

SWATARA CREEK BASIN

**01571820 SWATARA CREEK NEAR RAVINE, PA
(Swatara Creek Project)**

LOCATION.--Lat 40°34'50", long 76°24'18", Schuylkill County, Hydrologic Unit 02050305, on right bank 800 ft downstream of Adam's Run, 1,000 ft downstream from State Highway 125 bridge crossing Swatara Creek and 0.4 mi north of Ravine.

DRAINAGE AREA.--43.3 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1996 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 590 ft above sea level, from topographic map.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Other data for this project presented in tables on pages 342-386.

PEAK DISCHARGES FOR PERIOD OF RECORD.--Peak discharges greater than a base discharge of 600 ft³/s and maximum (*):

Date	Time	Discharge ft ³ /s	Gage Height (ft)	Date	Time	Discharge ft ³ /s	Gage Height (ft)
Jan. 24	0900	911	2.99	Sept. 30	0345	1,100	3.24
Sept. 16	1645	*1,140	*3.29				

**DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES**

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	13	16	e10	99	75	84	58	26	14	12	11
2	10	13	14	e10	178	64	82	57	26	15	11	11
3	11	13	e13	e50	e150	60	78	57	25	14	11	11
4	18	15	e12	e35	122	182	75	56	22	14	11	11
5	17	13	e12	e40	111	109	74	55	21	13	11	18
6	13	13	e11	e35	100	104	70	53	20	15	10	30
7	13	13	e12	e30	96	99	66	54	18	13	9.8	107
8	36	15	e13	e40	94	88	63	69	18	12	13	41
9	37	15	e13	e55	87	85	85	60	17	13	12	23
10	76	15	e12	e40	84	83	107	54	15	17	10	19
11	36	25	e11	e25	80	81	91	51	14	15	10	16
12	25	22	e11	e20	83	78	96	51	14	14	9.8	16
13	21	20	e11	e18	85	73	84	49	14	14	36	15
14	46	17	e10	e14	74	74	77	48	17	14	91	14
15	e35	16	e10	e12	71	77	76	47	17	16	33	16
16	e27	15	e10	e12	71	75	78	45	14	14	19	401
17	e22	19	e10	e15	75	84	74	44	28	13	17	215
18	20	14	e10	e80	78	99	70	45	33	13	14	77
19	18	13	e11	e90	72	89	69	51	21	15	13	57
20	18	14	e10	e60	68	81	71	44	18	14	15	49
21	17	15	e11	e50	64	109	68	41	17	13	16	68
22	18	14	e15	e70	60	256	72	41	16	13	15	92
23	16	13	e11	e85	58	160	80	41	15	14	13	63
24	16	12	e11	549	57	142	80	49	16	12	12	51
25	15	11	e11	311	56	125	70	45	15	12	12	45
26	18	33	e10	223	55	112	69	38	14	12	14	39
27	16	27	e10	171	54	103	66	35	14	13	14	36
28	15	20	e11	148	71	101	64	32	16	12	12	38
29	15	17	e10	139	---	95	62	31	16	11	12	47
30	14	20	e10	123	---	86	61	28	14	12	12	485
31	14	---	e10	108	---	81	---	27	---	12	11	---
TOTAL	686	495	352	2668	2353	3130	2262	1456	551	418	511.6	2122
MEAN	22.1	16.5	11.4	86.1	84.0	101	75.4	47.0	18.4	13.5	16.5	70.7
MAX	76	33	16	549	178	256	107	69	33	17	91	485
MIN	10	11	10	10	54	60	61	27	14	11	9.8	11
CFSM	.51	.38	.26	1.99	1.94	2.33	1.74	1.08	.42	.31	.38	1.63
IN.	.59	.43	.30	2.29	2.02	2.69	1.94	1.25	.47	.36	.44	1.82

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1996 - 1999, BY WATER YEAR (WY)

MEAN	59.5	66.0	114	114	126	136	100	96.2	68.6	41.3	29.2	38.3
MAX	135	143	284	177	196	196	144	181	110	64.2	39.9	70.7
(WY)	1997	1997	1997	1998	1998	1998	1998	1998	1998	1996	1996	1999
MIN	21.2	16.5	11.4	79.0	84.0	101	75.4	47.0	18.4	13.5	16.5	15.7
(WY)	1998	1999	1999	1997	1999	1999	1999	1999	1999	1999	1999	1998

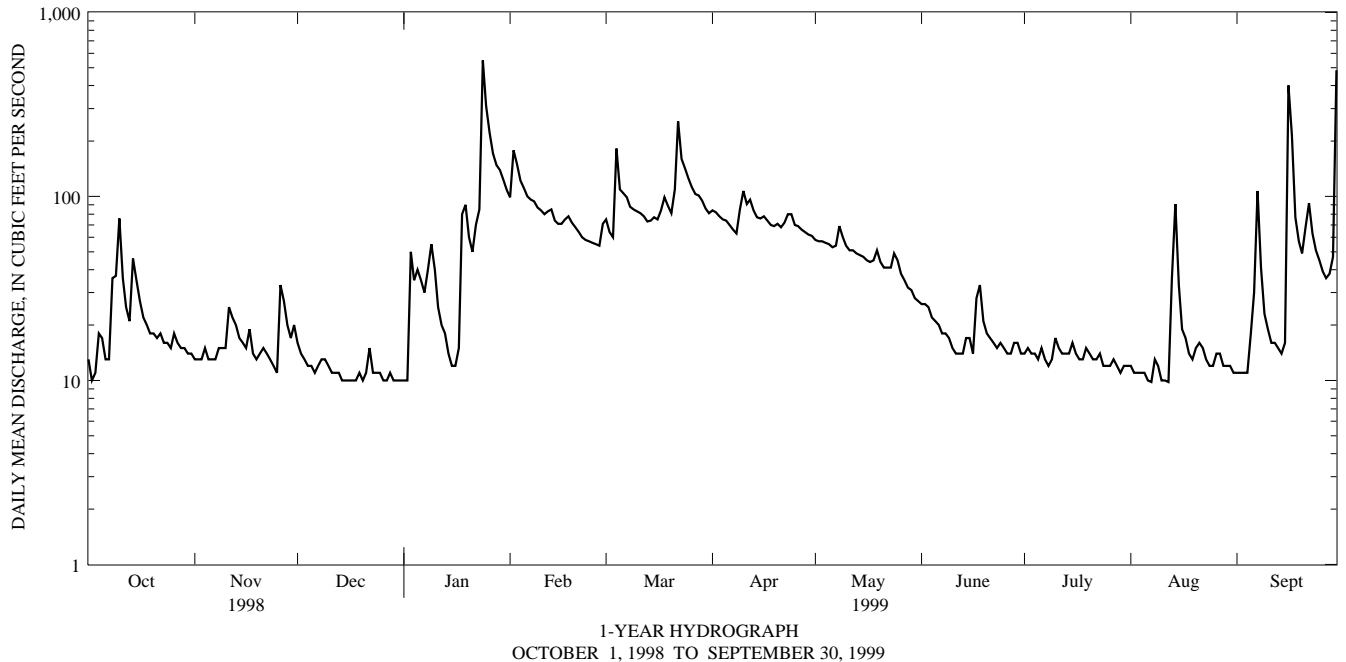
e Estimated.

SWATARA CREEK BASIN

01571820 SWATARA CREEK NEAR RAVINE, PA--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1996 - 1999	
ANNUAL TOTAL	34246		17004.6			
ANNUAL MEAN	93.8		46.6		81.2	
HIGHEST ANNUAL MEAN					98.7 1997	
LOWEST ANNUAL MEAN					46.6 1999	
HIGHEST DAILY MEAN	700	Jan 8	549	Jan 24	1180	Oct 19 1996
LOWEST DAILY MEAN	10	Oct 2 ^a	9.8	Aug 7,12	9.8	Aug 7,12 1999
ANNUAL SEVEN-DAY MINIMUM	b 10	Dec 14	b 10	Dec 14	10	Dec 14 1998
INSTANTANEOUS PEAK FLOW			c 1140	Sep 16	c 1740	Oct 19 1996
INSTANTANEOUS PEAK STAGE			3.29	Sep 16	3.92	Oct 19 1996
INSTANTANEOUS LOW FLOW			9.6	Oct 2,3 ^d	9.6	Oct 2,3 1998 ^d
ANNUAL RUNOFF (CFSM)	2.17		1.08		1.88	
ANNUAL RUNOFF (INCHES)	29.42		14.61		25.49	
10 PERCENT EXCEEDS	215		93		154	
50 PERCENT EXCEEDS	49		22		53	
90 PERCENT EXCEEDS	12		11		14	

- a** Also Dec. 14-18, 20, 26, 27, 29-31.
- b** Computed using estimated daily discharges.
- c** From rating curve extended above 502 ft³/s based on a straight line extension.
- d** Also Aug. 6-8, 12.



SWATARA CREEK BASIN

01571820 SWATARA CREEK NEAR RAVINE, PA--Continued
(Swatara Creek Project)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--April 1996 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: April 1996 to current year.

pH: April 1996 to current year.

WATER TEMPERATURE: April 1996 to current year.

INSTRUMENTATION.--Water-quality monitor (in situ system). Automatic pumping sampler for stormflow samples since July 1996.

REMARKS.--Interruptions in the record were due to malfunctions of the instrumentation. 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 342-386. Figure 8 shows the location of sites sampled as part of the Swatara Creek Project. Abbreviations used: E, estimated.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 538 microsiemens, Jan. 9, 1999; minimum, 27 microsiemens, June 11, 1997.

pH: Maximum, 8.2, July 30, 1999; minimum, 4.7, June 13, 1998.

WATER TEMPERATURE: Maximum, 26.5°C, July 5, 6, 1999, Aug. 1, 1999; minimum, 0.0°C, many days during winters.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 538 microsiemens, Jan. 9; minimum, 108 microsiemens, Sept. 30.

PH: Maximum, 8.2, July 30; minimum, 5.8, June 7-9, 14.

WATER TEMPERATURE: Maximum, 26.5°C, July 5, 6, Aug. 1; minimum, 0.0°C, several days during winter.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	TIME	AGENCY COLLECTING SAMPLE (CODE NUMBER)	AGENCY ANALYZING SAMPLE (CODE NUMBER)	DISCHARGE, INST. CUBIC FEET PER SECOND (00061)	SPECIFIC CONDUCTANCE (µS/CM) (00095)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	PH WATER WHOLE LAB (STANDARD UNITS) (00403)	OXIDATION REDUCTION POTENTIAL (MV) (00090)	TEMPERATURE WATER (DEG C) (00010)	OXYGEN, DISSOLVED (MG/L) (00300)	OXYGEN, (PERCENT SATURATION) (00301)
OCT											
30...	0930	1028	9813	13	281	7.1	6.3	389	7.1	13.0	110
NOV											
24...	0930	1028	9813	13	280	7.3	6.5	490	6.0	12.0	96
DEC											
31...	0945	1028	9813	32	232	7.3	--	--	.0	14.0	94
JAN											
19...	1415	1028	9813	106	205	6.6	--	--	.9	--	--
19...	1530	1028	9813	108	208	6.6	--	--	.8	--	--
24...	0400	1028	9813	312	178	6.6	--	--	2.9	--	--
24...	1000	1028	9813	823	129	6.2	--	--	2.5	--	--
24...	1200	1028	9813	795	125	6.1	--	--	2.7	--	--
24...	1600	1028	9813	663	126	6.1	--	--	2.9	--	--
24...	2145	1028	9813	461	130	6.0	--	--	3.0	--	--
27...	1030	1028	9813	180	163	6.4	--	303	4.1	12.0	95
FEB											
26...	1645	1028	9813	62	201	6.7	--	491	4.7	--	--
MAR											
17...	0830	1028	9813	78	198	6.9	--	--	3.6	--	--
18...	1200	1028	9813	94	177	7.0	--	--	7.4	--	--
APR											
09...	1415	1028	9813	94	198	6.7	--	--	9.6	--	--
09...	2200	1028	9813	119	179	6.8	--	--	8.7	--	--
10...	0200	1028	9813	130	167	6.7	--	--	8.3	--	--
10...	0600	1028	9813	121	162	6.6	--	--	7.6	--	--
10...	1600	1028	9813	98	168	6.7	--	--	11.0	--	--
13...	1330	1028	9813	85	185	6.6	--	462	10.3	--	--
MAY											
24...	0900	1028	9813	48	216	6.6	--	443	13.8	10.0	100
JUN											
14...	1915	1028	9813	27	237	6.5	--	--	18.1	--	--
14...	1930	1028	9813	38	257	6.6	--	--	18.0	--	--
14...	2000	1028	9813	37	261	7.0	--	--	18.2	--	--
14...	2200	1028	9813	30	251	6.9	--	--	18.2	--	--
15...	0001	1028	9813	25	267	7.1	--	--	18.1	--	--
22...	1045	1028	9813	17	256	7.3	--	333	17.6	9.6	98
JUL											
13...	1015	1028	9813	14	281	7.2	--	260	17.7	10.0	--
AUG											
13...	2115	1028	9813	54	264	6.9	--	--	20.6	--	--
13...	2200	1028	9813	83	221	7.0	--	--	20.9	--	--
13...	2230	1028	9813	180	193	7.1	--	--	20.7	--	--
13...	2300	1028	9813	441	235	7.2	--	--	20.6	--	--
24...	0945	1028	9813	12	268	7.3	--	326	17.1	9.3	96

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01571820 SWATARA CREEK NEAR RAVINE, PA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	ACIDITY (MG/L AS CACO3) (00435)	ACIDITY TOTAL HEATED (MG/L AS CACO3) (70508)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS CA) (00916)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS MG) (00927)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, TOTAL RECOV- ERABLE (MG/L AS NA) (00929)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	POTAS- SIUM, TOTAL RECOV- ERABLE (MG/L AS K) (00937)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)
OCT										
30...	--	.00	24	22	17	16	8.6	8.6	1.6	1.6
NOV										
24...	--	.00	23	23	17	17	7.4	7.2	1.7	1.7
DEC										
31...	--	.00	22	22	16	15	13	12	--	--
JAN										
19...	--	1.8	8.3	8.1	2.8	2.7	10	9.4	--	--
19...	--	7.2	12	12	6.4	6.4	14	14	--	--
24...	--	8.4	11	10	5.4	5.0	15	15	--	--
24...	--	16	8.1	7.4	4.2	3.6	9.9	9.9	--	--
24...	--	11	7.1	6.5	3.6	3.2	7.7	7.2	--	--
24...	--	6.8	7.0	6.5	3.7	3.4	7.1	6.8	--	--
24...	--	9.6	6.4	6.3	4.0	3.6	6.6	6.3	--	--
27...	--	5.8	8.5	8.5	6.1	6.1	6.8	6.7	--	--
FEB										
26...	--	1.6	15	15	9.9	9.9	5.6	5.5	--	--
MAR										
17...	--	.00	12	12	8.9	8.9	8.4	8.4	--	--
18...	--	--	--	--	--	--	--	--	--	--
APR										
09...	--	130	12	12	8.4	7.7	6.0	5.7	--	--
09...	--	130	11	11	7.1	7.0	6.4	6.2	--	--
10...	--	230	11	9.7	7.0	6.4	6.4	5.7	--	--
10...	--	250	9.8	9.8	6.4	6.4	6.0	6.0	--	--
10...	--	250	11	9.7	7.2	6.5	6.1	5.4	--	--
13...	--	.40	10	10	7.3	7.2	5.8	5.8	--	--
MAY										
24...	--	.00	15	15	11	11	6.4	6.4	--	--
JUN										
14...	--	2.4	20	19	15	15	6.4	6.4	--	--
14...	--	3.2	22	21	16	15	6.8	6.6	--	--
14...	--	3.0	21	20	16	15	6.5	6.2	--	--
14...	--	.00	23	21	14	13	6.9	6.5	--	--
15...	--	.00	24	23	15	14	6.9	6.7	--	--
22...	--	.00	21	21	16	16	6.7	6.7	--	--
JUL										
13...	--	.00	26	24	17	16	9.0	8.5	--	--
AUG										
13...	--	13	20	19	14	13	6.7	6.3	--	--
13...	--	.00	17	15	9.9	7.2	6.6	6.3	--	--
13...	--	.00	21	17	14	9.2	6.7	6.6	--	--
13...	--	.00	26	21	12	9.0	8.2	8.1	--	--
24...	.0	.00	27	26	19	18	9.6	9.1	1.5	1.2

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WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	ANC WATER UNFLTRD FET LAB		SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, TOTAL (MG/L AS F)	SILICA TOTAL (MG/L- SIO2)	RESIDUE	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	PHOS- PHORUS TOTAL (MG/L AS P)
	MG/L AS CACO3 (00417)	DEG. C, SUS- PENDEED (MG/L)									
OCT											
30...	13		100	11	<.2	7.9	<2	.210	<.020	.39	<.020
NOV											
24...	12		100	11	<.2	6.8	<2	.400	<.020	.60	<.020
DEC											
31...	11		99	--	--	--	<2	--	--	--	--
JAN											
19...	7		23	--	--	--	56	--	--	--	--
19...	5		42	--	--	--	46	--	--	--	--
24...	6		33	--	--	--	16	--	--	--	--
24...	4		23	--	--	--	210	--	--	--	--
24...	4		24	--	--	--	260	--	--	--	--
24...	4		26	--	--	--	160	--	--	--	--
24...	4		28	--	--	--	54	--	--	--	--
27...	4		47	--	--	--	<2	--	--	--	--
FEB											
26...	8		74	--	--	--	8	--	--	--	--
MAR											
17...	8		58	--	--	--	14	--	--	--	--
18...	--		--	--	--	--	--	--	--	--	--
APR											
09...	0		57	--	--	--	54	--	--	--	--
09...	0		52	--	--	--	34	--	--	--	--
10...	0		51	--	--	--	16	--	--	--	--
10...	0		49	--	--	--	10	--	--	--	--
10...	0		52	--	--	--	60	--	--	--	--
13...	8		56	--	--	--	<2	--	--	--	--
MAY											
24...	12		71	--	--	--	78	--	--	--	--
JUN											
14...	13		87	--	--	--	110	--	--	--	--
14...	12		89	--	--	--	170	--	--	--	--
14...	13		89	--	--	--	120	--	--	--	--
14...	17		80	--	--	--	120	--	--	--	--
15...	18		83	--	--	--	70	--	--	--	--
22...	15		96	--	--	--	<2	--	--	--	--
JUL											
13...	15		100	--	--	--	20	--	--	--	--
AUG											
13...	12		87	--	--	--	860	--	--	--	--
13...	17		53	--	--	--	1600	--	--	--	--
13...	15		73	--	--	--	1400	--	--	--	--
13...	20		74	--	--	--	1100	--	--	--	--
24...	15		120	12	--	--	<2	--	--	--	--

SWATARA CREEK BASIN

01571820 SWATARA CREEK NEAR RAVINE, PA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	COBALT, TOTAL RECOV- ERABLE (µG/L AS CO) (01037)	COBALT, DIS- SOLVED (µG/L AS CO) (01035)	COPPER, TOTAL RECOV- ERABLE (µG/L AS CU) (01042)	COPPER, DIS- SOLVED (µG/L AS CU) (01040)	IRON, TOTAL RECOV- ERABLE (µG/L AS FE) (01045)	IRON, DIS- SOLVED (µG/L AS FE) (01046)	LEAD, TOTAL RECOV- ERABLE (µG/L AS PB) (01051)	LEAD, DIS- SOLVED (µG/L AS PB) (01049)	LITHIUM TOTAL RECOV- ERABLE (µG/L AS LI) (01132)	LITHIUM DIS- SOLVED (µG/L AS LI) (01130)
OCT										
30...	<50	<50	<10	<10	360	250	<10	<10	<30	<25
NOV										
24...	<50	<50	12	<10	210	110	<1	<1.0	<30	<25
DEC										
31...	--	--	--	--	420	170	--	--	--	--
JAN										
19...	--	--	--	--	1100	25	--	--	--	--
19...	--	--	--	--	5200	44	--	--	--	--
24...	<50	<50	20	<10	19000	520	12	<1.0	--	--
24...	90	<50	45	<10	36000	1200	28	2.1	--	--
24...	<50	<50	<10	<10	12000	120	10	<1.0	--	--
24...	<50	<50	<10	<10	5800	150	5	<1.0	--	--
24...	<50	<50	<10	<10	3200	340	3	<1.0	--	--
27...	--	--	--	--	740	21	--	--	--	--
FEB										
26...	--	--	--	--	1400	600	--	--	--	--
MAR										
17...	--	--	--	--	1200	1200	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--
APR										
09...	<50	<50	<10	<10	5400	2600	5	3.9	--	--
09...	<50	<50	<10	<10	2600	1700	2	2.1	--	--
10...	<50	<50	<10	<10	2000	1300	2	1.9	--	--
10...	<50	<50	<10	<10	1400	1200	2	2.1	--	--
10...	<50	<50	<10	<10	980	780	<1	1.4	--	--
13...	--	--	--	--	890	460	--	--	--	--
MAY										
24...	--	--	--	--	4400	170	--	--	--	--
JUN										
14...	<50	<50	24	<10	22000	73	8	<1.0	--	--
14...	70	<50	62	<10	36000	260	12	<1.0	--	--
14...	60	<50	19	<10	19000	74	9	<1.0	--	--
14...	<50	<50	22	<10	18000	120	16	<1.0	--	--
15...	<50	<50	<10	<10	7500	220	6	<1.0	--	--
22...	--	--	--	--	800	70	--	--	--	--
JUL										
13...	--	--	--	--	630	35	--	--	--	--
AUG										
13...	<50	<50	13	<10	20000	95	10	<1.0	--	--
13...	<50	<50	19	<10	42000	120	34	<1.0	--	--
13...	190	<50	89	<10	130000	51	72	<1.0	--	--
13...	220	<50	100	<10	92000	48	68	<1.0	--	--
24...	--	--	--	--	830	49	--	--	--	--

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01571820 SWATARA CREEK NEAR RAVINE, PA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	MANGA- NESE, TOTAL RECOV- ERABLE (µG/L AS MN) (01055)	MANGA- NESE, DIS- SOLVED (µG/L AS MN) (01056)	NICKEL, TOTAL RECOV- ERABLE (µG/L AS NI) (01067)	NICKEL, DIS- SOLVED (µG/L AS NI) (01065)	SELE- NIUM, TOTAL (µG/L AS SE) (01147)	SELE- NIUM, DIS- SOLVED (µG/L AS SE) (01145)	STRON- TIUM, TOTAL RECOV- ERABLE (µG/L AS SR) (01082)	STRON- TIUM, DIS- SOLVED (µG/L AS SR) (01080)	ZINC, TOTAL RECOV- ERABLE (µG/L AS ZN) (01092)	ZINC, DIS- SOLVED (µG/L AS ZN) (01090)
OCT 30...	410	410	<50	<50	<70	<70	110	110	30	51
NOV 24...	360	360	<50	<50	<7	<7	100	98	30	25
DEC 31...	380	370	--	--	--	--	--	--	--	--
JAN 19...	300	220	--	--	--	--	--	--	--	--
19...	1200	400	--	--	--	--	--	--	--	--
24...	2100	140	50	<50	--	--	--	130	60	
24...	3900	250	88	<50	--	--	--	230	38	
24...	1200	240	<50	<50	--	--	--	100	33	
24...	860	370	<50	<50	--	--	--	70	43	
24...	600	430	<50	<50	--	--	--	60	45	
27...	540	540	--	--	--	--	--	--	--	
FEB 26...	700	690	--	--	--	--	--	--	--	
MAR 17...	630	630	--	--	--	--	--	--	--	
18...	--	--	--	--	--	--	--	--	--	
APR 09...	600	550	<50	<50	--	--	--	90	78	
09...	500	490	<50	<50	--	--	--	50	50	
10...	520	470	<50	<50	--	--	--	60	48	
10...	460	460	<50	<50	--	--	--	50	46	
10...	500	450	<50	<50	--	--	--	50	44	
13...	520	510	--	--	--	--	--	--	--	
MAY 24...	600	510	--	--	--	--	--	--	--	
JUN 14...	1500	360	65	<50	--	--	--	50	230	
14...	2100	370	59	<50	--	--	--	280	28	
14...	2000	260	56	<50	--	--	--	200	20	
14...	1300	260	<50	<50	--	--	--	160	20	
15...	600	310	<50	<50	--	--	--	70	18	
22...	410	400	--	--	--	--	--	--	--	
JUL 13...	270	220	--	--	--	--	--	--	--	
AUG 13...	1200	180	60	<50	--	--	--	200	30	
13...	1200	69	57	<50	--	--	--	230	<10	
13...	5500	190	200	<50	--	--	--	800	<10	
13...	9000	<10	230	<50	--	--	--	760	<10	
24...	360	280	--	--	--	--	--	--	--	

SWATARA CREEK BASIN

01571820 SWATARA CREEK NEAR RAVINE, PA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	TIME	AGENCY COLLECTING SAMPLE (CODE NUMBER)	AGENCY LYZING SAMPLE (CODE NUMBER)	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (µS/CM) (00095)	PH WATER FIELD (STAND-ARD) UNITS (00400)	PH WATER WHOLE LAB (STAND-ARD) UNITS (00403)	OXID-ATION RED- UCTION POTEN-TIAL (MV) (00090)	TEMPER-ATURE WATER (DEG C) (00010)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00300)	OXYGEN, DIS-SOLVED (MG/L) (00301)
SEP											
05...	2015	1028	9813	24	261	7.4	--	--	19.9	--	--
05...	2200	1028	9813	56	245	7.4	--	--	19.9	--	--
06...	0001	1028	9813	71	227	7.5	--	--	19.9	--	--
06...	0200	1028	9813	54	224	7.5	--	--	19.9	--	--
06...	0400	1028	9813	42	236	7.5	--	--	19.6	--	--
06...	0800	1028	9813	30	286	7.4	--	--	19.4	--	--
06...	1200	1028	9813	23	281	7.5	--	--	21.0	--	--
06...	1600	1028	9813	21	279	7.7	--	--	21.5	--	--
06...	2000	1028	9813	22	270	7.4	--	--	20.2	--	--
07...	0001	1028	9813	23	277	7.5	--	--	20.2	--	--
07...	0200	1028	9813	35	268	7.5	--	--	20.3	--	--
07...	0230	1028	9813	69	239	7.3	--	--	20.3	--	--
07...	1200	1028	9813	130	160	7.0	--	--	19.7	--	--
07...	1400	1028	9813	108	198	7.0	--	--	20.3	--	--
07...	1600	1028	9813	92	210	7.0	--	--	20.3	--	--
09...	1200	1028	9813	23	283	7.3	--	--	19.4	--	--
15...	1045	1028	9813	15	314	7.2	--	291	16.8	9.6	99
16...	0745	1028	9813	43	273	7.2	--	--	15.8	--	--
16...	1000	1028	9813	121	237	7.1	--	--	15.7	--	--
16...	1400	1028	9813	491	171	7.3	--	--	16.0	--	--
16...	1800	1028	9813	1100	118	6.6	--	--	15.8	--	--
16...	2200	1028	9813	639	125	6.5	--	--	15.5	--	--
17...	0400	1028	9813	358	128	6.5	--	--	15.1	--	--
17...	1200	1028	9813	166	161	6.7	--	--	15.4	--	--
17...	1800	1028	9813	119	184	6.7	--	--	15.5	--	--
18...	0001	1028	9813	96	203	6.8	--	--	14.5	--	--
27...	1415	1028	80020	36	284	6.8	6.6	412	14.6	10.0	98
29...	2230	1028	9813	71	253	6.9	--	--	15.9	--	--
30...	0001	1028	9813	160	252	7.0	--	--	16.0	--	--
30...	0100	1028	9813	324	189	7.1	--	--	16.1	--	--
30...	0130	1028	9813	486	176	7.1	--	--	16.1	--	--
30...	0215	1028	9813	896	143	7.1	--	--	16.1	--	--
30...	0600	1028	9813	896	111	6.7	--	--	15.3	--	--
30...	1000	1028	9813	491	118	6.6	--	--	15.2	--	--
30...	1400	1028	9813	371	126	6.6	--	--	15.4	--	--
30...	1800	1028	9813	263	134	6.6	--	--	15.1	--	--

DATE	ACIDITY (MG/L AS CAC03) (00435)	ACIDITY TOTAL HEATED (MG/L AS CAC03) (70508)	CALCIUM TOTAL RECOV-ERABLE (MG/L AS CA) (00916)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, RECOV-ERABLE (MG/L AS MG) (00927)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, TOTAL RECOV-ERABLE (MG/L AS NA) (00929)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	POTAS-SIUM, TOTAL RECOV-ERABLE (MG/L AS K) (00937)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)
SEP										
05...	--	180	23	22	16	15	7.5	7.4	--	--
05...	--	170	22	22	15	15	8.2	7.8	--	--
06...	--	110	19	18	11	11	7.4	7.2	--	--
06...	--	160	18	18	10	9.4	7.6	7.4	--	--
06...	--	130	20	18	12	11	8.0	7.6	--	--
06...	--	170	24	23	14	14	9.3	8.9	--	--
06...	--	150	22	22	14	13	10	9.8	--	--
06...	--	190	22	22	14	14	9.5	9.5	--	--
06...	--	160	21	21	14	14	9.0	9.0	--	--
07...	--	160	23	22	14	13	9.9	9.4	--	--
07...	--	120	20	20	12	12	8.9	8.9	--	--
07...	--	70	20	19	9.3	8.6	8.5	8.5	--	--
07...	--	110	15	14	7.2	6.7	5.2	5.1	--	--
07...	--	19	15	15	8.1	7.4	5.4	5.3	--	--
07...	--	9.0	17	16	8.1	7.5	5.4	5.1	--	--
09...	--	.00	22	21	15	14	7.6	7.5	--	--
15...	.0	.00	30	30	21	21	9.1	9.1	2.1	1.9
16...	--	.00	22	21	16	15	8.0	7.8	--	--
16...	--	.00	20	19	11	11	7.6	7.6	--	--
16...	--	.00	16	15	6.1	5.9	7.6	7.6	--	--
16...	--	8.0	11	11	4.7	4.7	5.2	5.2	--	--
16...	--	6.4	9.4	9.4	4.6	4.3	4.6	4.5	--	--
17...	--	.00	9.0	8.6	5.0	4.3	4.6	4.3	--	--
17...	--	5.8	11	11	6.4	6.3	5.0	4.9	--	--
17...	--	4.4	13	12	8.0	7.6	5.8	5.8	--	--
18...	--	1.2	15	14	9.0	8.6	6.9	6.8	--	--
27...	.0	--	--	20	--	14	--	8.5	--	--
29...	--	3.4	19	17	14	10	7.4	6.9	--	--
30...	--	5.0	18	17	13	12	9.1	8.6	--	--
30...	--	.00	16	14	9.0	8.1	7.8	7.3	--	--
30...	--	3.4	14	13	7.3	6.8	7.6	7.4	--	--
30...	--	12	16	13	7.6	6.2	7.6	7.1	--	--
30...	--	6.4	9.7	9.3	4.2	3.8	4.3	4.2	--	--
30...	--	4.4	9.7	9.8	4.8	4.5	4.5	4.5	--	--
30...	--	6.6	10	9.8	5.4	4.9	4.4	4.3	--	--
30...	--	6.0	10	10	5.9	5.6	4.8	4.9	--	--

SWATARA CREEK BASIN

01571820 SWATARA CREEK NEAR RAVINE, PA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	ANC WATER UNFLTRD FET LAB	SULFATE	CHLO- RIDE, DIS- SOLVED	RESIDUE TOTAL RIDE, AT 105 DEG. C, SUS- PENDE	ALUM- INUM, TOTAL RECOV- ERABLE	ALUM- INUM, SOLVED	COBALT, TOTAL RECOV- ERABLE	COBALT, TOTAL RECOV- ERABLE	COPPER, TOTAL RECOV- ERABLE	COPPER, TOTAL RECOV- ERABLE
	MG/L AS CACO3 (00417)	(MG/L AS SO4) (00945)	(MG/L AS CL) (00940)	(MG/L) (00530)	(MG/L) (01105)	(MG/L) (01106)	(MG/L) (01037)	(MG/L) (01035)	(MG/L) (01042)	(MG/L) (01040)
SEP										
05...	0	110	--	92	21000	17000	<50	<50	11	11
05...	0	110	--	230	13000	7600	<50	<50	30	16
06...	0	90	--	96	4800	1800	<50	<50	14	<10
06...	0	90	--	34	2900	1000	<50	<50	<10	<10
06...	0	92	--	88	3300	830	<50	<50	14	<10
06...	0	150	--	22	5900	4500	<50	<50	<10	<10
06...	0	140	--	<2	3600	3100	<50	<50	<10	<10
06...	0	140	--	<2	770	680	<50	<50	<10	<10
06...	0	140	--	<2	1000	580	<50	<50	<10	<10
07...	0	140	--	<2	1100	890	<50	<50	<10	<10
07...	0	99	--	<2	2100	920	<50	<50	<10	<10
07...	0	69	--	730	15000	3800	70	<50	51	18
07...	0	63	--	100	5300	2400	<50	<50	22	14
07...	2	67	--	130	7300	280	<50	<50	15	<10
07...	4	72	--	90	5400	<200	<50	<50	14	<10
09...	11	100	--	4	280	<200	<50	<50	<10	<10
15...	15	110	12	<2	<200	<200	--	--	--	--
16...	11	92	--	88	3000	<200	<50	<50	11	<10
16...	13	76	--	200	7000	<200	<50	<50	21	14
16...	15	45	--	340	6400	<200	<50	<50	<10	22
16...	7	32	--	210	6300	<200	50	<50	13	<10
16...	5	37	--	120	2700	<200	<50	<50	<10	<10
17...	4	40	--	90	2300	<200	<50	<50	36	16
17...	4	50	--	10	1100	<200	<50	<50	11	<10
17...	4	62	--	12	860	<200	<50	<50	14	<10
18...	5	68	--	12	500	<200	<50	<50	<10	<10
27...	--	100	12	--	--	22	--	--	--	--
29...	9	90	--	38	3800	<200	<50	<50	18	<10
30...	10	86	--	120	5200	<200	<50	<50	26	<10
30...	14	--	--	12	6700	<200	<50	<50	32	<10
30...	12	50	--	250	7600	<200	50	<50	26	<10
30...	12	48	--	420	14000	<200	70	<50	54	<10
30...	8	30	--	210	5100	<200	<50	<50	17	<10
30...	7	34	--	90	3400	200	<50	<50	17	11
30...	6	37	--	52	3200	<200	<50	<50	18	<10
30...	5	40	--	94	3200	<200	<50	<50	60	<10

DATE	IRON, TOTAL RECOV- ERABLE	IRON, DIS- SOLVED	LEAD, TOTAL RECOV- ERABLE	LEAD, DIS- SOLVED	MANGA- NESE, TOTAL RECOV- ERABLE	MANGA- NESE, SOLVED	NICKEL, TOTAL RECOV- ERABLE	NICKEL, TOTAL RECOV- ERABLE	ZINC, TOTAL RECOV- ERABLE	ZINC, TOTAL RECOV- ERABLE
	(MG/L AS FE) (01045)	(MG/L AS FE) (01046)	(MG/L AS PB) (01051)	(MG/L AS PB) (01049)	(MG/L AS MN) (01055)	(MG/L AS MN) (01056)	(MG/L AS NI) (01067)	(MG/L AS NI) (01065)	(MG/L AS ZN) (01092)	(MG/L AS ZN) (01090)
SEP										
05...	13000	2400	7	4.1	780	710	<50	<50	120	110
05...	24000	4000	12	5.8	1800	1000	67	<50	210	160
06...	13000	1700	12	5.4	1500	1000	<50	<50	110	88
06...	7700	2200	6	4.1	810	680	<50	<50	70	57
06...	12000	3200	7	3.4	690	620	330	300	70	53
06...	3300	1400	2	1.6	480	430	<50	<50	40	39
06...	1400	770	2	<1.0	340	310	<50	<50	30	27
06...	1100	780	1	1.1	280	270	<50	<50	30	25
06...	2400	1400	2	1.1	410	400	160	160	50	37
07...	1400	1300	1	<1.0	340	330	<50	<50	40	35
07...	4100	1200	4	1.9	530	430	<50	<50	60	48
07...	40000	500	34	4.0	2900	1200	<50	78	250	140
07...	9300	860	9	3.6	830	1000	<50	<50	140	110
07...	8000	<20	7	<1.0	1100	600	<50	<50	110	65
07...	4200	<20	4	<1.0	940	570	<50	<50	90	50
09...	610	<20	<1	<1.0	420	390	<50	<50	40	33
15...	450	100	--	--	320	300	--	--	--	--
16...	6900	100	6	<1.0	770	290	<50	<50	100	22
16...	20000	61	14	<1.0	2400	210	68	<50	210	29
16...	21000	200	12	<1.0	1500	160	56	<50	140	<10
16...	22000	220	14	<1.0	2000	310	<50	<50	150	14
16...	5700	180	6	<1.0	870	400	<50	<50	80	30
17...	2800	120	3	<1.0	700	390	<50	<50	110	110
17...	1200	110	1	<1.0	560	420	<50	<50	60	44
17...	1200	110	1	<1.0	670	570	<50	<50	80	67
18...	720	86	<1	<1.0	680	610	<50	<50	80	66
27...	--	34	--	--	--	710	--	--	--	--
29...	5100	27	4	<1.0	1000	570	<50	64	130	41
30...	14000	<20	10	<1.0	1700	580	74	59	260	58
30...	16000	<20	16	<1.0	1100	300	<50	<50	160	25
30...	18000	<20	14	<1.0	1700	220	<50	<50	150	16
30...	38000	<20	25	<1.0	2600	210	80	<50	290	15
30...	11000	<20	8	<1.0	1000	190	<50	<50	20	100
30...	6700	87	5	<1.0	830	300	69	<50	90	20
30...	4800	69	3	<1.0	820	360	<50	<50	90	26
30...	7500	69	5	<1.0	1200	390	60	<50	140	34

SWATARA CREEK BASIN

01571820 SWATARA CREEK NEAR RAVINE, PA--Continued

SPECIFIC CONDUCTANCE, MICROSIEMENS PER CENTIMETER AT 25° CELSIUS, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	310	267	298	292	270	280	287	255	270	326	294	310
2	304	270	282	292	268	280	262	239	254	341	293	321
3	285	266	278	290	268	279	261	244	251	519	282	361
4	274	249	262	316	268	300	261	240	250	287	210	235
5	291	260	281	308	274	287	283	239	258	250	218	230
6	290	257	271	291	271	281	288	247	266	258	209	229
7	277	261	271	290	273	281	262	231	245	257	235	246
8	278	214	244	311	274	292	255	236	244	252	226	238
9	258	208	232	323	275	294	251	230	240	538	224	344
10	218	170	190	289	272	280	273	233	259	335	213	236
11	238	200	219	286	242	269	265	231	245	233	204	218
12	262	234	245	294	253	271	250	232	239	237	220	229
13	280	250	263	303	280	292	251	227	238	278	215	236
14	279	166	221	288	267	277	273	222	242	268	231	243
15	---	---	---	288	272	279	280	234	257	238	219	227
16	---	---	---	293	272	283	246	224	236	273	228	241
17	---	---	---	311	271	294	240	221	231	319	243	264
18	289	266	281	305	276	290	239	219	230	444	214	302
19	276	259	267	296	278	286	270	220	245	218	184	200
20	285	263	273	295	274	283	267	219	238	231	203	216
21	281	255	268	316	269	285	234	210	224	250	221	232
22	301	264	286	321	284	303	234	208	218	255	211	238
23	301	269	280	294	273	282	235	209	222	234	171	208
24	285	269	276	288	271	281	251	226	240	201	121	143
25	286	267	276	288	270	279	240	208	224	159	134	148
26	301	262	281	283	218	255	232	206	221	164	138	159
27	304	269	287	253	206	224	235	205	222	172	157	165
28	285	266	275	258	233	243	241	202	222	182	166	174
29	284	268	276	260	238	249	247	197	222	183	168	175
30	301	255	280	285	237	255	227	192	210	193	175	184
31	312	277	298	---	---	---	311	202	263	206	184	196
MONTH	312	166	266	323	206	278	311	192	240	538	121	231
	FEBRUARY			MARCH			APRIL			MAY		
1	219	194	204	203	172	180	194	183	189	203	189	194
2	204	135	166	211	185	197	190	177	183	205	190	196
3	---	---	---	206	176	197	194	179	184	209	192	204
4	175	162	169	190	133	153	202	186	193	204	191	198
5	171	163	167	169	157	164	206	188	197	207	196	200
6	179	167	173	191	164	173	217	196	205	207	198	202
7	196	170	181	183	175	178	211	194	201	215	199	208
8	205	182	191	186	172	178	209	195	202	213	183	198
9	194	181	189	183	172	179	215	170	196	198	180	191
10	196	180	188	187	176	181	175	160	167	207	191	200
11	195	178	187	193	179	186	182	162	174	219	198	208
12	190	177	182	197	187	192	181	160	169	224	208	215
13	181	170	175	199	183	190	186	172	180	221	209	214
14	190	176	182	199	183	190	187	177	182	232	207	218
15	203	183	192	224	183	204	189	175	183	236	217	227
16	203	190	196	222	199	209	192	181	187	228	211	220
17	290	185	202	209	185	201	187	174	180	232	217	224
18	189	176	183	190	171	178	189	178	184	244	216	229
19	192	177	183	187	171	178	200	180	192	244	216	230
20	201	185	194	187	172	181	203	175	189	239	219	229
21	198	187	193	189	164	182	192	176	186	243	227	234
22	209	192	197	164	137	145	192	180	186	251	232	242
23	217	197	208	162	149	155	195	166	183	245	222	230
24	218	197	206	164	152	158	176	160	168	231	189	209
25	208	197	203	170	155	163	184	168	177	213	172	196
26	225	196	207	176	164	169	193	179	187	224	204	214
27	225	204	217	176	166	170	192	178	184	227	208	217
28	215	172	200	179	167	173	194	178	186	234	219	227
29	---	---	---	191	171	181	203	184	192	255	223	241
30	---	---	---	189	176	182	203	189	197	255	231	243
31	---	---	---	191	180	185	---	---	---	250	230	241
MONTH	290	135	190	224	133	179	217	160	186	255	172	216

SWATARA CREEK BASIN

01571820 SWATARA CREEK NEAR RAVINE, PA--Continued

SPECIFIC CONDUCTANCE, MICROSIEMENS PER CENTIMETER AT 25° CELSIUS, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	257	235	243	268	259	263	328	284	307	344	324	333
2	263	235	253	294	255	275	300	276	290	340	319	328
3	248	234	241	292	257	270	304	284	293	366	320	332
4	249	235	242	275	259	266	321	277	294	372	328	357
5	261	236	247	282	263	271	327	294	314	335	227	307
6	265	243	254	307	265	287	303	281	293	298	217	268
7	254	238	246	294	267	277	308	283	295	286	152	209
8	255	238	247	281	266	274	304	273	288	291	231	264
9	278	241	262	286	264	274	329	289	312	305	271	288
10	274	245	256	285	263	272	318	281	291	324	295	307
11	257	243	250	307	263	290	297	272	285	319	296	310
12	265	237	249	290	264	272	295	272	284	345	304	319
13	273	260	266	292	264	278	325	191	292	351	311	325
14	275	233	249	293	268	280	251	196	230	323	301	310
15	267	242	254	315	274	301	284	226	257	332	298	313
16	283	250	263	302	272	286	331	268	295	326	118	208
17	290	210	260	294	271	282	351	309	330	203	124	160
18	226	197	210	294	272	282	352	306	327	242	197	221
19	247	214	232	326	273	304	324	298	308	271	237	253
20	278	239	254	---	---	---	305	265	288	279	247	271
21	275	249	263	300	279	291	306	270	287	279	213	250
22	265	249	256	300	273	285	312	269	292	220	189	201
23	265	250	256	316	274	298	285	256	269	243	201	222
24	283	252	267	316	277	289	335	250	296	264	235	249
25	284	255	269	298	270	284	332	307	319	288	248	271
26	266	253	260	295	272	287	372	319	348	292	264	274
27	267	253	260	322	274	300	339	317	326	285	269	277
28	285	257	273	323	286	302	341	317	327	290	260	276
29	288	253	267	300	278	290	331	313	322	297	240	275
30	267	252	260	300	281	289	373	317	341	254	108	133
31	---	---	---	332	273	298	370	325	346	---	---	---
MONTH	290	197	254	332	255	284	373	191	301	372	108	270
YEAR	538	108	241									

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	7.0	6.5	6.8	6.8	6.7	6.8	7.2	6.9	7.1	6.8	6.6	6.7
2	7.1	6.6	6.9	7.0	6.7	6.8	7.2	7.1	7.2	6.9	6.7	6.7
3	7.1	6.8	7.0	6.9	6.7	6.8	7.3	7.1	7.2	7.0	6.7	6.9
4	7.1	6.9	7.0	6.7	6.5	6.6	7.4	7.0	7.3	6.8	6.6	6.7
5	7.1	6.5	6.9	6.8	6.6	6.8	7.3	7.0	7.2	6.8	6.7	6.7
6	7.2	6.8	7.0	6.9	6.7	6.8	7.3	7.0	7.1	6.8	6.7	6.8
7	7.2	6.8	7.1	6.9	6.8	6.9	7.3	6.9	7.2	6.9	6.7	6.8
8	7.1	6.6	7.0	7.0	6.6	6.8	7.4	7.1	7.3	6.9	6.8	6.9
9	7.1	6.5	6.9	7.0	6.7	6.9	7.5	7.3	7.3	6.9	6.7	6.8
10	7.1	6.7	6.9	7.0	6.8	6.9	7.3	7.0	7.1	6.8	6.6	6.7
11	7.1	6.9	7.0	7.1	6.8	7.0	7.3	7.2	7.2	6.7	6.6	6.7
12	7.1	6.6	7.0	7.0	6.7	6.9	7.3	7.2	7.2	6.8	6.6	6.7
13	7.1	6.5	6.9	6.9	6.6	6.7	7.3	7.2	7.3	6.9	6.8	6.8
14	7.1	6.7	6.9	7.0	6.8	6.9	7.3	7.1	7.2	6.9	6.8	6.8
15	---	---	---	7.2	6.9	7.1	7.2	7.0	7.1	6.8	6.8	6.8
16	---	---	---	7.1	7.0	7.0	7.4	7.2	7.3	6.8	6.6	6.7
17	---	---	---	7.1	6.9	7.0	7.5	7.3	7.4	6.9	6.7	6.8
18	7.0	6.8	6.9	7.1	6.8	7.0	7.5	7.3	7.4	6.9	6.4	6.8
19	7.1	6.7	7.0	7.1	6.9	7.0	7.4	7.1	7.2	6.7	6.5	6.6
20	7.1	6.6	7.0	7.1	7.0	7.0	7.4	7.1	7.3	6.8	6.6	6.7
21	7.2	6.9	7.1	7.2	7.0	7.1	7.5	7.2	7.4	6.8	6.6	6.7
22	7.2	6.9	7.0	7.1	6.9	7.0	7.5	7.3	7.4	6.9	6.7	6.8
23	7.2	6.9	7.0	7.1	7.0	7.0	7.4	7.2	7.3	6.9	6.7	6.8
24	7.2	7.0	7.1	7.1	6.7	7.1	7.2	7.1	7.2	6.9	6.0	6.3
25	7.2	7.1	7.1	7.2	7.0	7.1	7.3	7.2	7.3	6.3	6.1	6.2
26	7.1	6.8	7.0	7.1	6.9	7.0	7.4	7.2	7.3	6.5	6.3	6.4
27	7.2	6.8	7.0	7.1	6.9	7.0	7.5	7.3	7.4	6.5	6.4	6.5
28	7.2	6.9	7.1	7.1	6.9	7.0	7.5	7.2	7.3	6.6	6.4	6.5
29	7.2	6.9	7.1	7.2	7.0	7.1	7.4	7.2	7.3	6.6	6.5	6.6
30	7.1	6.4	6.8	7.2	6.9	7.1	7.5	7.3	7.4	6.7	6.6	6.6
31	6.8	6.5	6.6	---	---	---	7.3	6.8	7.1	6.7	6.4	6.7
MONTH	7.2	6.4	7.0	7.2	6.5	6.9	7.5	6.8	7.3	7.0	6.0	6.7

SWATARA CREEK BASIN

01571820 SWATARA CREEK NEAR RAVINE, PA--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	17.0	12.5	15.0	10.0	6.5	8.5	9.0	6.5	7.5	.0	.0	.0
2	13.0	9.5	11.5	10.0	7.0	8.5	7.5	4.5	6.0	.0	.0	.0
3	11.0	9.5	10.5	8.0	5.0	6.5	8.5	5.5	7.0	.0	.0	.0
4	11.0	10.5	11.0	7.5	4.5	6.0	11.5	8.0	9.5	.5	.0	.0
5	13.5	11.0	12.0	7.0	4.0	5.5	12.5	10.5	11.0	.0	.0	.0
6	12.5	10.0	11.5	7.5	5.0	6.0	12.5	9.5	11.0	.0	.0	.0
7	13.5	12.0	12.5	8.0	5.5	6.5	12.0	9.5	10.5	.0	.0	.0
8	15.0	13.0	14.0	8.5	7.0	7.5	10.5	8.5	9.5	.0	.0	.0
9	14.5	13.5	14.0	8.5	6.0	7.5	8.5	5.0	7.0	.5	.0	.0
10	14.0	13.0	13.5	9.0	5.5	6.5	6.0	3.5	5.0	.5	.0	.0
11	15.5	12.5	14.0	11.0	7.5	9.5	5.5	3.0	4.5	.0	.0	.0
12	16.0	12.5	14.0	8.0	5.5	7.0	5.0	2.5	3.5	1.0	.0	.5
13	15.0	13.5	14.0	7.5	5.0	6.5	5.5	3.0	4.5	1.5	.0	.5
14	14.5	12.5	13.5	8.5	5.5	7.0	4.5	2.5	3.5	.0	.0	.0
15	---	---	---	9.5	6.5	7.5	4.0	1.5	2.5	.0	.0	.0
16	---	---	---	8.0	5.5	6.5	4.5	1.5	3.0	.5	.0	.0
17	---	---	---	9.5	7.0	8.5	5.0	3.5	4.5	1.5	.5	1.0
18	14.5	10.0	12.0	7.5	5.0	6.5	4.0	2.0	3.0	1.0	.0	.5
19	15.0	12.0	13.5	6.5	3.5	5.0	5.0	2.0	3.5	1.0	.5	.5
20	13.5	10.5	11.5	8.0	6.5	7.0	6.5	4.5	5.5	2.5	.5	1.5
21	11.5	9.5	10.5	6.5	5.0	6.0	7.5	6.0	6.5	2.5	1.5	2.0
22	10.0	7.5	9.0	6.5	4.0	5.5	8.5	1.5	6.0	3.5	2.5	3.0
23	11.0	7.0	9.0	6.5	3.0	5.0	1.5	.0	.5	3.5	3.5	3.5
24	12.0	7.5	9.5	8.5	6.0	6.5	2.0	.5	1.0	3.5	2.5	3.0
25	11.5	7.5	9.5	6.5	4.0	5.5	1.5	.0	.5	4.5	3.0	4.0
26	12.5	8.5	10.5	8.0	5.5	7.0	.5	.0	.0	5.5	4.5	4.5
27	11.5	10.5	11.0	7.5	5.0	6.5	.5	.0	.0	5.0	4.0	4.5
28	12.5	10.5	11.5	7.0	4.0	5.5	2.0	.5	1.5	6.5	5.0	5.5
29	12.0	9.0	10.5	8.5	5.0	7.0	2.0	1.5	1.5	5.5	4.5	5.5
30	10.5	6.5	8.5	9.0	7.0	8.0	2.0	.0	1.0	5.0	3.5	4.0
31	10.0	6.5	8.0	---	---	---	.0	.0	.0	4.0	2.5	3.0
MONTH	17.0	6.5	11.6	11.0	3.0	6.8	12.5	.0	4.5	6.5	.0	1.5
	FEBRUARY			MARCH			APRIL			MAY		
1	4.0	2.0	3.0	5.0	3.5	4.5	9.5	8.0	9.0	15.0	9.0	12.0
2	4.5	4.0	4.0	6.5	3.0	4.5	11.5	9.0	10.0	15.5	9.0	12.0
3	---	---	---	7.5	3.5	5.5	12.5	9.5	10.5	12.0	9.5	11.0
4	5.5	4.5	5.0	7.5	3.0	4.5	13.0	10.0	11.0	15.0	11.0	12.5
5	5.5	4.0	4.5	4.5	2.0	3.5	12.0	8.0	9.5	18.0	12.0	14.5
6	5.5	4.5	5.0	4.0	3.0	3.5	11.0	7.0	9.0	14.5	13.0	13.5
7	5.0	4.0	5.0	3.5	1.0	2.5	13.0	7.5	10.0	13.5	12.5	13.0
8	5.0	4.0	4.5	3.5	.5	2.0	14.5	8.5	11.5	15.0	12.5	13.5
9	5.5	3.5	4.5	3.5	1.5	2.5	11.0	8.5	9.5	15.0	11.5	13.0
10	6.0	4.0	5.0	5.5	2.5	3.5	11.0	7.5	9.0	16.0	10.5	13.0
11	6.0	3.5	5.0	5.0	1.5	3.0	8.5	7.0	7.5	16.5	10.5	13.5
12	7.0	5.0	5.5	4.0	2.0	3.0	10.5	7.5	8.5	17.0	11.5	14.0
13	5.0	3.0	4.0	6.0	2.0	3.5	11.0	6.5	8.5	14.0	11.5	12.5
14	4.0	2.0	3.0	4.5	2.0	3.5	11.5	7.0	9.0	15.0	10.0	12.5
15	5.0	2.0	3.5	5.5	2.0	3.5	11.0	7.5	9.0	15.5	10.0	12.5
16	6.0	3.0	4.5	6.5	2.5	4.5	10.0	8.5	9.0	15.5	10.5	12.5
17	5.5	4.5	5.0	8.0	3.5	5.5	9.0	8.0	8.5	15.5	11.0	13.5
18	6.0	5.0	5.5	8.0	5.0	6.0	10.0	7.5	8.5	17.5	12.5	15.0
19	6.0	4.0	5.0	7.0	4.5	5.5	10.0	6.5	8.5	17.0	14.5	15.5
20	5.0	3.5	4.0	8.0	4.5	6.0	9.5	7.0	8.0	17.0	12.5	14.5
21	4.5	1.5	3.0	5.5	4.5	5.0	9.5	6.5	8.0	16.5	11.0	14.0
22	2.5	.5	1.5	5.0	4.0	4.5	12.0	8.0	10.0	16.5	12.0	14.5
23	2.0	.5	1.5	6.5	4.0	5.0	10.5	8.5	10.0	15.0	14.0	14.5
24	4.0	1.0	2.5	7.0	5.5	6.5	11.5	7.0	9.0	15.5	13.0	14.0
25	4.0	1.5	2.5	8.0	5.5	6.5	12.0	6.5	9.0	14.0	12.0	13.0
26	5.0	2.0	3.5	8.0	4.5	6.0	13.5	7.0	10.5	13.5	11.0	12.5
27	5.0	2.5	4.0	8.5	4.5	6.5	14.0	8.5	11.0	16.5	12.0	13.5
28	5.0	4.5	4.5	9.0	6.5	7.5	12.5	8.0	10.5	16.5	11.0	14.0
29	---	---	---	10.5	7.0	8.5	14.0	8.5	11.0	18.5	12.5	15.5
30	---	---	---	10.5	7.0	8.5	15.0	8.5	11.5	19.5	13.5	16.5
31	---	---	---	11.5	6.0	8.5	---	---	---	19.5	14.0	16.5
MONTH	7.0	.5	4.0	11.5	.5	5.0	15.0	6.5	9.5	19.5	9.0	13.6

