

## 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 mi<sup>2</sup>.

**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 Oct. 1-10, 19-24, Oct. 29 to Nov. 5, Mar. 10-19, Mar. 25 to Apr. 10, May 30 to June 7, June 23-26, Aug. 11-18, and Sept. 3-9, which are poor. pH records rated good. 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 436-482. Figure 8 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, 16 microsiemens, Aug. 11, 2003.

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, 247 microsiemens, Oct. 10; minimum, 16 microsiemens, Aug. 11.

pH: Maximum, 7.2, Sept. 15, 16; minimum, 4.6, Mar. 21, 22.

WATER TEMPERATURE: Maximum, 19.5°C, Aug. 4; minimum 0.0°C, many days during winter.

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

Date	Time	Agency collecting sample, code (00027)	Agency analyzing sample, code (00028)	Instantaneous discharge, cfs (00061)	Oxidation-reduction potential, mV (00090)	Turbidity, water, unfltrd field, NTU (61028)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, units (00400)	pH, water, unfltrd lab, std units (00403)	Specific conductance, wat unfltrd 25 degC (00095)
NOV 21...	1030	1028	89203	7.41	495	5.00	11.5	5.4	5.2	141
FEB 27...	1345	1028	89203	4.41	447	2.00	13.9	5.8	5.3	133
APR 29...	1030	1028	89203	4.58	432	9.00	11.1	5.7	5.5	143
JUN 26...	1130	1028	89203	9.57	478	8.00	10.0	5.0	5.0	140
AUG 25...	1030	1028	89203	4.58	385	--	9.82	6.0	5.9	145

  

Date	Temperature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Calcium water, unfltrd recoverable, mg/L (00916)	Magnesium water, fltrd, mg/L (00925)	Magnesium water, unfltrd recoverable, mg/L (00927)	Potassium water, fltrd, mg/L (00935)	Potassium water, unfltrd recoverable, mg/L (00937)	Sodium water, fltrd, mg/L (00930)	Sodium water, unfltrd recoverable, mg/L (00929)	ANC, wat unfltrd fixed end pt, lab, mg/L as CaCO3 (00417)
NOV 21...	7.60	7.20	7.20	6.90	6.80	1.00	.900	6.40	6.40	2.30
FEB 27...	1.60	7.40	7.80	5.50	5.90	.800	.800	6.70	6.80	3.00
APR 29...	9.80	7.90	8.00	5.50	6.20	.800	.800	8.40	6.30	2.30
JUN 26...	15.0	7.30	6.00	6.20	6.20	.900	.800	7.30	6.60	1.80
AUG 25...	14.8	9.30	9.70	6.70	7.00	.900	1.00	7.20	7.40	2.80

## SWATARA CREEK BASIN

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

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

Date	Alum- inum, water, fltrd, µg/L (01106)	Alum- inum, water, unfltrd recover- able, µg/L (01105)	Iron, water, fltrd, µg/L (01046)	Iron, water, unfltrd recover- able, µg/L (01045)	Mangan- ese, water, fltrd, µg/L (01056)	Mangan- ese, water, unfltrd recover- able, µg/L (01055)	Nickel, water, fltrd, µg/L (01065)	Nickel, water, unfltrd recover- able, µg/L (01067)	Zinc, water, fltrd, µg/L (01090)	Zinc, water, unfltrd recover- able, µg/L (01092)
NOV 21...	800	1200	630	850	560	530	38.0	57.0	113	103
FEB 27...	300	800	290	440	440	420	26.0	26.0	90.0	77.0
APR 29...	300	900	580	720	440	430	24.0	31.0	84.0	86.0
JUN 26...	700	1000	690	970	480	450	38.0	38.0	107	95.0
AUG 25...	<100	800	260	690	480	510	35.0	37.0	87.0	81.0

## SWATARA CREEK BASIN

## 0157155010 SWATARA CREEK, SITE C1, AT NEWTOWN, 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
	<b>OCTOBER</b>			<b>NOVEMBER</b>			<b>DECEMBER</b>			<b>JANUARY</b>		
1	125	107	116	122	112	118	148	139	143	137	87	113
2	143	124	134	130	120	125	149	144	146	126	91	112
3	160	137	150	136	128	132	154	145	149	137	124	131
4	174	156	164	142	134	138	155	150	153	147	136	142
5	179	162	170	144	134	141	154	143	148	149	144	146
6	194	173	183	136	112	121	152	147	149	148	143	145
7	206	187	199	137	127	133	157	149	152	148	143	145
8	221	203	211	140	131	134	155	150	152	145	141	143
9	234	217	224	137	132	134	161	151	156	146	134	140
10	247	187	229	139	134	136	164	151	157	146	136	141
11	187	49	86	139	133	136	159	76	133	150	144	147
12	69	55	62	141	106	127	107	78	98	151	146	149
13	82	69	75	127	110	119	115	103	110	150	145	148
14	90	81	85	131	124	127	112	90	99	152	146	149
15	94	89	91	134	128	131	133	109	124	152	147	149
16	94	56	77	133	110	126	144	132	138	155	147	151
17	92	69	80	117	100	108	147	142	144	156	146	149
18	107	91	100	120	104	111	147	143	145	158	147	151
19	117	107	111	133	118	126	146	141	143	158	134	148
20	126	115	121	140	131	136	143	92	114	152	145	149
21	137	126	132	143	136	139	130	115	124	156	148	152
22	148	136	142	139	111	126	138	128	133	160	151	155
23	157	147	152	126	113	121	141	135	139	163	151	157
24	162	157	159	129	124	127	145	140	142	158	152	155
25	162	140	157	130	126	128	143	132	138	156	151	153
26	140	72	86	135	129	132	146	138	143	154	149	151
27	99	86	92	139	132	136	147	143	145	156	148	152
28	105	96	101	142	137	140	147	143	145	156	150	153
29	109	103	106	143	138	140	147	142	145	153	146	150
30	111	105	108	144	138	141	151	144	147	156	149	153
31	115	108	112	---	---	---	148	134	143	155	148	152
MONTH	247	49	130	144	100	130	164	76	139	163	87	146
	<b>FEBRUARY</b>			<b>MARCH</b>			<b>APRIL</b>			<b>MAY</b>		
1	153	147	150	140	136	137	106	101	104	147	139	144
2	153	148	150	138	110	124	108	103	106	143	123	137
3	155	150	152	142	114	128	114	108	111	143	129	137
4	152	110	130	149	131	139	118	113	116	148	142	144
5	144	119	131	139	124	135	119	114	116	147	143	145
6	155	138	146	138	120	126	125	117	121	147	143	145
7	146	141	144	154	136	145	127	122	125	149	131	145
8	162	142	150	155	147	151	130	125	128	138	119	130
9	169	140	151	156	146	151	134	128	131	141	136	139
10	150	142	146	172	153	163	136	123	129	145	138	141
11	156	143	148	180	170	175	130	88	110	144	137	142
12	156	144	149	180	175	177	137	111	125	145	140	142
13	157	147	151	178	149	169	144	135	141	145	141	143
14	155	147	150	185	156	177	146	142	144	147	143	145
15	154	148	150	189	161	178	149	143	145	148	143	146
16	159	151	155	188	133	165	147	141	144	147	133	144
17	158	144	149	154	105	133	149	145	147	138	127	133
18	146	141	143	128	113	119	148	142	145	141	135	138
19	148	143	145	141	124	134	145	141	143	144	138	141
20	147	142	145	135	50	112	146	142	144	147	141	144
21	148	140	145	122	95	111	145	137	142	146	134	139
22	143	95	120	119	90	99	140	135	138	148	141	145
23	109	95	99	93	87	89	145	138	142	150	143	148
24	128	109	119	91	88	89	150	142	146	143	95	113
25	131	124	128	92	89	90	151	147	149	126	111	120
26	134	128	131	93	81	89	149	118	133	125	97	107
27	136	130	133	93	84	89	143	127	136	130	110	118
28	138	132	135	97	92	95	149	141	144	139	114	130
29	---	---	---	97	80	91	146	140	143	147	121	137
30	---	---	---	95	86	92	147	141	144	154	145	149
31	---	---	---	102	95	98	---	---	---	156	86	142
MONTH	169	95	141	189	50	128	151	88	133	156	86	138

## SWATARA CREEK BASIN

## 0157155010 SWATARA CREEK, SITE C1, AT NEWTOWN, 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			SEPTEMBER		
1	108	62	90	153	142	148	99	72	89	152	101	136
2	123	108	117	157	144	150	85	60	73	124	104	116
3	124	100	118	157	146	152	86	63	81	124	75	100
4	113	99	107	162	147	156	74	31	61	110	78	95
5	119	111	115	---	---	---	83	56	70	132	108	122
6	124	118	121	167	160	163	62	53	58	140	130	134
7	123	93	111	170	116	153	83	60	66	143	136	138
8	124	109	118	---	---	---	96	83	93	145	138	141
9	131	123	126	---	---	---	96	81	90	149	142	144
10	136	130	133	---	---	---	100	73	84	152	142	147
11	137	134	135	---	---	---	90	16	47	155	146	150
12	135	117	127	---	---	---	48	27	39	155	148	153
13	133	117	127	---	---	---	64	48	56	156	132	148
14	141	133	136	---	---	---	79	64	71	137	101	120
15	145	139	142	---	---	---	92	79	85	137	79	129
16	148	143	145	---	---	---	104	92	98	120	73	101
17	149	145	147	---	---	---	119	104	110	131	119	125
18	146	102	117	---	---	---	131	118	125	136	130	132
19	138	120	128	---	---	---	134	125	129	133	84	100
20	137	53	114	---	---	---	138	130	133	116	100	108
21	102	51	75	---	---	---	141	133	136	123	115	119
22	111	98	104	---	---	---	143	125	136	127	105	124
23	123	110	116	---	---	---	144	124	134	108	48	77
24	133	122	127	62	39	50	151	141	144	132	104	122
25	140	131	135	78	61	68	155	145	149	132	128	130
26	148	139	142	86	77	79	156	147	151	129	125	127
27	146	138	142	87	81	84	153	147	149	126	123	125
28	150	140	144	84	71	77	161	149	152	125	115	120
29	148	140	145	94	82	87	162	129	157	127	121	123
30	149	142	145	97	91	93	147	123	129	126	123	125
31	---	---	---	98	94	96	152	127	139	---	---	---
MONTH	150	51	125	170	39	111	162	16	104	156	48	124
YEAR	247	16	130									

## 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
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	6.8	6.7	6.8	6.0	5.9	5.9	5.6	5.5	5.6	5.9	5.5	5.7
2	6.7	6.7	6.7	5.9	5.8	5.9	5.7	5.6	5.6	5.5	5.4	5.5
3	6.7	6.6	6.7	5.8	5.8	5.8	5.8	5.6	5.7	5.4	5.3	5.3
4	6.7	6.6	6.7	5.8	5.7	5.8	5.8	5.8	5.8	5.3	5.3	5.3
5	6.7	6.6	6.6	5.8	5.7	5.8	5.8	5.8	5.8	5.4	5.3	5.4
6	6.6	6.6	6.6	5.9	5.5	5.6	5.9	5.8	5.8	5.5	5.4	5.4
7	6.6	6.6	6.6	5.7	5.6	5.6	6.0	5.9	5.9	5.5	5.5	5.5
8	6.6	6.6	6.6	5.7	5.7	5.7	6.0	5.9	6.0	5.5	5.5	5.5
9	6.6	6.6	6.6	5.7	5.6	5.7	6.1	6.0	6.0	5.6	5.4	5.5
10	7.0	6.6	6.6	5.7	5.6	5.6	6.1	5.9	6.0	5.6	5.5	5.6
11	7.0	5.3	5.9	5.6	5.6	5.6	6.2	5.6	6.1	5.7	5.6	5.6
12	5.8	5.4	5.6	6.0	5.6	5.7	5.6	5.5	5.5	5.7	5.6	5.7
13	5.9	5.8	5.9	5.6	5.5	5.5	5.7	5.5	5.5	5.7	5.6	5.7
14	5.8	5.7	5.8	5.5	5.5	5.5	5.8	5.3	5.5	5.7	5.7	5.7
15	5.8	5.8	5.8	5.5	5.5	5.5	5.3	5.2	5.2	5.7	5.7	5.7
16	6.3	5.3	5.8	5.5	5.5	5.5	5.2	5.2	5.2	5.8	5.7	5.7
17	5.4	5.3	5.4	5.5	5.4	5.5	5.3	5.2	5.2	5.8	5.7	5.7
18	5.4	5.4	5.4	5.6	5.4	5.5	5.4	5.3	5.3	5.8	5.7	5.7
19	5.5	5.4	5.5	5.5	5.4	5.4	5.4	5.4	5.4	5.8	5.7	5.8
20	5.6	5.5	5.5	5.4	5.3	5.4	6.2	5.2	5.4	5.8	5.8	5.8
21	5.7	5.6	5.6	5.4	5.4	5.4	5.3	5.3	5.3	5.9	5.8	5.8
22	5.8	5.7	5.8	5.6	5.4	5.4	5.3	5.3	5.3	5.9	5.7	5.8
23	5.9	5.8	5.8	5.5	5.4	5.4	5.4	5.3	5.4	5.9	5.7	5.8
24	6.1	5.9	6.1	5.5	5.4	5.5	5.5	5.4	5.5	5.9	5.8	5.9
25	6.1	6.1	6.1	5.5	5.4	5.4	5.5	5.5	5.5	5.9	5.9	5.9
26	6.4	5.6	5.6	5.5	5.4	5.5	5.6	5.5	5.5	5.9	5.8	5.9
27	6.0	5.7	5.8	5.5	5.5	5.5	5.6	5.6	5.6	5.9	5.8	5.9
28	6.0	5.9	6.0	5.6	5.5	5.5	5.6	5.6	5.6	5.9	5.9	5.9
29	6.1	6.0	6.1	5.6	5.5	5.5	5.7	5.6	5.6	5.9	5.9	5.9
30	6.2	6.0	6.1	5.6	5.5	5.5	5.7	5.7	5.7	5.9	5.8	5.9
31	6.2	6.0	6.1	---	---	---	5.7	5.7	5.7	5.9	5.9	5.9
MAX	7.0	6.7	6.8	6.0	5.9	5.9	6.2	6.0	6.1	5.9	5.9	5.9
MIN	5.4	5.3	5.4	5.4	5.3	5.4	5.2	5.2	5.2	5.3	5.3	5.3

## SWATARA CREEK BASIN

## 0157155010 SWATARA CREEK, SITE C1, AT NEWTOWN, 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
	<b>FEBRUARY</b>			<b>MARCH</b>			<b>APRIL</b>			<b>MAY</b>		
1	5.9	5.9	5.9	5.7	5.7	5.7	5.3	5.3	5.3	5.7	5.6	5.7
2	5.9	5.9	5.9	5.7	5.6	5.7	5.3	5.2	5.3	5.7	5.5	5.6
3	6.0	5.9	5.9	5.7	5.6	5.7	5.3	5.2	5.3	5.6	5.6	5.6
4	6.0	5.8	6.0	5.7	5.6	5.6	5.4	5.3	5.4	5.7	5.6	5.6
5	6.2	5.9	5.9	5.9	5.6	5.7	5.4	5.4	5.4	5.7	5.6	5.7
6	6.1	5.8	6.0	5.9	5.7	5.8	5.5	5.4	5.4	5.7	5.6	5.7
7	6.1	6.0	6.0	5.7	5.6	5.7	5.5	5.5	5.5	5.7	5.6	5.6
8	6.1	5.8	6.0	5.7	5.6	5.6	5.5	5.5	5.5	5.7	5.5	5.5
9	6.1	5.8	6.1	5.7	5.6	5.6	5.6	5.5	5.5	5.6	5.5	5.6
10	6.1	6.1	6.1	5.7	5.6	5.6	5.6	5.4	5.5	5.6	5.6	5.6
11	6.1	5.9	6.1	5.6	5.6	5.6	5.8	5.2	5.5	5.6	5.6	5.6
12	6.1	5.9	6.1	5.6	5.5	5.5	5.3	5.2	5.3	5.6	5.6	5.6
13	6.1	5.9	6.0	5.9	5.5	5.6	5.3	5.2	5.3	5.6	5.6	5.6
14	6.1	6.0	6.0	5.7	5.5	5.6	5.3	5.2	5.3	5.6	5.6	5.6
15	6.1	6.0	6.0	5.9	5.5	5.6	5.4	5.2	5.3	5.7	5.6	5.7
16	6.0	6.0	6.0	5.9	5.3	5.5	5.4	5.3	5.4	5.7	5.7	5.7
17	6.0	5.8	5.9	5.5	5.1	5.3	5.5	5.4	5.4	5.7	5.6	5.6
18	6.1	6.0	6.0	5.2	4.9	5.1	5.6	5.5	5.5	5.7	5.6	5.7
19	6.1	6.0	6.1	5.0	4.9	4.9	5.6	5.5	5.5	5.7	5.6	5.7
20	6.1	6.0	6.1	5.5	4.8	5.0	5.6	5.5	5.6	5.7	5.5	5.7
21	6.1	6.0	6.1	4.8	4.6	4.7	5.6	5.6	5.6	5.9	5.7	5.7
22	6.1	5.8	6.0	4.8	4.6	4.7	5.6	5.5	5.6	5.8	5.7	5.8
23	6.1	5.8	6.0	4.9	4.8	4.8	5.7	5.6	5.6	5.9	5.8	5.8
24	6.0	5.9	6.0	5.1	4.9	5.0	5.7	5.6	5.7	6.0	5.5	5.8
25	5.9	5.9	5.9	5.1	5.0	5.1	5.8	5.6	5.7	5.5	5.5	5.5
26	5.9	5.8	5.9	5.2	5.1	5.1	5.8	5.6	5.7	6.0	5.4	5.4
27	5.8	5.7	5.8	5.2	5.1	5.2	5.7	5.6	5.6	5.4	5.3	5.4
28	5.7	5.7	5.7	5.3	5.2	5.3	5.7	5.6	5.7	5.5	5.1	5.3
29	---	---	---	5.3	5.1	5.3	5.7	5.7	5.7	5.3	5.2	5.2
30	---	---	---	5.3	5.2	5.3	5.7	5.7	5.7	5.3	5.2	5.3
31	---	---	---	5.3	5.3	5.3	---	---	---	5.7	5.1	5.3
MAX	6.2	6.1	6.1	5.9	5.7	5.8	5.8	5.7	5.7	6.0	5.8	5.8
MIN	5.7	5.7	5.7	4.8	4.6	4.7	5.3	5.2	5.3	5.3	5.1	5.2
DAY	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN
	<b>JUNE</b>			<b>JULY</b>			<b>AUGUST</b>			<b>SEPTEMBER</b>		
1	5.5	5.0	5.1	5.4	5.3	5.4	6.6	6.3	6.5	---	---	---
2	5.0	4.9	5.0	5.5	5.4	5.4	6.6	6.0	6.1	---	---	---
3	5.2	5.0	5.0	5.5	5.4	5.5	6.7	6.2	6.4	---	---	---
4	5.2	5.1	5.1	5.6	5.5	5.5	6.6	5.4	5.5	---	---	---
5	5.1	5.1	5.1	---	---	---	6.1	5.2	5.3	---	---	---
6	5.1	5.1	5.1	5.7	5.6	5.7	5.7	5.1	5.2	---	---	---
7	5.5	5.1	5.2	5.9	5.6	5.8	5.2	5.2	5.2	---	---	---
8	5.2	5.1	5.1	---	---	---	5.2	5.2	5.2	---	---	---
9	5.1	5.1	5.1	---	---	---	5.3	5.2	5.3	---	---	---
10	5.1	5.1	5.1	---	---	---	5.8	5.3	5.4	---	---	---
11	5.2	5.1	5.1	---	---	---	6.6	5.2	5.4	6.3	6.1	6.2
12	5.5	5.0	5.1	---	---	---	5.2	5.0	5.0	6.5	6.3	6.4
13	5.3	5.1	5.2	---	---	---	5.1	5.0	5.1	6.7	6.5	6.6
14	5.2	5.1	5.1	---	---	---	5.2	5.1	5.2	6.9	6.3	6.4
15	5.2	5.1	5.2	---	---	---	5.4	5.2	5.4	7.2	6.2	6.6
16	5.2	5.2	5.2	---	---	---	5.4	5.4	5.4	7.2	6.4	6.5
17	5.4	5.2	5.3	---	---	---	5.5	5.4	5.4	6.8	6.6	6.7
18	5.9	5.3	5.4	---	---	---	---	---	---	6.8	6.7	6.8
19	5.4	5.3	5.3	---	---	---	---	---	---	7.1	6.4	6.6
20	5.9	5.2	5.3	---	---	---	---	---	---	6.5	6.5	6.5
21	5.3	4.9	5.0	---	---	---	---	---	---	6.6	6.5	6.6
22	4.9	4.8	4.8	---	---	---	---	---	---	6.6	6.5	6.6
23	4.8	4.7	4.8	---	---	---	---	---	---	7.0	5.6	5.7
24	4.8	4.7	4.8	5.7	5.2	5.5	---	---	---	5.7	5.7	5.7
25	4.8	4.8	4.8	6.0	5.7	5.9	---	---	---	5.8	5.7	5.8
26	5.1	4.8	5.1	6.1	6.0	6.1	---	---	---	5.9	5.8	5.9
27	5.3	5.1	5.2	6.2	6.0	6.1	---	---	---	6.0	5.9	6.0
28	5.3	5.2	5.2	6.3	5.9	5.9	---	---	---	6.0	6.0	6.0
29	5.3	5.2	5.3	6.3	6.0	6.2	---	---	---	6.1	6.0	6.1
30	5.3	5.3	5.3	6.4	6.3	6.4	---	---	---	6.1	6.1	6.1
31	---	---	---	6.5	6.4	6.5	---	---	---	---	---	---
MAX	5.9	5.3	5.4	6.5	6.4	6.5	6.7	6.3	6.5	7.2	6.7	6.8
MIN	4.8	4.7	4.8	5.4	5.2	5.4	5.1	5.0	5.0	5.7	5.6	5.7
YEAR	MAX			MAXIMUM	7.2	MINIMUM	4.8					
	MIN			MAXIMUM	6.7	MINIMUM	4.6					
	MEDIAN			MAXIMUM	6.8	MINIMUM	4.7					

## SWATARA CREEK BASIN

## 0157155010 SWATARA CREEK, SITE C1, AT NEWTOWN, 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
	<b>OCTOBER</b>			<b>NOVEMBER</b>			<b>DECEMBER</b>			<b>JANUARY</b>		
1	15.5	12.5	14.0	7.0	5.5	6.5	5.0	2.5	4.0	5.0	4.0	4.5
2	17.0	14.0	15.5	7.0	5.5	6.0	4.5	2.5	3.5	5.0	4.0	4.5
3	17.0	15.0	16.0	7.0	5.5	6.5	4.0	1.0	2.0	4.5	2.5	4.0
4	16.0	15.0	15.5	7.5	5.5	6.5	2.0	0.5	1.5	5.0	4.5	5.0
5	17.5	14.0	16.0	7.5	6.0	6.5	2.0	0.0	1.5	5.0	4.0	4.5
6	14.5	12.0	13.5	8.0	6.5	7.5	3.0	0.5	2.0	5.0	4.0	4.5
7	15.0	12.0	14.0	7.0	5.5	6.5	1.5	0.0	1.0	4.0	2.5	3.0
8	12.0	10.0	11.0	8.5	5.5	7.0	3.5	0.5	2.0	5.0	3.5	4.5
9	12.0	9.0	10.5	9.5	6.5	8.0	2.0	0.0	0.5	6.0	4.5	5.0
10	13.0	12.0	12.5	11.5	8.5	10.0	1.5	0.0	0.5	5.0	3.0	4.5
11	13.5	13.0	13.0	12.5	10.0	11.5	3.0	0.5	1.5	3.0	1.5	2.5
12	14.0	13.5	13.5	10.0	9.5	9.5	4.5	3.0	4.0	2.5	1.0	2.0
13	13.5	12.0	13.0	9.5	7.0	8.5	5.0	4.5	5.0	3.0	1.0	2.0
14	12.0	9.0	10.5	9.0	6.5	8.0	5.5	4.5	5.0	2.0	0.5	1.5
15	10.5	8.0	9.5	9.0	7.0	8.0	6.5	5.5	6.0	2.0	0.5	1.5
16	11.5	10.5	11.0	8.5	7.0	8.0	6.5	4.5	6.0	1.5	0.0	1.0
17	11.5	10.5	11.0	7.5	6.5	7.5	5.0	3.5	4.5	1.5	0.0	1.0
18	10.5	9.0	10.0	7.5	6.5	7.0	4.5	2.5	3.5	1.0	0.0	0.0
19	10.5	9.0	10.0	7.5	6.5	7.0	6.0	4.0	5.0	1.0	0.0	0.5
20	10.5	9.0	10.0	8.5	6.5	7.5	6.5	5.0	6.0	1.5	0.5	1.0
21	10.0	8.0	9.0	8.5	6.5	7.5	6.0	5.0	5.5	1.0	0.0	0.5
22	9.5	7.0	8.5	8.5	7.5	8.0	6.5	5.0	5.5	0.5	0.0	0.5
23	9.5	8.0	8.5	7.5	6.0	6.5	6.0	5.0	5.5	0.5	0.0	0.0
24	8.0	7.0	7.5	8.0	6.0	7.0	5.5	4.0	5.0	0.5	0.0	0.5
25	8.0	7.5	7.5	8.5	6.5	7.5	4.5	2.0	3.5	1.0	0.5	1.0
26	10.0	8.0	9.5	7.5	6.0	7.0	4.5	3.0	3.5	1.5	0.5	1.0
27	10.5	8.5	9.5	6.0	4.5	5.5	4.0	2.5	3.5	1.0	0.0	0.5
28	9.0	7.5	8.5	5.0	3.5	4.5	4.0	2.5	3.5	1.0	0.0	0.5
29	7.5	4.5	6.5	5.5	4.0	4.5	4.5	3.0	4.0	2.0	1.0	1.5
30	6.0	5.0	5.5	6.5	5.0	5.5	4.5	2.5	3.5	2.0	0.5	1.0
31	7.0	6.0	6.0	---	---	---	5.5	4.5	5.0	2.5	1.5	2.0
MONTH	17.5	4.5	10.9	12.5	3.5	7.2	6.5	0.0	3.6	6.0	0.0	2.1
	<b>FEBRUARY</b>			<b>MARCH</b>			<b>APRIL</b>			<b>MAY</b>		
1	2.5	2.0	2.0	3.0	2.0	2.5	5.5	3.5	5.0	14.0	10.0	11.5
2	3.5	2.0	2.5	3.5	2.5	3.0	10.0	5.0	7.5	14.5	11.5	12.5
3	4.0	1.5	2.5	2.5	0.0	0.5	10.0	7.0	8.5	13.5	9.5	11.0
4	3.0	1.5	2.5	2.0	0.0	1.0	8.0	6.5	7.5	12.5	9.0	10.0
5	1.5	0.0	1.0	4.5	2.0	3.0	7.0	6.0	6.5	9.5	8.0	8.5
6	1.0	0.0	0.5	3.0	0.5	2.0	7.5	5.0	6.0	11.0	8.0	9.5
7	2.5	0.0	1.0	2.0	0.0	1.0	5.5	2.5	4.0	15.0	9.5	12.0
8	1.0	0.0	0.5	4.0	0.5	2.5	5.0	4.0	4.5	13.5	11.5	12.0
9	1.0	0.0	0.5	5.0	1.0	3.0	5.5	4.5	5.0	12.0	11.0	11.5
10	1.0	0.5	1.0	2.5	0.5	1.5	7.5	5.0	6.0	13.0	10.5	11.5
11	1.0	0.0	0.5	2.5	0.0	1.5	6.5	5.5	6.0	13.5	11.5	12.5
12	1.0	0.0	0.5	4.5	2.0	3.0	9.0	6.5	7.5	13.0	10.0	11.5
13	0.5	0.0	0.0	5.0	2.5	3.5	9.0	6.5	7.5	10.5	9.5	10.0
14	1.0	0.0	0.5	4.0	1.5	2.5	9.5	6.0	8.0	11.0	9.0	10.0
15	1.0	0.0	0.5	6.0	2.5	3.5	12.0	7.5	9.5	10.5	8.0	9.5
16	0.0	0.0	0.0	7.0	3.5	4.5	13.0	8.5	10.5	10.5	9.5	10.0
17	0.0	0.0	0.0	6.5	4.0	5.0	10.0	6.5	8.0	10.0	9.0	9.5
18	0.0	0.0	0.0	6.5	4.5	5.5	7.0	6.0	6.5	11.5	9.0	10.0
19	1.0	0.0	0.5	6.5	5.0	5.5	10.5	7.0	8.5	13.0	7.5	10.0
20	2.0	0.5	1.0	5.5	3.0	4.5	11.0	6.5	8.5	13.0	8.5	11.0
21	2.5	0.0	1.0	7.5	4.0	6.0	9.5	8.0	9.0	11.5	10.5	11.0
22	1.5	0.5	1.0	8.0	6.5	7.0	11.5	8.0	9.5	11.5	10.0	10.5
23	1.5	0.5	1.0	8.0	6.0	7.0	9.5	6.5	7.5	11.0	10.0	10.5
24	1.5	0.0	1.0	8.5	6.0	7.0	10.5	5.0	7.5	11.5	10.5	11.0
25	2.0	0.0	1.0	9.5	6.0	8.0	11.5	6.0	8.5	11.5	11.0	11.0
26	1.5	0.0	0.5	9.0	6.5	7.5	10.0	9.5	9.5	11.5	10.5	11.5
27	1.5	0.5	1.0	9.0	6.0	7.5	12.5	8.5	10.0	11.5	10.5	10.5
28	3.0	1.5	2.0	8.5	6.5	7.5	13.5	7.0	10.5	11.5	10.0	10.5
29	---	---	---	9.5	8.0	8.5	12.5	9.0	10.5	12.5	10.0	11.5
30	---	---	---	8.0	4.5	6.0	13.0	8.0	10.5	13.0	11.0	12.0
31	---	---	---	6.0	4.0	5.0	---	---	---	13.0	11.0	11.5
MONTH	4.0	0.0	0.9	9.5	0.0	4.4	13.5	2.5	7.8	15.0	7.5	10.8

