

## SWATARA CREEK BASIN

403542076263201 ROWE DRAINAGE TUNNEL, SITE E2-244, NR JOLIETT, PA  
(Swatara Creek Project)

**LOCATION.**--Lat 40°35'42", long 76°26'32", Schuylkill County, Hydrologic Unit 02050305, on left bank above weir, 350 ft downstream from drainage tunnel. Located on Schuylkill County property.

**DRAINAGE AREA.**--Indeterminate.

## WATER-DISCHARGE RECORDS

**PERIOD OF RECORD.**--August 2000 to current year.

**GAGE.**--Water-stage recorder. Elevation of gage is 1,000 ft above National Geodetic Vertical Datum of 1929, from topographic map.

**REMARKS.**--No estimated daily discharges. Records fair. Outflow is from mine drainage tunnel and is regulated by mining activity.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	4.4	20	8.2	5.5	6.0	17	5.6	4.4	2.4	2.5	2.1
2	10	5.5	20	8.4	6.2	4.9	18	4.5	2.9	2.0	2.6	1.1
3	11	4.8	19	8.2	5.0	4.7	22	5.5	4.3	2.7	3.4	2.4
4	11	4.9	18	7.2	5.9	5.0	25	4.6	3.4	1.8	2.5	1.6
5	9.9	5.7	17	7.5	4.6	3.9	26	4.9	3.7	3.0	2.1	1.4
6	9.0	5.0	15	7.2	5.3	5.0	25	5.2	3.8	2.1	3.4	2.5
7	9.4	5.1	14	6.7	4.3	4.3	23	4.4	3.2	2.5	2.9	1.2
8	9.0	5.8	13	7.3	5.0	4.4	21	5.4	4.0	3.1	2.0	1.4
9	7.8	4.8	12	7.8	3.9	4.7	18	4.4	2.5	2.5	3.0	2.1
10	8.2	5.1	11	8.2	4.8	4.0	16	5.0	3.8	3.2	3.0	0.79
11	8.0	6.0	11	8.6	3.7	5.1	14	4.9	2.8	2.0	1.8	1.5
12	7.0	5.0	12	8.9	4.5	4.2	12	4.0	3.5	3.1	1.8	1.7
13	7.2	4.8	13	8.4	3.4	4.7	11	5.1	3.0	2.2	2.7	0.76
14	7.3	5.6	12	11	4.5	4.6	10	4.1	3.1	2.7	3.1	2.0
15	6.4	4.9	13	17	3.5	4.1	9.5	5.0	3.4	2.7	2.8	2.0
16	6.3	4.9	12	20	4.8	4.9	8.2	4.2	2.7	2.3	1.6	1.1
17	6.7	5.8	11	20	4.8	4.1	8.6	4.3	3.5	3.2	2.6	2.3
18	6.3	5.2	10	19	5.2	4.6	8.0	4.7	2.2	2.4	1.9	1.6
19	5.9	4.9	10	17	6.4	4.7	7.1	3.7	3.5	3.5	1.5	1.3
20	5.3	5.8	9.6	16	5.6	3.8	7.4	4.7	2.5	2.6	2.5	2.4
21	6.3	5.1	8.6	14	6.6	4.7	6.5	3.7	3.1	3.2	1.6	1.1
22	5.8	5.1	8.7	12	6.3	3.9	6.4	4.2	3.0	3.2	1.7	1.4
23	5.0	5.8	8.4	10	5.9	4.4	6.8	4.3	2.6	3.0	2.3	2.0
24	6.0	5.1	8.1	10	6.5	5.0	5.5	3.7	3.2	3.6	1.3	0.76
25	5.4	6.2	8.9	8.9	5.3	5.3	6.1	4.7	2.1	2.9	1.8	1.7
26	4.7	7.8	9.5	8.7	6.0	7.4	5.9	3.5	3.4	4.0	2.3	1.6
27	5.8	9.3	9.0	7.8	5.8	7.1	5.0	4.5	2.1	2.8	1.3	0.80
28	5.2	12	9.4	7.3	4.9	7.6	6.0	3.7	3.2	3.5	1.9	2.1
29	4.7	18	9.4	7.4	---	12	5.3	4.0	2.2	3.0	2.1	1.3
30	5.6	20	9.0	6.5	---	17	5.3	4.0	2.5	3.1	1.3	0.67
31	4.9	---	9.0	6.7	---	19	---	3.5	---	3.5	2.1	---
TOTAL	222.1	198.4	370.6	321.9	144.2	185.1	365.6	138.0	93.6	87.8	69.4	46.68
MEAN	7.16	6.61	12.0	10.4	5.15	5.97	12.2	4.45	3.12	2.83	2.24	1.56
MAX	11	20	20	20	6.6	19	26	5.6	4.4	4.0	3.4	2.5
MIN	4.7	4.4	8.1	6.5	3.4	3.8	5.0	3.5	2.1	1.8	1.3	0.67

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2000 - 2005, BY WATER YEAR (WY)

MEAN	4.23	4.92	8.11	6.20	4.20	6.93	9.43	6.46	6.11	3.76	3.54	4.09
MAX	7.48	9.22	12.0	10.4	5.15	11.5	12.2	10.6	12.4	5.54	7.15	10.1
(WY)	2004	2004	2005	2005	2005	2003	2005	2002	2003	2003	2003	2004
MIN	1.49	1.23	2.62	3.01	3.20	5.18	6.88	4.45	3.12	2.47	1.51	1.25
(WY)	2002	2002	2002	2002	2004	2004	2004	2005	2005	2002	2002	2002

e Estimated.

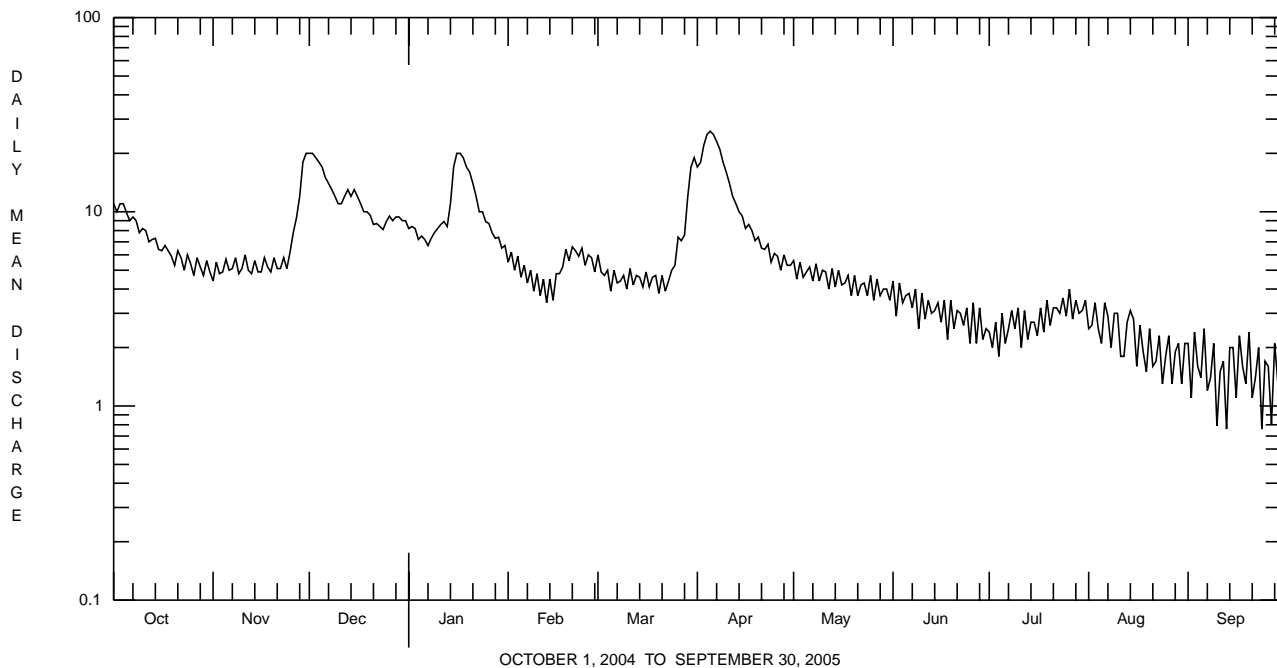
SWATARA CREEK BASIN

403542076263201 ROWE DRAINAGE TUNNEL, SITE E2-244, NR JOLIETT, PA--Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 2000 - 2005	
ANNUAL TOTAL	2369.0		2243.38			
ANNUAL MEAN	6.47		6.15		5.70	
HIGHEST ANNUAL MEAN					7.22 2003	
LOWEST ANNUAL MEAN					4.01 2002	
HIGHEST DAILY MEAN	30	Sep 19,20	26	Apr 5	30	Mar 23 2003
LOWEST DAILY MEAN	2.2	Feb 22,25,28	0.67	Sep 30	0.59	Nov 23 2001 <sup>a</sup>
ANNUAL SEVEN-DAY MINIMUM	2.7	Feb 22	1.3	Sep 24	1.00	Nov 17 2001
MAXIMUM PEAK FLOW			26	Apr 4-6	31	Sep 19 2004
MAXIMUM PEAK STAGE			2.19	Apr 4,5	2.32	Sep 19 2004
INSTANTANEOUS LOW FLOW			0.59	Sep 29,30	0.59	Nov 17 2001 <sup>b</sup>
10 PERCENT EXCEEDS	10		12		10	
50 PERCENT EXCEEDS	5.4		4.9		4.7	
90 PERCENT EXCEEDS	3.2		2.0		1.9	

<sup>a</sup> Also Sept. 13, 2002.

<sup>b</sup> Also Nov. 18, 20-24, 2001, Sept. 12-15, 19, 2002, Sept. 29, 30, 2005.



## SWATARA CREEK BASIN

403542076263201 ROWE DRAINAGE TUNNEL, SITE E2-244, NR JOLIETT, PA--Continued  
(Swatara Creek Project)

## WATER-QUALITY RECORDS

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

**PERIOD OF DAILY RECORD.**--

SPECIFIC CONDUCTANCE: April 1999 to September 2005. (Discontinued)

pH: April 1999 to September 2005. (Discontinued)

WATER TEMPERATURE: April 1999 to September 2005. (Discontinued)

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

**REMARKS.**--Specific conductance records rated good. pH records rated good except for period Nov. 17-22, which is fair and June 17 to Sept. 30, which is poor. The pH probe is subject to fowling from precipitation of iron, adhesion of lime on electrodes, and occasional burial by sediment. 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. Instantaneous discharge data provided by the Pottsville Mining office of the Pennsylvania Department of Environmental Protection.

**EXTREMES FOR PERIOD OF DAILY RECORD.**--

SPECIFIC CONDUCTANCE: Maximum, 904 microsiemens, Sept. 28, 2002; minimum, 141 microsiemens, Aug. 13, 1999.

pH: Maximum, 7.0, June 26, 27, 1999; minimum, 3.4, Sept. 8, 17, 1999.

WATER TEMPERATURE: Maximum, 14.5°C, Sept. 30, 1999; minimum, 10.0°C, Dec. 17, 2000.

**EXTREMES FOR CURRENT YEAR.**--

SPECIFIC CONDUCTANCE: Maximum, 434 microsiemens, July 19; minimum, 209 microsiemens, Apr. 12, 13.

pH: Maximum, 6.6, Nov. 22; minimum, 4.5, Dec. 15, 16 (may have been lower during period of no record, Jan. 4 to Feb. 3).

WATER TEMPERATURE: Maximum, 12.9°C, July 10; minimum 11.2°C, Feb. 11, Mar. 10, 12.

## 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)	Dis-solved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)
OCT 28...	1515	1028	89203	4.5	397	12	10.6	99	5.3	5.5
DEC 21...	1415	1028	89203	8.2	444	42	9.8	89	5.2	5.8
FEB 16...	1515	1028	89203	4.9	429	20	9.8	91	5.2	5.2
JUN 08...	1600	1028	89203	4.0	375	14	10.4	97	5.7	5.4
JUL 20...	1600	1028	89203	2.4	351	--	9.4	87	5.9	6.2
AUG 30...	1800	1028	89203	1.3	302	--	9.6	89	6.3	6.3

Date	Specific conductance, wat unfltrd, 25 degC (00095)	Temperature, 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)
OCT 28...	285	12.1	13.3	13.8	21.7	22.6	1.10	1.1	2.90	3.0
DEC 21...	228	11.4	10.0	8.7	21.2	18.0	1.20	1.0	3.50	3.3
FEB 16...	288	11.8	12.8	12.9	22.6	22.9	1.20	1.2	3.30	3.5
JUN 08...	305	12.3	14.6	15.8	20.9	23.2	1.00	1.1	3.40	2.8
JUL 20...	418	12.0	13.8	12.1	38.0	32.7	1.40	1.3	3.90	3.5
AUG 30...	314	12.0	11.9	11.5	25.3	24.5	1.30	1.2	3.50	3.4

## SWATARA CREEK BASIN

403542076263201 ROWE DRAINAGE TUNNEL, SITE E2-244, NR JOLIETT, PA--Continued

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

Date	ANC, wat unfiltered, 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, unfiltered, recover- able, µg/L (01105)	Bromine water unfiltered mg/L (71871)
OCT 28...	3	2.9	--	132	--	--	--	400	900	--
DEC 21...	4	3.4	--	95.6	--	--	--	500	600	--
FEB 16...	2	3.9	--	129	--	--	--	500	800	--
JUN 08...	4	3.0	<.01	121	<.01	<.030	<.020	200	700	.20
JUL 20...	13	4.1	--	190	--	--	--	100	800	--
AUG 30...	17	3.8	--	119	--	--	--	<100	500	--

Date	Iron, water, fltrd, µg/L (01046)	Iron, water, unfiltered, recover- able, µg/L (01045)	Mangan- ese, water, fltrd, µg/L (01056)	Mangan- ese, water, unfiltered, recover- able, µg/L (01055)	Nickel, water, fltrd, µg/L (01065)	Nickel, water, unfiltered, recover- able, µg/L (01067)	Zinc, water, fltrd, µg/L (01090)	Zinc, water, unfiltered, recover- able, µg/L (01092)
OCT 28...	4240	5610	1460	1510	75.0	80.0	175	180
DEC 21...	2060	3970	1470	1300	70.0	60.0	170	140
FEB 16...	3400	4730	1520	1540	75.0	75.0	200	200
JUN 08...	5180	6910	1550	1680	70.0	75.0	175	195
JUL 20...	7180	6740	1430	1260	65.0	60.0	125	105
AUG 30...	8040	8060	2000	2000	55.0	50.0	90.0	80.0

## SWATARA CREEK BASIN

## 403542076263201 ROWE DRAINAGE TUNNEL, SITE E2-244, NR JOLIETT, 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
	<b>OCTOBER</b>			<b>NOVEMBER</b>			<b>DECEMBER</b>			<b>JANUARY</b>		
1	291	275	282	302	274	286	253	239	247	246	227	234
2	275	245	252	304	298	301	253	247	251	246	227	244
3	269	245	264	301	271	284	248	231	241	247	245	245
4	267	264	266	296	267	279	240	229	235	---	---	---
5	267	242	259	301	295	299	236	234	235	---	---	---
6	265	241	245	301	268	283	235	222	232	---	---	---
7	268	265	266	295	267	280	237	235	236	---	---	---
8	267	265	266	297	293	295	241	236	239	---	---	---
9	266	241	244	296	260	272	242	240	241	---	---	---
10	271	241	266	286	257	270	248	226	239	---	---	---
11	273	268	269	285	281	283	271	245	266	---	---	---
12	270	240	249	285	250	269	270	256	263	---	---	---
13	270	239	259	286	250	260	256	251	254	---	---	---
14	272	269	270	289	286	287	253	231	240	---	---	---
15	273	241	256	288	258	274	252	231	247	---	---	---
16	276	244	257	283	256	263	251	245	248	---	---	---
17	278	276	276	294	283	290	246	244	245	---	---	---
18	277	263	272	295	256	282	246	225	232	---	---	---
19	280	249	264	285	254	262	249	225	242	---	---	---
20	284	251	259	287	285	286	251	247	249	---	---	---
21	288	284	286	286	255	274	249	227	235	---	---	---
22	289	260	281	281	253	265	252	249	251	---	---	---
23	283	257	262	281	279	280	276	241	253	---	---	---
24	287	283	286	312	239	266	275	246	260	---	---	---
25	288	261	280	338	296	321	275	264	270	---	---	---
26	275	257	260	335	285	309	264	253	257	---	---	---
27	287	275	284	285	247	263	253	230	237	---	---	---
28	286	258	280	308	232	278	246	230	240	---	---	---
29	273	252	256	303	260	278	245	229	243	---	---	---
30	286	273	280	260	244	251	246	227	240	---	---	---
31	285	281	284	---	---	---	246	244	245	---	---	---
MONTH	291	239	267	338	232	280	276	222	246	247	227	241
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	<b>FEBRUARY</b>			<b>MARCH</b>			<b>APRIL</b>			<b>MAY</b>		
1	---	---	---	264	243	260	235	218	224	274	268	272
2	---	---	---	269	244	261	249	225	233	273	238	245
3	---	---	---	268	241	250	287	243	275	273	264	271
4	264	258	261	272	268	270	271	245	258	278	242	260
5	263	229	239	269	242	249	245	227	235	270	241	257
6	268	262	264	271	244	265	227	218	222	275	266	272
7	264	230	240	273	245	265	218	214	216	267	240	245
8	268	264	266	290	241	255	217	214	216	275	267	273
9	268	233	241	302	272	293	219	216	218	278	244	258
10	277	268	273	294	272	280	224	219	222	288	245	268
11	278	245	254	294	287	291	225	222	224	281	246	275
12	283	278	280	288	261	268	229	209	220	282	246	253
13	281	248	257	287	260	280	235	209	225	285	281	283
14	282	273	279	283	254	274	250	234	242	282	240	254
15	302	260	269	275	251	258	248	245	247	284	245	278
16	290	260	285	277	272	275	249	224	229	284	247	264
17	290	259	278	272	244	253	254	249	252	285	246	267
18	268	253	258	272	243	262	256	226	250	287	246	281
19	270	266	268	274	242	267	257	226	237	278	241	247
20	266	239	252	267	240	245	260	257	258	281	278	280
21	259	238	252	270	266	269	261	229	235	280	241	258
22	261	238	255	271	238	253	261	228	247	280	241	263
23	258	237	243	267	235	251	262	258	260	283	244	276
24	260	257	259	268	246	264	262	230	237	282	242	248
25	260	237	245	251	235	242	267	230	260	291	282	286
26	261	236	252	252	246	250	272	240	267	288	243	254
27	265	254	262	246	225	238	264	234	239	290	243	280
28	254	237	240	261	216	224	272	264	269	291	245	267
29	---	---	---	292	261	280	274	238	260	288	244	269
30	---	---	---	271	250	258	268	234	251	293	250	282
31	---	---	---	250	235	242	---	---	---	288	248	257
MONTH	302	229	259	302	216	261	287	209	241	293	238	266

## SWATARA CREEK BASIN

## 403542076263201 ROWE DRAINAGE TUNNEL, SITE E2-244, NR JOLIETT, 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	295	288	292	300	290	297	335	305	323	324	306	317
2	295	249	259	296	287	291	318	294	300	326	317	323
3	294	249	286	307	293	303	336	318	331	321	310	314
4	294	253	278	301	298	299	331	324	328	334	321	330
5	298	252	271	302	289	296	324	295	309	336	321	331
6	301	245	281	302	294	299	329	293	316	325	316	319
7	300	248	265	294	268	284	331	327	329	334	325	332
8	306	300	304	355	291	323	327	300	315	334	314	326
9	305	254	268	381	355	365	319	291	302	327	314	320
10	312	268	308	390	381	388	327	319	325	332	327	330
11	310	268	279	387	369	378	326	297	313	330	316	324
12	312	268	301	372	369	371	297	282	288	333	319	329
13	310	264	287	369	342	357	319	280	290	336	332	334
14	304	263	282	351	336	343	342	319	336	347	330	338
15	308	263	294	352	334	349	341	337	338	350	317	342
16	308	262	274	334	320	325	337	299	320	317	287	299
17	309	302	307	377	332	363	324	287	305	351	285	327
18	304	260	262	431	376	406	327	324	325	354	327	343
19	307	260	302	434	418	421	324	296	312	332	323	326
20	304	250	268	420	409	416	322	294	309	351	331	343
21	297	248	279	409	383	393	325	313	322	353	328	344
22	299	249	285	383	367	377	313	286	297	352	309	326
23	295	247	259	367	357	362	322	288	308	357	352	355
24	301	295	299	364	351	360	327	312	321	356	340	349
25	296	257	269	351	329	336	312	289	299	354	325	343
26	288	259	281	348	337	345	317	290	304	354	344	351
27	289	272	283	344	318	331	320	302	315	344	331	335
28	295	266	277	343	317	332	302	284	290	360	321	351
29	296	289	294	342	317	335	316	288	305	360	356	357
30	290	273	282	335	309	320	318	310	316	356	333	351
31	---	---	---	336	333	334	310	301	305	---	---	---
MONTH	312	245	283	434	268	345	342	280	313	360	285	334
YEAR	434	209	281									

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

## SWATARA CREEK BASIN

## 403542076263201 ROWE DRAINAGE TUNNEL, SITE E2-244, NR JOLIETT, PA--Continued

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

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

YEAR	MAX	MINIMUM	6.6
	MIN	MINIMUM	4.7
	MEDIAN	MINIMUM	4.5
		MINIMUM	4.6

## SWATARA CREEK BASIN

## 403542076263201 ROWE DRAINAGE TUNNEL, SITE E2-244, NR JOLIETT, 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	11.8	11.8	11.8	12.0	11.7	11.8	11.8	11.7	11.7	11.8	11.6	11.7
2	11.8	11.6	11.7	12.2	12.0	12.1	11.7	11.7	11.7	11.8	11.6	11.8
3	11.8	11.6	11.8	12.2	11.6	11.9	11.7	11.6	11.7	11.9	11.8	11.9
4	11.8	11.8	11.8	12.0	11.5	11.7	11.7	11.6	11.7	---	---	---
5	11.8	11.6	11.8	12.0	11.9	12.0	11.8	11.7	11.7	---	---	---
6	11.8	11.6	11.7	12.1	11.7	11.9	11.7	11.6	11.7	---	---	---
7	11.9	11.8	11.9	12.1	11.7	11.9	11.8	11.7	11.7	---	---	---
8	11.9	11.9	11.9	12.1	11.9	12.0	11.8	11.8	11.8	---	---	---
9	11.9	11.7	11.7	11.9	11.5	11.7	11.8	11.7	11.8	---	---	---
10	11.9	11.7	11.9	11.9	11.4	11.7	11.8	11.6	11.7	---	---	---
11	11.9	11.8	11.9	12.1	11.9	12.0	11.8	11.6	11.7	---	---	---
12	11.9	11.6	11.7	12.0	11.6	11.8	11.7	11.7	11.7	---	---	---
13	12.0	11.7	11.9	11.8	11.5	11.7	11.7	11.7	11.7	---	---	---
14	12.0	12.0	12.0	12.0	11.8	11.9	11.7	11.5	11.6	---	---	---
15	12.1	11.7	11.9	12.0	11.6	11.8	11.7	11.5	11.6	---	---	---
16	12.0	11.7	11.8	12.0	11.6	11.8	11.7	11.6	11.6	---	---	---
17	12.0	11.9	11.9	12.2	11.9	12.0	11.7	11.6	11.7	---	---	---
18	12.0	11.9	11.9	12.2	11.8	12.1	11.6	11.5	11.5	---	---	---
19	12.0	11.7	11.9	12.1	11.8	11.9	11.7	11.5	11.6	---	---	---
20	12.0	11.7	11.8	12.1	12.1	12.1	11.6	11.5	11.5	---	---	---
21	12.0	12.0	12.0	12.2	11.8	12.0	11.6	11.4	11.5	---	---	---
22	12.1	11.6	12.0	12.0	11.7	11.9	11.8	11.6	11.7	---	---	---
23	11.9	11.6	11.7	12.1	12.0	12.1	11.8	11.4	11.7	---	---	---
24	12.0	11.9	11.9	12.2	11.8	11.9	11.6	11.4	11.5	---	---	---
25	12.1	11.8	12.0	12.0	11.8	11.9	11.6	11.6	11.6	---	---	---
26	11.9	11.7	11.8	12.0	11.8	11.9	11.7	11.6	11.6	---	---	---
27	12.1	11.9	12.0	11.9	11.8	11.8	11.6	11.4	11.4	---	---	---
28	12.1	11.7	11.9	11.8	11.7	11.7	11.6	11.4	11.6	---	---	---
29	12.0	11.7	11.8	11.8	11.7	11.8	11.8	11.4	11.7	---	---	---
30	12.1	12.0	12.1	11.8	11.7	11.8	11.8	11.6	11.7	---	---	---
31	12.2	11.8	12.0	---	---	---	11.8	11.8	11.8	---	---	---
MONTH	12.2	11.6	11.9	12.2	11.4	11.9	11.8	11.4	11.7	11.9	11.6	11.8

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	---	---	---	11.8	11.7	11.8	11.7	11.6	11.6	12.2	11.5	11.9
2	---	---	---	11.8	11.3	11.6	11.7	11.5	11.7	11.8	11.5	11.6
3	---	---	---	11.7	11.3	11.5	11.5	11.5	11.5	12.0	11.8	11.9
4	11.8	11.7	11.8	11.8	11.4	11.7	11.6	11.5	11.6	12.2	11.4	11.7
5	11.8	11.4	11.6	11.7	11.3	11.5	11.6	11.6	11.6	12.0	11.4	11.8
6	11.8	11.7	11.8	11.9	11.7	11.8	11.7	11.6	11.6	12.1	11.6	11.9
7	11.8	11.4	11.6	12.0	11.6	11.8	11.7	11.6	11.6	12.0	11.6	11.8
8	11.9	11.8	11.9	11.7	11.3	11.5	11.7	11.6	11.6	12.3	11.9	12.0
9	11.9	11.5	11.6	11.7	11.3	11.6	11.7	11.6	11.6	12.3	11.8	11.9
10	11.8	11.7	11.8	11.7	11.2	11.4	11.7	11.6	11.7	12.3	11.7	12.0
11	11.7	11.2	11.4	11.8	11.7	11.8	11.7	11.6	11.6	12.4	11.8	12.1
12	11.8	11.6	11.8	11.8	11.2	11.5	11.7	11.5	11.6	12.1	11.8	11.9
13	11.8	11.3	11.5	11.9	11.4	11.7	11.7	11.5	11.6	12.3	11.9	12.1
14	11.8	11.6	11.7	11.9	11.4	11.7	11.8	11.6	11.7	12.1	11.8	11.9
15	11.8	11.5	11.6	11.8	11.4	11.5	11.8	11.7	11.7	12.3	11.8	12.1
16	11.9	11.5	11.8	11.9	11.7	11.8	11.7	11.5	11.6	12.2	11.8	12.0
17	11.8	11.4	11.6	11.8	11.5	11.7	11.9	11.7	11.8	12.2	11.7	11.9
18	11.6	11.3	11.5	11.9	11.5	11.8	12.0	11.6	11.8	12.3	11.7	12.1
19	11.8	11.6	11.7	12.0	11.6	11.8	11.8	11.6	11.7	12.1	11.6	11.8
20	11.8	11.4	11.6	11.8	11.6	11.6	12.0	11.8	11.9	12.1	12.1	12.1
21	11.8	11.4	11.7	11.9	11.8	11.9	11.9	11.5	11.7	12.1	11.8	12.0
22	11.9	11.6	11.7	11.9	11.6	11.7	11.8	11.5	11.7	12.3	11.8	12.0
23	11.8	11.6	11.7	11.8	11.5	11.7	11.9	11.8	11.9	12.3	11.8	12.1
24	11.8	11.7	11.7	11.9	11.6	11.8	11.8	11.5	11.6	12.1	11.8	11.9
25	11.7	11.4	11.5	11.8	11.6	11.7	11.8	11.5	11.7	12.2	12.1	12.1
26	11.8	11.4	11.7	11.9	11.8	11.8	12.1	11.6	11.9	12.2	11.8	11.9
27	11.8	11.5	11.7	11.9	11.6	11.7	11.8	11.6	11.7	12.4	11.8	12.2
28	11.7	11.3	11.5	11.7	11.4	11.6	12.1	11.8	11.9	12.3	11.8	12.0
29	---	---	---	11.7	11.6	11.6	12.0	11.6	11.8	12.3	11.8	12.1
30	---	---	---	11.7	11.6	11.7	12.0	11.6	11.8	12.4	11.8	12.1
31	---	---	---	11.7	11.7	11.7	---	---	---	12.2	11.8	12.0
MONTH	11.9	11.2	11.7	12.0	11.2	11.7	12.1	11.5	11.7	12.4	11.4	12.0



