

SWATARA CREEK BASIN

**0157155010 SWATARA CREEK, SITE C1, AT NEWTOWN, PA
(Swatara Creek Project)**

LOCATION.--Lat 40°39'34", long 76°20'50", Schuylkill County, Hydrologic Unit 02050305, on left bank 500 ft upstream from bridge on U.S. Highway 209, 0.5 mi north of Newtown.

DRAINAGE AREA.--2.58 mi².

PERIOD OF RECORD.--August 1995 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1996 to current year.
pH: October 1996 to current year.
WATER TEMPERATURE: October 1996 to current year.

INSTRUMENTATION.--Water-quality monitor (in situ system).

REMARKS.--Specific conductance records rated fair except for periods Mar. 12 to Apr. 2, Apr. 22 to May 6, and Sept. 12-30, which is poor. pH records rated good except for period Oct. 1 to Mar. 11, which is fair. Water temperature records rated good. Interruptions in the record were due to malfunctions of the instrumentation. Analytical data from samples are used to determine effectiveness of various limestone treatment systems used to aid in the remediation efforts of acid mine drainage. Data collected prior to construction dates of upstream treatment, May 1997, are considered untreated water. Some values for "dissolved" parameters exceed values for the corresponding "total" parameter. These results are within the limits of analytical precision and methods. Other data for this project presented in tables on pages 350-412. Figure 9 shows the location of sites sampled as part of the Swatara Creek Project.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 414 microsiemens, Aug. 13, 1999; minimum, 42 microsiemens, Nov. 8, 1996.
pH: Maximum, 7.7, Mar. 21, 1997; minimum, 3.3, Jan. 1, 1997.
WATER TEMPERATURE: Maximum, 22.5°C, July 4, 2002; minimum, 0.0°C, many days during winters.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum recorded, 310 microsiemens, Sept. 14; minimum, 60 microsiemens, Sept. 27.
pH: Maximum, 7.3, Oct. 1, 2; minimum, 4.8, Nov. 25.
WATER TEMPERATURE: Maximum, 22.5°C, July 4; minimum 0.0°C, several days during winter.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	AGENCY COL-LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA-LYZING SAMPLE (CODE NUMBER) (00028)	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	OXID-ATION RED- UCTION POTEN- TIAL (MV) (00090)	OXYGEN, DIS- SOLVED (PER- CENT) (00300)	OXYGEN, SATUR- ATION (00301)	PH WATER WHOLE FIELD (STAND- ARD) (00400)	PH WATER WHOLE LAB (STAND- ARD) (00403)	SPE- CIFIC CON- DUCT- ANCE (µS/CM) (00095)
NOV 29...	0915	1028	9813	2.2	450	11	94	5.7	5.9	137
JAN 30...	1000	1028	9813	2.8	430	12	95	5.8	5.4	141
MAR 26...	1045	1028	9813	5.1	470	12	95	5.5	4.9	175
MAY 28...	1230	1028	9813	3.8	450	10	99	5.2	5.0	164
JUL 30...	1015	1028	9813	.62	400	8.4	91	5.5	5.4	237

Date	TEMPER- ATURE WATER (DEG C) (00010)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS CA) (00916)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS MG) (00927)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM, TOTAL RECOV- ERABLE (MG/L AS NA) (00929)	ACIDITY TOTAL HEATED (MG/L AS CAC03) (70508)	ANC WATER UNFLTRD FET LAB (MG/L AS CAC03) (00417)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)
NOV 29...	9.40	8.9	8.6	4.5	4.3	9.5	9.2	37	4.0	14
JAN 30...	6.80	7.8	8.1	5.0	5.3	7.5	7.7	51	3.0	11
MAR 26...	4.80	8.1	8.2	7.0	7.1	7.2	7.2	40	2.0	9.6
MAY 28...	14.3	8.0	8.1	6.9	7.0	6.9	7.0	76	2.0	10
JUL 30...	19.4	16	16	13	13	8.9	9.2	28	2.0	11

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WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDED (MG/L) (00530)	ALUM- INUM, DIS- SOLVED (µG/L AS AL) (01106)	ALUM- INUM, TOTAL RECOV- ERABLE (µG/L AS AL) (01105)	IRON, DIS- SOLVED (µG/L AS FE) (01046)	IRON, TOTAL RECOV- ERABLE (µG/L AS FE) (01045)	MANGA- NESE, DIS- SOLVED (µG/L AS MN) (01056)	MANGA- NESE, TOTAL RECOV- ERABLE (µG/L AS MN) (01055)
NOV 29...	34	6.0	<200	400	100	330	370	360
JAN 30...	39	<2.0	<200	800	200	820	400	420
MAR 26...	54	8.0	730	1200	680	1000	570	570
MAY 28...	55	<2.0	510	1000	650	1100	520	540
JUL 30...	87	16	<200	500	140	300	420	430

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0157155010 SWATARA CREEK, SITE C1, AT NEWTOWN, PA--Continued

SPECIFIC CONDUCTANCE, MICROSIEMENS PER CENTIMETER AT 25° CELSIUS, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	223	214	218	217	207	212	---	---	---	202	182	190
2	224	216	221	217	209	213	---	---	---	194	184	189
3	230	219	226	219	207	215	---	---	---	192	185	189
4	233	224	230	223	211	217	---	---	---	190	185	188
5	238	229	233	228	216	220	---	---	---	190	183	187
6	242	230	235	226	216	222	---	---	---	191	173	185
7	243	231	237	226	217	223	---	---	---	182	171	176
8	247	233	239	228	221	224	---	---	---	188	179	183
9	245	236	240	231	218	225	---	---	---	187	178	183
10	246	236	240	235	223	227	---	---	---	182	168	178
11	245	233	240	236	222	227	---	---	---	172	127	152
12	243	232	239	235	224	230	---	---	---	164	146	158
13	244	236	240	237	227	230	---	---	---	171	160	165
14	245	144	234	237	226	229	---	---	---	---	---	---
15	162	101	132	231	220	228	---	---	---	---	---	---
16	183	161	173	232	225	229	---	---	---	---	---	---
17	174	141	158	237	226	231	---	---	---	---	---	---
18	187	172	180	237	223	233	---	---	---	---	---	---
19	196	186	190	240	228	233	---	---	---	---	---	---
20	206	189	194	236	218	225	---	---	---	---	---	---
21	205	193	199	230	218	225	152	144	148	---	---	---
22	206	195	203	234	226	230	157	150	153	---	---	---
23	210	200	204	234	227	231	160	153	157	---	---	---
24	209	202	206	239	181	225	161	151	156	---	---	---
25	213	205	209	181	64	118	168	158	164	---	---	---
26	218	209	213	125	95	113	172	166	169	---	---	---
27	220	210	214	132	124	128	176	154	170	---	---	---
28	218	206	213	136	130	134	178	172	175	---	---	---
29	217	206	212	---	---	---	181	175	177	---	---	---
30	215	209	212	---	---	---	195	161	179	---	---	---
31	218	208	213	---	---	---	196	183	189	---	---	---
MONTH	247	101	213	240	64	211	196	144	167	202	127	179

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	---	---	---	189	178	184	154	137	145	139	124	132
2	---	---	---	189	163	183	160	152	157	140	91	110
3	---	---	---	163	96	118	160	152	157	126	103	115
4	---	---	---	152	132	144	162	154	159	142	124	133
5	---	---	---	158	135	150	164	160	162	150	139	145
6	---	---	---	157	151	154	173	160	164	157	148	154
7	154	150	152	159	153	155	167	162	164	158	153	156
8	157	151	155	161	155	158	168	162	164	163	156	159
9	162	155	160	166	133	158	168	138	162	163	136	146
10	163	117	155	146	117	131	152	124	138	155	142	149
11	141	110	125	154	144	150	164	150	156	162	150	158
12	150	141	146	155	145	151	166	157	161	161	145	154
13	155	147	150	150	144	147	166	153	159	149	106	139
14	160	149	154	151	144	147	156	122	149	130	98	119
15	157	152	154	153	146	150	123	91	107	136	129	133
16	156	151	154	153	148	150	130	119	123	137	132	136
17	160	153	156	156	150	154	148	129	139	142	134	138
18	165	157	162	154	120	134	153	146	149	137	78	98
19	167	161	165	134	123	129	157	148	153	134	110	123
20	168	160	165	134	89	115	160	153	155	145	133	141
21	166	159	163	112	94	106	160	155	157	152	145	148
22	171	163	166	131	109	121	160	153	157	157	149	152
23	175	167	171	141	129	136	167	153	162	158	152	155
24	177	171	174	144	138	142	168	162	165	161	154	157
25	180	173	176	147	142	144	170	153	161	164	157	160
26	183	169	176	148	68	130	166	155	161	164	159	162
27	177	167	173	104	69	89	169	158	166	167	160	163
28	183	176	180	123	104	114	164	96	128	171	162	167
29	---	---	---	133	121	128	126	97	114	176	167	170
30	---	---	---	144	133	138	132	123	127	176	167	172
31	---	---	---	150	140	146	---	---	---	177	168	174
MONTH	183	110	161	189	68	141	173	91	151	177	78	146

SWATARA CREEK BASIN

0157155010 SWATARA CREEK, SITE C1, AT NEWTOWN, PA--Continued

SPECIFIC CONDUCTANCE, MICROSIEMENS PER CENTIMETER AT 25° CELSIUS, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	181	166	172	204	195	200	257	245	251	270	242	255
2	187	178	181	209	198	205	257	249	254	262	248	254
3	189	183	186	214	202	210	262	254	258	263	255	259
4	193	184	188	217	209	214	266	255	261	269	257	264
5	193	184	188	223	212	218	269	234	260	271	262	267
6	188	140	177	226	215	222	259	238	252	276	264	270
7	167	127	150	228	220	224	267	257	261	281	268	274
8	179	166	172	230	221	225	269	261	265	285	271	276
9	186	177	181	230	176	218	274	264	269	284	273	279
10	196	185	188	212	195	202	277	267	272	294	274	281
11	197	186	191	225	210	217	281	270	275	289	278	282
12	199	77	156	230	220	224	284	270	277	308	275	284
13	143	107	130	230	223	226	286	275	279	292	280	286
14	147	96	118	231	221	227	287	276	281	310	283	294
15	132	114	124	233	223	227	290	235	277	300	143	235
16	149	131	139	238	225	231	266	241	255	145	101	118
17	157	146	150	239	214	231	271	257	265	182	141	162
18	161	151	156	238	226	232	276	264	271	198	180	189
19	164	150	156	240	230	234	280	271	275	211	195	201
20	168	160	164	240	231	235	284	273	278	220	210	215
21	174	162	169	244	231	238	286	273	280	219	210	214
22	181	171	175	246	237	240	289	259	280	221	203	217
23	190	175	181	250	135	223	273	244	265	203	134	155
24	190	176	185	225	187	204	278	254	263	196	172	185
25	188	176	183	232	219	225	270	259	264	201	191	196
26	197	181	190	238	226	232	277	265	270	208	166	198
27	199	139	182	240	231	235	282	270	275	168	60	91
28	181	162	171	240	231	235	283	270	277	114	71	93
29	192	180	186	243	234	237	277	229	247	130	113	122
30	199	189	195	246	237	242	258	243	251	143	128	136
31	---	---	---	251	241	247	269	253	261	---	---	---
MONTH	199	77	169	251	135	225	290	229	267	310	60	218
YEAR	310	60	190									

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	7.3	7.2	7.3	6.4	6.4	6.4	---	---	---	5.7	5.6	5.7
2	7.3	7.2	7.2	6.4	6.4	6.4	---	---	---	5.7	5.6	5.7
3	7.2	7.1	7.2	6.4	6.3	6.4	---	---	---	5.7	5.7	5.7
4	7.1	7.1	7.1	6.3	6.3	6.3	---	---	---	5.7	5.6	5.7
5	7.1	7.0	7.1	6.3	6.3	6.3	---	---	---	5.6	5.6	5.6
6	7.0	7.0	7.0	6.3	5.9	6.1	---	---	---	5.6	5.6	5.6
7	7.0	7.0	7.0	6.1	6.1	6.1	---	---	---	5.7	5.6	5.6
8	7.0	7.0	7.0	6.1	6.1	6.1	---	---	---	5.7	5.6	5.6
9	7.0	6.9	7.0	6.1	6.0	6.1	---	---	---	5.7	5.6	5.6
10	6.9	6.9	6.9	6.1	6.0	6.0	---	---	---	6.0	5.6	5.6
11	6.9	6.9	6.9	6.1	6.0	6.0	---	---	---	6.2	5.7	6.0
12	6.9	6.8	6.9	6.0	6.0	6.0	---	---	---	6.0	5.7	5.9
13	6.9	6.8	6.8	6.0	6.0	6.0	---	---	---	6.0	6.0	6.0
14	7.1	6.7	6.8	6.0	6.0	6.0	---	---	---	---	---	---
15	7.1	6.1	6.3	6.0	6.0	6.0	---	---	---	---	---	---
16	7.0	6.5	6.8	6.0	6.0	6.0	---	---	---	---	---	---
17	7.1	6.7	6.8	6.0	6.0	6.0	---	---	---	---	---	---
18	6.9	6.8	6.9	6.0	6.0	6.0	---	---	---	---	---	---
19	6.9	6.8	6.8	6.0	6.0	6.0	---	---	---	---	---	---
20	6.9	6.8	6.8	6.0	5.9	6.0	---	---	---	---	---	---
21	6.8	6.8	6.8	6.0	5.9	6.0	5.6	5.6	5.6	---	---	---
22	6.8	6.8	6.8	6.0	5.9	5.9	5.6	5.6	5.6	---	---	---
23	6.8	6.7	6.8	5.9	5.9	5.9	5.6	5.6	5.6	---	---	---
24	6.7	6.7	6.7	5.9	5.9	5.9	5.6	5.5	5.6	---	---	---
25	6.7	6.7	6.7	6.0	4.8	5.7	5.6	5.6	5.6	---	---	---
26	6.7	6.7	6.7	5.4	4.9	5.2	5.6	5.6	5.6	---	---	---
27	6.7	6.6	6.7	5.6	5.4	5.6	5.7	5.6	5.6	---	---	---
28	6.6	6.6	6.6	5.7	5.6	5.7	5.7	5.6	5.6	---	---	---
29	6.6	6.5	6.5	---	---	---	5.7	5.6	5.6	---	---	---
30	6.5	6.4	6.5	---	---	---	5.7	5.6	5.7	---	---	---
31	6.4	6.4	6.4	---	---	---	5.7	5.6	5.6	---	---	---
MAX	7.3	7.2	7.3	6.4	6.4	6.4	5.7	5.6	5.7	6.2	6.0	6.0
MIN	6.4	6.1	6.3	5.4	4.8	5.2	5.6	5.5	5.6	5.6	5.6	5.6

SWATARA CREEK BASIN

0157155010 SWATARA CREEK, SITE C1, AT NEWTOWN, PA--Continued

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN
FEBRUARY			MARCH			APRIL			MAY			
1	---	---	---	5.9	5.8	5.9	5.3	5.3	5.3	5.4	5.3	5.4
2	---	---	---	5.9	5.8	5.9	5.5	5.3	5.4	6.1	5.0	5.2
3	---	---	---	6.1	5.5	5.6	5.5	5.4	5.5	5.2	5.1	5.1
4	---	---	---	5.8	5.7	5.8	5.5	5.4	5.5	5.2	5.1	5.1
5	---	---	---	5.8	5.8	5.8	5.5	5.4	5.5	5.2	5.1	5.1
6	---	---	---	5.8	5.8	5.8	5.5	5.4	5.5	5.2	5.1	5.2
7	5.6	5.6	5.6	5.8	5.7	5.7	5.5	5.4	5.5	5.2	5.2	5.2
8	5.6	5.6	5.6	5.8	5.7	5.7	5.5	5.4	5.5	5.3	5.2	5.2
9	5.7	5.6	5.6	5.7	5.7	5.7	5.4	5.3	5.3	5.3	5.2	5.2
10	5.8	5.6	5.7	5.8	5.5	5.6	5.4	5.2	5.3	5.3	5.2	5.3
11	5.7	5.4	5.5	5.7	5.7	5.7	5.5	5.3	5.4	5.3	5.3	5.3
12	5.6	5.5	5.6	5.7	5.6	5.7	5.5	5.5	5.5	5.3	5.3	5.3
13	5.6	5.6	5.6	5.7	5.7	5.7	5.5	5.4	5.5	5.5	5.2	5.3
14	5.7	5.6	5.6	5.7	5.6	5.7	5.5	5.2	5.4	5.4	5.1	5.2
15	5.7	5.6	5.6	5.7	5.6	5.7	6.0	5.2	5.2	5.3	5.3	5.3
16	5.6	5.6	5.6	5.7	5.6	5.7	5.3	5.3	5.3	5.4	5.2	5.3
17	5.6	5.6	5.6	5.8	5.7	5.7	5.3	5.2	5.2	5.4	5.3	5.3
18	5.7	5.6	5.6	6.0	5.7	5.8	5.2	5.1	5.2	6.0	5.0	5.1
19	5.7	5.6	5.6	5.7	5.7	5.7	5.2	5.1	5.2	5.2	5.1	5.2
20	5.6	5.6	5.6	5.9	5.5	5.7	5.2	5.2	5.2	5.2	5.1	5.1
21	5.7	5.6	5.7	5.6	5.5	5.5	5.3	5.2	5.3	5.2	5.2	5.2
22	5.8	5.7	5.8	5.6	5.5	5.5	5.4	5.3	5.3	5.3	5.2	5.2
23	5.8	5.8	5.8	5.5	5.4	5.4	5.4	5.3	5.4	5.3	5.2	5.3
24	5.9	5.8	5.8	5.5	5.4	5.4	5.4	5.3	5.4	5.3	5.2	5.2
25	5.9	5.8	5.8	5.4	5.4	5.4	5.4	5.4	5.4	5.2	5.2	5.2
26	5.9	5.8	5.8	5.9	5.1	5.4	5.4	5.3	5.4	5.2	5.2	5.2
27	5.9	5.8	5.8	5.4	5.1	5.3	5.5	5.3	5.4	5.2	5.2	5.2
28	5.9	5.8	5.9	5.4	5.3	5.3	5.6	5.3	5.5	5.2	5.2	5.2
29	---	---	---	5.4	5.3	5.3	5.4	5.3	5.3	5.2	5.2	5.2
30	---	---	---	5.3	5.3	5.3	5.5	5.4	5.4	5.4	5.2	5.3
31	---	---	---	5.4	5.3	5.3	---	---	---	5.4	5.3	5.4
MAX	5.9	5.8	5.9	6.1	5.8	5.9	6.0	5.5	5.5	6.1	5.3	5.4
MIN	5.6	5.4	5.5	5.3	5.1	5.3	5.2	5.1	5.2	5.2	5.0	5.1

DAY	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN
JUNE			JULY			AUGUST			SEPTEMBER			
1	5.4	5.3	5.4	6.0	6.0	6.0	5.4	5.3	5.4	5.5	5.4	5.5
2	5.4	5.3	5.4	6.0	6.0	6.0	5.4	5.3	5.3	5.5	5.5	5.5
3	5.5	5.4	5.4	6.0	5.9	6.0	5.3	5.3	5.3	5.5	5.4	5.5
4	5.5	5.4	5.4	5.9	5.9	5.9	5.3	5.3	5.3	5.5	5.4	5.5
5	5.5	5.4	5.4	5.9	5.9	5.9	5.3	5.2	5.3	5.5	5.5	5.5
6	5.9	5.4	5.5	5.9	5.9	5.9	5.4	5.3	5.4	5.5	5.5	5.5
7	5.8	5.4	5.5	5.9	5.8	5.9	5.4	5.3	5.3	5.6	5.5	5.5
8	5.6	5.5	5.6	5.8	5.8	5.8	5.4	5.3	5.3	5.6	5.5	5.5
9	5.7	5.6	5.6	5.9	5.6	5.8	5.4	5.3	5.4	5.6	5.5	5.6
10	5.7	5.6	5.7	6.0	5.9	5.9	5.4	5.3	5.4	5.6	5.5	5.6
11	5.8	5.7	5.7	5.9	5.8	5.8	5.4	5.3	5.3	5.6	5.4	5.6
12	6.4	4.9	5.7	5.8	5.7	5.8	5.4	5.3	5.3	5.6	5.2	5.5
13	5.7	5.2	5.5	5.7	5.7	5.7	5.4	5.2	5.3	5.5	5.4	5.5
14	6.4	5.4	5.7	5.7	5.7	5.7	5.4	5.3	5.3	5.5	5.3	5.5
15	5.7	5.5	5.7	5.7	5.7	5.7	5.4	5.1	5.3	6.2	5.2	5.3
16	5.9	5.7	5.8	5.7	5.6	5.6	5.4	5.2	5.4	6.0	5.3	5.4
17	6.0	5.9	5.9	5.7	5.4	5.6	5.4	5.3	5.4	6.0	5.3	5.4
18	6.1	6.0	6.0	5.7	5.6	5.6	5.4	5.3	5.4	6.2	6.0	6.1
19	6.1	5.9	6.0	5.6	5.5	5.6	5.4	5.3	5.4	6.1	5.8	6.0
20	6.1	6.0	6.0	5.5	5.5	5.5	5.4	5.3	5.4	6.1	5.8	6.0
21	6.1	6.0	6.0	5.5	5.5	5.5	5.4	5.3	5.4	6.1	5.9	6.0
22	6.1	6.0	6.1	5.5	5.4	5.5	5.5	5.2	5.4	5.9	5.8	5.8
23	6.1	6.0	6.1	6.4	5.0	5.4	5.4	5.2	5.3	6.9	5.9	6.2
24	6.1	6.1	6.1	5.7	5.5	5.6	5.4	5.3	5.3	6.6	6.4	6.5
25	6.1	6.0	6.1	5.5	5.5	5.5	5.4	5.4	5.4	6.6	6.5	6.6
26	6.1	6.0	6.1	5.5	5.5	5.5	5.5	5.4	5.4	6.9	6.6	6.6
27	6.2	5.9	6.1	5.5	5.5	5.5	5.5	5.4	5.4	7.0	5.3	5.9
28	6.2	6.0	6.0	5.5	5.5	5.5	5.4	5.4	5.4	6.6	5.4	6.0
29	6.0	6.0	6.0	5.6	5.5	5.5	5.6	5.4	5.5	6.8	6.6	6.7
30	6.0	6.0	6.0	5.5	5.4	5.5	5.6	5.5	5.5	6.8	6.8	6.8
31	---	---	---	5.4	5.4	5.4	5.5	5.4	5.5	---	---	---
MAX	6.4	6.1	6.1	6.4	6.0	6.0	5.6	5.5	5.5	7.0	6.8	6.8
MIN	5.4	4.9	5.4	5.4	5.0	5.4	5.3	5.1	5.3	5.5	5.2	5.3

YEAR	MAX	MIN	MEDIAN	MAXIMUM	7.3	MINIMUM	5.2
				MAXIMUM	7.2	MINIMUM	4.8
				MAXIMUM	7.3	MINIMUM	5.1

SWATARA CREEK BASIN

0157155010 SWATARA CREEK, SITE C1, AT NEWTOWN, PA--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	12.5	10.0	11.0	10.0	6.0	8.0	---	---	---	0.0	0.0	0.0
2	14.0	10.0	12.0	12.5	8.5	10.5	---	---	---	0.5	0.0	0.0
3	15.5	11.5	13.5	12.5	8.5	11.0	---	---	---	0.5	0.0	0.0
4	15.5	12.0	14.0	10.5	7.0	9.0	---	---	---	1.0	0.0	0.5
5	15.5	12.0	13.5	8.0	6.0	7.0	---	---	---	1.5	0.5	1.0
6	13.5	10.5	13.0	8.0	5.5	6.5	---	---	---	1.5	0.0	1.0
7	10.5	8.0	9.0	9.5	6.0	7.5	---	---	---	1.5	0.0	1.0
8	9.0	6.5	7.5	9.5	6.0	8.0	---	---	---	1.5	0.0	0.5
9	9.0	5.0	7.0	9.0	5.5	7.5	---	---	---	2.0	0.5	1.0
10	11.0	6.5	8.5	8.0	5.0	6.5	---	---	---	3.0	1.5	2.0
11	12.5	8.0	10.0	7.0	4.0	6.0	---	---	---	2.5	2.0	2.5
12	13.5	9.5	11.5	6.0	2.5	4.5	---	---	---	3.5	2.0	2.5
13	15.0	11.5	13.0	6.0	2.5	4.5	---	---	---	3.0	1.5	2.5
14	14.5	13.0	13.5	7.0	3.0	5.0	---	---	---	---	---	---
15	14.0	10.5	12.5	9.0	5.5	7.0	---	---	---	---	---	---
16	12.0	8.5	10.0	10.0	6.5	8.0	---	---	---	---	---	---
17	10.0	7.5	9.0	8.0	5.5	7.0	---	---	---	---	---	---
18	9.5	6.0	7.5	7.5	5.0	6.0	---	---	---	---	---	---
19	10.0	5.5	7.5	7.5	4.5	6.0	---	---	---	---	---	---
20	12.0	8.0	9.5	7.0	4.0	6.0	---	---	---	---	---	---
21	12.5	8.0	10.0	5.0	2.5	4.0	4.5	3.0	4.0	---	---	---
22	13.0	10.0	11.5	6.0	2.5	4.0	3.5	2.5	3.0	---	---	---
23	13.0	10.0	11.5	6.5	3.0	4.5	5.0	2.5	3.5	---	---	---
24	15.5	12.0	13.5	9.0	4.5	6.5	5.0	2.5	4.0	---	---	---
25	14.0	10.5	12.5	11.0	9.0	10.0	2.5	1.5	2.0	---	---	---
26	10.5	7.0	9.0	9.5	8.0	9.0	1.5	0.5	1.0	---	---	---
27	8.5	6.5	7.5	9.0	7.0	8.0	1.0	0.0	0.5	---	---	---
28	8.0	5.0	6.5	10.0	8.5	9.0	2.0	0.0	1.0	---	---	---
29	8.0	4.0	6.0	---	---	---	2.0	0.0	1.0	---	---	---
30	9.5	6.0	7.5	---	---	---	0.5	0.0	0.0	---	---	---
31	7.5	6.0	7.0	---	---	---	0.0	0.0	0.0	---	---	---
MONTH	15.5	4.0	10.2	12.5	2.5	7.0	5.0	0.0	1.8	3.5	0.0	1.1
	FEBRUARY			MARCH			APRIL			MAY		
1	---	---	---	4.0	0.0	2.0	9.5	6.5	8.0	11.5	7.0	9.0
2	---	---	---	4.5	1.0	2.5	9.0	6.0	7.5	11.5	9.0	10.0
3	---	---	---	7.0	3.0	5.5	10.0	6.0	8.0	11.0	8.5	9.5
4	---	---	---	3.0	0.0	1.5	8.0	5.0	6.0	11.5	7.0	9.0
5	---	---	---	1.5	0.0	0.5	6.0	4.0	5.0	12.5	8.0	10.0
6	---	---	---	5.0	0.5	3.0	7.0	4.0	5.0	13.0	9.0	11.0
7	4.0	2.5	3.0	6.0	2.5	4.5	7.5	3.0	5.0	14.0	10.5	12.0
8	4.5	2.5	3.5	7.5	3.0	5.5	9.0	5.5	6.5	13.5	11.0	12.0
9	5.0	2.5	3.5	9.0	5.5	7.5	10.0	8.0	9.0	12.0	10.5	11.0
10	6.0	3.5	4.5	9.0	2.0	4.5	11.0	8.0	9.5	13.5	10.5	11.5
11	6.0	1.5	3.5	4.0	1.5	2.5	11.5	6.0	8.5	12.5	9.0	11.0
12	3.0	1.0	2.0	6.0	2.5	4.0	9.0	7.0	8.0	12.0	10.5	11.0
13	3.5	0.5	2.5	5.5	4.0	5.0	11.0	9.0	10.0	12.0	11.5	11.5
14	2.0	0.0	1.0	9.5	5.0	7.0	13.5	9.0	11.0	11.5	9.0	10.0
15	4.0	1.0	2.5	9.0	6.5	7.5	14.0	11.0	12.5	12.0	8.5	10.0
16	5.5	3.0	4.0	9.0	5.0	8.0	15.5	11.0	13.0	13.5	8.5	11.0
17	4.5	2.0	3.5	5.0	3.0	4.0	16.0	11.0	13.0	14.0	11.5	12.5
18	3.5	1.0	2.0	4.5	2.5	4.0	15.5	12.0	13.5	11.5	9.0	10.0
19	4.5	0.5	2.5	5.5	4.0	5.0	16.5	12.0	13.5	12.0	8.5	9.0
20	6.0	3.5	5.0	5.0	2.0	4.0	13.0	11.0	12.0	9.5	8.0	8.5
21	7.5	5.5	6.5	7.0	4.0	5.0	11.0	8.5	9.5	10.0	7.5	8.5
22	6.0	4.0	5.0	4.5	2.5	3.5	10.0	8.0	8.5	11.0	7.0	9.0
23	5.0	2.0	3.5	6.0	2.5	4.0	10.0	6.5	8.0	12.5	8.0	10.0
24	5.0	1.0	3.0	6.5	4.0	5.5	11.0	5.5	8.0	14.0	9.5	12.0
25	6.0	2.0	4.0	6.0	5.0	5.5	9.0	7.0	8.0	13.0	10.5	12.0
26	7.0	3.0	5.0	5.0	4.5	5.0	10.5	6.0	8.0	13.0	11.5	12.0
27	4.5	1.5	3.0	6.0	5.0	5.5	11.5	6.0	8.5	14.0	12.0	13.0
28	3.5	0.5	1.5	7.5	4.5	6.0	11.5	9.0	9.5	15.0	12.5	13.5
29	---	---	---	9.0	5.5	7.5	10.5	7.5	9.0	15.5	13.0	14.0
30	---	---	---	10.0	7.5	8.5	10.0	7.0	8.5	16.0	13.0	14.5
31	---	---	---	9.5	7.5	8.5	---	---	---	16.5	13.0	15.0
MONTH	7.5	0.0	3.4	10.0	0.0	4.9	16.5	3.0	9.0	16.5	7.0	11.1

