.1	8.5	7.7	8.1
24	8.6	7.5	8.0	8.9	7.6	8.3	8.7	7.7	8.3	8.5	7.8	8.3
25	8.6	7.4	8.0	8.9	7.4	8.0	8.7	7.7	8.1	8.6	7.8	8.2
26	8.7	7.4	8.1	9.0	7.3	8.2	8.8	7.7	8.2	8.4	7.8	8.1
27	8.2	7.3	7.6	9.0	7.3	7.9	8.5	7.7	8.0	8.3	7.6	8.0
28	8.6	7.3	7.7	8.8	7.3	8.0	7.8	7.6	7.7	8.4	7.8	8.1
29	8.4	7.3	7.7	9.1	7.4	8.4	8.3	7.6	7.8	8.3	7.7	7.9
30	8.5	7.3	7.7	9.1	7.5	8.3	8.3	7.5	7.8	8.4	7.8	8.1
31	---	---	---	9.1	7.5	8.4	8.0	7.6	7.8	---	---	---
MAX	8.7	7.6	8.1	9.1	7.6	8.4	9.0	7.7	8.3	8.7	7.8	8.3
MIN	7.7	7.3	7.5	7.6	7.2	7.4	7.8	7.4	7.6	8.0	7.6	7.7

CHRISTINA RIVER BASIN

01480617 WEST BRANCH BRANDYWINE CREEK AT MODENA, PA--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	18.9	16.4	17.8	14.3	12.5	13.5	---	---	---	---	---	---
2	18.3	17.4	17.9	14.4	12.4	13.5	---	---	---	---	---	---
3	18.7	16.9	17.8	14.1	12.3	13.6	---	---	---	---	---	---
4	17.9	15.6	16.8	12.3	10.4	10.8	---	---	---	---	---	---
5	17.2	15.4	16.3	10.7	9.6	10.2	---	---	---	---	---	---
6	15.7	13.5	14.7	10.5	8.3	9.6	---	---	---	---	---	---
7	16.5	13.5	15.0	11.6	8.8	10.3	---	---	---	---	---	---
8	17.4	14.7	16.0	11.3	9.2	10.1	---	---	---	---	---	---
9	17.5	15.8	16.6	9.2	7.6	8.4	---	---	---	---	---	---
10	17.8	16.2	16.9	7.9	5.9	7.2	---	---	---	---	---	---
11	16.3	14.8	15.5	9.2	6.8	8.1	---	---	---	---	---	---
12	15.3	13.2	14.3	9.1	7.8	8.7	---	---	---	---	---	---
13	14.6	13.2	14.1	8.6	7.4	8.0	---	---	---	---	---	---
14	14.8	13.8	14.4	8.0	6.2	7.2	---	---	---	---	---	---
15	15.9	14.6	15.1	8.4	6.1	7.5	---	---	---	---	---	---
16	15.0	13.6	14.3	9.2	7.1	8.3	---	---	---	---	---	---
17	14.1	12.3	13.2	9.9	7.4	8.7	---	---	---	---	---	---
18	13.4	---	---	11.2	9.7	10.4	---	---	---	---	---	---
19	---	---	---	11.6	10.2	11.0	---	---	---	---	---	---
20	---	---	---	11.9	11.1	11.5	---	---	---	---	---	---
21	---	---	---	12.2	11.2	11.6	---	---	---	---	---	---
22	13.1	11.9	12.4	11.5	10.0	10.8	---	---	---	---	---	---
23	12.5	10.6	11.6	11.3	10.6	11.0	---	---	---	---	---	---
24	11.5	10.2	11.0	12.8	11.2	11.8	---	---	---	---	---	---
25	13.0	11.3	12.1	13.8	10.0	12.7	---	---	---	---	---	---
26	13.0	11.9	12.5	10.0	7.9	8.6	---	---	---	---	---	---
27	13.4	11.2	12.3	9.4	7.3	8.3	---	---	---	---	---	---
28	13.3	11.6	12.5	---	---	---	---	---	---	---	---	---
29	12.7	11.3	12.0	---	---	---	---	---	---	---	---	---
30	14.4	12.7	13.6	---	---	---	---	---	---	---	---	---
31	15.7	13.8	14.6	---	---	---	---	---	---	---	---	---
MONTH	18.9	10.2	14.5	14.4	5.9	10.1	---	---	---	---	---	---

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	---	---	---	5.1	1.9	3.4	13.3	9.9	11.6	16.1	12.9	14.2
2	---	---	---	4.7	2.8	3.9	11.9	9.4	10.3	14.1	11.1	12.4
3	---	---	---	4.5	1.6	3.1	10.4	7.7	8.8	13.3	9.7	11.7
4	---	---	---	4.7	1.4	3.2	10.2	7.1	8.4	13.6	11.0	12.2
5	---	---	---	5.6	2.0	3.9	12.7	7.8	10.3	14.4	10.0	12.3
6	---	---	---	6.0	2.6	4.4	15.0	9.4	12.0	13.1	11.2	11.8
7	---	---	---	8.9	4.2	6.5	15.4	11.7	13.6	15.6	10.3	12.9
8	---	---	---	7.5	2.8	5.8	15.6	13.2	14.2	16.9	12.2	14.6
9	---	---	---	4.0	1.0	2.6	15.5	10.9	13.1	18.5	13.2	15.9
10	---	---	---	4.1	1.2	2.9	15.7	10.4	13.0	18.8	14.2	16.5
11	---	---	---	6.1	2.9	4.5	15.9	11.8	13.7	19.6	14.8	17.1
12	---	---	---	6.8	4.1	5.6	14.4	10.3	12.5	18.7	16.4	17.4
13	---	---	---	7.2	4.1	5.8	14.6	10.0	12.3	17.5	13.3	15.5
14	---	---	---	7.6	4.6	6.1	15.0	10.0	12.5	19.4	14.2	16.7
15	---	---	---	7.3	3.6	5.6	14.2	10.4	12.4	19.0	17.0	18.0
16	---	---	---	7.3	4.1	5.9	14.1	9.3	11.8	19.0	16.0	17.5
17	---	---	---	7.0	4.8	5.9	15.2	9.5	12.5	17.6	14.1	15.8
18	---	---	---	8.4	4.3	6.4	16.7	11.2	14.0	17.3	13.4	15.3
19	---	---	---	9.0	5.2	7.2	18.0	12.5	15.3	18.1	13.5	15.8
20	---	---	---	8.2	7.2	7.6	19.2	14.6	17.0	16.4	12.8	14.3
21	---	---	---	8.0	6.7	7.4	18.1	15.0	16.5	16.8	11.6	14.2
22	---	---	---	9.8	5.3	7.7	15.0	12.2	12.9	16.3	14.0	15.1
23	---	---	---	9.0	5.7	7.1	15.0	11.7	13.0	15.8	13.5	14.8
24	---	---	---	6.8	4.8	5.9	14.2	11.2	12.5	15.0	13.7	14.3
25	---	---	---	8.0	6.2	7.0	11.5	9.6	10.6	13.7	12.7	13.1
26	---	---	---	8.3	6.1	7.4	15.1	9.1	12.0	15.7	12.5	13.8
27	---	---	---	8.3	7.2	7.8	15.9	12.8	14.2	18.7	13.1	15.8
28	---	---	---	8.0	7.0	7.3	15.3	11.9	13.7	19.1	15.0	16.9
29	---	---	---	10.8	7.4	8.9	14.3	11.6	13.1	19.1	14.6	16.8
30	---	---	---	12.1	8.0	10.1	13.7	12.6	13.1	18.7	15.0	16.8
31	---	---	---	11.2	8.7	10.3	---	---	---	19.6	14.7	17.2
MONTH	---	---	---	12.1	1.0	6.0	19.2	7.1	12.7	19.6	9.7	15.1

CHRISTINA RIVER BASIN

01480617 WEST BRANCH BRANDYWINE CREEK AT MODENA, PA--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	20.4	15.8	18.0	25.0	22.2	23.4	25.5	22.1	23.5	24.5	21.8	23.2
2	19.9	16.2	17.9	25.2	21.5	23.1	26.6	22.0	24.2	24.2	20.6	22.5
3	18.0	16.2	16.7	24.2	20.3	22.3	27.2	23.0	25.0	23.1	20.2	21.9
4	17.9	15.7	16.8	24.9	20.1	22.4	27.5	23.4	25.4	22.2	19.2	21.0
5	22.0	16.2	18.9	23.5	21.5	22.6	26.9	23.6	25.3	22.5	19.1	20.9
6	22.9	18.6	20.6	24.2	21.3	22.6	26.0	23.5	24.8	22.4	19.0	20.9
7	23.7	19.0	21.2	22.9	21.5	22.1	24.9	22.5	23.7	22.2	18.7	20.6
8	24.5	19.9	22.1	21.5	19.0	20.0	23.8	22.0	22.9	21.9	18.1	20.2
9	23.9	20.5	22.2	23.4	19.0	20.9	23.6	21.5	22.4	21.5	18.7	20.2
10	24.5	21.1	22.6	24.4	19.6	21.9	25.3	21.4	23.1	21.9	18.5	20.3
11	25.1	21.5	23.2	24.9	20.1	22.5	26.1	21.8	23.9	21.5	18.1	20.1
12	25.1	21.5	23.3	25.5	21.1	23.2	26.8	22.8	24.7	22.2	18.4	20.5
13	25.0	21.6	23.2	24.4	22.0	23.1	27.7	24.0	25.8	22.9	19.3	21.2
14	25.7	21.9	23.8	24.3	22.2	23.2	28.1	24.5	26.2	24.2	20.1	21.5
15	25.3	22.3	23.7	25.4	22.4	23.2	26.6	24.4	25.4	23.8	21.3	22.4
16	23.3	20.8	22.2	24.2	22.1	22.7	24.5	22.1	23.0	24.6	21.9	23.1
17	21.6	18.6	20.1	25.3	22.2	23.0	24.8	20.9	22.8	24.3	22.0	23.0
18	21.7	17.4	19.4	25.8	22.8	24.1	24.7	21.1	22.9	22.8	20.1	21.5
19	19.6	17.8	18.6	25.3	22.3	23.7	23.4	21.9	22.4	23.1	20.0	21.5
20	20.8	17.1	18.8	25.9	22.2	23.9	24.0	21.2	22.4	22.4	20.4	21.4
21	22.2	17.3	19.7	25.6	21.6	23.5	26.2	22.4	24.1	22.4	19.7	21.1
22	23.1	18.9	20.8	25.8	22.2	23.9	24.9	21.6	23.4	21.9	18.7	20.4
23	23.4	18.6	21.0	25.8	22.4	23.9	23.5	20.5	22.1	22.5	19.7	21.2
24	24.2	19.3	21.5	24.5	20.6	22.6	23.0	19.9	21.5	21.8	19.8	20.7
25	25.0	20.1	22.4	25.0	21.3	23.0	23.0	19.0	21.1	20.7	19.1	20.0
26	25.7	21.0	23.3	26.9	22.3	24.4	22.6	19.6	21.2	21.2	19.5	20.3
27	23.8	22.1	22.7	27.8	23.5	25.4	22.1	20.2	21.2	21.1	19.5	20.4
28	26.0	21.4	23.4	26.0	22.4	24.0	22.5	20.9	21.6	19.7	16.9	18.6
29	24.6	22.5	23.5	24.8	21.0	22.8	23.7	20.6	22.0	19.4	17.7	18.5
30	25.1	22.2	23.6	25.1	22.0	23.4	24.2	22.1	23.1	17.7	15.4	16.8
31	---	---	---	24.7	21.8	23.2	24.9	23.2	23.9	---	---	---
MONTH	26.0	15.7	21.2	27.8	19.0	23.0	28.1	19.0	23.4	24.6	15.4	20.9

OXYGEN, DISSOLVED (MG/L), WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	9.8	9.0	9.4	10.5	8.5	9.3	---	---	---	---	---	---
2	9.7	9.1	9.3	10.7	8.7	9.5	---	---	---	---	---	---
3	9.9	9.1	9.4	11.1	8.6	9.7	---	---	---	---	---	---
4	10.4	9.3	9.8	10.9	9.5	10.3	---	---	---	---	---	---
5	10.6	9.4	10.0	10.6	10.1	10.4	---	---	---	---	---	---
6	11.4	10.0	10.7	11.4	10.2	10.8	---	---	---	---	---	---
7	11.4	10.0	10.6	11.5	9.8	10.6	---	---	---	---	---	---
8	11.4	9.6	10.4	11.7	9.9	10.8	---	---	---	---	---	---
9	11.3	9.4	10.3	12.4	10.8	11.6	---	---	---	---	---	---
10	11.0	9.4	10.1	13.1	11.2	12.2	---	---	---	---	---	---
11	11.8	9.6	10.5	12.8	10.9	11.9	---	---	---	---	---	---
12	11.3	10.0	10.6	11.4	10.9	11.1	---	---	---	---	---	---
13	11.3	10.2	10.7	12.7	11.3	12.2	---	---	---	---	---	---
14	10.5	10.1	10.3	13.4	12.6	12.9	---	---	---	---	---	---
15	10.6	9.7	10.2	13.4	12.4	12.8	---	---	---	---	---	---
16	10.7	9.8	10.3	13.0	12.2	12.6	---	---	---	---	---	---
17	11.0	10.1	10.5	12.9	11.9	12.4	---	---	---	---	---	---
18	---	---	---	12.0	10.0	11.4	---	---	---	---	---	---
19	---	---	---	12.0	9.8	10.6	---	---	---	---	---	---
20	---	---	---	11.4	9.5	10.3	---	---	---	---	---	---
21	---	---	---	11.6	9.5	10.4	---	---	---	---	---	---
22	10.4	9.7	9.9	12.2	9.8	10.6	---	---	---	---	---	---
23	10.7	9.7	10.1	11.8	9.9	10.5	---	---	---	---	---	---
24	10.7	9.7	10.2	10.6	9.3	10	---	---	---	---	---	---
25	10.6	9.5	10	10.2	9.2	9.6	---	---	---	---	---	---
26	10.5	9.4	9.8	12.5	10.2	11.3	---	---	---	---	---	---
27	10.9	9.4	10.0	13.0	10.3	11.6	---	---	---	---	---	---
28	10.8	9.4	9.9	---	---	---	---	---	---	---	---	---
29	10.7	9.4	10	---	---	---	---	---	---	---	---	---
30	10.0	8.8	9.3	---	---	---	---	---	---	---	---	---
31	10.0	8.5	9.0	---	---	---	---	---	---	---	---	---
MONTH	11.8	8.5	10.0	13.4	8.5	11.0	---	---	---	---	---	---

CHRISTINA RIVER BASIN

01480617 WEST BRANCH BRANDYWINE CREEK AT MODENA, PA--Continued

OXYGEN, DISSOLVED (MG/L), WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	---	---	---	14.6	12.3	13.5	---	---	---	10.9	7.9	9.7
2	---	---	---	14.4	12.2	13.2	---	---	---	13.3	9.5	11.4
3	---	---	---	14.7	12.3	13.4	---	---	---	13.6	10.7	12.1
4	---	---	---	14.5	11.9	13.3	---	---	---	13.8	10.7	12.1
5	---	---	---	14.2	11.3	12.8	---	---	---	13.9	10.7	12.3
6	---	---	---	13.9	10.7	12.4	---	---	---	13.7	10.7	12.2
7	---	---	---	12.9	9.8	11.4	---	---	---	13.6	9.9	11.9
8	---	---	---	11.7	10.1	10.8	---	---	---	12.9	9.6	11.1
9	---	---	---	13.3	11.5	12.4	---	---	---	12.6	9.1	10.8
10	---	---	---	13.5	11.2	12.4	---	---	---	12.4	9.1	10.7
11	---	---	---	13.1	10.3	11.8	---	---	---	12.5	8.6	10.5
12	---	---	---	12.8	10.3	11.4	---	---	---	12.1	8.6	10.2
13	---	---	---	13.1	10.2	11.6	---	---	---	12.7	9.0	10.9
14	---	---	---	13.4	10.2	11.7	---	---	---	12.7	8.1	10.5
15	---	---	---	13.7	10.6	12.0	---	---	---	12.4	8.1	10.1
16	---	---	---	14.1	10.5	12.0	---	---	---	12.2	8.3	10.2
17	---	---	---	13.9	10.5	12.0	---	---	---	12.8	8.6	10.7
18	---	---	---	14.0	10.0	12.0	---	---	---	13.2	9.1	10.9
19	---	---	---	13.9	9.8	11.7	---	---	---	13.0	8.6	10.7
20	---	---	---	12.2	9.8	10.8	13.0	7.7	10.1	9.9	7.9	8.9
21	---	---	---	13.1	10.1	11.4	13.2	7.8	10.3	10.6	8.1	9.5
22	---	---	---	13.6	9.5	11.6	12.5	8.8	10.6	11.4	8.3	9.7
23	---	---	---	11.2	9.5	10.5	12.2	7.9	10.4	11.8	8.5	9.9
24	---	---	---	11.2	7.2	9.7	10.3	7.9	9.3	10.7	8.8	9.7
25	---	---	---	11.7	10.4	11.0	12.6	9.2	11.0	11.2	9.5	10.4
26	---	---	---	12.9	10.9	11.8	13.8	9.6	11.5	11.7	9.4	10.4
27	---	---	---	13.6	11.3	12.3	13.3	9.6	11.1	11.7	8.6	10.2
28	---	---	---	---	---	---	13.6	9.6	11.4	11.6	8.1	9.6
29	---	---	---	---	---	---	14.1	10.0	11.8	11.1	8.5	9.6
30	---	---	---	---	---	---	11.0	7.6	10	11.4	8.4	9.7
31	---	---	---	---	---	---	---	---	---	11.2	8.5	9.8
MONTH	---	---	---	14.7	7.2	11.9	14.1	7.6	10.7	13.9	7.9	10.5
	JUNE			JULY			AUGUST			SEPTEMBER		
1	11.2	8.5	9.6	9.8	6.1	7.3	10.7	6.6	8.0	8.8	6.1	7.2
2	11.2	8.3	9.7	8.8	6.7	7.5	11.0	6.3	8.1	9.2	6.6	7.6
3	10.3	8.8	9.5	10.2	6.8	8.1	10.8	6.5	8.2	9.2	6.6	7.6
4	10.5	9.1	9.8	10.9	6.8	8.4	10.8	6.8	8.4	9.5	6.9	7.9
5	10.4	8.2	9.4	10.5	6.3	7.5	10.8	6.8	8.5	9.8	6.7	8.1
6	10.0	6.4	8.7	9.4	6.6	7.9	10.6	6.7	8.2	10.0	6.9	8.1
7	9.0	7.2	8.4	9.9	6.7	7.9	10.5	6.9	8.3	10.1	7.1	8.2
8	8.7	7.3	8.0	8.5	6.5	7.7	9.4	6.9	7.6	10.2	7.2	8.3
9	8.9	7.2	7.9	8.1	6.6	7.6	9.2	7.0	7.9	10.4	7.0	8.3
10	8.6	7.1	7.8	9.1	6.8	8.0	9.7	7.0	8.1	10.4	7.4	8.5
11	8.7	7.0	7.7	9.6	6.8	8.2	10.1	6.9	8.0	10.6	7.4	8.6
12	8.8	6.7	7.6	10.4	6.8	8.4	9.5	6.4	7.7	10.4	7.1	8.3
13	8.6	6.6	7.4	10.4	6.8	8.4	9.3	6.0	7.3	10.3	6.8	8.2
14	8.4	6.6	7.4	10.5	7.3	8.7	9.2	5.8	7.2	9.6	6.8	7.7
15	8.4	6.6	7.3	11.0	6.5	8.5	8.8	5.7	7.0	8.4	7.2	7.5
16	8.5	6.7	7.5	8.8	7.4	8.1	7.9	6.1	6.8	8.6	6.9	7.6
17	9.1	7.2	8.1	8.5	5.3	6.9	9.0	6.5	7.5	8.4	6.9	7.5
18	9.2	7.6	8.3	7.2	4.1	5.9	9.3	6.6	7.6	8.4	7.3	7.7
19	9.4	7.5	8.4	9.0	5.8	7.8	8.4	6.5	7.3	9.0	7.1	7.9
20	9.7	7.6	8.5	9.7	8.3	8.9	9.1	6.7	7.7	9.1	7.1	8.0
21	9.6	7.3	8.3	10.4	8.3	9.2	9.0	6.3	7.5	9.4	7.3	8.1
22	9.8	7.4	8.4	11.2	8.3	9.4	9.4	6.5	7.6	9.9	7.3	8.4
23	9.9	7.3	8.4	11.9	8.0	9.6	9.6	6.8	8.0	10.2	7.7	8.6
24	9.9	7.3	8.4	13.1	8.4	10.3	9.9	7.1	8.2	10.3	7.6	8.7
25	9.9	7.0	8.2	12.7	8.2	9.8	10.7	7.3	8.5	10.4	7.4	8.8
26	10.0	6.8	8.1	12.9	6.4	9.8	11.0	7.3	8.6	10.2	7.5	8.5
27	8.9	6.4	7.5	13.2	6.7	9.5	9.3	7.2	8.1	10.0	6.9	8.3
28	9.4	6.5	7.6	12.1	6.7	9.3	7.9	7.0	7.4	10.6	6.8	9.0
29	9.4	6.4	7.6	11.2	7.1	9.3	9.1	6.6	7.7	10.1	7.9	8.7
30	9.9	6.3	7.7	10.6	6.6	8.3	8.6	6.2	7.2	11.0	8.3	9.4
31	---	---	---	10.5	6.7	8.3	8.0	6.0	6.7	---	---	---
MONTH	11.2	6.3	8.2	13.2	4.1	8.4	11.0	5.7	7.8	11.0	6.1	8.2