

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 good except for periods July 25 to Aug. 11, Aug. 24 to Sept. 5, and Sept. 23-30, which are fair, Dec. 13 to Feb. 1, June 29 to July 4, July 11, and Sept. 6-14, 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.

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, 251 microsiemens, Sept. 14; minimum recorded (may have been lower Feb. 2 to Mar. 8 during period of gap in record), 54 microsiemens, June 6.

pH: Maximum, 6.5, Sept. 16-22, 26, 27, 29, 30; minimum recorded (may have been lower Feb. 2 to Mar. 8 during period of gap in record), 4.8, Nov. 28-30, Mar. 29, Apr. 3.

WATER TEMPERATURE: Maximum, 21.7°C, Aug. 14; minimum recorded 0.0°C, Dec. 20, Mar. 9 (0.0°C may have occurred during period of gap in record, Feb. 2 to Mar. 8).

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

Date	Time	Agency collecting sample, code (00027)	Agency analyzing sample, code (00028)	Instantaneous discharge, cfs (00061)	Oxidation-reduction potential, mV (00090)	Turbidity, water, unfltrd field, NTU (61028)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)
NOV										
02...	1115	1028	89203	2.6	442	2.7	10.6	94	5.9	5.8
DEC										
22...	1015	1028	89203	4.7	447	2.2	13.8	103	5.6	5.2
FEB										
09...	1045	1028	89203	2.9	393	--	12.4	95	6.0	5.9
MAR										
23...	1240	1028	89203	7.7	399	--	12.4	95	5.6	5.4
MAY										
04...	1213	1028	89203	2.8	387	2.9	12.1	104	5.9	5.6
JUN										
21...	1315	1028	89203	1.2	372	7.6	10.4	106	5.4	5.6
JUL										
18...	1230	1028	89203	5.9	457	--	8.2	92	5.3	5.5
SEP										
01...	1245	1028	89203	1.1	335	--	8.5	91	6.0	6.1

Date	Specific conductance, wat unfltrd, 25 degC (00095)	Temperature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Calcium water, unfltrd recover-able, mg/L (00916)	Magnesium water, fltrd, mg/L (00925)	Magnesium water, unfltrd recover-able, mg/L (00927)	Potassium water, fltrd, mg/L (00935)	Potassium water, unfltrd recover-able, mg/L (00937)	Sodium water, fltrd, mg/L (00930)	Sodium water, unfltrd recover-able, mg/L (00929)
NOV										
02...	119	9.9	6.80	7.0	4.40	4.5	.70	.7	5.90	5.4
DEC										
22...	130	3.0	7.40	6.3	6.40	5.4	.90	.8	5.20	4.9
FEB										
09...	109	4.3	5.90	5.9	4.30	4.4	.80	.9	4.90	5.0
MAR										
23...	95	4.3	4.70	5.3	3.50	4.0	1.10	1.2	4.90	5.3
MAY										
04...	116	9.0	6.30	6.2	4.80	4.7	.90	.8	5.00	4.9
JUN										
21...	143	16.0	8.70	8.9	6.80	7.0	.70	.7	5.40	5.4
JUL										
18...	102	18.7	5.40	4.8	3.90	3.4	1.10	1.0	6.20	5.5
SEP										
01...	187	18.4	10.9	12.0	8.30	9.2	1.10	1.1	8.60	6.7

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

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

Date	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (00417)	Chlor- ide, water, fltrd, mg/L (00940)	Fluor- ide, water, fltrd, mg/L (00950)	Sulfate water, fltrd, mg/L (00945)	Nitrate water, fltrd, mg/L as N (00618)	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)	Alum- inum, unfltrd recover- able, µg/L (01105)	Bromine water unfltrd mg/L (71871)
NOV 02...	2	10.8	--	35.1	--	--	--	<100	500	--
DEC 22...	2	7.5	--	42.7	--	--	--	300	600	--
FEB 09...	2	8.6	--	33.8	--	--	--	<100	500	--
MAR 23...	2	7.3	<.01	24.2	.49	<.030	<.020	400	1200	.19
MAY 04...	3	7.6	<.01	31.8	.42	<.030	<.020	<100	500	.18
JUN 21...	2	8.4	<.01	39.5	.45	<.030	<.020	200	600	.21
JUL 18...	2	9.4	--	31.6	--	--	--	400	500	--
SEP 01...	3	9.8	--	54.4	--	--	--	<100	300	--

Date	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 02...	100	230	250	260	35.0	20.0	70.0	50.0
DEC 22...	690	710	400	340	30.0	25.0	90.0	75.0
FEB 09...	410	560	310	310	25.0	25.0	60.0	65.0
MAR 23...	570	1030	250	280	20.0	20.0	65.0	80.0
MAY 04...	200	350	270	250	25.0	25.0	60.0	70.0
JUN 21...	90.0	410	270	270	30.0	30.0	70.0	75.0
JUL 18...	300	--	280	250	25.0	20.0	70.0	60.0
SEP 01...	90.0	190	170	200	25.0	25.0	60.0	50.0

SWATARA CREEK BASIN

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

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

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	122	117	119	121	115	117	122	88	104	112	111	111
2	122	120	122	119	117	118	117	110	115	113	112	113
3	125	120	123	119	117	118	119	117	118	114	102	111
4	127	125	126	120	101	113	120	119	119	107	98	102
5	130	127	128	112	101	108	120	119	120	108	96	103
6	131	129	130	117	112	115	122	120	121	103	87	96
7	133	130	131	119	116	118	121	106	115	108	102	105
8	134	132	133	121	119	120	117	108	114	108	95	101
9	135	134	134	123	121	123	119	97	116	107	98	104
10	136	134	135	124	123	123	102	84	95	112	106	109
11	137	136	136	124	123	124	105	94	99	114	109	112
12	138	137	137	124	90	105	112	105	109	113	106	111
13	139	134	138	111	97	106	117	112	114	113	99	106
14	137	114	125	114	111	113	122	117	119	106	71	91
15	131	104	123	115	114	115	123	121	122	110	106	109
16	123	103	115	116	115	116	123	121	122	107	104	106
17	130	123	126	117	116	117	123	121	122	106	105	106
18	134	130	132	119	117	118	125	123	124	107	105	107
19	132	99	111	121	119	120	124	123	123	107	106	106
20	120	111	117	122	116	120	131	124	128	107	106	106
21	123	120	122	122	114	119	130	128	129	110	107	108
22	123	118	120	126	113	123	130	128	129	111	106	110
23	126	123	125	123	113	120	128	57	98	110	107	108
24	127	126	126	124	70	104	97	77	88	111	110	110
25	128	126	127	85	70	77	105	97	102	110	110	110
26	131	128	129	103	85	95	107	104	106	112	110	110
27	131	127	130	108	103	107	111	107	109	117	112	115
28	132	126	130	116	55	88	113	110	111	121	115	118
29	132	130	131	129	116	126	111	110	110	120	116	117
30	131	78	101	127	122	125	111	110	111	116	116	116
31	115	105	111	---	---	---	111	110	111	119	116	117
MONTH	139	78	126	129	55	114	131	57	114	121	71	108
	FEBRUARY			MARCH			APRIL			MAY		
1	121	119	120	---	---	---	116	115	116	112	103	108
2	---	---	---	---	---	---	115	64	89	113	112	113
3	---	---	---	---	---	---	118	77	104	116	113	114
4	---	---	---	---	---	---	126	117	124	118	116	117
5	---	---	---	---	---	---	121	113	117	119	118	118
6	---	---	---	---	---	---	113	107	111	119	118	118
7	---	---	---	---	---	---	109	100	107	120	118	119
8	---	---	---	---	---	---	107	101	105	122	120	121
9	---	---	---	127	122	124	110	107	108	123	122	122
10	---	---	---	124	121	123	110	108	110	124	122	123
11	---	---	---	124	122	124	111	110	111	125	124	124
12	---	---	---	123	121	122	111	111	111	128	125	126
13	---	---	---	123	121	122	116	111	113	129	128	128
14	---	---	---	123	121	122	117	116	117	129	90	125
15	---	---	---	124	120	122	118	117	118	107	72	94
16	---	---	---	123	119	121	120	118	119	112	107	110
17	---	---	---	122	115	119	120	118	120	114	112	113
18	---	---	---	119	107	115	121	120	120	117	114	115
19	---	---	---	115	105	111	122	120	121	118	116	117
20	---	---	---	109	102	106	123	121	122	118	99	110
21	---	---	---	104	101	103	124	121	123	114	103	110
22	---	---	---	104	100	103	124	122	124	116	114	114
23	---	---	---	102	78	93	122	93	110	118	116	117
24	---	---	---	102	85	97	107	82	97	119	118	118
25	---	---	---	112	102	109	113	107	111	120	119	120
26	---	---	---	115	111	113	115	113	114	124	120	122
27	---	---	---	116	108	114	115	107	110	127	124	125
28	---	---	---	108	67	90	114	112	113	128	112	125
29	---	---	---	124	80	111	115	114	114	121	111	118
30	---	---	---	124	120	122	115	104	111	124	119	121
31	---	---	---	120	116	118	---	---	---	128	124	126
MONTH	121	119	120	127	67	113	126	64	113	129	72	118

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

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

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	150	128	131	169	119	162	161	159	160	189	184	186
2	153	134	135	156	114	135	165	161	163	197	189	193
3	155	108	133	175	156	167	168	165	166	203	197	200
4	114	103	107	183	175	179	171	167	170	207	203	205
5	126	114	120	188	166	185	173	171	172	210	207	208
6	129	54	103	172	145	160	175	173	173	213	200	209
7	99	73	87	179	123	163	176	175	176	206	203	204
8	107	99	103	160	97	115	178	109	169	210	206	208
9	107	88	102	133	113	122	145	106	129	214	210	212
10	104	99	101	148	133	141	157	145	151	218	214	216
11	106	103	104	156	148	151	166	157	162	222	217	220
12	126	105	108	156	151	154	172	166	169	226	220	223
13	129	115	120	159	152	155	178	172	174	230	220	226
14	134	119	124	160	134	157	181	157	178	251	221	233
15	130	124	126	160	153	156	182	177	180	228	214	217
16	158	127	132	158	128	146	184	174	180	223	123	212
17	159	131	139	128	65	95	181	175	178	186	160	174
18	152	132	137	119	91	103	188	181	184	199	186	194
19	156	135	141	136	119	129	188	154	170	206	199	203
20	162	137	143	142	135	138	173	156	166	210	205	208
21	161	140	142	145	138	141	179	173	176	215	210	212
22	166	144	147	145	140	142	186	179	183	220	213	218
23	173	151	155	150	143	145	191	186	189	220	220	220
24	162	156	159	153	147	150	195	191	193	230	220	220
25	168	162	164	154	130	138	200	195	198	231	230	231
26	174	168	171	150	139	146	202	200	201	231	211	226
27	178	174	176	148	139	144	204	202	203	211	201	210
28	182	178	180	150	140	144	203	156	169	221	211	219
29	186	104	168	154	150	152	179	159	170	222	202	216
30	155	104	132	156	154	155	186	179	184	222	212	221
31	---	---	---	159	156	158	188	182	186	---	---	---
MONTH	186	54	133	188	65	146	204	106	175	251	123	211
YEAR	251	54	134									

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

DAY	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	5.4	5.3	5.4	6.1	5.9	6.1	5.2	5.0	5.1	5.6	5.6	5.6
2	5.5	5.4	5.5	5.9	5.9	5.9	5.1	5.1	5.1	5.6	5.6	5.6
3	5.6	5.5	5.5	5.9	5.9	5.9	5.2	5.1	5.1	5.7	5.6	5.6
4	5.6	5.5	5.6	6.0	5.8	5.9	5.2	5.2	5.2	5.8	5.6	5.6
5	5.7	5.6	5.6	5.8	5.7	5.8	5.3	5.2	5.3	5.8	5.6	5.7
6	5.7	5.6	5.6	5.8	5.8	5.8	5.4	5.3	5.3	5.9	5.6	5.7
7	5.6	5.6	5.6	5.9	5.8	5.8	5.4	5.3	5.4	5.7	5.6	5.7
8	5.6	5.6	5.6	5.9	5.8	5.9	5.4	5.3	5.4	6.0	5.5	5.6
9	5.7	5.6	5.7	5.9	5.8	5.9	5.6	5.4	5.4	5.5	5.4	5.5
10	5.7	5.7	5.7	5.9	5.8	5.9	5.8	5.3	5.4	5.4	5.3	5.4
11	5.8	5.7	5.8	5.8	5.8	5.8	5.4	5.3	5.3	5.4	5.3	5.4
12	5.9	5.8	5.9	5.9	5.6	5.8	5.3	5.3	5.3	5.5	5.4	5.4
13	6.0	5.9	5.9	5.7	5.6	5.6	5.3	5.2	5.3	5.4	5.4	5.4
14	6.1	5.8	6.0	5.7	5.7	5.7	5.4	5.3	5.3	5.9	4.9	5.1
15	6.1	5.9	6.0	5.7	5.7	5.7	5.5	5.4	5.4	5.0	4.9	4.9
16	6.0	5.8	5.9	5.7	5.7	5.7	5.5	5.4	5.5	5.1	5.0	5.0
17	6.0	6.0	6.0	5.7	5.7	5.7	5.5	5.5	5.5	5.2	5.1	5.1
18	6.1	6.0	6.1	5.7	5.7	5.7	5.6	5.5	5.6	5.3	5.2	5.2
19	6.3	5.8	6.0	5.7	5.7	5.7	5.6	5.6	5.6	5.4	5.3	5.3
20	6.0	5.9	5.9	5.7	5.7	5.7	5.7	5.6	5.6	5.4	5.3	5.4
21	6.2	6.0	6.1	5.7	5.6	5.6	5.7	5.6	5.7	5.5	5.4	5.5
22	6.2	6.1	6.1	5.8	5.5	5.6	5.7	5.6	5.6	5.6	5.5	5.6
23	6.2	6.1	6.2	5.7	5.6	5.6	6.0	5.1	5.7	5.6	5.6	5.6
24	6.2	6.2	6.2	5.9	5.2	5.6	5.3	5.2	5.3	5.7	5.6	5.6
25	6.2	6.2	6.2	5.6	5.1	5.2	5.3	5.3	5.3	5.7	5.6	5.7
26	6.2	6.2	6.2	5.2	5.1	5.2	5.4	5.3	5.4	5.7	5.7	5.7
27	6.3	6.2	6.2	5.2	5.1	5.1	5.5	5.4	5.4	5.8	5.7	5.7
28	6.2	6.1	6.2	5.7	4.8	4.9	5.5	5.4	5.5	5.8	5.7	5.7
29	6.2	6.1	6.2	4.8	4.8	4.8	5.5	5.5	5.5	5.8	5.7	5.8
30	6.4	5.7	5.8	5.1	4.8	4.9	5.6	5.5	5.5	5.8	5.7	5.8
31	6.0	5.9	6.0	---	---	---	5.6	5.5	5.6	5.8	5.7	5.8
MAX	6.4	6.2	6.2	6.1	5.9	6.1	6.0	5.6	5.7	6.0	5.7	5.8
MIN	5.4	5.3	5.4	4.8	4.8	4.8	5.1	5.0	5.1	5.0	4.9	4.9

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

DAY	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN
	FEBRUARY			MARCH			APRIL			MAY		
1	5.9	5.8	5.8	---	---	---	5.2	5.1	5.2	5.9	5.9	5.9
2	---	---	---	---	---	---	5.5	5.0	5.2	6.0	5.9	5.9
3	---	---	---	---	---	---	5.1	4.8	4.8	6.0	5.6	5.9
4	---	---	---	---	---	---	5.0	4.9	5.0	5.9	5.8	5.9
5	---	---	---	---	---	---	5.1	5.0	5.0	6.0	5.9	6.0
6	---	---	---	---	---	---	5.1	5.0	5.1	6.0	5.9	6.0
7	---	---	---	---	---	---	5.1	5.0	5.1	6.0	5.8	5.9
8	---	---	---	---	---	---	5.1	5.1	5.1	5.9	5.8	5.9
9	---	---	---	5.8	5.8	5.8	5.2	5.1	5.2	5.9	5.8	5.9
10	---	---	---	5.8	5.7	5.8	5.2	5.2	5.2	5.9	5.8	5.9
11	---	---	---	5.7	5.7	5.7	5.3	5.2	5.2	5.9	5.8	5.9
12	---	---	---	5.7	5.7	5.7	5.3	5.2	5.3	5.9	5.8	5.9
13	---	---	---	5.7	5.6	5.7	5.5	5.3	5.3	5.9	5.8	5.8
14	---	---	---	5.6	5.6	5.6	5.6	5.5	5.5	6.0	5.6	5.7
15	---	---	---	5.7	5.6	5.6	5.6	5.6	5.6	6.0	5.4	5.5
16	---	---	---	5.7	5.6	5.6	5.6	5.6	5.6	5.7	5.6	5.7
17	---	---	---	5.7	5.6	5.7	5.7	5.6	5.6	5.7	5.7	5.7
18	---	---	---	5.9	5.6	5.7	5.8	5.6	5.7	5.7	5.7	5.7
19	---	---	---	5.8	5.6	5.7	5.8	5.7	5.7	5.8	5.7	5.7
20	---	---	---	5.7	5.6	5.6	5.8	5.7	5.7	5.8	5.6	5.8
21	---	---	---	5.6	5.6	5.6	5.8	5.7	5.7	5.7	5.5	5.6
22	---	---	---	5.6	5.6	5.6	5.9	5.8	5.9	5.6	5.5	5.6
23	---	---	---	5.7	5.5	5.6	6.2	5.8	5.8	5.6	5.6	5.6
24	---	---	---	5.5	5.4	5.4	6.2	5.6	5.7	5.6	5.6	5.6
25	---	---	---	5.4	5.4	5.4	5.9	5.8	5.8	5.6	5.6	5.6
26	---	---	---	5.4	5.3	5.3	6.0	5.9	6.0	5.7	5.5	5.5
27	---	---	---	5.4	5.3	5.3	6.0	5.9	5.9	5.8	5.7	5.7
28	---	---	---	5.5	5.0	5.4	6.0	5.9	6.0	5.9	5.7	5.8
29	---	---	---	5.0	4.8	4.9	6.0	6.0	6.0	5.8	5.7	5.7
30	---	---	---	5.0	4.9	4.9	6.0	5.9	5.9	5.8	5.7	5.8
31	---	---	---	5.1	5.0	5.1	---	---	---	5.8	5.7	5.8
MAX	5.9	5.8	5.8	5.9	5.8	5.8	6.2	6.0	6.0	6.0	5.9	6.0
MIN	5.9	5.8	5.8	5.0	4.8	4.9	5.0	4.8	4.8	5.6	5.4	5.5
DAY	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	5.8	5.7	5.8	5.7	5.4	5.7	5.5	5.4	5.4	6.0	6.0	6.0
2	5.8	5.7	5.8	6.1	5.6	5.6	5.4	5.4	5.4	6.0	5.9	6.0
3	5.9	5.7	5.7	5.8	5.7	5.8	5.4	5.4	5.4	5.9	5.9	5.9
4	5.8	5.6	5.6	5.8	5.8	5.8	5.4	5.4	5.4	5.9	5.9	5.9
5	5.7	5.6	5.6	5.8	5.8	5.8	5.4	5.4	5.4	5.9	5.9	5.9
6	5.9	5.1	5.6	6.1	5.7	5.8	5.4	5.4	5.4	5.9	5.8	5.9
7	5.4	5.1	5.3	5.9	5.2	5.8	5.4	5.4	5.4	5.9	5.9	5.9
8	5.5	5.4	5.5	6.0	5.0	5.2	6.0	5.4	5.4	5.9	5.9	5.9
9	5.5	5.4	5.5	5.2	5.2	5.2	5.9	5.7	5.7	5.9	5.9	5.9
10	5.4	5.4	5.4	5.3	5.2	5.2	5.8	5.7	5.7	5.9	5.9	5.9
11	5.5	5.4	5.4	5.2	5.1	5.2	5.8	5.7	5.7	5.9	5.8	5.9
12	5.4	5.4	5.4	5.5	5.2	5.3	5.9	5.8	5.8	5.9	5.8	5.9
13	5.5	5.4	5.4	5.5	5.4	5.4	5.8	5.8	5.8	5.9	5.8	5.9
14	5.5	5.4	5.4	5.5	5.4	5.4	5.8	5.7	5.8	6.3	5.9	6.0
15	5.5	5.4	5.5	5.5	5.4	5.4	5.8	5.8	5.8	6.3	6.2	6.2
16	5.5	5.3	5.4	5.7	5.4	5.6	5.8	5.7	5.8	6.5	6.1	6.2
17	5.4	5.3	5.4	5.9	5.1	5.3	5.9	5.8	5.8	6.5	6.4	6.5
18	5.4	5.4	5.4	5.3	5.2	5.3	5.8	5.8	5.8	6.5	6.5	6.5
19	5.5	5.4	5.4	5.3	5.2	5.2	6.0	5.7	5.8	6.5	6.4	6.5
20	5.5	5.4	5.4	5.2	5.2	5.2	5.9	5.8	5.9	6.5	6.4	6.5
21	5.5	5.4	5.4	5.3	5.2	5.2	5.9	5.8	5.8	6.5	6.5	6.5
22	5.5	5.4	5.5	5.3	5.2	5.3	5.8	5.8	5.8	6.5	6.4	6.5
23	5.5	5.4	5.4	5.3	5.2	5.3	5.8	5.8	5.8	6.4	6.3	6.4
24	5.5	5.4	5.5	5.3	5.2	5.3	5.8	5.7	5.8	6.4	6.3	6.3
25	5.5	5.5	5.5	5.5	5.3	5.3	5.7	5.7	5.7	6.4	6.3	6.3
26	5.5	5.5	5.5	5.4	5.3	5.3	5.7	5.7	5.7	6.5	6.3	6.4
27	5.5	5.5	5.5	5.4	5.3	5.4	5.7	5.7	5.7	6.5	6.4	6.5
28	5.5	5.5	5.5	5.4	5.4	5.4	6.0	5.7	5.9	6.4	6.4	6.4
29	5.8	5.4	5.5	5.4	5.4	5.4	6.0	5.9	5.9	6.5	6.4	6.4
30	5.8	5.5	5.6	5.5	5.4	5.4	6.0	5.9	6.0	6.5	6.4	6.4
31	---	---	---	5.5	5.4	5.5	6.0	6.0	6.0	---	---	---
MAX	5.9	5.7	5.8	6.1	5.8	5.8	6.0	6.0	6.0	6.5	6.5	6.5
MIN	5.4	5.1	5.3	5.2	5.0	5.2	5.4	5.4	5.4	5.9	5.8	5.9
YEAR	MAX			MAXIMUM	6.5	MINIMUM	4.8					
	MIN			MAXIMUM	6.5	MINIMUM	4.8					
	MEDIAN			MAXIMUM	6.5	MINIMUM	4.8					

SWATARA CREEK BASIN

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

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

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	13.7	11.4	12.7	10.8	9.2	10.1	8.3	7.4	8.0	7.5	5.4	6.2
2	13.9	12.9	13.5	11.0	9.4	10.2	7.8	6.6	7.3	5.5	4.6	5.0
3	13.6	11.2	12.3	11.2	7.6	9.8	7.4	6.1	6.7	7.1	5.5	6.4
4	13.0	10.0	11.6	8.1	6.5	7.2	6.8	5.3	6.2	7.3	6.3	6.9
5	12.0	9.5	10.8	8.3	6.6	7.6	7.8	6.2	6.9	6.4	4.6	5.6
6	11.0	8.2	9.7	8.4	5.9	7.2	6.4	5.8	6.2	4.6	4.3	4.5
7	12.6	9.5	11.1	9.8	6.8	8.4	7.1	6.3	6.5	4.8	4.1	4.5
8	13.3	10.6	12.0	8.9	5.9	7.3	8.4	6.7	7.6	4.8	4.5	4.6
9	13.1	10.9	12.1	5.9	4.1	5.2	7.0	5.9	6.5	5.3	4.6	4.9
10	12.6	10.6	11.8	5.4	3.2	4.5	7.3	6.9	7.1	6.1	5.3	5.6
11	11.0	9.3	10.3	7.3	5.1	6.2	8.2	7.2	7.7	5.4	4.8	5.2
12	10.7	8.5	9.6	6.8	6.2	6.6	7.3	6.8	7.1	5.6	5.3	5.5
13	11.1	8.6	10.0	6.2	4.3	5.5	7.0	6.0	6.6	8.4	5.5	6.5
14	11.3	10.4	10.8	5.4	3.5	4.5	6.0	4.4	5.4	9.1	6.0	7.0
15	11.9	10.5	11.3	6.6	4.1	5.3	4.8	3.5	4.2	6.0	5.0	5.6
16	10.8	8.8	10.2	7.4	5.3	6.3	4.9	3.2	4.1	5.5	4.8	5.1
17	9.2	7.8	8.5	7.8	5.2	6.7	5.5	3.8	4.8	4.8	2.7	3.9
18	9.6	7.0	8.5	9.1	7.7	8.5	4.8	2.8	3.8	2.7	1.4	2.0
19	9.5	9.1	9.3	9.9	8.6	9.1	5.6	1.8	4.1	2.7	1.3	2.0
20	9.6	9.2	9.4	8.9	8.5	8.6	1.8	0.0	0.5	3.8	2.5	3.1
21	9.5	9.2	9.4	9.9	8.2	9.0	1.8	0.4	1.2	2.5	0.5	1.4
22	10.2	8.3	9.3	8.6	7.4	8.0	4.0	1.8	3.0	1.0	0.2	0.6
23	9.0	6.7	7.9	8.4	7.5	8.0	7.0	4.0	5.4	1.4	0.4	0.8
24	8.6	7.3	7.9	10.6	8.4	9.2	4.6	3.9	4.3	1.4	0.3	0.9
25	9.9	8.4	9.1	10.8	7.4	9.7	4.0	2.8	3.5	2.9	1.3	2.3
26	10.6	9.0	9.8	7.6	6.8	7.3	4.1	2.6	3.3	4.0	1.4	3.0
27	10.3	8.0	9.1	8.5	7.4	7.9	3.6	1.8	2.5	1.4	0.1	0.5
28	9.8	8.1	9.0	9.5	8.5	9.0	3.1	1.4	2.3	1.0	0.1	0.4
29	9.9	7.9	9.1	8.5	7.8	8.2	5.1	3.1	4.3	1.4	0.1	0.7
30	11.8	9.9	10.9	8.4	7.6	8.1	5.6	5.0	5.2	2.6	1.1	1.8
31	12.6	10.3	11.6	---	---	---	6.5	5.0	5.9	2.7	0.9	1.7
MONTH	13.9	6.7	10.3	11.2	3.2	7.6	8.4	0.0	5.1	9.1	0.1	3.7
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	2.3	0.2	1.2	---	---	---	9.4	7.0	8.1	11.7	8.0	9.8
2	---	---	---	---	---	---	8.2	6.9	7.4	9.0	6.5	7.8
3	---	---	---	---	---	---	7.3	6.1	6.6	9.2	5.6	7.2
4	---	---	---	---	---	---	8.2	6.2	7.1	9.7	6.0	7.7
5	---	---	---	---	---	---	8.9	6.3	7.6	10.8	5.4	8.0
6	---	---	---	---	---	---	10.8	7.1	8.8	9.9	6.9	8.3
7	---	---	---	---	---	---	11.0	8.5	9.7	12.4	6.1	9.1
8	---	---	---	---	---	---	10.9	8.8	9.7	13.3	7.9	10.3
9	---	---	---	1.7	0.0	0.7	10.8	7.2	8.9	14.6	8.5	11.3
10	---	---	---	2.6	0.1	1.4	11.4	6.6	8.9	15.1	9.6	12.2
11	---	---	---	3.2	1.6	2.5	11.0	7.7	9.1	16.3	10.8	13.4
12	---	---	---	4.5	1.7	3.1	9.9	5.8	7.7	14.8	10.2	12.8
13	---	---	---	4.2	1.7	3.0	9.8	5.5	7.3	12.9	7.9	10.4
14	---	---	---	4.2	1.7	2.8	11.1	6.6	8.6	15.2	9.9	12.4
15	---	---	---	4.5	1.0	2.6	10.5	6.5	8.2	15.1	12.7	13.6
16	---	---	---	5.0	1.8	3.1	10.5	5.2	7.7	12.8	10.5	11.8
17	---	---	---	5.2	2.0	3.3	11.7	5.7	8.6	12.1	8.9	10.5
18	---	---	---	5.9	2.7	4.0	12.6	7.1	9.7	12.7	8.3	10.5
19	---	---	---	5.9	2.2	4.0	14.0	8.0	10.8	12.8	8.5	10.7
20	---	---	---	4.6	4.1	4.3	15.2	10.3	12.5	11.3	9.2	10.3
21	---	---	---	5.1	4.0	4.4	12.9	9.0	11.4	12.9	8.8	10.6
22	---	---	---	6.7	3.2	4.8	9.0	6.9	8.1	12.3	9.9	10.9
23	---	---	---	4.5	2.6	3.8	10.6	7.9	9.0	11.7	9.4	10.4
24	---	---	---	4.8	3.0	4.0	9.6	6.6	7.7	11.0	10.2	10.6
25	---	---	---	5.5	4.1	4.7	7.4	5.9	6.6	10.6	9.6	10.0
26	---	---	---	5.6	4.0	4.8	11.3	5.4	8.2	14.2	9.7	11.5
27	---	---	---	6.0	5.0	5.5	12.4	8.9	10.0	14.6	10.1	12.3
28	---	---	---	5.4	4.5	4.8	11.2	7.4	9.0	12.8	10.9	11.8
29	---	---	---	7.0	5.2	6.2	9.4	6.8	8.1	13.8	10.2	11.7
30	---	---	---	7.9	5.7	6.8	9.4	8.4	8.8	13.3	9.9	11.3
31	---	---	---	7.4	6.2	6.9	---	---	---	14.6	10.1	12.2
MONTH	2.3	0.2	1.2	7.9	0.0	4.0	15.2	5.2	8.7	16.3	5.4	10.7

