



Water-Data Report 2008

01432110 LACKAWAXEN RIVER AT ROWLAND, PA

Upper Delaware Basin
Middle Delaware-Mongaup-Brodhead Subbasin

LOCATION.--Lat 41°28'33", long 75°02'12" referenced to North American Datum of 1927, Pike County, PA, Hydrologic Unit 02040104, on concrete highway bridge on SR 1003, at river mile 4.02, 0.5 mi east of Rowland, Pa.

DRAINAGE AREA.--589 mi².

SURFACE-WATER RECORDS

PERIOD OF RECORD.--Water year 1949 (low-flow partial-record station), water years 1989 to 2007 (miscellaneous measurements). July 27, 2007 to current year.

GAGE.--Water-stage recorder. Datum of gage is 668.83 ft above North American Vertical Datum of 1988. Satellite telemetry at station.

COOPERATION.--Station established and maintained by the U.S. Geological Survey in cooperation with the Pennsylvania Department of Environmental Protection and PPL Holtwood, LLC.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Regulated by lakes and reservoirs upstream. Prior to October 1988, gage located at Lat 41°28'19", long 75°02'25", 0.3 mi upstream.

01432110 LACKAWAXEN RIVER AT ROWLAND, PA—Continued

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007
DAILY MEAN VALUES
 [e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	---	---	---	---	---	---	---	---	---	---	643	166
2	---	---	---	---	---	---	---	---	---	---	532	83
3	---	---	---	---	---	---	---	---	---	---	583	78
4	---	---	---	---	---	---	---	---	---	---	282	460
5	---	---	---	---	---	---	---	---	---	---	181	494
6	---	---	---	---	---	---	---	---	---	---	458	539
7	---	---	---	---	---	---	---	---	---	---	520	513
8	---	---	---	---	---	---	---	---	---	---	661	628
9	---	---	---	---	---	---	---	---	---	---	613	86
10	---	---	---	---	---	---	---	---	---	---	962	656
11	---	---	---	---	---	---	---	---	---	---	765	504
12	---	---	---	---	---	---	---	---	---	---	466	448
13	---	---	---	---	---	---	---	---	---	---	748	684
14	---	---	---	---	---	---	---	---	---	---	767	475
15	---	---	---	---	---	---	---	---	---	---	793	178
16	---	---	---	---	---	---	---	---	---	---	891	e106
17	---	---	---	---	---	---	---	---	---	---	538	400
18	---	---	---	---	---	---	---	---	---	---	255	340
19	---	---	---	---	---	---	---	---	---	---	150	462
20	---	---	---	---	---	---	---	---	---	---	376	359
21	---	---	---	---	---	---	---	---	---	---	797	407
22	---	---	---	---	---	---	---	---	---	---	1,010	433
23	---	---	---	---	---	---	---	---	---	---	936	126
24	---	---	---	---	---	---	---	---	---	---	933	402
25	---	---	---	---	---	---	---	---	---	---	680	463
26	---	---	---	---	---	---	---	---	---	---	670	611
27	---	---	---	---	---	---	---	---	---	915	581	162
28	---	---	---	---	---	---	---	---	---	1,630	526	69
29	---	---	---	---	---	---	---	---	---	e1,890	484	64
30	---	---	---	---	---	---	---	---	---	1,420	435	65
31	---	---	---	---	---	---	---	---	---	1,390	577	---
Total	---	---	---	---	---	---	---	---	---	---	18,813	10,461
Mean	---	---	---	---	---	---	---	---	---	---	607	349
Max	---	---	---	---	---	---	---	---	---	---	1,010	684
Min	---	---	---	---	---	---	---	---	---	---	150	64
Cfsm	---	---	---	---	---	---	---	---	---	---	1.03	0.59
In.	---	---	---	---	---	---	---	---	---	---	1.19	0.66

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEAR 2007, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	---	---	---	---	---	---	---	---	---	---	607	349
Max	---	---	---	---	---	---	---	---	---	---	607	349
(WY)	(---)	(---)	(---)	(---)	(---)	(---)	(---)	(---)	(---)	(---)	(2007)	(2007)
Min	---	---	---	---	---	---	---	---	---	---	607	349
(WY)	(---)	(---)	(---)	(---)	(---)	(---)	(---)	(---)	(---)	(---)	(2007)	(2007)

01432110 LACKAWAXEN RIVER AT ROWLAND, PA—Continued

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008
DAILY MEAN VALUES

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	65	880	1,560	2,690	859	672	2,040	507	361	703	553	78
2	62	819	1,260	2,500	1,060	576	2,210	522	780	598	163	316
3	61	477	1,490	2,220	983	1,200	1,940	492	758	553	125	395
4	58	418	1,460	1,650	1,160	2,200	1,990	614	722	476	422	524
5	56	573	1,320	1,650	1,550	9,600	2,310	703	815	185	468	337
6	54	658	1,210	1,600	3,750	8,610	1,890	586	684	147	539	378
7	54	647	1,020	2,100	8,390	5,890	1,780	523	256	491	467	199
8	53	544	804	2,790	5,280	7,140	1,590	520	247	619	594	279
9	56	566	710	3,350	4,090	8,450	1,370	575	886	616	216	357
10	191	343	1,070	3,250	3,320	5,740	1,270	868	1,120	595	124	368
11	608	310	1,260	3,490	2,900	4,490	1,160	749	1,060	647	345	446
12	1,400	572	1,840	4,900	2,680	4,030	1,080	598	970	162	462	388
13	1,040	725	2,310	3,340	3,280	3,650	1,020	521	682	118	386	168
14	626	753	1,640	2,530	4,370	3,430	1,530	493	185	569	323	130
15	428	2,490	1,480	2,270	3,840	3,830	1,260	462	197	617	352	265
16	289	3,740	1,510	2,060	3,320	4,030	1,380	532	490	563	151	346
17	216	2,000	1,570	2,060	2,990	3,760	1,330	1,350	581	419	124	323
18	191	1,390	1,770	1,820	4,360	3,230	1,090	1,140	598	748	140	347
19	167	1,440	1,580	1,480	5,520	3,610	500	1,780	499	190	152	351
20	380	1,710	1,700	1,540	4,070	7,450	463	1,610	497	95	147	383
21	426	2,320	1,530	1,210	3,350	5,470	435	1,550	212	354	117	124
22	313	1,840	1,030	1,210	3,100	3,900	407	1,250	325	522	95	321
23	248	1,540	1,060	1,150	2,200	2,980	411	1,090	511	471	99	303
24	315	1,290	3,990	1,170	1,970	2,380	396	498	475	1,250	96	433
25	609	1,170	2,880	1,100	1,730	1,860	353	431	474	887	111	351
26	533	1,890	2,410	693	1,770	1,810	309	395	552	319	116	373
27	1,740	3,650	1,890	655	1,270	1,760	314	897	465	211	91	267
28	3,440	3,280	1,970	792	1,230	1,900	354	471	200	472	69	354
29	1,850	2,670	2,520	847	1,250	1,460	764	720	182	442	84	471
30	1,270	2,140	3,050	852	---	1,220	648	327	655	360	84	288
31	960	---	2,910	863	---	1,450	---	290	---	378	88	---
Total	17,759	42,845	53,804	59,832	85,642	117,778	33,594	23,064	16,439	14,777	7,303	9,663
Mean	573	1,428	1,736	1,930	2,953	3,799	1,120	744	548	477	236	322
Max	3,440	3,740	3,990	4,900	8,390	9,600	2,310	1,780	1,120	1,250	594	524
Min	53	310	710	655	859	576	309	290	182	95	69	78
Cfsm	0.97	2.42	2.95	3.28	5.01	6.45	1.90	1.26	0.93	0.81	0.40	0.55
In.	1.12	2.71	3.40	3.78	5.41	7.44	2.12	1.46	1.04	0.93	0.46	0.61

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2007 - 2008, BY WATER YEAR (WY)

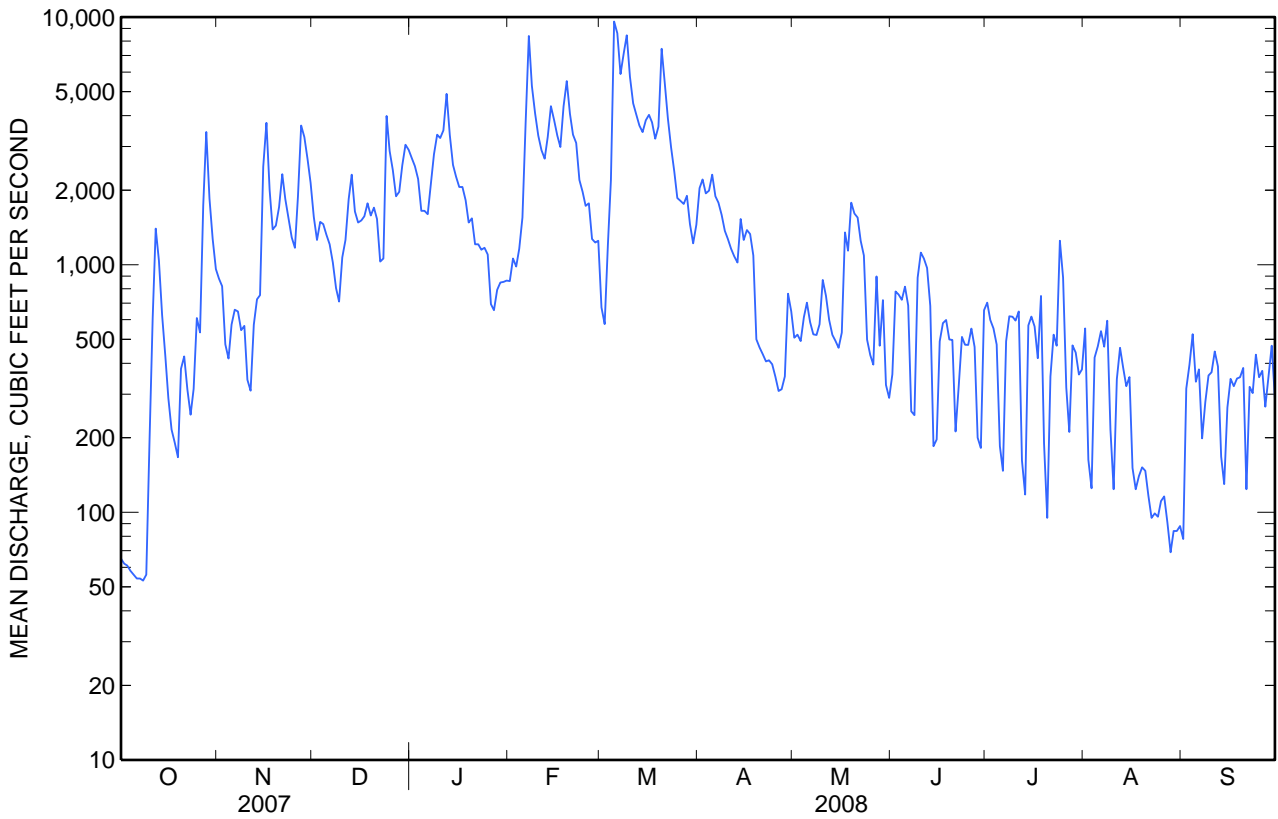
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	573	1,428	1,736	1,930	2,953	3,799	1,120	744	548	477	421	335
Max	573	1,428	1,736	1,930	2,953	3,799	1,120	744	548	477	607	349
(WY)	(2008)	(2008)	(2008)	(2008)	(2008)	(2008)	(2008)	(2008)	(2008)	(2008)	(2007)	(2007)
Min	573	1,428	1,736	1,930	2,953	3,799	1,120	744	548	477	236	322
(WY)	(2008)	(2008)	(2008)	(2008)	(2008)	(2008)	(2008)	(2008)	(2008)	(2008)	(2008)	(2008)

01432110 LACKAWAXEN RIVER AT ROWLAND, PA—Continued

SUMMARY STATISTICS

	Water Year 2008		Water Years 2007 - 2008	
Annual total	482,500			
Annual mean	1,318		1,318	
Highest annual mean			1,318	2008
Lowest annual mean			1,318	2008
Highest daily mean	9,600	Mar 5	9,600	Mar 5, 2008
Lowest daily mean	53	Oct 8	53	Oct 8, 2007
Annual seven-day minimum	56	Oct 3	56	Oct 3, 2007
Maximum peak flow	^a 13,200	Mar 5	^a 13,200	Mar 5, 2008
Maximum peak stage	10.56	Mar 5	10.56	Mar 5, 2008
Instantaneous low flow	49	Sep 25	49	Sep 25, 2008
Annual runoff (cfsm)	2.24		2.24	
Annual runoff (inches)	30.47		30.41	
10 percent exceeds	3,320		3,320	
50 percent exceeds	724		724	
90 percent exceeds	168		168	

^a From rating curve extended above 10,100 ft³/s.



01432110 LACKAWAXEN RIVER AT ROWLAND, PA—Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: July 2007 to current year.

REMARKS.--Water temperature records rated good.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: Maximum, 29.0°C, July 20, 2008; minimum 0.0°C, several days during winters.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum, 29.0°C, July 20; minimum, 0.0°C, on many days.

TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
	October			November			December			January		
1	18.4	15.2	16.6	11.8	9.9	11.0	5.1	2.1	3.6	2.0	0.9	1.6
2	19.0	14.7	16.7	11.6	7.9	9.8	4.0	0.3	2.2	1.8	0.4	1.2
3	21.6	16.3	18.5	11.0	7.5	9.0	4.6	1.7	3.4	0.5	0.0	0.2
4	23.0	17.1	19.6	8.5	6.3	7.4	3.2	1.1	2.4	0.9	0.0	0.3
5	22.6	18.3	20.1	10.8	6.9	8.3	3.0	0.3	1.9	1.3	0.1	0.6
6	23.2	17.8	20.1	10.8	8.9	10	2.6	0.0	1.6	1.9	0.9	1.4
7	22.3	19.0	20.4	10.2	7.5	8.6	2.5	0.0	1.5	2.6	1.6	2.0
8	23.4	17.8	20.2	9.1	5.9	7.1	2.4	1.0	1.7	2.5	1.7	2.1
9	22.2	18.8	20.5	8.9	6.0	7.3	2.7	1.5	2.0	3.8	2.1	3.0
10	21.0	17.9	19.1	8.9	5.2	7.0	3.4	2.1	2.9	3.1	2.4	2.8
11	19.1	16.3	17.7	5.5	3.6	4.5	3.3	2.2	2.9	3.3	2.8	3.0
12	16.3	13.7	14.8	9.0	3.8	5.1	3.7	2.5	3.2	3.2	2.6	2.9
13	14.0	12.5	13.2	9.0	7.6	8.5	2.6	0.7	1.5	2.7	2.1	2.4
14	13.6	12.0	12.8	9.3	6.6	7.8	2.4	0.8	1.6	2.8	2.4	2.6
15	14.7	12.3	13.3	9.4	7.2	8.0	2.1	0.8	1.5	2.6	2.0	2.3
16	14.9	12.5	13.6	7.5	5.9	6.4	1.4	0.0	0.5	2.1	1.4	1.8
17	15.6	12.6	13.9	6.3	4.9	5.5	1.5	0.0	0.7	1.7	0.8	1.3
18	16.4	13.9	15.1	6.5	4.7	5.2	1.8	0.9	1.4	2.5	1.3	1.8
19	17.2	15.4	16.2	6.5	3.8	5.2	1.9	1.0	1.4	1.9	0.9	1.4
20	16.6	14.4	15.7	6.8	4.3	5.7	2.2	1.5	1.8	1.4	0.0	0.6
21	15.6	12.7	14.0	7.4	4.8	6.2	2.0	1.7	1.8	0.9	0.0	0.2
22	15.6	12.5	13.8	8.1	6.0	6.9	2.2	1.7	1.9	1.0	0.0	0.4
23	16.3	13.8	15.1	7.4	5.2	5.8	3.3	1.9	2.5	1.6	0.0	0.7
24	16.0	14.3	15.1	5.7	2.6	4.1	2.9	1.3	1.8	1.2	0.1	0.5
25	14.6	13.0	13.9	5.4	2.3	4.0	2.0	1.5	1.8	1.4	0.0	0.4
26	13.0	12.0	12.4	6.1	3.6	5.1	2.1	1.3	1.8	0.8	0.0	0.3
27	13.0	12.0	12.4	6.4	5.4	5.8	2.5	2.0	2.2	1.4	0.0	0.6
28	12.4	10.7	11.8	5.8	5.0	5.5	2.9	2.2	2.5	1.9	0.0	0.7
29	11.8	9.3	10.4	6.0	5.0	5.5	3.3	2.5	2.9	1.8	0.0	0.9
30	12.3	8.6	10.4	5.6	4.3	5.0	2.5	1.8	2.2	2.5	0.8	1.7
31	11.8	9.0	10.6	---	---	---	2.2	1.6	1.8	1.6	0.0	0.7
Month	23.4	8.6	15.4	11.8	2.3	6.7	5.1	0.0	2.0	3.8	0.0	1.4

01432110 LACKAWAXEN RIVER AT ROWLAND, PA—Continued

TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
	February			March			April			May		
1	1.1	0.0	0.4	2.1	0.4	1.1	7.2	4.0	5.5	12.2	8.5	10.4
2	1.4	0.7	1.0	2.8	0.0	1.1	7.1	4.9	5.8	11.3	10.6	10.9
3	2.0	0.2	1.2	3.8	0.8	2.1	6.1	3.4	4.8	11.1	10.6	10.9
4	1.6	1.0	1.3	2.7	2.1	2.4	5.2	4.6	4.9	14.3	10.2	11.9
5	2.2	1.5	1.9	2.1	0.9	1.4	5.9	4.8	5.2	16.2	10.8	13.3
6	2.2	1.7	1.9	2.3	0.8	1.5	6.1	4.6	5.3	17.1	11.7	14.2
7	1.7	1.2	1.5	2.3	1.3	1.8	6.2	5.2	5.7	17.6	12.3	14.9
8	1.9	1.0	1.4	2.3	1.8	2.1	8.9	5.0	6.5	16.9	14.9	15.7
9	1.8	1.5	1.6	2.2	1.1	1.6	9.6	6.3	7.8	15.2	12.4	13.6
10	2.1	0.6	1.6	2.6	1.1	1.8	11.9	7.7	9.1	14.0	11.6	12.7
11	1.1	0.0	0.4	3.4	1.8	2.5	10.4	7.8	9.2	15.1	11.0	13.0
12	1.1	0.2	0.6	3.1	2.4	2.7	13.9	8.0	10.9	13.1	11.3	12.1
13	1.3	0.3	0.9	3.4	2.0	2.7	11.7	9.0	10.5	16.5	9.8	12.8
14	1.6	0.5	1.0	4.1	2.5	3.2	9.1	7.4	8.1	16.9	11.8	14.4
15	1.8	0.9	1.3	3.8	3.2	3.5	10.2	6.2	7.9	16.6	14.2	15.2
16	1.9	0.7	1.2	3.7	3.1	3.4	10.3	6.3	8.2	14.7	11.8	13.1
17	1.6	0.7	1.2	4.0	2.2	3.1	11.1	7.3	9.2	14.4	11.0	12.7
18	2.4	1.3	1.9	3.5	2.7	3.1	12.5	8.0	10.2	13.5	12.0	12.7
19	1.9	0.9	1.3	3.3	3.1	3.2	17.3	10.5	13.9	13.2	10.8	11.9
20	1.7	0.6	1.1	3.3	2.7	3.1	14.9	13.1	13.6	12.2	10.2	11.3
21	1.9	0.6	1.2	3.5	2.1	2.7	17.1	12.1	14.1	13.7	10.3	11.9
22	1.4	0.9	1.1	4.0	2.1	2.9	18.0	11.8	14.6	13.6	11.0	12.1
23	1.9	1.0	1.4	4.4	2.2	3.1	18.8	12.9	15.6	14.0	11.0	12.3
24	2.5	0.2	1.3	4.7	2.1	3.4	18.9	14.0	16.2	15.5	11.5	13.3
25	2.9	0.5	1.5	4.9	2.2	3.6	18.0	12.8	15.2	18.8	11.6	14.9
26	1.7	1.2	1.5	4.8	4.0	4.3	18.3	14.2	15.9	20.4	13.6	16.9
27	1.9	0.8	1.4	4.2	3.5	3.8	17.4	13.8	15.3	20.4	14.4	17.5
28	1.6	0.0	0.5	4.1	3.6	3.9	15.2	12.4	13.3	19.7	13.0	16.0
29	2.3	0.0	0.7	5.6	2.7	3.9	13.1	10.8	11.8	19.6	13.2	15.2
30	---	---	---	5.9	2.2	3.9	13.0	9.2	10.8	20.6	12.2	16.1
31	---	---	---	4.5	3.8	4.0	---	---	---	20.2	16.4	18.0
Month	2.9	0.0	1.2	5.9	0.0	2.8	18.9	3.4	10.2	20.6	8.5	13.6

01432110 LACKAWAXEN RIVER AT ROWLAND, PA—Continued

TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
	June			July			August			September		
1	21.5	16.5	18.7	21.7	16.3	18.0	23.4	18.2	20.2	24.6	16.7	20.1
2	18.8	15.4	17.0	22.2	15.2	18.0	23.5	18.4	20.3	25.1	17.6	19.9
3	18.3	13.6	15.8	21.2	15.8	18.1	25.2	19.6	22.0	23.9	17.1	19.5
4	17.7	14.8	15.9	20.6	17.2	17.9	25.3	19.3	21.1	24.8	17.2	19.6
5	17.2	14.5	15.5	25.1	17.1	20.4	25.3	17.7	20.2	24.9	17.9	20.5
6	18.6	14.7	16.5	26.1	20.0	22.9	25.0	18.8	20.8	21.2	18.7	19.9
7	25.1	16.1	20.5	25.0	17.8	21.6	24.6	18.4	20.5	23.1	18.4	20.2
8	26.5	20.8	23.5	23.8	16.8	19.4	22.1	18.2	19.6	23.5	17.4	19.6
9	23.9	17.7	21.0	22.8	18.0	19.4	23.8	17.4	20.1	19.6	17.3	18.2
10	21.3	16.1	18.0	24.1	17.1	19.3	21.2	18.5	19.7	21.1	16.6	18.3
11	22.0	16.2	18.0	23.0	15.7	18.5	19.6	17.1	18.7	20.3	16.2	17.8
12	20.3	15.8	17.5	25.4	17.1	20.9	23.2	16.9	18.9	18.5	17.4	18.0
13	20.3	14.5	17.2	25.5	21.4	23.0	23.7	17.0	19.4	21.1	18.0	19.4
14	24.3	16.3	20.2	23.2	18.4	21.5	23.7	17.6	19.8	24.8	19.2	21.6
15	26.1	20.9	23.0	25.1	17.4	19.8	23.2	17.9	19.8	24.2	18.9	21.7
16	25.5	16.4	20.7	23.0	16.5	19.4	23.4	17.3	19.9	20.2	16.8	18.3
17	21.1	15.8	17.4	24.6	17.6	19.9	25.2	18.6	21.5	21.2	15.9	17.7
18	19.0	14.5	16.1	23.6	17.0	19.5	25.5	19.8	22.4	20.4	15.2	17.2
19	20.6	14.3	16.7	26.2	18.4	21.9	23.5	19.3	21.1	19.4	14.3	16.4
20	20.1	14.5	16.6	29.0	22.6	25.5	22.9	16.4	19.3	19.2	14.5	16.5
21	23.8	14.7	18.7	28.1	20.0	24.0	24.1	16.8	20.0	20.3	14.8	17.2
22	24.4	17.5	20.8	23.8	17.6	19.8	25.9	18.3	21.5	20.7	16.7	18.0
23	23.8	16.2	18.6	22.0	17.9	19.3	25.2	19.1	21.6	20.3	15.3	17.1
24	23.5	16.1	18.3	22.9	18.4	20.5	25.3	19.3	21.9	20.2	14.8	16.9
25	24.6	15.0	18.5	22.7	19.3	20.5	23.7	19.9	21.5	18.2	15.6	16.9
26	21.9	16.0	17.7	24.6	18.0	21.0	23.2	16.4	19.4	17.0	15.8	16.4
27	20.6	16.2	17.2	25.0	21.3	22.8	22.8	16.4	19.2	18.6	16.6	17.4
28	23.4	15.7	19.3	25.1	19.6	21.5	22.0	16.8	19.3	17.4	16.8	17.1
29	22.9	20.1	21.5	26.1	18.0	20.9	20.8	18.4	19.6	17.3	16.3	16.7
30	21.5	17.2	19.8	25.0	17.9	20.9	22.8	19.1	20.8	18.3	15.1	16.5
31	---	---	---	26.3	18.3	21.2	23.8	16.8	19.9	---	---	---
Month	26.5	13.6	18.5	29.0	15.2	20.6	25.9	16.4	20.3	25.1	14.3	18.4

	Max	Min	Mean
Year	29.0	0.0	11.0

01432110 LACKAWAXEN RIVER AT ROWLAND, PA—Continued

TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
	June			July			August			September		
1	---	---	---	---	---	---	26.1	18.1	20.6	22.6	16.3	18.9
2	---	---	---	---	---	---	27.0	18.0	21.0	23.8	16.2	19.3
3	---	---	---	---	---	---	24.3	18.6	20.5	24.6	17.1	20.2
4	---	---	---	---	---	---	26.3	18.6	22.0	23.7	18.5	20.2
5	---	---	---	---	---	---	25.4	18.3	22.0	21.7	17.2	19.1
6	---	---	---	---	---	---	23.3	19.4	21.5	23.6	17.5	19.6
7	---	---	---	---	---	---	25.2	19.4	21.0	25.1	18.3	20.6
8	---	---	---	---	---	---	26.2	19.3	21.4	24.3	19.3	21.1
9	---	---	---	---	---	---	25.1	19.8	21.5	25.6	19.8	22.3
10	---	---	---	---	---	---	20.6	18.3	19.2	24.0	20.1	21.9
11	---	---	---	---	---	---	23.2	17.6	20.1	21.0	19.3	19.8
12	---	---	---	---	---	---	24.6	19.1	21.4	21.2	16.9	18.9
13	---	---	---	---	---	---	23.6	19.7	21.2	20.6	16.7	18.6
14	---	---	---	---	---	---	22.8	17.1	19.2	19.9	17.1	18.7
15	---	---	---	---	---	---	22.1	17.4	19.4	19.8	16.3	18.5
16	---	---	---	---	---	---	21.9	19.2	20.4	18.0	13.9	15.6
17	---	---	---	---	---	---	23.3	18.6	20.6	17.8	13.1	15.3
18	---	---	---	---	---	---	22.0	16.2	18.7	20.0	14.7	16.8
19	---	---	---	---	---	---	19.6	17.3	18.6	20.4	14.7	17.0
20	---	---	---	---	---	---	18.5	16.4	17.8	21.8	16.0	18.2
21	---	---	---	---	---	---	17.7	16.3	17.0	22.8	17.0	18.9
22	---	---	---	---	---	---	17.6	16.4	16.9	20.4	17.1	18.7
23	---	---	---	---	---	---	19.4	16.9	18.0	21.7	17.0	18.8
24	---	---	---	---	---	---	21.8	18.4	19.7	19.9	15.5	17.6
25	---	---	---	---	---	---	24.5	19.5	21.2	21.8	15.7	18.1
26	---	---	---	---	---	---	24.0	19.2	20.8	21.4	17.4	19.1
27	---	---	---	22.4	18.3	19.6	23.7	18.0	19.8	23.4	18.6	20.7
28	---	---	---	21.0	18.2	19.5	24.0	18.1	19.8	21.6	18.4	20.3
29	---	---	---	---	---	---	24.8	17.8	20.3	21.0	16.1	17.9
30	---	---	---	22.2	18.4	19.7	25.8	18.8	21.1	20.4	14.8	17.0
31	---	---	---	22.3	18.1	19.6	22.8	18.5	19.9	---	---	---
Month	---	---	---	22.4	18.1	19.6	27.0	16.2	20.1	25.6	13.1	18.9