

## SWATARA CREEK BASIN

01571778 LORBERRY CREEK NEAR LORBERRY JUNCTION, PA  
(Swatara Creek Project)

**LOCATION.**--Lat 40°35'15", long 76°25'35", Schuylkill County, Hydrologic Unit 02050301, on left bank 100 ft downstream from bridge on SR 4011, 0.75 mi west of Lorberry Junction.

**DRAINAGE AREA.**--3.59 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

**PERIOD OF RECORD.**--November 1999 to current year.

**GAGE.**--Water-stage recorder. Elevation of gage is 740 ft above National Geodetic Vertical Datum of 1929, from topographic map.

**REMARKS.**--No estimated daily discharges. Records fair. Other data for this project presented in tables on pages 350-412.

**PEAK DISCHARGES FOR CURRENT YEAR.**--Peak discharges greater than a base discharge of 70 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge ft <sup>3</sup> /s	Gage Height (ft)	Date	Time	Discharge ft <sup>3</sup> /s	Gage Height (ft)
Mar. 26	2115	*52	*1.85	(No peaks above base discharge.)			

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.9	3.7	3.7	2.8	6.4	4.6	18	14	9.7	3.0	2.2	1.5
2	2.5	2.7	2.3	4.0	5.3	4.3	16	22	10	3.7	2.2	1.7
3	3.4	2.5	2.3	2.7	6.9	15	13	18	9.4	2.8	1.7	2.2
4	2.7	3.8	2.8	2.9	5.7	6.6	12	18	8.0	2.7	2.3	1.3
5	2.4	2.5	2.0	3.6	4.5	4.9	12	18	9.8	3.4	2.0	1.4
6	3.6	2.4	2.3	2.8	6.6	7.0	10	18	9.3	2.5	1.6	2.1
7	2.4	3.8	3.0	3.7	4.7	4.9	11	18	10	2.8	2.3	1.2
8	2.3	2.4	2.5	3.9	5.0	5.0	9.5	15	8.8	3.0	1.7	1.4
9	3.6	2.3	3.9	2.8	6.6	6.0	10	17	7.2	2.5	1.5	2.0
10	2.3	3.7	3.6	3.5	5.8	6.5	11	15	8.4	3.1	2.4	1.2
11	2.6	2.3	2.5	4.4	8.2	6.0	8.6	13	6.7	2.6	1.5	1.5
12	3.6	2.3	3.0	3.3	6.6	5.7	8.9	12	5.9	2.3	1.5	1.9
13	2.4	3.4	3.7	3.9	5.4	4.8	8.4	15	7.0	3.1	2.3	1.2
14	3.4	2.0	3.7	3.2	6.2	6.1	8.7	14	8.3	2.4	1.4	1.5
15	4.9	2.4	4.4	3.1	6.0	5.3	16	12	6.6	2.4	1.9	2.7
16	2.9	3.6	4.2	4.0	5.3	4.7	10	11	7.2	3.0	2.2	3.0
17	3.5	2.2	3.3	4.2	6.7	6.1	12	9.9	5.9	2.1	1.5	1.9
18	3.4	2.4	4.9	2.9	5.6	7.1	11	28	5.6	2.6	1.8	2.2
19	2.5	3.5	4.0	3.4	5.3	7.0	14	22	6.9	2.7	2.0	1.4
20	3.1	2.3	2.9	4.3	7.3	16	16	21	5.0	2.1	1.4	1.8
21	3.1	2.4	3.7	3.0	5.4	14	13	22	5.2	2.7	1.8	2.1
22	2.4	3.4	3.5	3.4	5.4	12	14	19	5.1	2.3	1.9	1.7
23	3.1	2.2	3.1	4.2	6.5	13	12	20	4.2	2.0	1.4	3.3
24	3.0	2.6	4.4	6.6	4.7	12	11	18	5.0	2.9	2.0	2.4
25	2.6	8.0	3.7	7.1	5.4	15	11	17	3.9	2.0	1.8	1.6
26	3.6	4.7	3.1	5.6	5.9	21	11	17	4.0	2.0	1.3	2.3
27	3.0	2.9	4.2	4.1	4.6	24	11	14	5.1	2.8	1.9	12
28	2.5	3.1	3.3	5.0	5.3	20	16	14	3.8	2.0	1.6	8.2
29	3.7	2.1	2.9	4.8	---	19	16	12	4.0	2.2	1.5	3.7
30	2.8	3.2	4.3	4.2	---	19	14	11	3.6	2.6	2.1	3.1
31	2.5	---	2.8	5.7	---	18	---	12	---	1.9	1.6	---
TOTAL	92.7	90.8	104.0	123.1	163.3	320.6	365.1	506.9	199.6	80.2	56.3	75.5
MEAN	2.99	3.03	3.35	3.97	5.83	10.3	12.2	16.4	6.65	2.59	1.82	2.52
MAX	4.9	8.0	4.9	7.1	8.2	24	18	28	10	3.7	2.4	12
MIN	2.3	2.0	2.0	2.7	4.5	4.3	8.4	9.9	3.6	1.9	1.3	1.2

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2000 - 2002, BY WATER YEAR (WY)

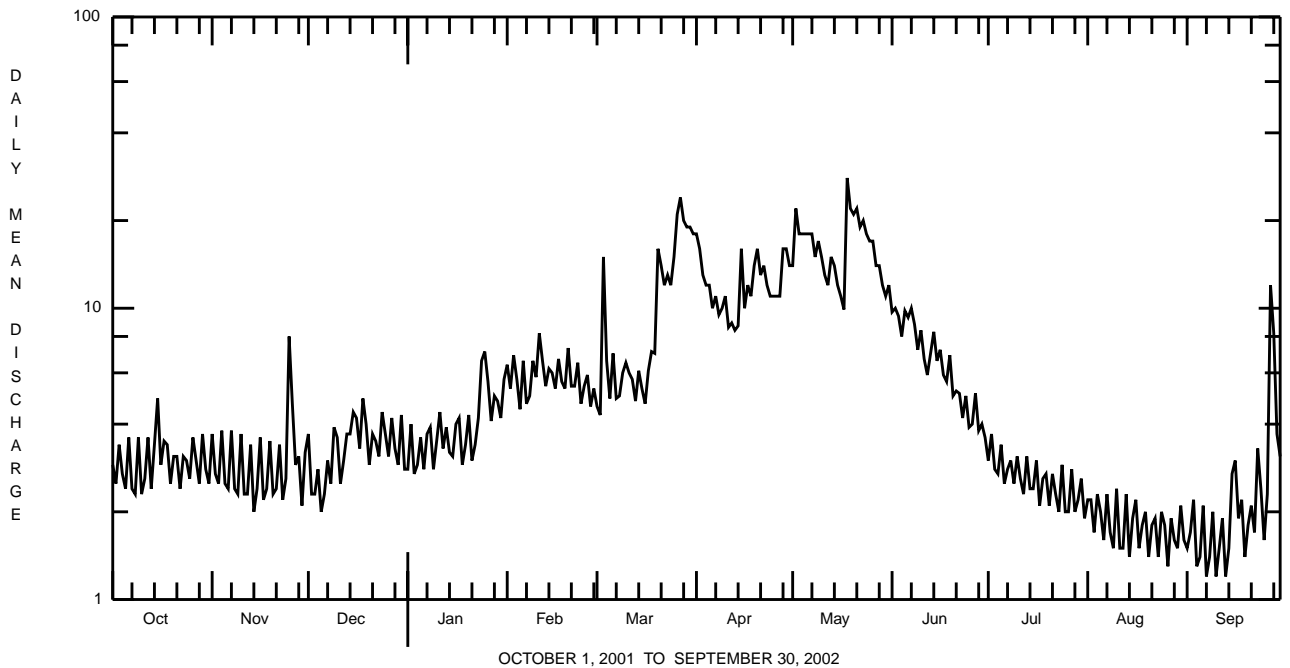
MEAN	3.30	3.43	8.02	6.47	7.87	15.4	14.7	11.1	8.95	4.89	3.18	3.12
MAX	3.61	3.82	11.9	8.19	9.82	24.7	19.5	16.4	10.9	6.20	4.14	3.59
(WY)	2001	2001	2001	2000	2001	2000	2000	2002	2000	2001	2000	2000
MIN	2.99	3.03	3.35	3.97	5.83	10.3	12.2	7.30	6.65	2.59	1.82	2.52
(WY)	2002	2002	2002	2002	2002	2002	2002	2001	2002	2002	2002	2002

SWATARA CREEK BASIN

01571778 LORBERRY CREEK NEAR LORBERRY JUNCTION, PA  
(Swatara Creek Project)

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 2000 - 2002	
ANNUAL TOTAL	2409.9		2178.1		6.71	
ANNUAL MEAN	6.60		5.97		7.45	
HIGHEST ANNUAL MEAN					5.97	
LOWEST ANNUAL MEAN					2001	
HIGHEST DAILY MEAN	e23	Mar 30a	28	May 18	92	Dec 17 2000
LOWEST DAILY MEAN	2.0	Nov 14, Dec 5	1.2	Sep 7	1.2	Sep 7 2002
ANNUAL SEVEN-DAY MINIMUM	2.5	Dec 2	1.5	Sep 7, 10, 13	1.5	Sep 7 2002
MAXIMUM PEAK FLOW			52	Mar 26	e92	Dec 17 2000
MAXIMUM PEAK STAGE			1.85	Mar 26	b2.17	Mar 21 2000
10 PERCENT EXCEEDS	12		14		13	
50 PERCENT EXCEEDS	5.4		3.7		4.9	
90 PERCENT EXCEEDS	2.5		1.9		2.3	

a Also June 22.  
b Discharge 86 ft<sup>3</sup>/s.  
e Estimated.



SWATARA CREEK BASIN

01571778 LORBERRY CREEK NEAR LORBERRY JUNCTION, PA--Continued  
(Swatara Creek Project)

WATER-QUALITY RECORDS

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

PERIOD OF DAILY RECORD.--

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

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

REMARKS.--Specific conductance records rated fair. pH records rated fair except for period Oct. 1-15, which is poor. Water temperature records rated good. 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 the Swatara Creek 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, 526, microsiemens, Sept. 29, 2002; minimum, 51, microsiemens, July 24, 1997.  
pH: Maximum, 8.1, Aug. 14, 1999; minimum, 3.6, Oct. 21-23, 25, Dec. 3, 1996.  
WATER TEMPERATURE: Maximum, 23.5°C, July 5, 6, 1999; minimum, 0.0°C, many days during winters.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 526, microsiemens, Sept. 29; minimum 84, microsiemens, Mar. 26.  
pH: Maximum, 7.2, Mar. 11; minimum, 4.1, Sept. 22.  
WATER TEMPERATURE: Maximum, 23.0°C, Aug. 15; minimum 2.0°C, Jan. 6.

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

Date	Time	AGENCY COLLECTING SAMPLE (CODE NUMBER)	AGENCY ANALYZING SAMPLE (CODE NUMBER)	DISCHARGE, INST. CUBIC FEET PER SECOND (00061)	OXIDATION REDUCTION POTENTIAL (MV) (00090)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PERCENT SATURATION) (00301)	PH WATER FIELD (STANDARD UNITS) (00400)	PH WATER WHOLE LAB (STANDARD UNITS) (00403)	SPECIFIC CONDUCTANCE (µS/CM) (00095)
NOV										
28...	1030	1028	930	3.3	570	10	92	5.1	4.1	369
JAN										
24...	1200	1028	930	10	--	--	--	6.2	5.6	205
24...	1400	1028	930	10	--	--	--	6.3	5.6	181
24...	1600	1028	930	9.5	--	--	--	6.3	5.8	178
24...	1800	1028	930	8.7	--	--	--	6.3	5.6	180
24...	2200	1028	930	8.0	--	--	--	6.3	5.8	182
25...	0200	1028	930	7.7	--	--	--	6.4	6.0	183
25...	0600	1028	930	7.0	--	--	--	6.4	6.0	187
25...	1200	1028	930	5.8	--	--	--	6.5	6.1	202
29...	1230	1028	930	3.9	400	12	100	5.5	4.5	281
MAR										
03...	0030	1028	930	11	--	--	--	6.3	6.1	180
03...	0400	1028	930	24	--	--	--	6.2	6.0	124
03...	0600	1028	930	22	--	--	--	6.1	--	149
03...	2000	1028	930	11	--	--	--	5.8	5.0	211
04...	0200	1028	930	9.5	--	--	--	6.0	5.3	220
04...	0400	1028	930	7.3	--	--	--	6.0	5.1	214
13...	1130	1028	930	4.8	250	11	96	7.0	4.4	208
APR										
15...	0045	1028	930	19	--	--	--	6.0	5.2	177
15...	0200	1028	930	24	--	--	--	5.8	4.8	150
15...	0400	1028	930	21	--	--	--	5.7	4.8	138
15...	0600	1028	930	20	--	--	--	5.6	4.7	157
15...	1400	1028	930	15	--	--	--	5.8	4.7	184
23...	1015	1028	930	12	320	11	96	6.6	5.4	196
MAY										
29...	1115	1028	930	13	430	10	98	5.2	4.4	228
JUN										
19...	1030	1028	930	7.0	420	10	100	5.6	4.2	260
JUL										
31...	1015	1028	930	1.9	190	9.3	95	6.4	4.4	280
AUG										
19...	0945	1028	930	2.4	350	9.9	99	5.3	4.0	347

## SWATARA CREEK BASIN

## 01571778 LORBERRY CREEK NEAR LORBERRY JUNCTION, PA--Continued

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

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)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	POTAS- SIUM, TOTAL RECOV- ERABLE (MG/L AS K) (00937)	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)
NOV										
28...	10.5	20	19	26	25	1.4	1.4	3.5	3.3	<5.0
JAN										
24...	5.50	10	10	11	11	1.1	1.4	7.7	7.4	--
24...	5.40	7.8	7.8	7.8	7.8	.93	1.1	8.8	8.8	--
24...	5.80	7.9	7.9	8.3	8.1	.88	.9	6.7	6.6	--
24...	5.90	8.1	8.0	8.5	8.4	.86	.9	6.2	6.1	--
24...	6.10	8.5	8.5	9.3	9.2	.87	.9	5.0	5.0	--
25...	5.80	8.8	8.9	9.9	9.7	.91	1.2	4.4	5.4	--
25...	5.20	9.0	8.8	10	10	.86	.9	3.9	3.8	--
25...	5.30	9.7	9.6	12	11	.93	.9	3.9	3.8	--
29...	9.50	15	14	18	17	1.1	1.1	3.0	2.9	18
MAR										
03...	7.20	9.1	8.8	10	9.7	1.1	1.3	5.2	5.1	--
03...	5.90	6.2	6.1	5.9	5.8	.98	1.2	5.4	5.3	--
03...	6.30	7.6	7.4	8.1	7.9	1.0	1.0	4.2	4.2	--
03...	7.00	11	11	13	13	1.1	1.1	3.3	3.2	11
04...	5.90	12	12	14	14	1.1	1.1	3.2	3.3	9.6
04...	5.50	12	11	14	14	1.1	1.0	3.2	3.1	22
13...	7.90	9.5	9.2	12	11	.90	.90	4.1	4.2	<5.0
APR										
15...	12.0	7.6	7.3	8.9	8.6	.87	1.3	3.2	3.2	13
15...	11.5	7.3	6.8	8.1	7.9	.84	1.0	2.8	2.8	14
15...	11.2	7.3	7.0	8.6	8.2	.80	.8	2.6	2.5	13
15...	11.0	7.8	7.5	10	9.5	.81	.8	2.5	2.4	13
15...	13.5	8.9	8.8	12	11	.80	.9	2.5	2.4	13
23...	9.60	9.4	9.2	13	13	.86	.90	2.7	2.8	10
MAY										
29...	13.1	10	10	16	15	.97	1.0	2.6	2.5	14
JUN										
19...	13.9	13	13	18	18	1.0	1.1	2.8	2.7	20
JUL										
31...	15.9	14	14	19	18	1.1	1.1	3.1	3.1	19
AUG										
19...	15.3	20	20	24	23	1.3	1.3	3.5	3.4	26

Date	ANC WATER UNFLTRD FET LAB (MG/L AS CAC03) (00417)	SULFATE DIS- SOLVED (MG/L AS S04) (00945)	ALUM- INUM, DIS- SOLVED (MG/L AS AL) (01106)	ALUM- INUM, TOTAL RECOV- ERABLE (MG/L AS AL) (01105)	ARSENIC DIS- SOLVED (MG/L AS AS) (01000)	ARSENIC TOTAL (MG/L AS AS) (01002)	BARIUM, DIS- SOLVED (MG/L AS BA) (01005)	BARIUM, TOTAL RECOV- ERABLE (MG/L AS BA) (01007)	CADMIUM DIS- SOLVED (MG/L AS CD) (01025)	CADMIUM WATER UNFLTRD TOTAL (MG/L AS CD) (01027)
NOV										
28...	--	170	1500	1700	<40	<40	27	28	<3.0	<3.0
JAN										
24...	<5.0	71	<20	5000	<40	<40	24	37	<3.0	<3.0
24...	<5.0	49	50	1600	<40	<40	26	35	<3.0	<3.0
24...	<5.0	52	40	810	<40	<40	25	30	<3.0	<3.0
24...	<5.0	54	30	670	<40	<40	25	29	<3.0	<3.0
24...	<5.0	59	50	600	<40	<40	24	27	<3.0	<3.0
25...	<5.0	62	40	1900	<40	<40	24	33	<3.0	<3.0
25...	<5.0	65	40	570	<40	<40	24	27	<3.0	<3.0
25...	<5.0	72	30	580	<40	<40	24	27	<3.0	<3.0
29...	--	120	100	810	<40	<40	25	28	<3.0	<3.0
MAR										
03...	<5.0	63	<20	2800	<40	<40	22	29	<3.0	<3.0
03...	<5.0	37	60	2200	<40	<40	23	30	<3.0	<3.0
03...	--	52	60	980	<40	<40	26	28	<3.0	<3.0
03...	--	84	50	620	<40	<40	25	26	<3.0	<3.0
04...	--	91	30	640	<40	<40	26	26	<3.0	<3.0
04...	--	88	30	790	<40	<40	26	26	<3.0	<3.0
13...	<5.0	77	290	790	<80	<40	23	23	<6.0	<3.0
APR										
15...	--	57	650	3000	<40	<40	26	38	<3.0	<3.0
15...	--	53	250	1300	<40	<40	25	31	<3.0	<3.0
15...	--	56	150	910	<40	<40	25	29	<3.0	<3.0
15...	--	63	170	810	<40	<40	25	28	<3.0	<3.0
15...	--	73	100	750	<40	<40	25	30	<3.0	<3.0
23...	--	80	50	800	<40	<40	23	24	<3.0	<3.0
MAY										
29...	--	97	270	950	<40	<40	23	23	<3.0	<3.0
JUN										
19...	--	120	180	1100	<40	<40	24	25	<3.0	<3.0
JUL										
31...	--	120	<20	600	<40	<40	26	26	<3.0	<3.0
AUG										
19...	--	160	570	910	<40	<40	29	29	<3.0	<3.0

## SWATARA CREEK BASIN

## 01571778 LORBERRY CREEK NEAR LORBERRY JUNCTION, PA--Continued

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

Date	CHRO- MIUM, DIS- SOLVED (µG/L AS CR) (01030)	CHRO- MIUM, TOTAL RECOV- ERABLE (µG/L AS CR) (01034)	COBALT, DIS- SOLVED (µG/L AS CO) (01035)	COBALT, TOTAL RECOV- ERABLE (µG/L AS CO) (01037)	COPPER, DIS- SOLVED (µG/L AS CU) (01040)	COPPER, TOTAL RECOV- ERABLE (µG/L AS CU) (01042)	IRON, DIS- SOLVED (µG/L AS FE) (01046)	IRON, TOTAL RECOV- ERABLE (µG/L AS FE) (01045)	LEAD, DIS- SOLVED (µG/L AS PB) (01049)	LEAD, TOTAL RECOV- ERABLE (µG/L AS PB) (01051)
NOV										
28...	<3.0	<3.0	56	53	<3.0	<3.0	2800	3400	<40	<40
JAN										
24...	<3.0	<3.0	21	24	<3.0	10	1900	25000	<40	<40
24...	<3.0	<3.0	14	15	<3.0	<3.0	1600	6500	<40	<40
24...	<3.0	<3.0	16	15	<3.0	<3.0	1800	4500	<40	<40
24...	<3.0	<3.0	17	17	<3.0	<3.0	2000	4400	<40	<40
24...	<3.0	3.0	17	18	<3.0	<3.0	2200	3900	<40	<40
25...	<3.0	14	19	17	<3.0	21	2400	4400	<40	<40
25...	<3.0	<3.0	19	20	<3.0	<3.0	2600	3800	<40	<40
25...	3.0	<3.0	22	21	<3.0	<3.0	2800	4200	<40	<40
29...	<3.0	<3.0	38	37	<3.0	<3.0	4000	5300	<40	<40
MAR										
03...	<3.0	4.0	20	20	<3.0	8.0	890	13000	<40	<40
03...	<3.0	17	11	13	<3.0	15	700	12000	<40	<40
03...	<3.0	<3.0	17	18	<3.0	7.0	1300	6300	<40	<40
03...	<3.0	<3.0	29	30	<3.0	<3.0	2700	4200	<40	<40
04...	<3.0	<3.0	33	33	<3.0	<3.0	3000	4400	<40	<40
04...	<3.0	<3.0	31	31	<3.0	5.0	2900	4800	<40	<40
13...	<6.0	<3.0	29	27	7.0	<3.0	2700	3900	<80	<40
APR										
15...	<3.0	<3.0	22	25	<3.0	6.0	2900	9900	<40	<40
15...	<3.0	<3.0	20	21	<3.0	3.0	1400	4700	<40	<40
15...	<3.0	<3.0	22	21	<3.0	<3.0	1400	3700	<40	<40
15...	<3.0	<3.0	23	23	<3.0	<3.0	1600	3500	<40	<40
15...	<3.0	<3.0	27	27	<3.0	<3.0	2100	3600	<40	<40
23...	<3.0	<3.0	30	30	<3.0	<3.0	3100	4400	<40	<40
MAY										
29...	<3.0	<3.0	42	41	<3.0	<3.0	3000	4600	<40	<40
JUN										
19...	<3.0	<3.0	45	44	<3.0	<3.0	3700	5500	<40	<40
JUL										
31...	<3.0	<3.0	36	35	<3.0	<3.0	4500	6200	<40	<40
AUG										
19...	<3.0	<3.0	60	59	<3.0	<3.0	4300	5600	<40	<40

Date	MANGA- NESE, DIS- SOLVED (µG/L AS MN) (01056)	MANGA- NESE, TOTAL RECOV- ERABLE (µG/L AS MN) (01055)	NICKEL, DIS- SOLVED (µG/L AS NI) (01065)	NICKEL, TOTAL RECOV- ERABLE (µG/L AS NI) (01067)	SELE- NIUM, DIS- SOLVED (µG/L AS SE) (01145)	SELE- NIUM, TOTAL RECOV- ERABLE (µG/L AS SE) (01147)	ZINC, DIS- SOLVED (µG/L AS ZN) (01090)	ZINC, TOTAL RECOV- ERABLE (µG/L AS ZN) (01092)
NOV								
28...	2000	2000	92	87	<100	<100	230	210
JAN								
24...	1000	1100	30	31	<100	<100	71	120
24...	690	700	19	21	<100	<100	52	110
24...	720	730	23	22	<100	<100	49	96
24...	750	750	22	24	<100	<100	62	80
24...	810	820	27	28	<100	<100	54	80
25...	850	870	24	32	<100	<100	58	150
25...	890	880	28	27	<100	<100	62	89
25...	980	980	36	33	<100	<100	64	120
29...	1500	1500	57	55	<100	<100	140	170
MAR								
03...	970	990	30	34	<100	<100	70	80
03...	550	600	31	38	<100	<100	45	65
03...	750	770	29	30	<100	<100	73	80
03...	1200	1200	46	46	<100	<100	120	120
04...	1300	1200	51	48	<100	<100	120	120
04...	1200	1200	47	51	<100	<100	120	120
13...	1100	1000	46	44	<200	<100	130	110
APR								
15...	850	900	37	40	<100	<100	100	190
15...	740	760	35	36	<100	<100	110	120
15...	770	770	36	35	<100	<100	97	150
15...	820	820	39	38	<100	<100	100	130
15...	980	970	42	44	<100	<100	110	160
23...	1200	1200	46	47	<100	<100	92	97
MAY								
29...	1300	1300	64	62	<100	<100	160	150
JUN								
19...	1500	1500	68	67	<100	<100	170	170
JUL								
31...	1700	1700	51	51	<100	<100	80	92
AUG								
19...	2200	2100	94	91	<100	<100	230	220

## SWATARA CREEK BASIN

## 01571778 LORBERRY CREEK NEAR LORBERRY JUNCTION, 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
	<b>OCTOBER</b>			<b>NOVEMBER</b>			<b>DECEMBER</b>			<b>JANUARY</b>		
1	460	415	436	412	348	384	338	289	317	292	271	277
2	426	415	420	402	358	379	307	293	300	321	267	303
3	470	414	447	360	339	355	375	306	320	277	242	252
4	442	408	419	396	336	377	388	341	375	265	241	244
5	408	399	403	388	343	360	341	320	328	343	265	318
6	448	399	430	344	331	337	363	314	325	308	256	281
7	420	393	399	427	332	401	371	337	359	325	264	281
8	396	389	392	397	333	354	337	205	298	344	304	332
9	439	392	427	333	328	330	306	197	235	304	271	278
10	415	380	387	427	330	404	341	300	326	328	270	288
11	405	371	375	393	334	348	300	281	285	346	246	296
12	428	400	418	334	328	330	350	282	298	247	241	245
13	400	371	377	431	333	410	361	306	340	324	246	276
14	384	279	367	389	286	322	306	211	250	328	263	295
15	368	268	334	334	306	310	325	214	251	263	253	257
16	345	287	331	394	334	383	338	288	320	330	253	290
17	422	281	338	388	332	360	288	225	265	334	292	323
18	422	369	397	368	316	323	286	172	222	292	267	274
19	369	359	364	392	368	386	303	264	284	314	264	274
20	437	359	389	383	327	350	270	262	265	348	309	330
21	428	373	397	368	312	321	339	270	301	309	268	279
22	373	359	363	397	368	389	340	286	316	322	268	279
23	432	353	390	386	310	359	287	242	267	345	289	329
24	416	359	385	338	302	327	309	240	274	289	178	224
25	359	352	355	346	187	291	317	272	292	276	183	218
26	431	352	391	250	187	217	272	268	270	294	244	275
27	417	362	387	346	250	273	333	268	313	244	235	238
28	362	359	360	381	326	363	329	277	298	297	236	263
29	420	357	393	326	290	305	277	268	274	300	246	278
30	407	357	377	294	200	269	337	271	320	246	230	237
31	357	349	351	---	---	---	331	281	296	288	230	261
MONTH	470	268	387	431	187	344	388	172	296	348	178	277
	<b>FEBRUARY</b>			<b>MARCH</b>			<b>APRIL</b>			<b>MAY</b>		
1	286	213	246	298	241	272	208	169	183	208	173	185
2	230	215	224	241	189	235	214	199	211	210	133	172
3	289	230	272	224	131	188	202	196	199	185	165	176
4	286	237	255	229	204	210	228	201	217	212	185	202
5	264	239	243	219	210	215	232	209	222	211	196	204
6	298	241	288	275	219	267	216	207	209	216	194	199
7	287	235	247	255	222	229	240	216	237	219	211	216
8	287	236	242	271	222	231	237	213	219	217	199	201
9	297	260	289	284	197	266	239	212	221	210	183	199
10	273	202	248	206	173	185	231	210	221	227	190	206
11	263	197	215	258	197	223	213	205	208	226	203	219
12	273	234	261	261	219	242	242	205	233	204	188	197
13	234	228	230	220	207	214	238	194	215	214	172	202
14	287	232	258	269	211	246	231	190	201	193	173	184
15	288	235	265	264	216	235	196	135	170	235	191	210
16	235	232	233	216	211	213	194	166	186	236	206	228
17	289	233	270	268	213	257	231	181	210	207	196	204
18	287	240	259	258	160	187	226	197	210	196	104	147
19	241	238	240	229	165	184	203	132	188	186	172	179
20	292	238	282	234	124	178	219	192	206	210	179	191
21	280	233	242	169	136	156	205	192	201	216	197	210
22	285	232	241	214	169	190	216	193	203	197	191	195
23	294	259	285	214	186	201	220	193	203	206	186	200
24	259	241	245	186	175	183	225	203	219	204	192	198
25	297	241	259	232	173	216	225	196	207	217	192	199
26	297	238	279	229	84	182	228	198	207	219	214	216
27	238	230	232	181	95	141	229	205	225	214	199	202
28	298	232	266	194	179	189	205	126	156	231	202	219
29	---	---	---	182	177	179	196	134	177	228	212	221
30	---	---	---	206	179	197	200	170	186	240	209	215
31	---	---	---	207	170	196	---	---	---	242	239	240
MONTH	298	197	254	298	84	210	242	126	205	242	104	201

## SWATARA CREEK BASIN

## 01571778 LORBERRY CREEK NEAR LORBERRY JUNCTION, 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
1	239	214	219	260	250	255	348	264	296	295	224	256
2	258	216	238	309	255	290	351	319	343	305	250	280
3	254	225	242	304	268	280	319	281	288	350	291	332
4	230	221	223	312	259	265	361	269	313	345	285	316
5	258	230	254	320	303	312	359	281	334	313	264	271
6	251	160	213	310	271	280	284	278	281	368	296	345
7	244	171	206	316	264	280	364	275	325	349	283	313
8	244	223	237	320	295	315	361	284	327	319	270	279
9	228	219	223	295	242	271	284	273	277	370	308	352
10	268	224	256	324	242	284	365	266	337	354	267	301
11	262	222	238	322	278	301	356	285	317	318	246	265
12	231	224	228	278	266	270	317	272	280	357	286	340
13	271	227	255	333	270	313	366	315	348	339	265	297
14	271	203	229	328	274	293	353	289	311	316	243	265
15	207	199	203	315	268	276	300	216	280	344	205	287
16	265	207	244	339	299	327	355	300	343	304	146	224
17	263	234	247	299	273	285	339	279	296	351	303	320
18	254	211	231	319	263	283	335	266	286	371	346	363
19	273	245	261	322	287	315	358	335	352	346	334	337
20	245	232	238	287	266	271	340	280	293	378	333	345
21	289	237	260	332	261	298	364	274	298	390	355	381
22	288	254	277	331	285	313	370	316	358	357	244	340
23	256	244	250	285	269	274	316	270	282	363	186	253
24	305	249	286	341	263	314	354	255	291	379	356	369
25	296	259	270	340	286	307	354	308	340	368	353	360
26	287	234	256	308	275	280	310	267	276	367	258	349
27	300	206	270	337	308	328	357	255	296	258	104	185
28	240	217	230	327	275	291	357	292	337	380	129	267
29	296	237	264	315	268	282	292	246	261	526	380	447
30	296	260	283	343	315	338	355	253	299	459	402	438
31	---	---	---	334	279	290	354	294	331	---	---	---
MONTH	305	160	244	343	242	293	370	216	310	526	104	316
YEAR	526	84	278									

## 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
1	5.8	5.2	5.3	---	---	---	4.8	4.3	4.4	6.6	6.4	6.5
2	6.1	5.8	5.9	---	---	---	4.8	4.3	4.5	6.5	5.8	5.9
3	6.3	5.5	5.6	---	---	---	5.4	4.7	5.1	6.6	6.0	6.6
4	6.4	5.7	6.1	---	---	---	4.7	4.4	4.5	6.6	6.3	6.6
5	6.4	6.3	6.3	---	---	---	5.1	4.4	4.7	6.3	5.7	5.8
6	6.4	5.2	5.3	---	---	---	5.6	4.9	5.3	6.6	6.3	6.5
7	5.9	5.2	5.6	---	---	---	4.9	4.4	4.6	6.6	6.2	6.5
8	6.1	5.9	6.0	---	---	---	5.8	4.4	5.2	6.5	5.4	5.7
9	6.0	5.3	5.3	---	---	---	6.0	5.2	5.8	6.7	6.5	6.7
10	5.8	5.3	5.7	---	---	---	5.2	4.6	4.7	6.7	6.0	6.6
11	6.0	5.8	5.8	---	---	---	5.5	4.6	5.3	6.3	5.5	5.7
12	5.8	5.3	5.3	---	---	---	5.9	5.2	5.7	6.7	6.3	6.6
13	5.7	5.3	5.7	---	---	---	5.2	4.7	4.7	6.6	5.7	6.6
14	5.7	5.5	5.7	---	---	---	6.0	4.9	5.9	6.3	5.4	5.8
15	5.6	5.5	5.5	---	---	---	6.1	5.3	6.0	6.5	6.3	6.5
16	---	---	---	---	---	---	5.4	4.9	5.0	6.5	5.5	6.3
17	---	---	---	---	---	---	6.1	5.4	6.0	5.6	5.4	5.4
18	---	---	---	---	---	---	6.4	5.3	6.1	6.1	5.6	6.0
19	---	---	---	---	---	---	6.3	5.2	5.4	6.3	6.1	6.2
20	---	---	---	---	---	---	6.6	6.3	6.5	6.1	5.5	5.5
21	---	---	---	---	---	---	6.7	5.4	6.6	6.4	5.7	6.4
22	---	---	---	---	---	---	6.6	5.3	5.5	6.4	6.2	6.4
23	---	---	---	---	---	---	6.7	6.6	6.6	6.2	5.6	5.6
24	---	---	---	---	---	---	6.6	5.9	6.3	6.4	6.0	6.3
25	---	---	---	---	---	---	6.6	5.9	6.4	6.5	5.8	6.4
26	---	---	---	---	---	---	6.6	6.5	6.6	6.0	5.4	5.5
27	---	---	---	---	---	---	6.5	6.0	6.3	6.3	6.0	6.3
28	---	---	---	---	---	---	6.5	6.0	6.4	6.4	5.6	6.3
29	---	---	---	4.8	4.4	4.5	6.5	6.5	6.5	6.3	5.5	5.6
30	---	---	---	5.6	4.8	5.2	6.5	5.9	6.0	6.5	6.3	6.5
31	---	---	---	---	---	---	6.5	5.9	6.5	6.6	5.8	6.4
MAX	6.4	6.3	6.3	5.6	4.8	5.2	6.7	6.6	6.6	6.7	6.5	6.7
MIN	5.6	5.2	5.3	4.8	4.4	4.5	4.7	4.3	4.4	5.6	5.4	5.4

SWATARA CREEK BASIN

01571778 LORBERRY CREEK NEAR LORBERRY JUNCTION, 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	6.5	5.8	6.2	6.4	6.1	6.2	6.8	6.2	6.7	6.3	5.6	6.3
2	6.6	6.5	6.5	6.4	6.3	6.4	6.7	6.2	6.3	5.8	5.5	5.5
3	6.6	6.0	6.0	6.3	5.8	5.9	6.8	6.7	6.8	5.9	5.8	5.9
4	6.8	6.0	6.7	6.5	5.9	6.4	6.8	6.0	6.3	5.9	5.2	5.3
5	6.8	6.8	6.8	6.5	6.4	6.5	6.7	6.2	6.2	5.7	5.3	5.3
6	6.8	6.3	6.4	6.5	5.8	6.0	6.8	6.7	6.7	6.1	5.3	5.7
7	6.7	6.3	6.6	6.4	6.1	6.4	6.8	6.0	6.1	5.4	5.2	5.3
8	6.6	6.4	6.6	7.0	6.3	6.4	6.7	6.2	6.7	6.1	5.4	6.0
9	6.4	6.2	6.2	6.9	6.7	6.8	6.7	5.9	6.7	6.0	5.1	5.3
10	6.7	6.4	6.6	7.1	6.4	7.0	6.6	6.0	6.1	6.0	5.1	5.7
11	6.6	6.4	6.6	7.2	6.7	7.1	6.7	6.6	6.6	5.9	5.2	5.3
12	6.5	6.4	6.4	7.0	6.7	6.8	6.8	5.9	6.1	6.1	5.9	6.0
13	6.6	6.5	6.6	7.0	7.0	7.0	6.7	6.1	6.6	6.0	5.1	5.2
14	6.6	6.2	6.5	7.0	6.6	6.8	6.7	6.0	6.6	5.8	5.2	5.7
15	6.5	6.2	6.3	7.0	6.8	7.0	6.3	5.6	5.8	5.8	5.0	5.8
16	6.5	6.4	6.5	7.0	6.9	7.0	6.5	6.3	6.4	6.0	5.0	5.1
17	6.5	6.1	6.3	7.0	6.7	6.8	6.6	5.8	6.0	6.4	6.0	6.2
18	6.5	6.2	6.4	6.9	6.8	6.9	6.5	6.0	6.4	6.3	5.0	5.1
19	6.8	6.5	6.5	7.0	6.8	7.0	6.4	5.7	6.4	5.6	5.0	5.3
20	6.8	6.4	6.5	6.8	6.3	6.5	6.0	5.6	5.7	5.8	5.1	5.6
21	6.6	6.4	6.6	6.7	6.5	6.6	6.1	6.0	6.1	5.4	5.0	5.1
22	6.6	6.4	6.6	6.7	6.2	6.6	6.5	5.5	6.1	6.0	5.4	5.7
23	6.5	6.3	6.3	6.8	6.2	6.5	6.6	5.9	6.6	6.0	5.1	5.1
24	6.6	6.5	6.5	6.8	6.8	6.8	6.5	5.8	6.0	5.8	5.1	5.2
25	6.5	6.2	6.5	6.8	6.4	6.6	6.6	6.2	6.5	6.0	5.2	5.9
26	6.4	6.2	6.3	6.9	6.4	6.8	6.6	5.8	6.6	5.2	5.1	5.1
27	6.5	6.4	6.5	6.7	6.2	6.5	6.5	5.8	6.0	6.0	5.2	5.9
28	6.5	6.1	6.3	6.5	6.1	6.2	6.5	6.2	6.3	6.1	5.1	5.2
29	---	---	---	6.7	6.5	6.6	6.3	5.5	5.7	6.0	5.1	5.2
30	---	---	---	6.7	6.1	6.3	6.3	5.7	6.2	6.2	5.2	6.1
31	---	---	---	6.7	6.3	6.7	---	---	---	5.3	5.0	5.1
MAX	6.8	6.8	6.8	7.2	7.0	7.1	6.8	6.7	6.8	6.4	6.0	6.3
MIN	6.4	5.8	6.0	6.3	5.8	5.9	6.0	5.5	5.7	5.2	5.0	5.1

DAY	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN
JUNE			JULY			AUGUST			SEPTEMBER			
1	6.4	5.3	6.3	6.6	6.1	6.5	6.5	5.2	6.3	5.2	4.7	5.1
2	6.6	5.2	5.5	6.8	5.8	6.1	5.2	5.0	5.0	5.5	4.9	5.2
3	6.5	5.3	5.6	6.4	5.8	6.0	6.2	5.1	6.1	5.1	4.6	4.7
4	6.6	6.5	6.6	6.4	6.1	6.4	6.3	5.0	6.1	4.7	4.6	4.6
5	6.6	5.4	5.6	6.1	5.3	5.5	5.6	4.9	5.0	5.0	4.7	5.0
6	6.6	5.7	6.4	6.3	5.3	6.3	6.1	5.6	6.0	5.1	4.6	4.7
7	6.5	5.4	6.5	6.4	5.8	6.4	6.2	5.0	6.0	4.8	4.5	4.6
8	6.3	5.5	5.6	6.0	5.4	5.5	6.1	4.8	5.0	5.4	4.8	5.2
9	6.5	6.3	6.4	6.4	6.0	6.3	6.6	6.1	6.4	5.4	4.5	4.7
10	6.5	5.6	5.6	6.4	5.2	6.2	6.5	5.0	5.3	4.9	4.4	4.6
11	6.5	5.6	6.3	6.1	5.2	5.5	6.1	5.0	5.1	6.0	4.9	5.6
12	6.7	6.5	6.6	6.4	6.1	6.3	6.4	6.1	6.3	6.0	4.4	4.6
13	6.7	5.2	5.6	6.3	5.3	5.8	6.3	5.1	5.2	4.8	4.4	4.6
14	6.3	5.2	5.5	6.4	5.4	6.0	6.3	5.0	5.5	5.7	4.8	5.3
15	6.7	6.3	6.6	6.4	6.2	6.4	6.6	5.8	6.5	5.4	4.5	4.7
16	6.8	5.4	5.8	6.2	5.4	5.5	6.4	5.3	5.4	5.0	4.6	4.7
17	6.7	5.5	6.3	---	---	---	6.2	5.3	5.9	5.0	4.6	4.7
18	6.8	6.3	6.7	---	---	---	6.4	5.9	6.3	4.9	4.3	4.5
19	6.3	5.6	5.7	---	---	---	5.9	5.2	5.3	4.5	4.3	4.3
20	6.7	6.0	6.6	---	---	---	6.1	5.3	5.9	4.6	4.5	4.5
21	6.8	5.6	6.7	---	---	---	6.4	5.0	6.0	4.5	4.2	4.3
22	6.5	5.6	5.7	---	---	---	5.0	4.8	4.9	4.5	4.1	4.2
23	6.6	6.4	6.6	---	---	---	6.1	4.9	5.9	4.8	4.4	4.6
24	6.7	5.6	5.7	---	---	---	6.3	5.1	6.1	4.4	4.2	4.3
25	6.4	5.6	6.1	---	---	---	5.1	4.9	5.0	4.4	4.2	4.3
26	6.6	6.0	6.5	---	---	---	5.9	5.0	5.7	4.9	4.4	4.5
27	6.0	5.6	5.8	---	---	---	6.1	4.9	5.9	5.4	4.6	4.7
28	6.5	6.0	6.4	---	---	---	5.0	4.8	4.9	5.0	4.5	4.6
29	6.7	5.6	6.5	---	---	---	5.7	4.9	5.7	4.7	4.5	4.6
30	6.1	5.6	5.7	6.2	5.0	5.0	6.0	4.8	5.8	4.5	4.3	4.4
31	---	---	---	6.4	5.0	6.2	4.8	4.7	4.7	---	---	---
MAX	6.8	6.5	6.7	6.8	6.2	6.5	6.6	6.1	6.5	6.0	4.9	5.6
MIN	6.0	5.2	5.5	6.0	5.0	5.0	4.8	4.7	4.7	4.4	4.1	4.2

YEAR	MAX	MINIMUM	7.2
	MIN	MINIMUM	4.4
	MEDIAN	MINIMUM	4.1
		MINIMUM	4.2



## SWATARA CREEK BASIN

## 01571778 LORBERRY CREEK NEAR LORBERRY JUNCTION, 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	11.0	11.5	12.0	8.0	10.0	12.0	9.0	11.0	5.5	3.5	4.5
2	14.0	11.0	12.0	13.5	10.5	12.0	9.5	7.0	8.5	7.5	5.0	6.0
3	14.0	11.5	13.0	13.0	10.0	12.0	8.5	5.5	7.0	6.0	4.5	5.0
4	14.5	12.0	13.0	12.0	9.0	10.5	11.0	7.5	9.0	6.5	4.5	5.5
5	14.0	11.5	13.0	10.5	7.5	8.5	11.5	9.0	10.5	8.0	6.0	7.0
6	13.0	11.0	12.5	8.5	6.0	8.0	11.5	9.0	10.0	6.5	2.0	5.5
7	11.0	9.0	9.5	12.0	8.0	10.0	11.5	8.5	10.5	6.5	4.0	6.0
8	9.5	8.0	8.5	11.0	8.0	9.5	8.5	6.5	7.0	7.5	5.0	6.0
9	11.0	8.0	9.5	10.5	7.0	9.0	8.0	6.5	7.5	7.5	4.5	6.0
10	12.0	8.0	10.0	10.5	7.0	9.0	8.5	6.0	7.0	9.0	6.0	7.5
11	13.0	9.5	11.0	9.5	6.0	8.0	9.5	6.5	8.0	8.0	6.0	7.5
12	14.0	11.0	12.5	8.0	5.0	6.5	9.0	5.0	7.0	7.5	5.5	6.5
13	14.5	12.0	13.0	10.0	6.5	8.0	10.5	9.0	9.5	7.0	6.0	6.5
14	14.5	12.5	13.5	8.5	5.0	7.0	10.5	10.0	10.0	7.5	5.5	6.5
15	13.5	10.5	12.5	10.5	7.5	9.0	10.0	7.0	8.0	7.5	6.0	6.5
16	12.0	9.0	10.5	12.5	9.0	10.5	8.0	6.5	7.5	7.5	5.5	6.5
17	10.5	9.5	10.0	10.5	7.5	8.5	8.5	7.0	7.5	8.5	6.0	7.5
18	11.0	8.5	9.5	8.5	6.5	7.5	9.0	7.5	8.0	6.0	4.0	5.0
19	11.0	7.5	9.0	10.5	7.5	8.5	9.0	7.5	8.0	5.0	3.5	4.0
20	12.5	9.5	11.0	9.0	6.0	8.0	7.5	6.0	7.0	7.5	5.0	6.0
21	13.0	10.0	11.5	6.5	4.0	5.5	8.0	5.5	7.0	6.0	4.5	5.5
22	13.5	11.0	12.0	9.5	6.0	7.5	7.5	6.0	7.0	7.5	5.0	6.5
23	13.0	10.5	12.0	8.5	5.0	6.5	8.0	6.0	7.0	8.5	6.5	7.5
24	15.0	12.5	13.5	11.0	7.0	8.5	8.5	7.0	8.0	7.0	5.5	6.0
25	13.5	10.5	12.5	12.0	10.0	11.0	7.5	5.5	6.5	7.0	4.5	6.0
26	10.5	9.0	10.0	10.5	9.0	9.5	6.5	5.0	5.5	8.0	5.5	6.5
27	9.5	8.0	9.0	10.5	8.0	9.0	7.0	4.5	6.0	8.5	4.5	6.0
28	9.0	6.5	8.0	12.0	10.0	11.0	7.0	5.5	6.0	9.5	5.0	7.0
29	10.5	6.0	8.5	11.0	10.5	10.5	7.0	4.5	5.5	10.5	7.5	8.5
30	11.0	8.5	10.0	12.5	10.5	11.5	6.0	4.5	5.5	10.0	8.5	9.0
31	9.5	7.5	8.5	---	---	---	5.5	3.5	4.5	8.5	7.5	8.0
MONTH	15.0	6.0	11.0	13.5	4.0	9.0	12.0	3.5	7.6	10.5	2.0	6.4

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	8.5	6.0	8.0	9.0	5.5	7.0	10.5	9.0	9.5	12.0	9.5	10.5
2	6.5	5.0	6.0	8.0	5.5	7.0	11.0	9.0	10.0	12.0	10.5	11.0
3	8.0	5.5	7.0	8.5	6.0	7.0	11.5	8.5	10.0	11.5	10.0	10.5
4	7.5	4.0	6.0	6.0	3.5	5.0	10.5	8.0	9.0	12.5	9.0	10.5
5	6.0	3.5	4.5	6.0	3.0	4.5	9.5	8.0	8.5	13.0	10.0	11.5
6	8.5	5.0	7.0	10.0	4.5	7.5	9.5	8.0	8.5	13.0	10.5	11.5
7	8.5	6.5	7.5	10.0	6.0	8.0	10.5	7.5	9.0	13.5	11.5	12.5
8	9.0	6.5	7.5	11.0	6.5	8.5	11.0	8.5	9.5	13.5	11.5	12.5
9	10.0	7.0	8.5	11.0	9.0	10.0	11.5	10.0	11.0	12.5	11.5	11.5
10	9.0	7.5	8.0	10.0	5.0	7.0	12.5	9.5	10.5	13.5	11.5	12.0
11	8.0	5.5	6.5	8.5	5.0	6.5	12.5	8.5	10.5	13.0	11.0	12.0
12	8.0	6.0	6.5	9.0	7.0	8.0	11.0	9.0	10.0	12.5	11.5	12.0
13	7.0	5.0	6.5	8.5	7.5	8.0	12.0	11.0	11.5	12.5	12.0	12.0
14	8.0	4.0	6.0	12.0	8.0	10.0	13.5	10.0	12.0	12.0	10.5	11.0
15	8.5	6.5	7.5	11.0	9.0	10.0	13.5	11.0	12.0	12.5	10.0	11.5
16	9.5	7.0	8.0	10.5	7.5	10.0	15.5	11.5	13.0	14.0	10.5	12.0
17	9.0	6.5	7.5	8.0	7.0	7.5	16.0	12.0	13.5	14.0	12.0	13.0
18	8.0	5.5	6.5	7.5	6.5	7.0	15.0	12.5	13.5	12.0	10.5	11.0
19	9.5	5.0	7.0	8.5	7.0	7.5	16.0	12.5	13.5	11.5	10.0	10.5
20	10.5	8.0	9.5	8.0	6.0	6.5	13.5	12.0	12.5	11.0	9.5	10.5
21	10.0	8.5	9.5	9.0	5.5	7.0	12.0	10.5	11.0	11.5	9.5	10.5
22	9.0	8.0	8.5	7.0	4.5	5.5	11.5	10.0	10.5	12.0	9.5	10.5
23	9.5	6.5	8.0	8.5	5.5	6.5	12.0	9.0	10.0	13.0	10.0	11.5
24	9.5	5.5	7.0	9.0	6.0	7.5	12.5	9.0	10.5	13.5	11.0	12.5
25	10.5	6.0	8.0	9.0	8.0	8.5	11.0	9.5	10.0	13.0	11.5	12.0
26	11.0	7.5	9.0	8.5	5.5	7.5	12.0	9.0	10.5	13.0	12.0	12.5
27	8.0	5.0	6.5	7.5	6.0	7.0	12.5	9.0	11.0	14.0	12.0	13.0
28	8.5	4.5	6.5	9.5	7.0	8.0	12.0	10.5	11.0	14.0	12.0	13.0
29	---	---	---	10.5	7.5	9.0	11.0	10.0	10.5	14.0	12.5	13.0
30	---	---	---	11.5	9.5	10.0	11.0	9.5	10.0	15.0	12.5	13.5
31	---	---	---	11.0	9.5	10.0	---	---	---	15.0	12.5	13.5
MONTH	11.0	3.5	7.3	12.0	3.0	7.7	16.0	7.5	10.8	15.0	9.0	11.8

