01480870 EAST BRANCH BRANDYWINE CREEK BELOW DOWNINGTOWN, PA

LOCATION.--Lat 39°58'07", long 75°40'25", Chester County, Hydrologic Unit 02040205, on left bank at downstream side of Sugars Bridge (U.S. Highway 322), 2,000 ft upstream from Valley Creek, 1.5 mi north of Marshallton, and 3.3 mi southeast of Downingtown.

DRAINAGE AREA.--89.9 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--February 1972 to current year.

REVISED RECORDS.--WDR PA-75-1: 1972(P), 1973, 1974.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 195 ft above National Geodetic Vertical Datum of 1929, from topographic map. Feb. 1 to Apr. 10, and June 25 to Nov. 17, 1972, nonrecording gage at same site and datum.

REMARKS.—Records good except those for estimated daily discharges, which are poor. Flow regulated since November 1973 by Marsh Creek Reservoir (station 01480684) about 7.5 mi upstream. Satellite and landline telemetry at station.

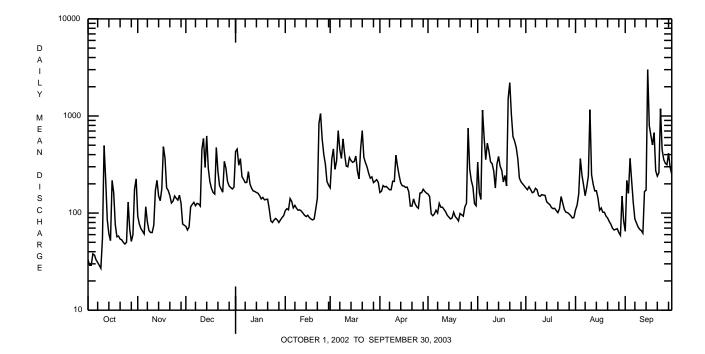
			DISCHAR	GE, CUBIC	FEET PER SE		TER YEAR C EAN VALUE		002 TO SEPT	EMBER 2003	;	
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	33	93	73	431	106	182	163	157	335	182	108	65
2	29	77	67	456	111	359	168	148	162	174	121	217
3	29	69	72	311	108	458	192	98	138	187	158	160
4	38	65	116	364	141	282	186	94	1150	175	365	366
5	37	61	123	237	132	345	188	98	597	162	247	215
6	33	116	129	222	113	706	181	107	355	165	195	128
7	31	81	119	206	120	451	174	100	524	180	151	87
8	29	66	126	207	112	365	174	126	433	174	185	79
9	27	63	124	267	e107	581	213	115	337	151	242	72
10	55	63	118	199	e108	406	212	115	323	149	1160	68
11	497	75	453	180	e105	305	395	109	271	155	248	66
12	220	171	587	169	e100	300	302	103	181	153	198	62
13	85	217	295	167	e95	373	244	95	320	152	169	167
14	61	150	623	163	e92	347	204	91	383	131	170	172
15	52	134	288	160	e95	333	191	87	304	126	143	3000
16	217	178	210	151	e90	340	190	89	275	122	107	793
17	162	483	179	e140	e87	387	184	102	209	114	113	627
18	76	367	163	e145	e85	269	185	92	244	111	102	503
19	57	182	157	e137	e87	225	166	88	190	112	102	675
20	58	171	474	e138	e110	463	118	83	1520	106	93	273
21	54	152	270	e139	142	705	118	99	2200	101	89	240
22	53	127	192	e110	842	376	140	96	1030	111	82	261
23	50	133	177	e83	1060	330	124	93	613	148	77	1190
24	48	150	164	e80	580	298	116	116	551	127	70	450
25	50	142	341	e85	404	257	112	126	475	109	67	356
26 27 28 29 30 31	130 68 51 60 176 225	136 153 126 77 75	289 211 190 183 177 185	e88 e85 e80 e85 e90	319 212 194 	229 236 206 213 221 207	161 162 176 167 161	748 284 217 186 125 119	364 229 210 200 191	102 101 98 94 89	68 69 63 59 150 83	325 315 413 295 251
TOTAL	2791	4153	6875	5469	5857	10755	5467	4306	14314	4151	5254	11891
MEAN	90.0	138	222	176	209	347	182	139	477	134	169	396
MAX	497	483	623	456	1060	706	395	748	2200	187	1160	3000
MIN	27	61	67	80	85	182	112	83	138	89	59	62
CFSM	1.00	1.54	2.47	1.96	2.33	3.86	2.03	1.55	5.31	1.49	1.89	4.41
IN.	1.15	1.72	2.84	2.26	2.42	4.45	2.26	1.78	5.92	1.72	2.17	4.92
STATIST	CS OF M	ONTHLY MEA	N DATA FO	OR WATER	YEARS 197	4 - 2003,	BY WATER	YEAR (WY)			
MEAN	90.4	111	167	179	174	221	205	167	129	106	75.8	102
MAX	304	242	577	527	409	525	594	410	477	421	177	396
(WY)	1997	1997	1997	1979	1979	1994	1983	1989	2003	1984	1996	2003
MIN	36.7	41.8	40.8	30.9	49.2	61.6	53.1	75.9	45.5	32.5	28.6	29.5
(WY)	2002	2002	1981	1981	2002	1985	1985	1999	1999	2002	1999	1980

e Estimated.

01480870 EAST BRANCH BRANDYWINE CREEK BELOW DOWNINGTOWN, PA--Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR	FOR 2003 WATER YEAR	WATER YEARS 1974 - 2003
ANNUAL TOTAL	30773	81283	
ANNUAL MEAN	84.3	223	144
HIGHEST ANNUAL MEAN			<u>257</u> 1984
LOWEST ANNUAL MEAN			57.0 2002
HIGHEST DAILY MEAN	623 Dec 14	3000 Sep 15	3080 Sep 16 1999
LOWEST DAILY MEAN	19 Sep 14	27 Oct 9	19 Sep 14 2002
ANNUAL SEVEN-DAY MINIMUM	22 Sep 9	32 Oct 3	22 Sep 9 2002
MAXIMUM PEAK FLOW		a 6230 Sep 15	b 8160 Jun 22 1972
MAXIMUM PEAK STAGE		13.56 Sep 15	c 14.79 Sep 16 1999
ANNUAL RUNOFF (CFSM)	0.94	2.48	1.60
ANNUAL RUNOFF (INCHES)	12.73	33.63	21.74
10 PERCENT EXCEEDS	177	420	275
50 PERCENT EXCEEDS	57	160	94
90 PERCENT EXCEEDS	26	69	41

- a From rating curve extended above 3,600 ft³/s on basis of runoff comparison with nearby stations.
 b From rating curve extended above 3,600 ft³/s on basis of slope-area measurement of peak flow at gage height 13.40 ft.
 c Discharge, 7,200 ft³/s on basis of runoff comparison with nearby stations.



01480870 EAST BRANCH BRANDYWINE CREEK BELOW DOWNINGTOWN, PA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1965 to September 1966, October 1970 to current year.

PERIOD OF DAILY RECORD.--SPECIFIC CONDUCTANCE: February 1972 to current year.

pH: February 1972 to current year.
WATER TEMPERATURES: February 1972 to current year.
DISSOLVED OXYGEN: February 1972 to current year.

INSTRUMENTATION.--Water-quality monitor since February 1972.

REMARKS.--Specific conductance record rated good. pH record rated good, except for period Oct. 1-18, which is fair. Water temperature record rated good. Dissolved oxygen record rated fair, except for periods Nov. 5-11, 14-16, July 16-28, 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, 891 microsiemens, Mar. 5, 2001; minimum, 67 microsiemens, July 1, 1984.

pH: Maximum, 9.9, May 13, June 5, 1973; minimum, 5.4, Oct. 24, 26, 1973.
WATER TEMPERATURE: Maximum, 33.0°C, July 18, 1977; minimum, 0.0°C, many days during winters.
DISSOLVED OXYGEN: Maximum, 19.4 mg/L, Mar. 18, 1989; minimum, 0.8 mg/L, July 23, 1984.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

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 unf µS/cm 25 degC (00095)	Temper- ature, water, deg C (00010)	Fecal coli- form, M-FC 0.7µ MF col/ 100 mL (31625)
MAR 2003									
10	1420	1028	1028	356	13.6	7.6	229	4.2	183
20	1330	1028	1028	246	12.6	7.6	282	6.6	380
APR									
07	1405	1028	1028	168	13.1	8.2	272	7.0	680
21	1215	1028	1028	116	12.3	8.2	304	13.6	57
MAY				4 = 0					
01	1155	1028	1028	159	10.9	7.8	275	14.6	132
12	1705	1028	1028	100	10.1	7.7	311	16.7	593
21 JUN	1530	1028	1028	114	8.4	7.4	307	15.4	527
05	1300	1028	1028	557	9.4	7.2	201	15.3	3900
12	1345	1028	1028	192	9.4	7.5	266	18.8	133
26	0935	1028	1028	432	9.2	7.3	234	16.5	280
JUL	0,555	1020	1020	132	7.2	7.5	231	10.5	200
08	1110	1028	1028	171	8.0	7.5	277	22.2	1350
16	0950	1028	1028	127	7.8	7.5	296	21.2	390
23	1350	1028	1028	155	8.4	7.6	270	22.6	2600
AUG									
06	1330	1028	1028	172	8.0	7.6	255	23.3	E1700
27	1250	1028	1028	72	11.0	8.4	319	22.9	1230
SEP									
09	1140	1028	1028	72	8.6	7.7	333	20.1	277
22	1245	1028	1028	261	8.8	7.5	249	19.4	113

01480870 EAST BRANCH BRANDYWINE CREEK BELOW DOWNINGTOWN, PA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

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 unf µS/cm 25 degC (00095)	Temper- ature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Magnes- ium, water, fltrd, mg/L (00925)	Potas- sium, water, fltrd, mg/L (00935)	Sodium, water, fltrd, mg/L (00930)	ANC, wat unf incrm. titr., field, mg/L as CaCO3 (00419)
OCT 2002 28	1130	1028	80020	49	11.5	7.7	381	12.2	35.9	11.7	4.26	21.3	103
Date	Chlor- ide, water, fltrd, mg/L (00940)	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)	Ortho- phos- phate, water, fltrd, mg/L as P (00671)	Alum- inum, water, fltrd, µg/L (01106)	Arsenic water, fltrd, µg/L (01000)	Boron, water, fltrd, µg/L (01020)	Cadmium water, fltrd, µg/L (01025)	Chrom- ium, water, fltrd, µg/L (01030)	Copper, water, fltrd, µg/L (01040)
OCT 2002 28	33.4	12.8	27.0	.36	2.98	.051	.17	20	<2	210	<.2	<.8	3.2
		Date	Iron, water, fltrd, µg/L (01046)	Lead, water, fltrd, µg/L (01049)	Mangan- ese, water, fltrd, µg/L (01056)	Mercury water, fltrd, µg/L (71890)	Molyb- denum, water, fltrd, µg/L (01060)	Nickel, water, fltrd, µg/L (01065)	Zinc, water, fltrd, µg/L (01090)				
	00	28	56	<1	29.1	<.02	2.0	<2.0	<24				

01480870 EAST BRANCH BRANDYWINE CREEK BELOW DOWNINGTOWN, PA--Continued

BIOLOGICAL DATA BENTHIC MACROINVERTEBRATES

REMARKS.--Samples were collected using a Hess sampler with a mesh size of 500 μ m. Each sample covered a total area of 2.4 m².

Date	10/28/02
Benthic Macroinvertebrate	Count
	Count
Platyhelminthes Turbellaria (FLATWORMS)	
Tricladida	
Planariidae	129
Nemertea (PROBOSAS WORMS)	129
Enopla	
_	
Hoplonemertea Tetrastemmatidae	
	95
<u>Prostoma</u> sp Mollusca	95
Gastropoda (SNAILS)	
Basommatophora	
Ancylidae	1.6
<u>Ferrissia</u> sp	16
Physidae	1
<u>Physa</u> sp	1
Planorbidae	5
<u>Gyraulus</u> sp Mesogastropoda	5
Mesogastropoda Hydrobiidae	
<u>-</u>	1
<u>Amnicola</u> sp Bivalvia (CLAMS)	1
Veneroida	
Corbiculidae	
Corbicula fluminea	7
Sphaeriidae	/
	32
<u>Sphaerium</u> sp Annelida	32
Oligochaeta (AQUATIC EARTHWORMS)	
Lumbriculida	
Lumbriculidae	46
Tubificida	40
Naididae	3
Arthropoda	3
Acariformes	
Hydrachnidia (WATER MITES)	86
Crustacea	
Amphipoda (SCUDS)	
Gammaridae	
Gammarus sp	90
Gammar and Dp	,,,

01480870 EAST BRANCH BRANDYWINE CREEK BELOW DOWNINGTOWN, PA--Continued

BIOLOGICAL DATA BENTHIC MACROINVERTEBRATES--Continued

Date	10/28/02
Benthic Macroinvertebrate	Count
Insecta	
Ephemeroptera (MAYFLIES)	
Caenidae	
<u>Caenis</u> sp	102
Ephemerellidae sp	
Eurylophella sp	3
<u>Serratella</u> sp	40
Heptageniidae	
<u>Stenonema</u> sp	159
Isonychiidae	
<u>Isonychia</u> sp	1
Tricorythidae	
<u>Tricorythodes</u> sp	3
Odonata (DRAGONFLIES AND DAMSELFLIES)	
Aeshnidae	
<u>Boyeria</u> sp	1
Coenagrionidae	
<u>Argia</u> sp	45
Plecoptera (STONEFLIES)	
Perlidae	1
Taeniopterygidae	
<u>Taeniopteryx</u> sp	1
Trichoptera (CADDISFLIES)	
Brachycentridae	
<u>Micrasema</u> sp	9
Hydropsychidae	
<u>Cheumatopsyche</u> sp	132
<u>Hydropsyche</u> sp	290
Hydroptilidae	
<u>Hydroptila</u> sp	1
<u>Leucotrichia</u> sp	12
Lepidostomatidae	
<u>Lepidostoma</u> sp	6
Leptoceridae	
<u>Oecetis</u> sp	4
Philopotamidae	
<u>Chimarra</u> sp	56
Polycentropodidae	
<u>Polycentropus</u> sp	3
Lepidoptera (MOTHS AND BUTTERFLIES)	
Pyralidae	
<u>Petrophila</u> sp	14

01480870 EAST BRANCH BRANDYWINE CREEK BELOW DOWNINGTOWN, PA--Continued

BIOLOGICAL DATA BENTHIC MACROINVERTEBRATES--Continued

Date	10/28/02
Benthic Macroinvertebrate	Count
Coleoptera (BEETLES)	
Dryopidae	
<u>Helichus</u> sp	1
<pre>Elmidae (RIFFLE BEETLES)</pre>	
Ancyronyx sp	5
<u>Dubiraphia</u> sp	11
<u>Macronychus</u> sp	10
<u>Optioservus</u> sp	277
<u>Oulimnius</u> sp	24
<u>Stenelmis</u> sp	464
Hydrophilidae	
<u>Berosus</u> sp	7
Psephenidae (WATER PENNIES)	
<u>Psephenus</u> sp	77
Diptera (TRUE FLIES)	
Chironomidae (MIDGES)	602
Empididae (DANCE FLIES)	
<u>Hemerodromia</u> sp	6
Simuliidae	
Simulium sp	20
Tipulidae (CRANE FLIES)	
<u>Antocha</u> sp	7
Total organisms	2905
Total number of taxa	45

01480870 EAST BRANCH BRANDYWINE CREEK BELOW DOWNINGTOWN, PA--Continued

SPECIFIC CONDUCTANCE, MICROSIEMENS PER CENTIMETER AT 25° CELSIUS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	399	380	389	325	268	302	367	354	359			
2	443 473	399 400	422 449				374	359	367			
4	459	398	425	363	348	355						
5	417	392	402	362	347	353						
6	421	401	410	357	279	303						
7 8	442 454	412 430	424 439	331 357	290 322	310 337						
9	454	433	444	361	344	352						
10	449	262	407	365	341	355						
11 12				362 326	326	346						
13				526								
14				281	258	270						
15				291	278	284						
16				292	254	276						
17			210									
18 19	341 373	292 341	319 357	243 279	243	266						
20	386	350	372	277	266	270						
21 22	383 373	349 363	370 368	292 315	273 274	281 301						
23	382	367	374	313	276	297						
24	389	375	384	284	271	277						
25	387	369	380	284	276	281						
26	384	257	296	287	278	283						
27 28	368 394	298 368	333 383	322 347	276 296	303 318						
29	429	286	392	373	347	357						
30	291	241	271	375	360	367						
31	268	207	232									
MONTH	473	207	377	375	243	310	374	354	363			
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
DAY	MAX	MIN FEBRUAR		MAX	MIN MARCH	MEAN	MAX	MIN APRIL	MEAN	MAX	MIN MAY	MEAN
		FEBRUAR	Y		MARCH			APRIL			MAY	
1	MAX 			443	MARCH 345	376	MAX 288		MEAN 280	278	MAY 270	275
1 2 3		FEBRUAR	 	443 503 314	MARCH 345 314 262	376 385 273	288 	270 	280	278 298 329	MAY 270 271 298	275 278 321
1 2 3 4		FEBRUAR	 	443 503 314 289	MARCH 345 314 262 270	376 385 273 276	288 	270 	280 	278 298 329 328	MAY 270 271 298 307	275 278 321 316
1 2 3 4 5		FEBRUAR	 	443 503 314 289 377	MARCH 345 314 262 270 257	376 385 273 276 317	288 	270 	280 	278 298 329 328 324	MAY 270 271 298 307 308	275 278 321 316 318
1 2 3 4		FEBRUAR	 	443 503 314 289	MARCH 345 314 262 270	376 385 273 276	288 	270 	280 	278 298 329 328	MAY 270 271 298 307	275 278 321 316
1 2 3 4 5		FEBRUAR	Y	443 503 314 289 377 325 293 316	345 314 262 270 257 237 249 262	376 385 273 276 317 268 259 278	288 332	270 297	280 312	278 298 329 328 324 316 324 305	270 271 298 307 308 294 290 288	275 278 321 316 318 305 308 295
1 2 3 4 5 6 7 8		FEBRUAR	Y	443 503 314 289 377 325 293 316 305	345 314 262 270 257 237 249 262 193	376 385 273 276 317 268 259 278 253	288 332 297	270 297 271	280 312 286	278 298 329 328 324 316 324 305 300	270 271 298 307 308 294 290 288 287	275 278 321 316 318 305 308 295 294
1 2 3 4 5 6 7 8 9		FEBRUAR	Y	443 503 314 289 377 325 293 316 305 240	345 314 262 270 257 237 249 262 193 195	376 385 273 276 317 268 259 278 253 220	288 332 297 271	270 297 271 259	280 312 286 264	278 298 329 328 324 316 324 305 300 305	270 271 298 307 308 294 290 288 287 293	275 278 321 316 318 305 308 295 294 298
1 2 3 4 5 6 7 8 9 10		FEBRUAR	Y	443 503 314 289 377 325 293 316 305 240	MARCH 345 314 262 270 257 237 249 262 193 195	376 385 273 276 317 268 259 278 253 220	288 332 297 271	270 297 271 259	280 312 286 264	278 298 329 328 324 316 324 305 300 305	270 271 298 307 308 294 290 288 287 293	275 278 321 316 318 305 308 295 294 298
1 2 3 4 5 6 7 8 9		FEBRUAR	Y	443 503 314 289 377 325 293 316 305 240	345 314 262 270 257 237 249 262 193 195	376 385 273 276 317 268 259 278 253 220	288 332 297 271	270 297 271 259	280 312 286 264	278 298 329 328 324 316 324 305 300 305	270 271 298 307 308 294 290 288 287 293	275 278 321 316 318 305 308 295 294 298
1 2 3 4 5 6 7 8 9 10 11 12 13 14		FEBRUAR	Y	443 503 314 289 377 325 293 316 305 240 254 265 244 248	MARCH 345 314 262 270 257 237 249 262 193 195 240 238 221 234	376 385 273 276 317 268 259 278 253 220 248 258 237 243	288 332 297 271 269 243 	270 297 271 259 200 220	280 312 286 264 238 234 	278 298 329 328 324 316 324 305 300 305 309 316 321 321	270 271 298 307 308 294 290 288 287 293 299 303 306 308	275 278 321 316 318 305 308 295 294 298 304 309 312 313
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15		FEBRUAR	Y	443 503 314 289 377 325 293 316 305 240 254 265 244 248 265	345 314 262 270 257 237 249 262 193 195 240 238 221 234 232	376 385 273 276 317 268 259 278 253 220 248 258 237 243 248	288 332 297 271 269 243 276	270 297 271 259 200 220 259	280 312 286 264 238 234 268	278 298 329 328 324 316 324 305 300 305 309 316 321 322 322	270 271 298 307 308 294 290 288 287 293 299 303 306 308 294	275 278 321 316 318 305 308 295 294 298 304 309 312 313 312
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15		FEBRUAR	Y	443 503 314 289 377 325 293 316 305 240 254 265 244 248 265	MARCH 345 314 262 270 257 237 249 262 193 195 240 238 221 234 232	376 385 273 276 317 268 259 278 253 220 248 258 237 243 248	288 332 297 271 269 243 276	270 297 271 259 200 220 259 265	280 312 286 264 238 234 268	278 298 329 328 324 316 324 305 300 305 309 316 321 322 324	270 271 298 307 308 294 290 288 287 293 299 303 306 308 294	275 278 321 316 318 305 308 295 294 298 304 309 312 313 312
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15		FEBRUAR	Y	443 503 314 289 377 325 293 316 305 240 254 265 244 248 265	345 314 262 270 257 237 249 262 193 195 240 238 221 234 232	376 385 273 276 317 268 259 278 253 220 248 258 237 243 248	288 332 297 271 269 243 276	270 297 271 259 200 220 259	280 312 286 264 238 234 268	278 298 329 328 324 316 324 305 300 305 309 316 321 322 322	270 271 298 307 308 294 290 288 287 293 299 303 306 308 294	275 278 321 316 318 305 308 295 294 298 304 309 312 313 312
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18		FEBRUAR	Y	443 503 314 289 377 325 293 316 305 240 254 265 244 265 254 265	MARCH 345 314 262 270 257 237 249 262 193 195 240 238 221 234 232 228 237 239 249	376 385 273 276 317 268 259 278 253 220 248 258 237 243 248 243 248 243 243 255	288 332 297 271 269 243 276 288 281 286 306	270 297 271 259 200 220 259 265 271 276 272	280 312 286 264 238 234 268 273 275 280 283	278 298 329 328 324 316 324 305 300 305 309 316 321 322 324 333 329 336 335	270 271 298 307 308 294 290 288 287 293 299 303 306 308 294 308 296 306 302	275 278 321 316 318 305 308 295 294 298 304 309 312 313 312
1 2 3 4 5 5 6 7 8 8 9 10 11 12 13 14 15 16 17 18 19 20		FEBRUAR	Y	443 503 314 289 377 325 293 316 305 240 254 265 244 248 265 244 248 265 249 259 291	345 314 262 270 257 237 249 262 193 195 240 238 221 234 232 228 237 239 249 188	376 385 273 276 317 268 259 278 253 220 248 258 237 243 248 243 248 243 255 261	288 332 297 271 269 243 276 288 281 286 306 310	270 270 297 271 259 200 220 259 265 271 276 272 297	280 312 286 264 238 234 268 273 275 280 283 304	278 298 329 328 324 316 324 305 300 305 309 316 321 322 324 333 329 336 335 339	270 271 298 307 308 294 290 288 287 293 299 303 306 308 294 308 296 302 313	275 278 321 316 318 305 308 295 294 298 304 309 312 313 312 323 316 321 322 326
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21		FEBRUAR	Y	443 503 314 289 377 325 293 316 305 240 254 265 244 268 265 254 269 279 291 231	MARCH 345 314 262 270 257 237 249 262 193 195 240 238 221 234 232 228 237 239 249 188	376 385 273 276 317 268 259 278 253 220 248 258 237 243 248 243 248 243 243 255 261	288 332 297 271 269 243 276 288 281 306 310	270 297 271 259 200 220 259 265 271 276 272 297 298	280 312 286 264 238 234 268 273 275 280 283 304	278 298 329 328 324 316 324 305 300 305 309 316 321 322 324 333 329 336 335 339	270 271 298 307 308 294 290 288 287 293 306 308 294 308 294 308 306 302 313	275 278 321 316 318 305 308 295 294 298 304 309 312 313 312 323 316 321 322 326
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22		FEBRUAR	Y	443 503 314 289 377 325 293 316 305 240 254 265 244 265 254 265 259 259 259 259 259 259 259 259 259 25	MARCH 345 314 262 270 257 237 249 262 193 195 240 238 221 234 232 228 237 239 249 188 186 225	376 385 273 276 317 268 259 278 253 220 248 258 237 243 248 243 248 243 255 261	288 332 297 271 269 243 276 288 281 286 306 310	270 297 271 259 200 220 259 265 271 276 272 297 298 289	280 312 286 264 238 234 268 273 275 280 283 304	278 298 329 328 324 316 324 305 300 305 309 316 321 322 324 333 329 336 335 339	270 271 298 307 308 294 290 288 287 293 303 306 308 294 308 294 308 296 306 308 291 308 298	275 278 321 316 318 305 308 295 294 298 304 309 312 313 312 323 316 321 322 326
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24		FEBRUAR	Y	443 503 314 289 377 325 293 316 305 240 254 265 244 265 254 265 254 265 249 279 291 231 234 243	MARCH 345 314 262 270 257 237 249 262 193 195 240 238 221 234 232 228 237 239 249 188 186 225 232 238	376 385 273 276 317 268 259 278 253 220 248 258 237 243 248 243 248 243 243 255 261 212 231 240	288 332 297 271 269 243 276 288 281 286 310 308 300 304 304 308	270 297 271 259 200 220 259 265 271 276 272 297 298 289 297 296	280 312 286 264 238 234 268 273 275 280 283 304 302 296 300 304	278 298 329 328 324 316 324 305 300 305 309 316 321 322 324 333 329 336 335 339	270 271 298 307 308 294 290 288 287 293 306 308 294 308 294 308 294 308 294 308 294 308 294 308 294	275 278 321 316 318 305 308 295 294 298 304 309 312 313 316 321 322 326 311 306 311 306 312 298
1 2 3 3 4 5 5 6 7 8 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23		FEBRUAR	Y	443 503 314 289 377 325 293 316 305 240 254 265 244 248 265 249 259 291 231 231 234 239	MARCH 345 314 262 270 257 237 249 262 193 195 240 238 221 234 232 228 237 239 249 188	376 385 273 276 317 268 259 278 253 220 248 258 237 248 243 248 243 248 243 255 261	288 332 297 271 269 243 276 288 281 286 306 310 308 300 304 308 319	270 297 271 259 200 220 259 265 271 276 272 297 298 289 297	280 312 286 264 238 234 268 273 275 280 283 304 302 296 300	278 298 329 328 324 316 324 305 300 305 309 316 321 322 324 333 329 336 335 339	270 271 298 307 308 294 290 288 287 293 299 303 306 308 294 308 294 308 295	275 278 321 316 318 305 308 295 294 298 304 309 312 313 312 323 316 321 322 326 311 306 312
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26		FEBRUAR	Y	443 503 314 289 377 325 293 316 305 240 254 265 244 265 249 259 291 231 234 239 243 260	MARCH 345 314 262 270 257 237 249 262 193 195 240 238 221 234 232 228 237 239 249 188 186 225 238 243 257	376 385 273 276 317 268 259 278 253 220 248 258 237 243 248 243 248 243 248 243 248 243 248 243 249 263	288 332 297 271 269 243 276 288 281 286 310 308 300 304 308 319	270 297 271 259 200 220 259 265 271 276 272 297 298 289 297 298 289 297 296 299	280 312 286 264 238 234 268 273 275 280 283 304 302 296 300 304 309 288	278 298 329 328 324 316 324 305 300 305 309 316 321 322 324 333 329 336 335 339 323 318 321 316 302 276	270 271 298 307 308 294 290 288 287 293 306 308 294 308 294 308 294 308 294 308 294 307 308 294 307 308 294 307 308 294 307 307 308 307 307 308 307 308 307 308 307 308 307 308 307 308 307 308 307 308 307 308 308 308 309 309 309 309 309 309 309 309 309 309	275 278 321 316 318 305 308 295 294 298 304 309 312 313 316 321 322 326 311 306 311 306 312 298 288
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27		FEBRUAR	Y	443 503 314 289 377 325 293 316 305 240 254 265 244 265 229 291 231 234 239 243 260 278 275	MARCH 345 314 262 270 257 237 249 262 193 195 240 238 221 234 232 228 237 239 249 188 186 225 232 238 243	376 385 273 276 317 268 259 278 253 220 248 258 237 243 248 243 248 243 248 243 248 243 248 243 248 243 255 261 212 231 235 240 249 263 259	288 332 297 271 269 243 276 288 281 286 306 310 308 309 304 308 319	270 271 259 200 220 259 265 271 276 277 278 297 298 289 297 298 289 297 298 289 297 298 289 297 298 289 297	280 312 286 264 238 234 268 275 280 283 304 302 296 300 304 309	278 298 329 328 324 316 324 305 300 305 309 316 321 322 324 333 329 336 335 339 321 321 322 324 336 337 329 336 337 329 338 329 329 329 329 329 329 329 329 329 329	270 271 298 307 308 294 290 288 287 293 303 306 308 294 308 294 308 294 308 294 308 294 4 308 294 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	275 278 321 316 318 305 308 295 294 298 304 309 312 313 312 323 316 321 322 326 311 306 312 298 288
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29		FEBRUAR	Y	443 503 314 289 377 325 293 316 305 240 254 265 244 265 254 265 254 265 279 291 231 234 239 243 260	MARCH 345 314 262 270 257 237 249 262 193 195 240 238 221 234 232 228 237 239 249 188 186 225 238 243 257 250 257 248	376 385 273 276 317 268 259 278 253 220 248 258 237 243 248 243 248 243 248 243 248 243 255 261 212 231 235 240 249 263 259 262 261	288 332 297 271 269 243 276 288 281 286 310 308 300 304 308 319 299 288 281 297 277 277 277 277 277 277 277 277 277	270 297 271 259 200 220 259 265 271 276 272 297 298 289 297 298 289 297 296 299 272 261 265 263	280 312 286 264 238 234 268 273 275 280 283 304 302 296 300 304 309 288 278 288 268 268	278 298 329 328 324 316 324 305 300 305 309 316 321 322 324 333 329 336 335 339 323 318 321 316 302 276 246 246 255 279	270 271 298 307 308 294 299 288 287 293 306 308 294 308 294 308 294 308 294 308 294 313 303 288 295 284 274	275 278 321 316 318 305 308 295 294 298 304 309 312 313 312 323 326 321 322 326 311 306 312 298 288
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30		FEBRUAR	Y	443 503 314 289 377 325 293 316 305 240 254 265 244 265 229 291 231 234 239 243 243 243 260 278 275 266 267 280	MARCH 345 314 262 270 257 237 249 262 193 195 240 238 221 234 232 228 237 239 249 188 186 225 232 238 243 257 250 257 248 262	376 385 273 276 317 268 259 278 253 220 248 258 237 243 248 243 248 243 248 243 248 243 248 243 255 261 212 231 235 240 249 263 259 2662 261 269	288 332 297 271 269 243 276 288 281 286 300 304 308 309 309 319 299 288 272 274 276	270 271 259 200 220 259 265 271 276 272 297 298 289 297 298 289 297 298 289 297 298 289 297 298 289 297 298 289 297	280 312 286 264 238 234 268 275 280 275 280 304 302 296 300 304 309 288 278 268 278 268 278 268 268	278 298 329 328 324 316 324 305 300 305 309 316 321 322 324 333 329 336 335 339 323 318 321 316 302 276 246 255 279 289	270 271 298 307 308 294 290 288 287 293 303 306 308 294 308 294 308 294 308 294 308 294 308 294 308 294 308 294 308 294 308 294 307 308 308 308 308 308 308 308 308 308 308	275 278 321 316 318 305 308 295 294 298 304 309 312 313 316 321 322 326 311 306 312 298 288
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29		FEBRUAR	Y	443 503 314 289 377 325 293 316 305 240 254 265 244 265 254 265 254 265 279 291 231 234 239 243 260	MARCH 345 314 262 270 257 237 249 262 193 195 240 238 221 234 232 228 237 239 249 188 186 225 238 243 257 250 257 248	376 385 273 276 317 268 259 278 253 220 248 258 237 243 248 243 248 243 248 243 248 243 255 261 212 231 235 240 249 263 259 262 261	288 332 297 271 269 243 276 288 281 286 310 308 300 304 308 319 299 288 281 297 277 277 277 277 277 277 277 277 277	270 297 271 259 200 220 259 265 271 276 272 297 298 289 297 298 289 297 298 289 297 296 299 272 261 265 263	280 312 286 264 238 234 268 273 275 280 283 304 302 296 300 304 309 288 278 288 268 268	278 298 329 328 324 316 324 305 300 305 309 316 321 322 324 333 329 336 335 339 323 318 321 316 302 276 246 246 255 279	270 271 298 307 308 294 299 288 287 293 306 308 294 308 294 308 294 308 294 308 294 313 303 288 295 284 274	275 278 321 316 318 305 308 295 294 298 304 309 312 313 312 323 326 321 322 326 311 306 312 298 288

01480870 EAST BRANCH BRANDYWINE CREEK BELOW DOWNINGTOWN, PA--Continued

SPECIFIC CONDUCTANCE, MICROSIEMENS PER CENTIMETER AT 25° CELSIUS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST		S	EPTEMBE	R
1 2	279 264	191 215	221 242	290 288	277 273	282 282	327 314	265 262	321 289	335 325	318	327
3	281	257	268	288	273	282	314	202	289	325 272	254	262
4	265	137	180	289	280	285	267	151	215	265	204	234
5	225	168	201	291	281	286	270	193	239			
6	238	225	233	290	283	286	267	213	245			
7	240	180	223	289	267	284	278	258	270			
8	237	184	216	285	267	277	266	255	260			
9	241	232	237	301	280	287	271	207	250	333	316	327
10	245	234	238	295	282	288	238	115	161			
11	266	234	244	296	287	291	246	212	236	348	334	339
12	281	254	265	293	271	288	265	240	254	345	334	340
13	287	150	256	297	268	285	269	258	265	341	193	300
14	239	154	203	299	283	292	269	259	262			
15	252	189	233	297	285	290	297	269	273			
16	252	237	245	303	292	297	301	283	291			
17	282	245	260	303	296	300	304	292	296	225	215	220
18	281	243	255	306	297	302	306	292	299	251	218	231
19	278	255	271	311	298	304	298	288	291	239	172	194
20	278	97	217	316	302	309				256	219	240
21	168	101	144	315	297	306				260	239	253
22	214	168	188	312	294	303				249	238	244
23	225	214	220	303	267	281				262		
24	229	217	223	301	278	286						
25	234	227	231	313	295	301						
26	274	233	246	317	298	304						
27	276	270	273	316	300	307	331	319	327			
28	280	272	276	321	311	315	351	326	335			
29	281	276	279	319	306	311	354	334	345			
30	280	276	278	322	300	310	348	188	293			
31				324	305	316	327	239	303			
MONTH	287	97	236	324	267	295	354	115	275	348	172	270

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN I	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN
		OCTOBER		N	OVEMBER	t .	I	DECEMBE	R		JANUAR	Y
1 2 3 4 5	8.0 8.0 7.9 7.6 7.7	7.5 7.4 7.2 7.2 7.2 7.3	7.7 7.6 7.5 7.4 7.3	7.6 7.6 7.6 7.6 7.7	7.4 7.4 7.4	7.4 7.5 7.5	7.6 7.6 	7.4 7.4 	7.4 7.4 	 		
7 8 9 10	8.1 8.3 8.2 7.8	7.5 7.5 7.6 7.4	7.5 7.8 7.8 7.6	7.6 7.8 7.7 7.5	7.4 7.5 7.4 7.2	7.5 7.6 7.5 7.4	 			 		
11 12 13 14 15				7.2 7.5 7.5	7.1 7.2 7.2	7.1 7.3 7.2			 			
16 17 18 19 20	 7.7 7.8 7.7	 7.4 7.5 7.4	7.5 7.6 7.5	7.3 7.5 7.5	7.2 7.3 7.2	7.2 7.3 7.3	====		 	 	 	
21 22 23 24 25	7.6 7.7 7.8 7.7 7.7	7.4 7.4 7.5 7.5 7.5	7.5 7.5 7.5 7.6 7.6	7.5 7.3 7.5 7.5 7.5	7.2 7.2 7.2 7.2 7.2	7.3 7.2 7.3 7.3	 			 		
26 27 28 29 30 31	7.5 7.4 7.3 7.6 7.6 7.5	7.1 7.1 7.1 7.3 7.4 7.3	7.3 7.2 7.3 7.5 7.5 7.4	7.4 7.4 7.6 7.6 7.5	7.2 7.2 7.3 7.4 7.4	7.2 7.3 7.4 7.4 7.4	 	 	 	 		
MAX MIN	8.3 7.3	7.6 7.1	7.8 7.2	7.8 7.2	7.5 7.1	7.6 7.1	7.6 7.6	7.4 7.4	7.4 7.4			

01480870 EAST BRANCH BRANDYWINE CREEK BELOW DOWNINGTOWN, PA--Continued

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN
		FEBRUA	RY		MARCH			APRIL			MAY	
1 2 3 4 5	 	 	 	7.7 7.6 7.6 7.7 7.7	7.5 7.4 7.4 7.4 7.4	7.6 7.5 7.5 7.5 7.5	8.4 8.5 8.7 8.2 8.5	7.4 7.1 7.1 7.3 7.4	7.6 7.5 7.6 7.5 7.6	8.5 8.5 8.6 8.7 8.2	7.4 7.3 7.3 7.4 7.4	7.5 7.5 7.6 7.5
6 7 8 9	 		 	7.4 7.5 7.7 7.7	7.4 7.4 7.5 7.4	7.4 7.5 7.5 7.5	8.9 8.4 8.3 8.3	7.4 7.4 7.5 7.5	7.9 7.6 7.6 7.6	8.2 8.6 8.0 7.6	7.4 7.3 7.2 7.3	7.5 7.5 7.4 7.4
10 11 12 13 14 15	 		 	7.6 7.7 7.8 7.7 7.6 7.6	7.4 7.5 7.4 7.4 7.3 7.3	7.5 7.6 7.4 7.4 7.4	8.8 7.6 8.0 8.9	7.4 7.4 7.4 7.4	7.7 7.4 7.5 7.7	7.9 7.8 8.0 8.1 8.0	7.3 7.3 7.3 7.3 7.3 7.5	7.4 7.4 7.5 7.6 7.7
16 17 18 19 20				7.7 7.6 7.7 7.7 7.6	7.3 7.2 7.2 7.2 7.2	7.4 7.3 7.3 7.4 7.3	9.0 8.8 8.0 8.8 8.7	7.3 7.3 7.4 7.4 7.4	7.7 7.8 7.6 7.7	7.6 7.4 7.6 7.8 7.7	7.3 7.2 7.2 7.3 7.2	7.5 7.3 7.4 7.4 7.3
21 22 23 24 25	 		 	7.3 7.5 7.7 7.8 7.9	7.2 7.2 7.3 7.3 7.3	7.2 7.3 7.4 7.4 7.4	8.5 8.0 8.3 8.1 8.2	7.4 7.4 7.4 7.5 7.4	7.7 7.6 7.6 7.6 7.6	7.5 7.5 7.6 7.5 7.4	7.2 7.3 7.3 7.3 7.3	7.3 7.4 7.4 7.3 7.3
26 27 28 29 30 31	 7.6 7.7 	7.5 7.5 	7.5 7.6 	8.0 8.2 8.1 8.1 7.8 8.3	7.3 7.3 7.3 7.2 7.2	7.4 7.5 7.4 7.3 7.4 7.6	7.7 8.1 8.1 8.0 8.2	7.4 7.4 7.4 7.3 7.3	7.5 7.5 7.5 7.5 7.5	7.3 7.3 7.3 7.4 7.4	7.0 7.1 7.2 7.2 7.2 7.2	7.1 7.2 7.2 7.3 7.3
MAX MIN	7.7 7.6	7.5 7.5	7.6 7.5	8.3 7.3	7.5 7.2	7.6 7.2	9.0 7.6	7.5 7.1	7.9 7.4	8.7 7.3	7.5 7.0	7.7 7.1
DAY	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN
DAY	MAX	MIN JUNE	MEDIAN	MAX	MIN JULY	MEDIAN	MAX	MIN AUGUST		MAX	MIN SEPTEMB	
DAY 1 2 3 4 5	7.3 7.4 7.4 7.3 7.4		7.2 7.3 7.3 7.1 7.2	7.7 8.0 7.7 8.0 8.0		7.4 7.5 7.4 7.5 7.5	7.7 7.7 7.7 7.7 7.3 7.4			7.7 7.4 7.5 7.3		
1 2 3 4	7.3 7.4 7.4 7.3	7.2 7.2 7.2 7.2 7.0	7.2 7.3 7.3 7.1	7.7 8.0 7.7 8.0	7.3 7.3 7.3 7.3	7.4 7.5 7.4 7.5	7.7 7.7 7.7 7.3	7.3 7.2 7.3 7.2	7.4 7.4 7.3 7.3	7.7 7.4 7.5 7.3	7.4 7.3 7.3 7.2	7.4 7.4 7.4 7.3
1 2 3 4 5 6 7 8	7.3 7.4 7.4 7.3 7.4 7.5 7.3 7.4	7.2 7.2 7.2 7.0 7.1 7.3 7.3 7.3	7.2 7.3 7.3 7.1 7.2 7.4 7.3 7.3	7.7 8.0 7.7 8.0 8.0 7.8 7.8 7.8 7.7	7.3 7.3 7.3 7.3 7.3 7.3 7.3 7.3 7.3	7.4 7.5 7.4 7.5 7.5 7.4 7.4 7.4	7.7 7.7 7.7 7.3 7.4 7.6 7.6 7.6	7.3 7.2 7.3 7.2 7.2 7.2 7.2 7.4 7.4 7.3	7.4 7.4 7.3 7.3 7.3 7.3 7.5 7.4	7.7 7.4 7.5 7.3 7.8	7.4 7.3 7.3 7.2 	7.4 7.4 7.4 7.3
1 2 3 4 5 6 7 8 9 10 11 12 13 14	7.3 7.4 7.3 7.4 7.5 7.3 7.4 7.4 7.5 7.4	7.2 7.2 7.2 7.0 7.1 7.3 7.3 7.3 7.3 7.3 7.3	7.2 7.3 7.3 7.1 7.2 7.4 7.3 7.4 7.3 7.4 7.3	7.7 8.0 7.8 9.0 7.8 7.7 7.6 7.5 7.6 7.6 7.6	7.3 7.3 7.3 7.3 7.3 7.3 7.3 7.3 7.3 7.3	7.4 7.5 7.4 7.5 7.5 7.4 7.4 7.4 7.4 7.4 7.4	7.7 7.7 7.7 7.3 7.4 7.6 7.6 7.4 7.3 7.4 7.4	7.3 7.2 7.2 7.2 7.2 7.4 7.4 7.3 7.1	7.4 7.4 7.3 7.3 7.3 7.5 7.4 7.3 7.1	7.7 7.4 7.5 7.3 7.8 7.9 8.0 7.6	7.4 7.3 7.3 7.2 7.4 7.4 7.4 7.2	7.4 7.4 7.4 7.3 7.6 7.6 7.6
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	7.3 7.4 7.3 7.4 7.3 7.4 7.5 7.3 7.4 7.4 7.5 7.4 7.4 7.4 7.4 7.6 7.6	7.2 7.2 7.2 7.0 7.1 7.3 7.3 7.3 7.3 7.3 7.3 7.3 7.3 7.3 7.3	7.2 7.3 7.3 7.1 7.2 7.4 7.3 7.4 7.3 7.4 7.3 7.3 7.3 7.3 7.3	7.7 8.0 7.8 7.8 7.8 7.6 7.6 7.6 7.6 7.6 7.7	JULY 7.3 7.3 7.3 7.3 7.3 7.3 7.3 7.3 7.3 7.3	7.4 7.5 7.4 7.5 7.5 7.4 7.4 7.4 7.4 7.4 7.4 7.5 7.5 7.5	7.7 7.7 7.7 7.3 7.4 7.6 7.6 7.6 7.4 7.3 7.4 7.4 7.4 7.4 7.5 7.6	7.3 7.2 7.2 7.2 7.2 7.4 7.3 7.1 7.2 7.3 7.3 7.3 7.3 7.3	7.4 7.4 7.3 7.3 7.3 7.5 7.4 7.3 7.3 7.3 7.3 7.3 7.3 7.3	7.7 7.4 7.5 7.3 7.8 7.9 8.0 7.6 7.2 7.2	7.4 7.3 7.3 7.2 7.4 7.4 7.4 7.4 7.2 7.0 7.0 7.1	7.4 7.4 7.3 7.6 7.6 7.6 7.6 7.6 7.6
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24	7.3 7.4 7.3 7.4 7.3 7.4 7.5 7.3 7.4 7.4 7.4 7.4 7.4 7.6 7.6 7.5 7.2 7.2	7.2 7.2 7.2 7.0 7.1 7.3 7.3 7.3 7.3 7.3 7.3 7.3 7.1 7.2 7.3 7.3 7.3 7.1 7.2 7.3 7.3 7.3 7.1 7.1 7.2 7.1 7.1 7.1	7.2 7.3 7.3 7.1 7.2 7.4 7.3 7.4 7.3 7.3 7.3 7.3 7.3 7.4 7.3 7.3 7.4 7.4 7.4 7.4 7.4	7.7 8.0 8.0 7.8 7.8 7.6 7.6 7.6 7.6 7.6 7.7 7.8 7.8 7.7	JULY 7.3 7.3 7.3 7.3 7.3 7.3 7.3 7.3 7.3 7.3	7.4 7.5 7.5 7.5 7.4 7.4 7.4 7.4 7.4 7.4 7.5 7.5 7.5 7.5 7.5 7.5	7.7 7.7 7.7 7.3 7.4 7.6 7.6 7.4 7.3 7.4 7.4 7.4 7.5 7.7 7.7	7.3 7.2 7.2 7.4 7.3 7.1 7.2 7.3 7.1 7.2 7.3 7.1 7.2 7.3 7.1 7.2 7.3 7.3 7.3 7.3 7.4 7.4 7.4 7.5	7.4 7.4 7.3 7.3 7.3 7.5 7.4 7.3 7.3 7.3 7.3 7.3 7.3 7.5 7.5	7.7 7.4 7.5 7.3 7.8 7.9 8.0 7.6 7.2 7.2 7.2 7.3	7.4 7.3 7.2 7.4 7.4 7.4 7.4 7.2 7.4 7.2 7.2 7.0 7.0 7.1 7.2 7.2 7.3	7.4 7.4 7.4 7.3 7.6 7.6 7.6 7.7 7.7 7.6 7.7 7.7 7.0 7.2 7.3 7.3 7.3 7.3

01480870 EAST BRANCH BRANDYWINE CREEK BELOW DOWNINGTOWN, PA--Continued

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

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1 2	21.0 22.5	17.0 18.5	18.5 20.0	9.0 9.0	7.0 7.0	8.0	5.5 4.5	3.5	4.5			
3	23.0	19.5	21.0	9.0	7.0							
4 5	21.5 23.5	20.5 20.5	21.0 21.5	9.5 9.5	7.5 7.5	8.5 8.5						
6	20.5	17.5	19.0	10.0	9.0	9.5						
7 8	21.5 18.0	18.0 15.5	19.5 17.0	10.5 10.0	8.5 7.5	9.0 8.5						
9 10	17.0 17.5	14.5 16.5	16.0 17.0	11.5 14.0	8.5 10.5	10.0 12.0						
					14.0							
11 12				16.5 16.0		15.5						
13 14				11.5 10.5	8.5	9.5						
15				11.0	9.0	10.0						
16	14.0	13.0	13.5	10.0	9.0	10.0						
17 18	13.5 14.0	12.0	13.0	8.5								
19	13.0	11.0	12.0	8.5	6.5	7.5						
20	14.0	13.0	13.5	9.0	7.0	8.0						
21 22	14.5 13.5	12.0 10.5	13.0 12.0	9.0 9.5	7.5 9.0	8.0 9.5						
23 24	13.0 12.0	10.5 11.0	12.0 11.5	9.0 8.5	7.0 7.0	8.0 7.5						
25	11.5	10.5	11.0	9.0	6.5	7.5						
26	12.5	11.0	11.5	9.0	7.5	8.5						
27 28	13.0 12.5	11.0 11.0	12.0 12.0	8.0 6.0	6.0 5.0	7.0 5.5						
29	11.0	8.5	10.0	5.0	4.0	4.5						
30 31	8.5 8.5	7.5 7.0	8.0 8.0	6.0	4.5	5.5						
MONTH	23.5	7.0	14.5	16.5	4.0	8.6	5.5	3.0	4.2			
MONTH	23.3	7.0	14.5	10.5	4.0	0.0	3.3	3.0	7.2			
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
DAY	MAX	MIN FEBRUAR		MAX	MIN MARCH	MEAN	MAX	MIN APRIL	MEAN	MAX	MIN MAY	MEAN
1	MAX			4.5		4.5	MAX 8.0		MEAN	MAX 18.0		16.0
1 2		FEBRUAR	Y	4.5 5.5	MARCH 4.0 3.5	4.5 4.5	8.0 13.0	APRIL 6.0 7.5	7.5 10.5	18.0 18.0	MAY 13.5 15.0	16.0 16.5
1 2 3 4		FEBRUAR	 	4.5 5.5 3.5 4.0	MARCH 4.0 3.5 1.5	4.5 4.5 2.5 2.5	8.0 13.0 13.0 12.0	6.0 7.5 10.0 9.0	7.5 10.5 11.5 10.0	18.0 18.0 18.0 16.0	MAY 13.5 15.0 15.0 14.5	16.0 16.5 16.5 15.0
1 2 3 4 5		FEBRUAR	 	4.5 5.5 3.5	MARCH 4.0 3.5 1.5 1.0 3.5	4.5 4.5 2.5 2.5 4.5	8.0 13.0 13.0	6.0 7.5 10.0	7.5 10.5 11.5 10.0 9.0	18.0 18.0 18.0 16.0 14.5	MAY 13.5 15.0 15.0	16.0 16.5 16.5 15.0 13.0
1 2 3 4 5		FEBRUAR	 	4.5 5.5 3.5 4.0 6.5	MARCH 4.0 3.5 1.5 1.0 3.5	4.5 4.5 2.5 2.5 4.5	8.0 13.0 13.0 12.0 9.5	6.0 7.5 10.0 9.0 8.5	7.5 10.5 11.5 10.0 9.0	18.0 18.0 18.0 16.0 14.5	MAY 13.5 15.0 15.0 14.5 12.0	16.0 16.5 16.5 15.0 13.0
1 2 3 4 5	 	FEBRUAR	 	4.5 5.5 3.5 4.0 6.5 4.0 4.5 6.0	MARCH 4.0 3.5 1.5 1.0 3.5 2.0 1.5 2.5	4.5 4.5 2.5 2.5 4.5 3.0 3.0 4.5	8.0 13.0 13.0 12.0 9.5 11.5 10.0 6.5	6.0 7.5 10.0 9.0 8.5 7.5 6.5 6.0	7.5 10.5 11.5 10.0 9.0 9.5 8.0 6.5	18.0 18.0 18.0 16.0 14.5 13.5 18.5	MAY 13.5 15.0 15.0 14.5 12.0 12.0 13.0 16.5	16.0 16.5 16.5 15.0 13.0
1 2 3 4 5		FEBRUAR	 	4.5 5.5 3.5 4.0 6.5 4.0	MARCH 4.0 3.5 1.5 1.0 3.5	4.5 4.5 2.5 2.5 4.5	8.0 13.0 13.0 12.0 9.5	APRIL 6.0 7.5 10.0 9.0 8.5 7.5 6.5	7.5 10.5 11.5 10.0 9.0 9.5 8.0	18.0 18.0 18.0 16.0 14.5	MAY 13.5 15.0 15.0 14.5 12.0 12.0 13.0	16.0 16.5 16.5 15.0 13.0
1 2 3 4 5 6 7 8		FEBRUAR	 	4.5 5.5 3.5 4.0 6.5 4.0 4.5 6.0	### ### ### ### ### ### ### #### #### ####	4.5 4.5 2.5 2.5 4.5 3.0 4.5 5.0	8.0 13.0 13.0 12.0 9.5 11.5 10.0 6.5 7.0	6.0 7.5 10.0 9.0 8.5 7.5 6.5 6.0 6.5	7.5 10.5 11.5 10.0 9.0 9.5 8.0 6.5 6.5	18.0 18.0 18.0 16.0 14.5 13.5 18.5 17.5	MAY 13.5 15.0 15.0 14.5 12.0 12.0 13.0 16.5 15.0	16.0 16.5 16.5 15.0 13.0 12.5 15.5 17.0 15.5
1 2 3 4 5 6 7 8 9 10		FEBRUAR	Y	4.5 5.5 3.5 4.0 6.5 4.0 4.5 6.0 7.0 4.5 4.5	### ### ### ### ### ### ### ### #### ####	4.5 4.5 2.5 2.5 4.5 3.0 4.5 5.0 3.0	8.0 13.0 12.0 9.5 11.5 10.0 6.5 7.0 8.5	APRIL 6.0 7.5 10.0 9.0 8.5 7.5 6.5 6.5 6.5 7.0 7.5	7.5 10.5 11.5 10.0 9.0 9.5 8.0 6.5 7.5 7.5	18.0 18.0 16.0 14.5 13.5 18.5 17.5 16.5 16.0	MAY 13.5 15.0 15.0 14.5 12.0 12.0 13.0 16.5 15.0 14.0	16.0 16.5 16.5 15.0 13.0 12.5 15.5 17.0 15.5 15.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14		FEBRUAR		4.5 5.5 3.5 4.0 6.5 4.0 7.0 4.5 6.5 7.0 6.5	### ### ### ### ### ### ### ### #### ####	4.5 4.5 2.5 2.5 4.5 3.0 4.5 5.0 3.0 3.0	8.0 13.0 13.0 12.0 9.5 11.5 10.0 6.5 7.0 8.5	6.0 7.5 10.0 9.0 8.5 7.5 6.5 6.5 6.5 7.0 7.5	7.5 10.5 11.5 10.0 9.0 9.5 8.0 6.5 7.5 7.5	18.0 18.0 16.0 14.5 13.5 18.5 16.5 16.5 16.5 15.5	MAY 13.5 15.0 15.0 14.5 12.0 12.0 13.0 16.5 15.0 14.0 16.0 15.5 14.0 13.0	16.0 16.5 16.5 15.0 13.0 12.5 15.5 17.0 15.5 15.0
1 2 3 4 5 6 7 8 9 10		FEBRUAR	Y	4.5 5.5 3.5 4.0 6.5 4.0 4.5 6.0 7.0 4.5 6.5 7.0	### ### ### ### ### #### #### ########	4.5 4.5 2.5 2.5 4.5 3.0 4.5 5.0 3.0	8.0 13.0 13.0 12.0 9.5 11.5 10.0 6.5 7.0 8.5	APRIL 6.0 7.5 10.0 9.0 8.5 7.5 6.5 6.5 6.5 7.0 7.5	7.5 10.5 11.5 10.0 9.0 9.5 8.0 6.5 7.5 7.5	18.0 18.0 18.0 16.0 14.5 13.5 18.5 17.5 16.0 18.0 17.5	MAY 13.5 15.0 15.0 14.5 12.0 12.0 13.0 16.5 15.0 14.0 16.0 15.5 14.0	16.0 16.5 16.5 15.0 13.0 12.5 17.0 15.5 17.0 16.5 16.5 14.5
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15		FEBRUAR		4.5 5.5 3.5 4.0 6.5 4.0 4.5 6.0 7.0 4.5 4.5 7.0 6.5 7.0	### ### ### ### ### ### ### ### ### ##	4.5 4.5 2.5 2.5 4.5 3.0 4.5 5.0 3.0 5.5 5.0 7.0	8.0 13.0 13.0 12.0 9.5 11.5 10.0 6.5 7.0 8.5 12.5 15.5	APRIL 6.0 7.5 10.0 9.0 8.5 7.5 6.5 6.5 6.5 7.0 7.5 10.0 12.0	7.5 10.5 11.5 10.0 9.0 9.5 8.0 6.5 7.5 7.5 9.5 12.5	18.0 18.0 16.0 14.5 13.5 18.5 16.5 16.5 16.5 15.5 15.5 15.5	MAY 13.5 15.0 15.0 14.5 12.0 12.0 13.0 16.5 15.0 14.0 16.0 15.5 14.0 13.0 13.0 13.0	16.0 16.5 16.5 15.0 13.0 12.5 15.5 17.0 15.5 15.0 16.5 14.5 14.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15		FEBRUAR	Y	4.5 5.5 3.5 4.0 6.5 4.0 4.5 6.0 7.0 4.5 6.5 7.0 6.5 7.0 6.5	### ### ### ### ### ### ### ### ### ##	4.5 4.5 2.5 2.5 4.5 3.0 4.5 5.0 3.0 5.5 5.5 7.0 9.0	8.0 13.0 13.0 12.0 9.5 11.5 10.0 6.5 7.0 8.5 12.5 15.5	APRIL 6.0 7.5 10.0 9.0 8.5 7.5 6.5 6.5 6.5 7.0 7.5 10.0 12.0 10.0 9.0	7.5 10.5 11.5 10.0 9.0 9.5 8.0 6.5 7.5 7.5 9.5 12.5 14.5 12.5 9.5	18.0 18.0 18.0 16.0 14.5 13.5 18.5 17.5 16.5 16.5 15.5 15.5 15.5 15.5	13.5 15.0 15.0 14.5 12.0 12.0 13.0 16.5 15.0 14.0 16.0 13.0 13.0 13.5 14.0	16.0 16.5 16.5 15.0 13.0 12.5 15.5 17.0 16.5 14.5 14.0 14.5
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15		FEBRUAR		4.5 5.5 3.5 4.0 6.5 4.0 4.5 6.0 7.0 4.5 6.5 7.0 6.5	### ### ### ### ### ### ### ### ### ##	4.5 4.5 2.5 2.5 4.5 3.0 4.5 5.0 3.0 5.0 5.5 7.0	8.0 13.0 12.0 9.5 11.5 10.0 6.5 7.0 8.5 12.5 15.5	APRIL 6.0 7.5 10.0 9.0 8.5 7.5 6.5 6.5 6.5 7.0 7.5 10.0 12.0 10.0	7.5 10.5 11.5 10.0 9.0 9.5 8.0 6.5 7.5 7.5 9.5 12.5	18.0 18.0 16.0 14.5 13.5 18.5 17.5 16.0 18.0 17.5 15.5 15.5 15.5	MAY 13.5 15.0 15.0 14.5 12.0 12.0 13.0 16.5 15.0 14.0 16.0 13.0 13.0 13.5 14.0	16.0 16.5 16.5 15.0 13.0 12.5 15.5 17.0 15.5 14.5 14.5 14.0 13.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20		FEBRUAR		4.5 5.5 3.5 4.0 6.5 4.0 4.5 6.0 7.0 4.5 7.0 6.5 7.0 6.5 7.0 6.5	### ### ### ### ### ### ### ### ### ##	4.5 4.5 2.5 2.5 4.5 3.0 4.5 3.0 4.5 5.0 3.0 5.5 5.5 7.0 9.0 8.0 6.5	8.0 13.0 13.0 12.0 9.5 11.5 10.0 6.5 7.0 8.5 12.5 15.5 17.0 15.5 10.0 14.0	APRIL 6.0 7.5 10.0 9.0 8.5 7.5 6.5 6.5 6.5 7.0 7.5 10.0 12.0 10.0 9.0 9.0 10.5	7.5 10.5 11.5 10.0 9.0 9.5 8.0 6.5 7.5 7.5 9.5 12.5 14.5 12.5 9.5 11.0	18.0 18.0 18.0 16.0 14.5 13.5 18.5 17.5 16.5 16.0 18.0 17.5 15.5 15.5 15.5 15.5 15.0 14.0 13.5 17.0 18.5	13.5 15.0 15.0 14.5 12.0 12.0 13.0 16.5 15.0 14.0 16.0 13.0 13.0 13.5 14.0 13.0 13.5	16.0 16.5 16.5 15.0 13.0 12.5 15.5 17.0 16.5 14.5 14.5 14.0 13.0 14.0 16.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22		FEBRUAR		4.5 5.5 3.5 4.0 6.5 4.0 4.5 6.0 7.0 4.5 6.5 7.0 9.0 9.5 10.5 9.5	### ### ### ### ### ### ### ### ### ##	4.5 4.5 2.5 2.5 4.5 3.0 4.5 3.0 4.5 5.0 5.0 5.0 5.0 9.0 8.0 6.5	8.0 13.0 12.0 9.5 11.5 10.0 6.5 7.0 8.5 12.5 15.5 17.0 15.5 10.0 14.0 15.5	APRIL 6.0 7.5 10.0 9.0 8.5 7.5 6.5 6.5 6.5 7.0 7.5 10.0 12.0 10.0 9.0 9.0 10.5	7.5 10.5 11.5 10.0 9.0 9.5 8.0 6.5 7.5 7.5 9.5 12.5 14.5 12.5 9.5 11.0 13.0	18.0 18.0 16.0 14.5 13.5 18.5 17.5 16.0 18.0 17.5 15.5 15.5 15.5 15.5 15.5 15.5	13.5 15.0 14.5 12.0 13.0 14.5 12.0 13.0 14.0 16.5 14.0 15.5 14.0 13.0 13.0 13.0 13.0 13.0 13.0	16.0 16.5 16.5 15.0 13.0 12.5 15.5 17.0 16.5 14.5 14.0 13.0 13.0 14.0 14.0 15.5 14.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20		FEBRUAR		4.5 5.5 3.5 4.0 6.5 4.0 4.5 6.0 7.0 4.5 6.5 7.0 6.5 7.0 9.5 7.5 9.5 7.5	### ### ### ### ### ### ### ### ### ##	4.5 4.5 2.5 2.5 4.5 3.0 4.5 3.0 4.5 3.0 5.5 5.5 7.0 9.0 9.5	8.0 13.0 13.0 12.0 9.5 11.5 10.0 6.5 7.0 8.5 12.5 15.5 17.0 14.0 15.5 15.0 14.0	APRIL 6.0 7.5 10.0 9.0 8.5 7.5 6.5 6.5 6.5 7.0 7.5 10.0 12.0 10.0 9.0 10.5 12.0 13.0 11.0	7.5 10.5 11.5 10.0 9.0 9.5 8.0 6.5 7.5 7.5 9.5 12.5 14.5 12.5 9.5 11.0 13.0	18.0 18.0 18.0 16.0 14.5 13.5 18.5 17.5 16.5 15.5 15.5 15.5 15.5 15.5 15.5 15.5 15.5 15.5 15.5	13.5 15.0 15.0 14.5 12.0 12.0 13.0 16.5 15.0 14.0 16.0 13.0 13.0 13.5 12.5 12.0 13.5 12.5 12.5 12.0	16.0 16.5 16.5 15.0 13.0 12.5 15.5 17.0 15.5 14.5 14.5 14.0 13.0 14.0 14.0 15.5 14.5
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23		FEBRUAR		4.5 5.5 3.5 4.0 6.5 4.0 4.5 6.0 7.0 4.5 6.5 7.0 9.0 9.5 10.5 9.5	### ### ### ### ### ### ### ### ### ##	4.5 4.5 2.5 2.5 4.5 3.0 4.5 3.0 4.5 5.0 5.0 5.0 5.0 9.0 8.0 6.5	8.0 13.0 12.0 9.5 11.5 10.0 6.5 7.0 8.5 12.5 15.5 17.0 15.5 10.0 14.0 15.5	APRIL 6.0 7.5 10.0 9.0 8.5 7.5 6.5 6.5 6.5 7.0 7.5 10.0 12.0 10.0 9.0 9.0 10.5	7.5 10.5 11.5 10.0 9.0 9.5 8.0 6.5 7.5 7.5 9.5 12.5 14.5 12.5 9.5 11.0 13.0	18.0 18.0 16.0 14.5 13.5 18.5 17.5 16.0 18.0 17.5 15.5 15.5 15.5 15.5 15.5 15.5	13.5 15.0 14.5 12.0 13.0 14.5 12.0 13.0 14.0 16.5 14.0 15.5 14.0 13.0 13.0 13.0 13.0 13.0 13.0	16.0 16.5 16.5 15.0 13.0 12.5 15.5 17.0 16.5 14.5 14.0 13.0 13.0 14.0 14.0 15.5 14.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26		FEBRUAR		4.5 5.5 3.5 4.0 6.5 4.0 4.5 6.0 7.0 4.5 6.5 7.0 9.0 9.5 7.5 9.0 11.0 11.0 11.5 12.0	### ### ### ### ### ### ### ### ### ##	4.5 4.5 2.5 2.5 4.5 3.0 3.0 4.5 5.0 3.0 5.5 5.0 5.5 7.0 8.0 9.0 8.0 9.5 9.5 10.0	8.0 13.0 13.0 12.0 9.5 11.5 10.0 6.5 7.0 8.5 12.5 15.5 17.0 15.5 17.0 15.5 14.0 15.0 15.0 15.0	APRIL 6.0 7.5 10.0 9.0 8.5 7.5 6.5 6.5 7.0 7.5 10.0 12.0 10.0 9.0 10.5 12.0 13.0 11.0 13.0 13.0	7.5 10.5 11.5 10.0 9.0 9.5 8.0 6.5 7.5 7.5 9.5 12.5 12.5 12.5 14.0 13.0 13.5	18.0 18.0 18.0 16.0 14.5 13.5 18.5 16.5 16.5 15.5 15.5 15.5 15.5 15.5 15.5 15.5 15.5 14.0 14.5 14.5	MAY 13.5 15.0 15.0 14.5 12.0 12.0 13.0 16.5 15.0 14.0 16.0 13.0 13.5 14.0 13.5 12.5 12.0 13.5 13.5 14.0 13.5 13.5 14.0 13.5	16.0 16.5 16.5 15.0 13.0 12.5 15.5 15.5 15.0 16.5 14.5 14.0 13.0 14.0 13.0 14.0 14.5 14.0 14.5 14.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25		FEBRUAR	Y	4.5 5.5 3.5 4.0 6.5 4.0 4.5 6.0 7.0 4.5 6.5 7.0 9.5 10.5 9.5 7.5 9.0 11.0 11.0 11.5 12.0	### ### ### ### ### ### ### ### ### ##	4.5 4.5 2.5 2.5 4.5 3.0 4.5 5.0 3.0 4.5 5.5 5.5 7.0 9.0 9.5 9.0 9.5 9.5	8.0 13.0 12.0 9.5 11.5 10.0 6.5 7.0 8.5 12.5 15.5 17.0 14.0 15.5 15.0 14.0 15.0	APRIL 6.0 7.5 10.0 9.0 8.5 7.5 6.5 6.5 6.5 7.0 7.5 10.0 12.0 10.0 9.0 10.5 12.0 11.0 11.0	7.5 10.5 11.5 10.0 9.0 9.5 8.0 6.5 7.5 7.5 9.5 12.5 12.5 13.0 13.5 14.0 12.5 12.5	18.0 18.0 16.0 14.5 13.5 18.5 17.5 16.5 15.5 15.5 15.5 15.5 14.0 13.5 14.0 14.5 14.5 14.5 14.5 15.0 14.5	13.5 15.0 14.5 12.0 12.0 13.0 16.5 15.0 14.0 16.0 13.5 14.0 13.5 12.5 12.5 12.0 11.0 13.5 12.5 12.0 11.0 13.5	16.0 16.5 15.0 13.0 12.5 15.5 17.0 15.5 14.5 14.5 14.0 13.0 14.0 13.0 14.5 14.5 14.5
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29		FEBRUAR		4.5 5.5 3.5 4.0 6.5 4.0 4.5 6.0 7.0 4.5 6.5 7.0 9.0 9.5 7.5 9.0 11.0 11.5 12.0	### ### ### ### ### ### ### ### ### ##	4.5 4.5 2.5 2.5 4.5 3.0 3.0 4.5 5.0 3.0 5.5 5.0 5.5 7.0 8.0 9.0 8.0 9.5 9.5 10.0	8.0 13.0 13.0 12.0 9.5 11.5 10.0 6.5 7.0 8.5 12.5 15.5 17.0 15.5 15.0 14.0 15.0 15.0 15.0 17.5 17.0 15.0	APRIL 6.0 7.5 10.0 9.0 8.5 7.5 6.5 6.5 6.5 7.0 7.5 10.0 12.0 10.0 9.0 10.5 12.0 13.0 11.0 13.0 11.0 13.0 12.5 12.0 13.0	7.5 10.5 11.5 10.0 9.0 9.5 8.0 6.5 7.5 7.5 9.5 12.5 12.5 12.5 14.0 13.0 13.5 14.5 14.5 14.5	18.0 18.0 18.0 16.0 14.5 13.5 18.5 16.5 16.5 15.0 14.0 14.5 14.5 15.0 14.5 15.0 14.5 15.0 14.5 15.0 14.5 15.0 14.5 15.0	13.5 15.0 14.5 12.0 12.0 13.0 16.5 15.0 14.0 13.0 13.0 13.0 13.0 13.5 12.5 12.0 11.0 13.5 12.5 12.0 13.5 13.5 14.0 13.5	16.0 16.5 15.0 13.0 12.5 15.5 15.5 15.5 14.5 14.0 13.0 14.5 14.0 13.0 14.5 14.0 14.5 14.5 14.5 14.5 14.5 14.5 14.5 14.5
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28		FEBRUAR	Y	4.5 5.5 3.5 4.0 6.5 4.0 4.5 6.0 7.0 4.5 6.5 7.0 9.5 10.5 9.5 10.5 9.5 11.0 11.0 11.5 12.0	### ### ### ### ### ### ### ### ### ##	4.5 4.5 2.5 2.5 4.5 3.0 4.5 5.0 3.0 4.5 5.0 5.5 5.5 7.0 9.0 9.5 9.0 9.5 10.0 10.5 10.0	8.0 13.0 12.0 9.5 11.5 10.0 6.5 7.0 8.5 12.5 15.5 17.0 14.0 15.5 15.0 14.0 15.0 14.0 15.0	APRIL 6.0 7.5 10.0 9.0 8.5 7.5 6.5 6.5 6.5 7.0 7.5 10.0 12.0 10.0 9.0 9.0 11.0 11.0 11.0 12.5 12.0	7.5 10.5 11.5 10.0 9.0 9.5 8.0 6.5 7.5 7.5 9.5 12.5 14.5 12.5 9.5 11.0 13.0 13.5 12.5 13.0	18.0 18.0 16.0 14.5 13.5 18.5 17.5 16.5 15.5 15.5 15.5 15.5 14.0 13.5 14.0 14.5 14.5 14.5 14.5 15.0 14.5	13.5 15.0 14.5 12.0 12.0 13.0 16.5 15.0 14.0 16.0 13.5 14.0 13.5 12.5 12.5 12.0 11.0 13.5 12.5 12.0 11.0 13.5	16.0 16.5 15.0 13.0 12.5 15.5 17.0 15.5 14.5 14.0 13.0 13.0 14.0 14.5 14.5 14.0 14.5 14.5
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 27 28 29 30		FEBRUAR	Y	4.5 5.5 3.5 4.0 6.5 4.0 4.5 6.5 7.0 4.5 6.5 7.0 9.5 9.5 10.5 9.5 11.0 11.0 11.0 11.5 12.0	### ### ### ### ### ### ### ### ### ##	4.5 4.5 2.5 2.5 4.5 3.0 4.5 5.0 3.0 5.0 5.0 5.0 5.0 9.0 9.0 9.5 10.0 10.5 10.5 10.5	8.0 13.0 12.0 9.5 11.5 10.0 6.5 7.0 8.5 12.5 15.5 17.0 15.5 10.0 14.0 15.0 14.0 17.5 17.0 15.0	APRIL 6.0 7.5 10.0 9.0 8.5 7.5 6.5 6.5 6.5 7.0 7.5 10.0 12.0 10.0 9.0 9.0 10.5 12.0 11.0 11.0 13.0 11.0 12.5 12.0 13.0 12.5	7.5 10.5 11.5 10.0 9.0 9.5 8.0 6.5 7.5 7.5 9.5 12.5 14.5 12.5 9.1 13.0 13.5 14.5 12.5 14.5 13.0	18.0 18.0 16.0 14.5 13.5 18.5 16.5 16.5 15.5 15.5 15.5 15.5 15.0 14.0 14.5 14.5 15.0 14.5 14.5 15.0 14.5	13.5 15.0 15.0 14.5 12.0 12.0 13.0 16.5 15.0 14.0 16.0 15.5 14.0 13.0 13.5 12.5 12.0 13.5 12.5 12.0 13.5 13.5 13.5 14.0	16.0 16.5 16.5 15.0 13.0 12.5 15.5 17.0 16.5 14.0 14.5 14.0 13.0 14.0 14.5 14.5 14.0 14.5 14.5 14.5 14.5 14.5 14.5

01480870 EAST BRANCH BRANDYWINE CREEK BELOW DOWNINGTOWN, PA--Continued

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

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE		JULY		AUGUST				SEPTEMBER			
1 2 3 4 5	17.0 17.0 16.0 15.0 16.5	15.0 13.5 14.5 13.0 14.0	16.0 15.5 15.5 13.5 15.0	22.5 22.0 21.0 23.0 24.0	19.5 20.0 20.0 19.5 21.0	21.0 21.0 20.5 21.0 22.5	23.5 24.5 24.5 24.5 24.0	21.5 22.0 23.0 22.5 23.0	22.5 23.0 23.5 23.5 23.5	21.5 20.0 19.5 	21.0 20.0 19.0 18.0	21.0 20.0 19.0
6 7 8 9 10	16.5 15.0 15.5 17.0 17.5	14.5 14.0 14.5 14.5 14.0	15.5 14.5 15.0 15.5 15.5	24.0 24.5 24.0 23.5 22.5	21.0 21.5 22.0 22.0 20.5	22.5 23.0 23.0 23.0 21.0	24.0 23.5 23.0 21.5 23.5	22.0 22.5 19.5 19.5 21.0	23.0 23.0 21.0 20.5 22.5	21.5 22.0 20.5	17.5 19.2	
11 12 13 14 15	16.5 19.5 20.5 21.5 21.0	14.5 16.5 18.0 19.0 17.0	15.5 18.0 19.0 20.0 19.5	22.5 22.5 23.5 22.5 23.0	20.0 20.0 20.0 20.0 20.0	21.5 21.5 21.5 21.0 21.5	23.5 24.5 24.5 23.5 23.5	22.5 22.5 23.0 21.0 21.0	23.0 23.5 23.5 22.5 22.0	21.0 19.5 21.0 	17.5 18.5 18.5 	19.0 19.0 19.0
16 17 18 19 20	17.5 17.5 18.0 19.0 18.5	15.0 13.5 16.5 17.0 17.5	16.5 15.5 17.0 18.0 18.0	24.0 24.0 22.0 23.0 23.0	21.0 20.5 20.5 20.0 19.5	22.5 22.5 21.0 21.5 21.0	23.0 24.0 24.0 24.5	21.5 22.0 21.5 22.0	22.5 23.0 23.0 23.0	21.0 18.0 18.5 20.0 20.5	14.5 14.0 18.5 18.5	16.5 15.5 19.5 19.5
21 22 23 24 25	17.5 18.0 20.0 19.0 19.0	17.0 17.0 16.5 16.0 16.0	17.0 17.5 18.0 17.5 17.5	24.0 24.0 23.0 23.5 24.5	21.0 22.5 22.0 21.5 21.0	22.5 23.0 22.5 22.5 22.5	 	 	 	20.0 20.0 	18.5 19.0 	19.5 19.5
26 27 28 29 30 31	20.0 22.0 21.5 22.0 22.5 	16.5 19.5 19.0 19.0 19.5	18.0 21.0 20.5 20.5 21.0 	25.0 25.5 24.5 25.0 24.0 23.5	21.0 22.5 23.0 21.5 21.0 22.0	23.0 24.0 24.0 23.0 22.5 22.5	23.5 24.5 23.5 24.5 23.0	21.5 21.5 21.5 22.0 20.5	22.5 23.0 22.5 23.0 22.0	 22.0	 14.0	 18.9
MONIA	44.5	13.0	11.4	25.5	19.0	∠∠.⊥	24.3	19.3	44.1	22.0	14.0	10.9

OXYGEN, DISSOLVED (MG/L), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER		NOVEMBER		DECEMBER			JANUARY				
1 2	8.4 9.1	5.5 5.5	6.8	11.1 11.1	9.8 9.8	10.3						
3 4	9.4 7.6	5.5 5.0	6.9 6.0	11.4 11.1	9.5	10.2						
5	8.2	5.5	6.5	11.4	9.5	10.2						
6 7	9.6	6.0 6.5	7.5 7.6	10.9 11.3	9.4 10.9	10.2 11.2						
8	10.0 10.6	6.6	8.0	11.4	11.0	11.2						
9 10	10.8 8.6	7.0 6.7	8.2 7.5	11.0 10.8	10.8 10.0	10.9 10.4						
11				10.0	9.6	9.8						
12 13												
14 15				9.7 10.3	8.7 8.9	9.1 9.5						
16 17		8.5		9.9	9.4	9.8						
18 19	10.4 10.5	9.1 9.2	9.7 9.8									
20	10.5	9.1	9.6									
21 22	10.5 11.0	9.2 9.4	9.7									
23	11.5	9.6	10.0 10.3									
24 25	$\frac{11.2}{11.2}$	9.4 9.7	10.1 10.2									
26	10.7	9.6	10.1									
27	11.1	9.0	10									
28 29	10.8 11.1	8.9 9.1	9.6 10									
30 31	10.7	10.1	10.4 10.5									
MONTH	11.5	5.0	8.8	11.4	8.7	10.2						

01480870 EAST BRANCH BRANDYWINE CREEK BELOW DOWNINGTOWN, PA--Continued

OXYGEN, DISSOLVED (MG/L), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUAR	Y		MARCH			APRIL			MAY	
1 2 3 4 5		 	 	13.0 12.4 13.7 13.9 12.8	11.9 11.8 12.2 12.2	12.3 12.0 13.0 13.2 12.2	14.4 15.0 14.7 12.7 13.4	10.3 9.0 8.9 8.9 9.9	12.1 11.7 11.2 10.5 11.2	11.5 11.3 12.5 13.0 12.3	7.5 7.4 7.3 7.6 8.1	9.4 9.1 9.5 9.8
6 7 8 9 10	 	 	 	12.9 13.7 13.3 12.7 13.5	12.1 12.3 11.4 11.5 12.4	12.5 13.1 12.5 12.1 12.9	15.3 13.5 13.9 13.7 14.5	9.7 9.6 10.7 10.7 10.4	12.0 11.3 11.9 11.9	12.2 12.9 10.7 9.7 11.4	8.7 7.1 6.5 7.5 7.9	10.1 9.9 8.4 8.5 9.4
11 12 13 14 15	 	 	 	13.8 13.4 13.0 13.6 13.6	12.3 11.6 11.6 11.9 11.5	13.1 12.5 12.1 12.6 12.5	11.2 12.0 14.3	10.2 9.2 8.6	10.7 10.8 11.2	10.6 10.8 11.7 11.8 11.6	7.3 7.2 8.0 7.6 6.4	8.8 8.7 9.7 9.6 9.0
16 17 18 19 20	 	 	 	13.2 12.7 12.7 12.9 12.7	11.1 10.3 9.9 9.8 10.8	12.1 11.5 11.1 11.3 11.5	14.2 13.8 13.0 14.5 13.9	8.0 8.0 10.1 9.0 8.5	10.6 10.9 11.4 11.7 10.9	 9.9	 5.3	 7.3
21 22 23 24 25	 	 	 	11.4 12.1 12.3 12.6 12.7	10.5 10.2 10.1 9.9 9.6	11.1 11.1 11.1 11.1 11.0	12.9 11.4 11.9 11.9	8.3 8.3 8.4 8.8 8.4	10.1 9.4 10.1 10.3	8.8 9.5 10.6 10.7 10.1	6.2 7.1 8.0 8.6 8.6	7.5 8.3 9.2 9.4 9.3
26 27 28 29 30 31	13.9 13.4 13.4 	12.4 11.9 	12.8 12.6 	12.8 13.2 13.7 13.2 12.4 14.1	9.3 9.3 9.6 9.1 9.0 10.3	10.7 11.0 11.2 10.6 10.4 11.9	10.4 11.4 11.4 11.2 11.7	7.9 8.3 8.1 8.1 8.2	9.1 9.7 9.6 9.6 9.7	9.3 10.4 10.1 10.1 9.4 8.9	8.6 8.9 8.9 8.1 7.4 5.3	9.0 9.8 9.5 9.2 8.6 7.9
MONTH	13.9	11.9	12.7	14.1	9.0	11.8	15.3	7.9	10.8	13.0	5.3	9.1
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
DAY	MAX	MIN JUNE	MEAN	MAX	MIN JULY	MEAN	MAX	MIN AUGUST	MEAN		MIN S EPTEMBE	
DAY 1 2 3 4 5	MAX 8.9 9.7 9.2 9.5 9.5		MEAN 8.3 9.0 8.5 9.2 9.2	MAX 8.9 9.2 8.5 9.0 9.0		MEAN 8.0 8.1 7.9 8.1 7.8	MAX 8.8 8.5 8.5 7.2 7.6		7.5 7.4 7.1 7.0 7.1			
1 2 3 4	8.9 9.7 9.2 9.5	7.5 8.1 8.0 8.2	8.3 9.0 8.5 9.2	8.9 9.2 8.5 9.0	7.3 7.3 7.4 7.2	8.0 8.1 7.9 8.1	8.8 8.5 8.5 7.2	6.9 6.6 6.4 6.8	7.5 7.4 7.1 7.0	9.2 8.8 8.8	7.2 8.0 8.3	7.9 8.4 8.4
1 2 3 4 5 6 7 8 9	8.9 9.7 9.2 9.5 9.5 9.4 9.1	7.5 8.1 8.0 8.2 8.7	8.3 9.0 8.5 9.2 9.2 9.1 9.1 9.1	8.9 9.2 8.5 9.0 9.0 8.9 8.8 8.6 8.5	7.3 7.3 7.4 7.2 7.0 7.0 6.8 7.0 6.8	8.0 8.1 7.9 8.1 7.8 7.8 7.7 7.6 7.5	8.8 8.5 7.2 7.6 8.1 8.2 8.8 8.6	6.9 6.6 6.4 6.8 6.8 7.0 7.1 7.3 7.7	7.5 7.4 7.1 7.0 7.1 7.4 7.6 8.2 8.0	9.2 8.8 8.8 9.1	7.2 8.0 8.3 	7.9 8.4 8.4
1 2 3 4 5 6 7 8 9 10 11 12 13 14	8.9 9.7 9.5 9.5 9.3 9.4 9.4 9.6 9.6 9.1 8.2	7.5 8.1 8.0 8.2 8.7 8.8 8.8 8.7 8.8	8.3 9.0 8.5 9.2 9.2 9.1 9.1 9.1 9.2 9.2 8.5 7.7	8.9 9.2 8.5 9.0 9.0 8.9 8.8 8.6 8.5 8.2	7.3 7.3 7.4 7.2 7.0 6.8 7.0 6.8 7.0 7.1 7.1 7.2	8.0 8.1 7.9 8.1 7.8 7.7 7.6 7.5 7.6 7.9 7.9	8.8 8.5 7.2 7.6 8.1 8.2 8.6 7.8 7.7 7.9 8.1	6.9 6.6 6.4 6.8 6.8 7.0 7.1 7.3 7.7 7.2 7.1 7.1 7.0 7.0	7.5 7.4 7.1 7.0 7.1 7.4 7.6 8.0 7.4 7.4 7.4 7.5	9.2 8.8 8.8 9.1 9.8 10.0 9.8 9.0	7.2 8.0 8.3 7.5 7.4 7.2	7.9 8.4 8.4 8.3 8.1 7.8
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	8.9 9.7 9.5 9.5 9.5 9.3 9.4 9.4 9.6 9.6 9.1 8.2 8.6	7.5 8.1 8.0 8.2 8.7 8.8 8.8 8.7 8.8 8.7 8.6 7.5 6.7 6.7	8.3 9.0 8.5 9.2 9.1 9.1 9.1 9.2 9.2 8.5 7.7 7.9 9.4 8.6	8.9 9.2 8.5 9.0 9.0 8.9 8.6 8.5 8.2 8.7 8.8 8.7 8.9 8.9	7.3 7.4 7.2 7.0 7.0 6.8 7.0 6.8 7.0 7.1 7.2 7.3 7.1 7.2 7.3 7.1 7.2 7.3 7.7	8.0 8.1 7.9 8.1 7.8 7.7 7.6 7.5 7.6 7.9 7.9 8.0 8.1	8.8 8.5 7.2 7.6 8.1 8.2 8.6 7.8 7.7 7.9 8.1 8.0 8.2 8.4 8.3	6.9 6.6 6.4 6.8 6.8 7.0 7.1 7.2 7.1 7.2 7.1 7.0 7.0 6.8 6.8 6.8	7.5 7.4 7.0 7.1 7.4 7.6 8.0 7.4 7.4 7.5 7.5 7.5 7.4	9.2 8.8 8.8 8.8 9.1 9.8 10.0 9.8 9.0 9.7 9.9 8.5	7.2 	7.9 8.4 8.4 8.3 8.1 7.8 9.1 9.5 8.2
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24	8.9 9.7 9.5 9.5 9.3 9.4 9.6 9.6 9.1 8.2 8.6 9.6 10.0 9.1 8.6 8.8 8.9 9.2	7.5 8.1 8.0 8.2 8.7 8.8 8.8 8.7 8.8 8.7 6.7 6.7 6.7 7.1 6.7 6.7 7.4 7.6 8.6 8.2	8.3 9.5 9.2 9.1 9.1 9.1 9.2 9.2 8.5 7.7 9.4 8.6 8.1 8.7 8.9	8.9 9.2 8.5 9.0 9.0 8.9 8.6 8.5 8.2 8.7 8.8 8.7 8.9 8.7 8.7 8.9	7.3 7.4 7.2 7.0 6.8 7.0 6.8 7.0 7.3 7.1 7.2 7.2 7.3 7.7 7.7	8.0 8.1 7.8 8.1 7.8 7.6 7.5 7.6 7.9 7.9 8.0 8.1 7.7 8.2 8.3 8.2 7.7	8.8 8.5 7.2 7.6 8.1 8.2 8.6 7.8 7.7 7.9 8.1 8.0 8.0 8.2 8.4 8.3	6.9 6.6 6.4 6.8 6.8 7.0 7.1 7.2 7.1 7.0 7.0 6.8 6.8 6.8 6.7	7.5 7.4 7.1 7.0 7.1 7.4 7.6 8.0 7.4 7.4 7.5 7.5 7.5 7.5 7.4 7.4	9.2 8.8 8.8 8.8 9.1 9.8 10.0 9.8 9.0 9.7 9.7 9.9 8.5 8.5	7.2 8.0 8.3 7.5 7.4 7.2 8.1 8.5 8.0 7.9 7.9	7.9 8.4 8.4 8.3 8.1 7.8 9.1 9.5 8.2 8.2 8.2