

Water-Data Report 2009

03075070 MONONGAHELA RIVER AT ELIZABETH, PA

Monongahela Basin
Lower Monongahela Subbasin

LOCATION.--Lat 40°15'44", long 79°54'05" referenced to North American Datum of 1927, Allegheny County, PA, Hydrologic Unit 05020005, on right bank 30 ft landward from upstream end of guide wall, and 1,050 ft upstream from dam at lock 3 at Elizabeth, 0.4 mi downstream from Lobbs Creek, at river mile 24.0.

DRAINAGE AREA.--5,340 mi².

SURFACE-WATER RECORDS

PERIOD OF RECORD.--October 1933 to current year. Published as "at Charleroi" (station 03075000) October 1933 to September 1976. Monthly discharge prior to 1940, adjusted for reservoir contents, published in WSP 1305. Records for March 1886 to March 1905 (high-water periods only), published in WSP 169, are unreliable and should not be used. (Peak discharge of July 11, 1888, as published in WSP 183, is still considered reliable.)

REVISED RECORDS.--WSP 758: Drainage area. WSP 783: 1888 (M). WSP 1435: 1934, 1936. See also "PERIOD OF RECORD."

GAGE.--Water-stage recorder and concrete dam control. Datum of gage is 717.90 ft above National Geodetic Vertical Datum of 1929 (U.S. Army Corps of Engineers bench mark). From Oct. 1933 to Oct. 1, 1967, water-stage recorder at site 17.9 mi upstream at datum 17.43 ft higher. From Oct. 1, 1965 to Sept. 30, 1967, auxiliary staff gage and Apr. 14, 1966 to Sept. 30, 1967, auxiliary water-stage recorder at present site. From Oct. 1, 1967 to Sept. 30, 1976, at site 17.5 mi upstream at datum 15.70 ft higher. From Oct. 1, 1967 to Nov. 4, 1990, water-stage recorder at present site at datum 7.60 ft higher. Satellite telemetry at station.

COOPERATION.--Station established and maintained by the U.S. Geological Survey in cooperation with the U.S. Army Corps of Engineers, Pittsburgh District and the Pennsylvania Department of Environmental Protection.

REMARKS.--Records good except those below 2,500 ft³/s and those for estimated daily discharges, which are poor. Flow regulated by locks above station, since May 1926 by Lake Lynn, since 1938 by Tygart Lake, and since April 1989 by Stonewall Jackson Lake, combined capacity, 432,000 acre-ft. Several measurements of water temperature were made during the year.

03075070 MONONGAHELA RIVER AT ELIZABETH, PA—Continued

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2008 TO SEPTEMBER 2009
DAILY MEAN VALUES

[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	1,070	1,060	1,870	9,050	15,000	4,670	13,100	10,300	6,280	2,420	8,400	1,030
2	1,070	1,010	1,840	8,010	12,900	6,410	11,800	19,900	7,280	2,000	9,690	e1,190
3	e1,190	e779	4,970	7,270	15,900	7,130	11,600	22,900	7,650	1,970	10,600	1,110
4	e825	e743	1,220	5,640	13,700	5,580	20,300	40,600	6,420	2,070	13,300	757
5	1,440	e1,070	3,160	5,790	14,100	5,330	20,300	79,000	11,600	2,390	11,500	1,340
6	e990	e1,600	3,880	8,670	11,500	5,790	14,700	44,100	20,700	2,210	6,060	704
7	1,070	1,650	3,370	22,400	8,830	2,550	15,000	38,700	21,800	1,670	2,300	1,540
8	1,180	1,060	3,850	46,400	7,810	3,080	14,700	43,000	15,200	1,430	1,500	1,440
9	1,160	810	2,930	28,800	22,900	3,450	15,500	34,200	10,800	1,490	1,490	1,640
10	1,270	e743	5,390	23,900	21,200	3,390	14,400	27,600	7,500	1,140	1,520	1,610
11	e1,110	e850	17,200	29,200	33,700	7,460	13,300	24,400	6,530	1,760	1,990	1,490
12	911	1,230	40,900	37,400	31,600	6,210	20,500	21,800	6,160	e1,400	1,440	1,250
13	1,010	e780	36,600	28,200	21,400	5,600	18,100	20,000	4,850	1,520	2,050	1,220
14	1,470	e871	23,000	24,500	17,600	2,620	14,700	16,000	4,830	1,180	2,290	1,410
15	1,000	1,360	22,400	22,200	12,100	1,800	16,600	11,800	3,990	1,410	1,350	1,770
16	866	1,720	18,700	17,400	10,700	2,620	22,400	7,800	3,760	1,120	1,470	867
17	e935	3,680	26,400	7,350	11,500	3,000	22,800	9,170	3,920	1,530	1,200	1,100
18	1,010	2,780	38,600	7,020	9,200	2,940	20,900	8,560	8,310	1,490	1,740	1,310
19	1,020	5,050	31,900	6,000	8,110	2,330	16,600	6,080	8,960	1,960	988	1,130
20	e716	4,050	44,000	6,180	9,410	5,000	13,300	4,730	7,370	1,410	1,280	1,270
21	e798	2,960	28,300	5,620	8,320	1,860	14,200	4,620	11,500	1,500	1,290	1,390
22	1,190	1,940	22,000	5,490	6,480	1,300	15,000	3,900	7,430	1,160	2,350	987
23	975	608	19,200	6,600	9,590	1,910	15,600	3,430	4,990	1,480	1,680	1,550
24	e1,080	1,310	20,100	3,570	8,740	2,710	16,200	3,190	5,200	1,920	1,700	1,270
25	2,720	1,420	36,200	3,960	8,830	3,130	15,100	3,670	3,540	1,950	2,240	1,070
26	2,260	1,600	24,100	4,280	5,540	3,430	12,200	3,630	2,080	1,250	1,820	1,650
27	1,710	3,810	30,000	4,770	4,460	9,860	12,900	5,860	2,940	2,200	1,290	1,670
28	1,520	5,910	20,000	9,700	5,230	12,400	11,000	6,060	1,300	2,570	952	1,180
29	e1,530	3,880	17,200	22,900	---	11,500	8,410	8,090	e1,520	2,580	1,350	1,530
30	1,330	1,170	11,800	22,000	---	14,700	7,770	6,710	2,020	3,100	1,370	1,910
31	1,190	---	9,890	20,800	---	13,600	---	5,990	---	3,620	1,670	---
Total	37,616	57,504	570,970	461,070	366,350	163,360	458,980	545,790	216,430	56,900	99,870	39,385
Mean	1,213	1,917	18,420	14,870	13,080	5,270	15,300	17,610	7,214	1,835	3,222	1,313
Max	2,720	5,910	44,000	46,400	33,700	14,700	22,800	79,000	21,800	3,620	13,300	1,910
Min	716	608	1,220	3,570	4,460	1,300	7,770	3,190	1,300	1,120	952	704

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1934 - 2009, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	3,623	6,966	11,730	13,660	15,350	17,860	13,540	10,460	6,566	4,463	4,057	3,056
Max	16,770	33,750	29,760	37,480	33,170	41,930	26,500	33,610	24,840	13,570	17,890	13,300
(WY)	(1980)	(1986)	(1973)	(1937)	(1994)	(1963)	(1940)	(1996)	(1981)	(1958)	(1956)	(1945)
Min	475	400	1,991	2,249	3,210	5,270	4,478	2,128	1,009	915	812	581
(WY)	(1954)	(1954)	(1966)	(1977)	(1934)	(2009)	(1971)	(1982)	(1936)	(1966)	(1957)	(1936)

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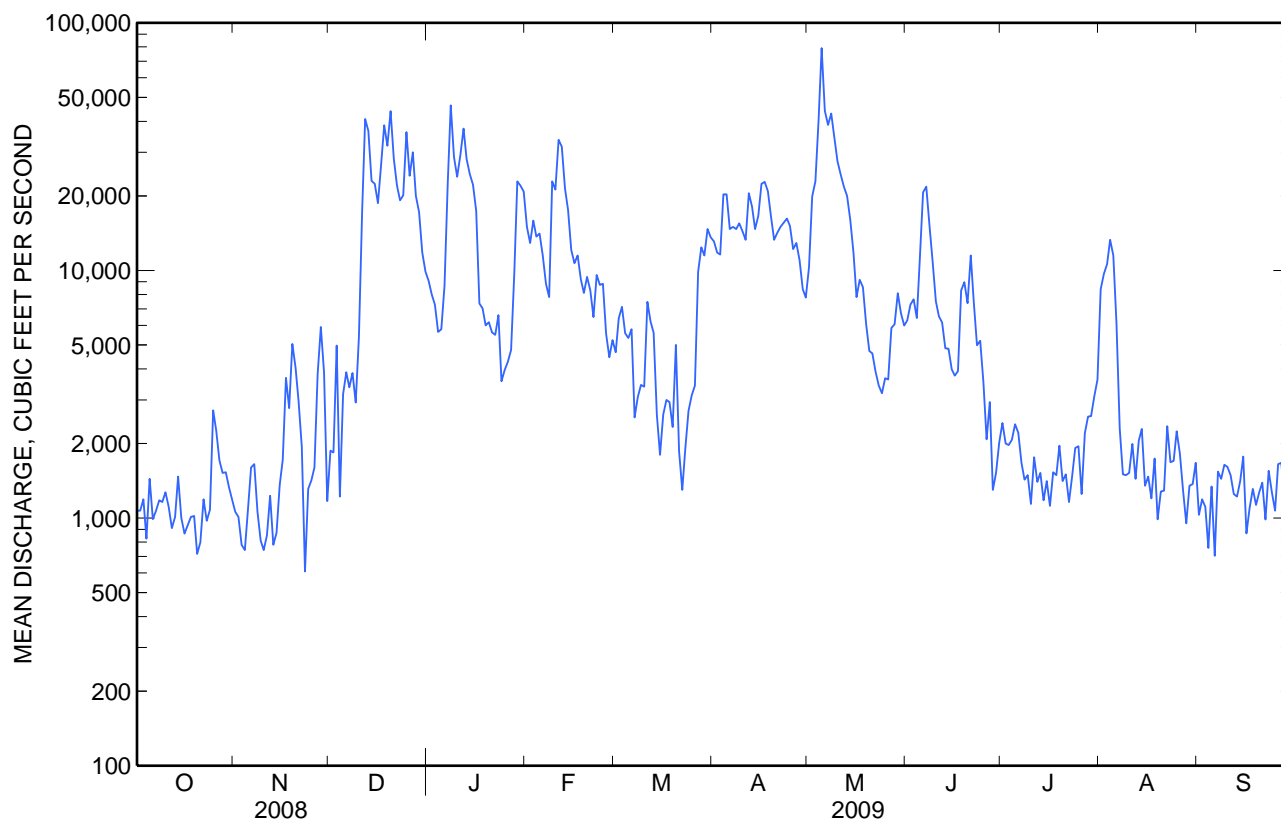
SUMMARY STATISTICS

	Calendar Year 2008		Water Year 2009		Water Years 1934 - 2009	
Annual total	3,822,467		3,074,225			
Annual mean	10,440		8,423		9,251	
Highest annual mean					14,400	1996
Lowest annual mean					5,282	1954
Highest daily mean	71,000	Jun 5	79,000	May 5	158,000	Jan 20, 1996
Lowest daily mean	319	Aug 26	608	Nov 23	206	Jun 29, 1936
Annual seven-day minimum	694	Aug 20	^a 906	Nov 8	301	Oct 1, 1936
Maximum peak flow			86,300	May 5	^b 178,000	Nov 6, 1985
Maximum peak stage			20.68	May 5	^c 31.20	Nov 6, 1985
10 percent exceeds	27,000		22,100		22,400	
50 percent exceeds	6,660		3,960		5,290	
90 percent exceeds	1,010		1,090		1,180	

^a Computed using estimated daily discharges.

^b From rating curve extended above 110,000 ft³/s.

^c At present site and datum, gage height 23.60 ft, datum then in use.



03075070 MONONGAHELA RIVER AT ELIZABETH, PA—Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: June 2005 to current year.

SPECIFIC CONDUCTANCE: June 2005 to current year.

pH: June 2005 to current year.

DISSOLVED OXYGEN: June 2005 to current year.

INSTRUMENTATION.--Continuous water-quality monitor interfaced with a data collection platform with 60-minute recording interval.

REMARKS.--Specific conductance, water temperature, and dissolved oxygen records rated good. pH record rated good except for period Jan 12-22, which is fair. Dissolved oxygen data collected seasonally from May through September. Data collection discontinued during winter months. Other interruptions in the record were due to malfunctions of the equipment.

COOPERATION.--Station established and maintained by the U.S. Geological Survey in cooperation with the U.S. Army Corps of Engineers, Pittsburgh District.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 1,290 microsiemens/cm, Nov. 8, 9; minimum, 150 microsiemens/cm, Jan. 13.

pH: Maximum, 8.0 standard units, Mar. 22, 23, 24; minimum, 7.1 standard units, May 29, June 16, Aug. 11, 12, Sept. 10.

WATER TEMPERATURE: Maximum, 32.6°C, Aug. 17; minimum, 0.0°C, Jan. 31.

03075070 MONONGAHELA RIVER AT ELIZABETH, PA—Continued

**SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS
WATER YEAR OCTOBER 2008 TO SEPTEMBER 2009**

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
	October			November			December			January		
1	980	935	959	1,060	1,050	1,050	895	855	877	283	235	251
2	1,030	980	1,000	1,060	1,050	1,060	874	850	857	247	226	236
3	1,070	1,030	1,050	1,080	1,060	1,070	876	716	813	247	236	241
4	1,080	1,060	1,070	1,080	1,070	1,070	719	665	685	253	241	247
5	1,100	1,080	1,090	1,110	1,080	1,090	668	545	603	292	252	270
6	1,120	1,100	1,110	1,200	1,110	1,160	545	501	527	293	262	272
7	1,120	1,110	1,120	1,250	1,200	1,220	570	501	539	316	276	288
8	1,120	1,110	1,110	1,290	1,250	1,270	633	570	591	320	229	270
9	1,120	1,110	1,120	1,290	1,280	1,280	757	633	688	243	220	226
10	1,130	1,120	1,120	1,280	1,270	1,280	839	709	806	227	214	219
11	1,130	1,130	1,130	1,280	1,270	1,270	795	525	617	216	204	210
12	1,130	1,130	1,130	1,270	1,260	1,260	783	427	596	217	170	198
13	1,130	1,120	1,130	1,260	1,250	1,260	436	270	348	170	150	156
14	1,120	1,100	1,110	1,260	1,260	1,260	270	238	248	194	166	184
15	1,100	1,100	1,100	1,270	1,260	1,260	250	222	232	194	176	188
16	1,100	1,090	1,100	1,280	1,260	1,270	242	226	237	180	174	177
17	1,090	1,080	1,090	1,260	1,240	1,250	240	211	226	185	171	177
18	1,080	1,080	1,080	1,260	1,230	1,250	215	187	200	209	184	200
19	1,090	1,080	1,080	1,230	1,180	1,200	203	182	192	214	208	211
20	1,100	1,090	1,090	1,210	1,190	1,200	229	203	215	214	209	211
21	1,110	1,100	1,100	1,200	1,150	1,180	208	176	196	220	210	214
22	---	---	---	1,150	1,120	1,130	181	175	179	248	219	235
23	---	---	---	1,120	1,120	1,120	185	180	183	260	238	248
24	---	---	---	1,120	1,100	1,110	200	183	190	273	257	266
25	---	---	---	1,100	1,070	1,100	208	192	197	325	273	302
26	---	---	---	1,080	1,050	1,060	216	186	203	327	321	325
27	---	---	---	1,070	1,030	1,050	211	199	204	341	327	335
28	---	---	---	1,070	929	981	217	201	210	360	331	341
29	---	---	---	945	884	906	241	217	230	372	329	344
30	1,080	1,060	1,080	896	890	893	247	235	241	399	305	358
31	1,060	1,050	1,050	---	---	---	285	247	267	373	304	336
Month	1,130	935	1,090	1,290	884	1,150	895	175	400	399	150	250

03075070 MONONGAHELA RIVER AT ELIZABETH, PA—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS
WATER YEAR OCTOBER 2008 TO SEPTEMBER 2009

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
	February			March			April			May		
1	319	274	290	358	322	340	505	369	403	284	261	274
2	303	277	293	337	319	329	597	403	494	313	273	296
3	311	284	301	367	336	355	407	374	392	299	267	287
4	292	269	277	383	346	357	378	308	341	273	233	255
5	300	288	296	388	374	384	333	307	320	240	194	216
6	288	251	266	421	374	400	318	284	307	194	185	190
7	251	244	247	414	401	405	284	238	249	202	186	192
8	275	245	258	417	407	413	241	229	236	217	201	210
9	275	244	256	425	380	408	277	230	247	210	195	202
10	297	253	278	380	336	347	299	243	276	209	205	207
11	289	222	239	351	315	337	290	253	280	209	201	207
12	249	226	241	327	309	322	269	246	254	223	207	215
13	234	207	217	349	309	331	265	239	251	226	208	218
14	214	201	205	355	349	352	248	224	230	241	211	227
15	224	214	219	359	340	353	230	216	224	235	229	232
16	232	224	229	379	359	371	270	230	249	255	233	241
17	233	229	231	400	379	395	268	225	236	263	241	256
18	247	231	238	403	371	395	225	196	212	274	255	262
19	279	247	264	439	398	417	205	201	203	285	272	279
20	282	274	278	561	439	505	214	195	208	307	284	298
21	304	276	290	572	561	566	218	210	215	316	293	306
22	299	285	289	585	572	579	245	215	230	328	313	321
23	290	284	287	590	524	584	252	237	246	344	324	335
24	309	279	289	583	491	555	241	225	234	367	341	352
25	315	277	297	494	379	428	246	225	239	377	365	373
26	286	277	282	399	380	387	263	235	252	370	343	359
27	302	279	290	380	361	371	274	258	265	369	357	364
28	344	302	318	509	380	438	268	242	248	379	355	369
29	---	---	---	501	479	489	247	239	242	413	374	388
30	---	---	---	512	410	471	278	241	255	430	413	425
31	---	---	---	474	369	403	---	---	---	459	425	443
Month	344	201	267	590	309	412	597	195	268	459	185	284

03075070 MONONGAHELA RIVER AT ELIZABETH, PA—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS
WATER YEAR OCTOBER 2008 TO SEPTEMBER 2009

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
	June			July			August			September		
1	506	458	482	416	399	409	709	665	693	474	470	472
2	513	506	510	399	378	388	763	705	732	477	467	474
3	508	433	473	401	379	394	863	763	813	478	474	477
4	457	429	444	433	397	421	854	561	689	476	470	473
5	476	431	458	452	433	445	632	562	599	483	470	473
6	506	443	480	452	419	434	616	557	596	488	482	485
7	485	318	418	420	393	410	598	550	566	495	487	490
8	318	279	307	397	392	395	554	546	550	514	494	503
9	279	264	268	396	391	393	553	537	545	515	492	510
10	329	268	292	412	396	402	537	486	508	515	504	510
11	339	307	329	421	412	417	491	458	478	508	487	504
12	307	279	291	442	421	435	465	456	462	498	487	494
13	308	281	293	451	438	445	480	459	465	487	475	481
14	306	290	302	451	447	449	559	478	513	475	469	471
15	291	283	286	456	449	453	611	559	585	493	468	478
16	310	287	297	466	456	460	670	610	639	502	490	499
17	319	310	314	483	466	475	686	664	678	521	502	511
18	325	295	313	495	482	492	681	628	652	537	508	530
19	332	305	320	513	495	502	628	593	614	540	537	538
20	355	332	345	530	513	523	601	497	536	549	539	543
21	393	355	373	554	530	539	500	460	490	558	549	555
22	422	387	403	589	554	576	460	429	441	562	555	558
23	496	422	457	626	574	594	429	421	424	567	561	565
24	505	438	488	639	606	625	426	397	413	571	567	570
25	438	403	412	651	637	642	397	382	387	574	571	573
26	415	404	409	659	651	656	394	383	389	584	574	580
27	406	358	381	658	649	654	399	393	396	597	581	587
28	358	340	344	677	654	661	409	396	401	594	590	592
29	378	347	356	686	677	681	423	408	413	592	569	577
30	412	376	395	679	655	667	449	423	437	611	569	584
31	---	---	---	665	641	653	470	448	462	---	---	---
Month	513	264	375	686	378	506	863	382	534	611	467	522

	Max	Min	Mean
Year	1,290	150	493

03075070 MONONGAHELA RIVER AT ELIZABETH, PA—Continued

PH, WATER, UNFILTERED, FIELD, STANDARD UNITS
WATER YEAR OCTOBER 2008 TO SEPTEMBER 2009

Day	Max	Min	Median	Max	Min	Median	Max	Min	Median	Max	Min	Median
	October			November			December			January		
1	7.4	7.3	7.4	7.8	7.7	7.7	7.7	7.6	7.7	7.8	7.7	7.7
2	7.5	7.4	7.4	7.8	7.7	7.8	7.7	7.7	7.7	7.7	7.6	7.7
3	7.5	7.4	7.5	7.8	7.7	7.8	7.7	7.6	7.6	7.7	7.6	7.7
4	7.5	7.4	7.5	7.8	7.7	7.7	---	---	---	7.6	7.6	7.6
5	7.6	7.4	7.5	7.8	7.7	7.7	7.7	7.6	7.6	7.7	7.6	7.6
6	7.5	7.4	7.5	7.8	7.7	7.7	7.7	7.6	7.6	7.7	7.6	7.6
7	7.6	7.4	7.5	7.7	7.6	7.7	7.7	7.6	7.7	7.6	7.6	7.6
8	7.6	7.6	7.6	7.7	7.6	7.7	7.7	7.6	7.6	7.6	7.5	7.6
9	7.7	7.6	7.6	7.8	7.7	7.7	7.7	7.6	7.7	7.6	7.5	7.5
10	7.7	7.6	7.6	7.8	7.7	7.8	7.7	7.6	7.7	7.6	7.5	7.6
11	7.7	7.6	7.6	7.8	7.7	7.8	7.6	7.6	7.6	7.6	7.6	7.6
12	7.6	7.6	7.6	---	---	---	7.6	7.4	7.6	7.6	7.4	7.6
13	7.6	7.5	7.6	7.8	7.7	7.7	7.4	7.3	7.4	7.4	7.3	7.4
14	7.6	7.6	7.6	7.8	7.7	7.7	7.4	7.3	7.4	7.5	7.4	7.5
15	7.6	7.5	7.6	7.8	7.7	7.7	7.4	7.4	7.4	7.5	7.4	7.4
16	7.6	7.5	7.6	7.8	7.7	7.8	7.6	7.4	7.6	7.4	7.3	7.3
17	7.6	7.5	7.6	7.8	7.7	7.8	7.6	7.5	7.5	7.3	7.3	7.3
18	7.6	7.5	7.6	7.8	7.7	7.8	7.5	7.4	7.5	7.4	7.3	7.3
19	7.6	7.6	7.6	7.8	7.7	7.7	7.6	7.4	7.4	7.4	7.3	7.4
20	7.7	7.6	7.6	7.8	7.7	7.7	7.6	7.6	7.6	7.4	7.3	7.4
21	7.7	7.6	7.7	7.8	7.7	7.7	7.6	7.5	7.6	7.4	7.3	7.3
22	---	---	---	7.8	7.7	7.7	7.6	7.5	7.5	---	---	---
23	---	---	---	7.8	7.7	7.7	---	---	---	7.6	7.5	7.5
24	---	---	---	7.7	7.6	7.7	7.5	7.4	7.4	7.6	7.5	7.5
25	---	---	---	7.8	7.7	7.7	7.5	7.4	7.4	7.6	7.5	7.6
26	---	---	---	7.8	7.7	7.7	7.6	7.4	7.4	7.6	7.5	7.5
27	---	---	---	7.7	7.6	7.7	7.6	7.5	7.5	7.6	7.5	7.5
28	---	---	---	7.8	7.7	7.7	7.6	7.5	7.5	7.6	7.5	7.5
29	---	---	---	7.7	7.6	7.7	7.5	7.4	7.5	7.5	7.5	7.5
30	7.8	7.7	7.7	7.7	7.6	7.6	7.6	7.5	7.5	7.5	7.4	7.5
31	7.8	7.7	7.7	---	---	---	7.7	7.6	7.7	7.6	7.4	7.6
Max	7.8	7.7	7.7	7.8	7.7	7.8	7.7	7.7	7.7	7.8	7.7	7.7
Min	7.4	7.3	7.4	7.7	7.6	7.6	7.4	7.3	7.4	7.3	7.3	7.3

03075070 MONONGAHELA RIVER AT ELIZABETH, PA—Continued

PH, WATER, UNFILTERED, FIELD, STANDARD UNITS
WATER YEAR OCTOBER 2008 TO SEPTEMBER 2009

Day	Max	Min	Median	Max	Min	Median	Max	Min	Median	Max	Min	Median
	February			March			April			May		
1	7.5	7.5	7.5	7.6	7.5	7.5	7.6	7.5	7.6	7.5	7.4	7.4
2	7.5	7.5	7.5	7.6	7.5	7.6	7.7	7.6	7.7	7.5	7.4	7.5
3	7.5	7.5	7.5	7.7	7.6	7.7	7.7	7.6	7.6	7.5	7.4	7.5
4	7.6	7.5	7.5	7.7	7.6	7.6	7.6	7.6	7.6	7.5	7.4	7.4
5	7.6	7.6	7.6	7.7	7.6	7.6	7.6	7.5	7.6	7.4	7.3	7.3
6	7.6	7.5	7.5	7.7	7.6	7.6	7.6	7.5	7.6	7.3	7.2	7.2
7	7.5	7.4	7.5	7.6	7.6	7.6	7.6	7.5	7.6	7.3	7.2	7.3
8	7.5	7.5	7.5	7.7	7.6	7.6	7.6	7.5	7.6	7.3	7.2	7.3
9	7.5	7.5	7.5	7.7	7.6	7.6	7.6	7.5	7.5	7.2	7.2	7.2
10	7.5	7.5	7.5	7.6	7.5	7.5	7.6	7.5	7.5	7.3	7.2	7.3
11	7.5	7.4	7.4	7.6	7.5	7.5	7.6	7.5	7.5	7.3	7.2	7.3
12	7.6	7.4	7.5	7.6	7.5	7.5	7.6	7.5	7.5	7.3	7.2	7.3
13	7.5	7.5	7.5	7.6	7.5	7.6	7.5	7.4	7.5	7.3	7.3	7.3
14	7.5	7.5	7.5	7.6	7.5	7.6	7.5	7.4	7.4	7.3	7.2	7.3
15	7.5	7.5	7.5	7.6	7.5	7.6	7.5	7.4	7.4	7.3	7.3	7.3
16	7.5	7.5	7.5	7.6	7.4	7.6	7.5	7.4	7.5	7.4	7.3	7.3
17	7.5	7.4	7.5	7.6	7.6	7.6	7.5	7.4	7.4	7.4	7.3	7.4
18	7.5	7.5	7.5	7.7	7.4	7.6	7.4	7.4	7.4	7.4	7.4	7.4
19	7.6	7.5	7.6	7.7	7.5	7.6	7.4	7.3	7.4	7.5	7.4	7.4
20	7.6	7.6	7.6	7.7	7.6	7.6	7.4	7.4	7.4	7.5	7.4	7.4
21	7.6	7.6	7.6	7.8	7.7	7.7	7.4	7.4	7.4	7.5	7.4	7.4
22	7.6	7.6	7.6	8.0	7.8	7.8	7.5	7.4	7.4	7.6	7.3	7.4
23	7.6	7.6	7.6	8.0	7.8	7.9	7.5	7.4	7.5	7.5	7.2	7.4
24	7.6	7.5	7.6	8.0	7.8	7.9	7.5	7.4	7.5	7.6	7.3	7.4
25	7.6	7.5	7.6	7.9	7.8	7.8	7.5	7.4	7.5	7.6	7.4	7.4
26	7.5	7.5	7.5	7.8	7.6	7.7	7.5	7.4	7.5	7.4	7.2	7.4
27	7.5	7.5	7.5	7.7	7.6	7.6	7.5	7.4	7.5	7.4	7.3	7.4
28	7.5	7.5	7.5	7.6	7.5	7.5	7.5	7.4	7.4	7.4	7.3	7.3
29	---	---	---	7.6	7.5	7.6	7.4	7.4	7.4	7.4	7.1	7.3
30	---	---	---	7.6	7.5	7.6	7.4	7.4	7.4	7.4	7.2	7.3
31	---	---	---	7.6	7.5	7.6	---	---	---	7.6	7.3	7.4
Max	7.6	7.6	7.6	8.0	7.8	7.9	7.7	7.6	7.7	7.6	7.4	7.5
Min	7.5	7.4	7.4	7.6	7.4	7.5	7.4	7.3	7.4	7.2	7.1	7.2

03075070 MONONGAHELA RIVER AT ELIZABETH, PA—Continued

PH, WATER, UNFILTERED, FIELD, STANDARD UNITS
WATER YEAR OCTOBER 2008 TO SEPTEMBER 2009

Day	Max	Min	Median	Max	Min	Median	Max	Min	Median	Max	Min	Median
	June			July			August			September		
1	7.5	7.3	7.4	7.5	7.3	7.4	7.5	7.4	7.4	7.6	7.4	7.5
2	7.5	7.3	7.4	7.4	7.3	7.4	7.5	7.3	7.4	7.6	7.3	7.5
3	7.4	7.4	7.4	7.4	7.3	7.4	7.4	7.2	7.4	7.6	7.5	7.5
4	7.5	7.3	7.4	7.5	7.3	7.4	7.4	7.3	7.3	7.6	7.5	7.5
5	7.4	7.3	7.4	7.5	7.4	7.4	7.3	7.2	7.3	7.7	7.2	7.5
6	7.4	7.3	7.4	7.5	7.4	7.4	7.4	7.2	7.3	7.6	7.4	7.5
7	7.3	7.2	7.3	7.5	7.3	7.4	7.4	7.2	7.3	7.4	7.3	7.4
8	7.3	7.2	7.2	7.4	7.2	7.3	7.4	7.2	7.3	7.5	7.3	7.4
9	7.2	7.2	7.2	7.4	7.2	7.3	7.4	7.2	7.3	7.6	7.4	7.4
10	7.3	7.2	7.3	7.4	7.3	7.3	7.4	7.2	7.3	7.5	7.1	7.3
11	7.3	7.3	7.3	7.5	7.3	7.4	7.3	7.1	7.2	7.6	7.4	7.4
12	7.3	7.2	7.3	7.6	7.3	7.4	7.3	7.1	7.2	7.5	7.3	7.4
13	7.4	7.2	7.3	7.5	7.3	7.4	7.3	7.2	7.3	7.6	7.4	7.5
14	7.4	7.3	7.4	7.5	7.2	7.3	7.4	7.2	7.3	7.6	7.4	7.5
15	7.4	7.3	7.3	7.6	7.3	7.4	7.5	7.3	7.4	7.8	7.6	7.6
16	7.4	7.1	7.3	7.6	7.3	7.4	7.5	7.3	7.4	7.6	7.5	7.5
17	7.4	7.3	7.4	7.5	7.3	7.4	7.5	7.3	7.4	7.5	7.4	7.5
18	7.4	7.3	7.3	7.5	7.4	7.4	7.6	7.4	7.5	7.6	7.4	7.5
19	7.3	7.2	7.3	7.6	7.4	7.5	7.6	7.4	7.4	7.5	7.4	7.5
20	7.3	7.2	7.3	7.5	7.3	7.4	7.6	7.4	7.5	7.5	7.4	7.5
21	7.3	7.3	7.3	7.6	7.4	7.4	7.6	7.4	7.4	7.5	7.4	7.5
22	7.5	7.3	7.3	7.6	7.3	7.5	7.5	7.3	7.4	7.4	7.3	7.4
23	7.5	7.3	7.4	7.6	7.4	7.5	7.4	7.2	7.4	7.5	7.4	7.4
24	7.5	7.3	7.4	7.6	7.4	7.5	7.4	7.2	7.3	7.5	7.4	7.4
25	7.5	7.2	7.4	7.7	7.4	7.6	7.5	7.3	7.4	7.4	7.2	7.4
26	7.5	7.3	7.4	7.7	7.5	7.6	7.5	7.3	7.4	7.5	7.4	7.4
27	7.5	7.3	7.3	7.7	7.4	7.5	7.4	7.3	7.3	7.5	7.4	7.4
28	7.4	7.2	7.3	7.6	7.4	7.5	7.4	7.3	7.4	7.6	7.4	7.5
29	7.5	7.2	7.3	7.6	7.4	7.5	7.4	7.3	7.3	7.7	7.5	7.6
30	7.5	7.3	7.3	7.6	7.4	7.5	7.6	7.3	7.4	7.6	7.5	7.6
31	---	---	---	7.6	7.4	7.5	7.6	7.4	7.5	---	---	---
Max	7.5	7.4	7.4	7.7	7.5	7.6	7.6	7.4	7.5	7.8	7.6	7.6
Min	7.2	7.1	7.2	7.4	7.2	7.3	7.3	7.1	7.2	7.4	7.1	7.3

	Max	Min	Median
Year			
Maximum	8.0	7.8	7.9
Year			
Minimum	7.2	7.1	7.2

03075070 MONONGAHELA RIVER AT ELIZABETH, PA—Continued

TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2008 TO SEPTEMBER 2009

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
	October			November			December			January		
1	---	---	---	13.5	12.4	12.8	6.2	5.4	5.7	4.0	3.6	3.8
2	22.2	21.1	21.6	13.3	12.8	13.0	6.7	5.6	6.0	4.2	3.7	3.9
3	21.1	20.0	20.5	14.4	12.8	13.3	6.6	5.6	6.1	3.9	3.5	3.7
4	20.2	19.6	19.9	13.8	13.0	13.3	8.5	6.1	6.9	3.8	3.4	3.6
5	20.8	19.5	19.9	13.9	13.3	13.6	8.0	5.7	6.9	3.9	3.7	3.8
6	20.0	19.4	19.8	15.4	13.7	14.3	7.8	5.6	6.2	3.9	3.6	3.7
7	19.4	18.5	18.9	16.3	14.9	15.4	5.8	4.6	5.3	3.9	3.5	3.7
8	18.5	17.9	18.1	15.7	14.4	15.2	5.9	4.4	5.1	4.1	3.5	3.8
9	20.1	18.3	19.1	14.4	13.1	13.7	6.0	4.4	5.1	3.5	2.9	3.1
10	20.5	19.2	19.7	13.1	12.0	12.5	6.6	5.1	5.8	3.9	3.1	3.5
11	20.6	19.5	20.0	12.4	11.7	12.0	5.5	4.1	4.4	4.0	3.8	3.9
12	20.6	19.6	20.1	12.6	11.7	12.2	4.1	2.9	3.4	3.8	3.5	3.6
13	21.1	19.8	20.2	13.0	12.2	12.6	3.2	2.5	2.9	3.5	2.9	3.3
14	20.6	19.9	20.2	14.0	12.7	13.2	4.3	3.2	3.7	2.9	2.6	2.7
15	20.9	20.3	20.6	14.1	12.8	13.8	4.8	4.3	4.5	2.7	2.0	2.3
16	20.7	20.3	20.5	12.8	11.6	12.1	4.4	4.1	4.2	2.0	1.2	1.4
17	20.3	19.1	19.8	11.6	11.2	11.4	4.2	3.8	4.0	1.3	1.0	1.1
18	19.1	18.3	18.7	11.6	10.0	10.6	4.2	3.9	4.1	1.6	1.0	1.2
19	18.8	18.1	18.3	10.4	9.4	10	4.6	4.0	4.2	1.4	0.9	1.1
20	18.2	17.7	18.0	10.5	9.1	9.8	5.4	4.6	5.0	1.4	0.4	0.8
21	17.7	17.1	17.4	10.3	9.1	9.7	5.4	4.5	5.1	0.8	0.1	0.4
22	17.2	16.4	16.8	9.9	8.2	8.9	4.5	3.6	3.8	1.3	0.6	0.9
23	16.4	15.8	16.1	9.6	8.5	9.0	4.0	3.6	3.8	1.6	0.8	1.2
24	16.3	16.0	16.2	10.9	9.2	9.6	4.5	4.0	4.1	1.5	0.7	1.2
25	16.4	15.6	16.1	9.6	8.4	9.0	4.4	4.0	4.2	1.7	0.8	1.3
26	16.2	14.7	15.7	9.1	7.7	8.0	4.4	4.0	4.2	1.2	0.7	0.9
27	14.7	13.5	14.1	7.9	6.1	6.9	4.7	4.3	4.5	1.2	0.4	0.8
28	13.6	12.5	13.1	6.1	5.6	5.8	5.0	4.4	4.7	1.0	0.2	0.6
29	12.8	12.2	12.5	6.1	5.4	5.7	5.0	4.4	4.7	0.4	0.1	0.2
30	13.2	12.3	12.7	5.6	5.5	5.6	4.9	4.6	4.8	0.6	0.3	0.4
31	13.1	12.3	12.7	---	---	---	4.7	4.0	4.5	0.4	0.0	0.3
Month	22.2	12.2	17.9	16.3	5.4	11.1	8.5	2.5	4.8	4.2	0.0	2.1

03075070 MONONGAHELA RIVER AT ELIZABETH, PA—Continued

TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2008 TO SEPTEMBER 2009

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
	February			March			April			May		
1	1.1	0.3	0.6	4.2	3.3	3.7	11.4	10.2	10.5	16.3	15.3	15.7
2	1.1	0.6	0.9	3.3	2.7	3.0	11.6	10.5	11.0	16.5	15.9	16.2
3	0.8	0.4	0.5	3.0	1.7	2.6	11.4	10.8	11.2	16.4	15.6	16.0
4	0.4	0.2	0.3	3.4	2.1	2.7	11.3	10.2	10.7	15.6	14.8	15.2
5	0.3	0.1	0.2	4.3	2.6	3.2	11.6	10.5	11.0	14.8	13.1	13.9
6	0.8	0.2	0.5	6.2	3.4	4.5	11.4	10.3	10.9	13.2	12.8	13.0
7	1.2	0.6	0.8	6.7	4.7	5.3	10.3	9.5	9.9	13.7	13.0	13.3
8	1.7	1.2	1.5	6.6	5.6	6.1	10.6	9.3	9.8	13.9	13.3	13.6
9	1.9	1.3	1.6	7.3	6.6	6.8	10.8	9.7	10.2	14.6	13.8	14.2
10	2.2	1.6	1.9	6.7	6.1	6.4	10.4	10.1	10.2	15.0	14.4	14.6
11	2.5	2.1	2.3	7.0	5.8	6.4	11.1	10.1	10.5	14.9	14.4	14.6
12	3.7	2.5	3.2	6.4	5.6	6.0	10.8	9.9	10.4	15.6	14.4	14.9
13	4.0	3.7	3.8	6.4	5.2	5.9	10.4	9.6	9.9	15.4	14.7	15.0
14	4.0	3.6	3.8	6.9	6.0	6.4	9.8	9.5	9.6	15.8	15.0	15.4
15	4.2	3.8	4.0	7.2	6.7	7.0	10.0	9.7	9.9	16.8	15.5	16.0
16	4.4	3.9	4.1	7.3	6.9	7.1	10.7	9.8	10.2	17.7	16.4	17.0
17	4.5	3.9	4.2	8.6	7.1	7.7	11.0	9.7	10.3	18.7	16.2	17.2
18	4.7	4.3	4.6	10.1	7.6	8.4	11.5	10.1	10.8	18.5	16.2	17.0
19	4.7	3.9	4.4	9.9	8.4	8.9	11.3	10.8	11.0	19.2	16.5	17.5
20	4.0	3.0	3.4	8.9	8.4	8.6	11.1	11.0	11.1	24.4	17.1	19.2
21	3.9	3.2	3.5	9.4	8.1	8.5	11.5	10.9	11.1	21.9	17.9	19.3
22	3.7	2.9	3.3	10.9	8.1	9.0	11.9	11.0	11.3	23.7	18.6	20.4
23	3.2	2.8	3.0	9.3	8.2	8.7	12.5	11.2	11.6	23.6	19.3	20.6
24	3.4	2.5	2.9	9.2	8.1	8.7	13.0	11.4	12.0	22.8	20.2	21.2
25	3.8	2.8	3.2	8.8	8.5	8.6	13.6	12.2	12.8	23.4	20.5	21.5
26	4.3	3.4	3.8	8.7	8.3	8.5	15.4	13.2	13.9	24.1	21.3	22.1
27	5.1	4.0	4.3	8.8	8.0	8.4	15.6	14.0	14.5	23.8	20.4	21.7
28	4.2	3.7	4.0	9.6	8.6	9.1	16.5	14.5	15.3	23.0	20.8	21.5
29	---	---	---	10.2	9.2	9.6	15.7	15.0	15.3	22.6	21.3	21.7
30	---	---	---	9.9	9.2	9.4	15.7	14.7	15.2	23.4	20.6	21.5
31	---	---	---	10.4	9.3	9.8	---	---	---	24.6	20.9	22.2
Month	5.1	0.1	2.7	10.9	1.7	6.9	16.5	9.3	11.4	24.6	12.8	17.5

03075070 MONONGAHELA RIVER AT ELIZABETH, PA—Continued

**TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2008 TO SEPTEMBER 2009**

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
	June			July			August			September		
1	22.2	21.0	21.7	26.7	25.3	25.9	26.2	25.2	25.6	25.7	24.5	25.0
2	24.1	21.7	22.6	25.5	24.5	25.1	26.1	25.5	25.7	24.6	23.8	24.2
3	23.1	22.0	22.5	25.0	24.1	24.5	26.0	25.2	25.6	24.6	23.5	24.0
4	23.0	21.1	21.8	25.5	24.0	24.6	26.0	25.4	25.7	26.8	23.6	24.4
5	21.5	20.4	20.8	24.5	23.5	23.9	25.6	25.3	25.5	25.5	23.8	24.4
6	21.1	20.1	20.6	25.7	23.8	24.5	26.2	24.7	25.3	25.6	24.3	24.9
7	20.7	19.9	20.3	25.5	23.9	24.6	26.8	25.0	25.6	25.1	24.6	24.9
8	20.9	19.9	20.4	25.8	23.9	24.6	25.9	25.1	25.4	25.0	24.2	24.5
9	22.1	20.6	21.1	25.5	24.0	24.7	26.4	25.0	25.5	25.6	23.9	24.4
10	22.9	20.7	21.1	27.9	24.8	25.9	27.3	25.5	26.2	25.2	24.1	24.6
11	21.3	20.3	20.6	27.1	25.9	26.4	28.0	26.4	27.0	24.6	23.8	24.1
12	21.7	20.1	20.7	29.4	26.5	27.7	27.4	26.7	27.1	24.2	23.9	24.1
13	23.1	20.1	21.1	29.1	26.4	27.4	28.7	26.7	27.4	24.8	23.5	23.9
14	22.9	20.5	21.3	28.6	25.8	26.8	28.6	26.7	27.3	24.4	23.5	23.9
15	24.7	21.1	22.3	27.9	25.4	26.3	29.1	26.7	27.4	25.0	23.1	23.9
16	23.7	21.9	22.8	27.5	26.0	26.6	30.2	26.9	28.4	24.4	23.8	24.1
17	23.1	22.4	22.8	27.3	26.2	26.6	32.6	28.2	30.0	24.0	23.4	23.7
18	23.1	22.2	22.5	26.6	26.1	26.4	30.6	28.2	29.1	24.8	23.2	23.8
19	24.5	21.6	22.2	27.4	25.4	26.1	30.7	29.2	29.7	24.8	23.7	24.2
20	23.5	22.2	22.7	25.8	24.7	25.3	30.1	28.4	29.0	24.8	23.8	24.2
21	23.5	22.8	23.1	25.1	24.4	24.7	29.4	28.4	29.0	25.7	24.0	24.7
22	24.6	22.9	23.5	26.6	24.4	25.3	29.0	27.9	28.4	25.1	23.8	24.3
23	26.5	23.5	24.3	25.8	25.1	25.3	28.5	26.9	27.6	24.2	23.4	23.8
24	29.7	24.1	26.1	27.2	25.2	26.1	27.6	26.4	26.8	25.2	24.2	24.6
25	31.2	24.6	26.7	26.9	25.8	26.2	27.5	25.6	26.4	24.6	24.0	24.3
26	29.5	25.4	26.9	26.6	25.4	25.8	26.9	25.6	26.1	24.1	23.4	23.9
27	28.7	25.5	26.8	27.0	25.3	26.1	27.7	25.8	26.4	23.8	23.4	23.6
28	26.8	25.6	26.1	27.3	26.3	26.7	26.5	26.2	26.4	23.5	21.7	22.6
29	27.8	25.4	26.3	26.6	26.1	26.4	26.8	26.2	26.5	21.7	20.2	20.7
30	27.6	25.9	26.6	27.6	26.1	26.5	27.1	26.2	26.5	20.8	20.2	20.4
31	---	---	---	26.5	25.8	26.1	26.4	25.7	26.1	---	---	---
Month	31.2	19.9	22.9	29.4	23.5	25.8	32.6	24.7	26.9	26.8	20.2	23.9

	Max	Min	Mean
Year	32.6	0.0	14.6

03075070 MONONGAHELA RIVER AT ELIZABETH, PA—Continued

DISSOLVED OXYGEN, WATER, UNFILTERED, MILLIGRAMS PER LITER
WATER YEAR OCTOBER 2008 TO SEPTEMBER 2009

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
	October			November			December			January		
1	---	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	---	---	---	---
22	---	---	---	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---	---	---	---
27	---	---	---	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	---	---	---	---
29	---	---	---	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
Month	---	---	---	---	---	---	---	---	---	---	---	---

03075070 MONONGAHELA RIVER AT ELIZABETH, PA—Continued

DISSOLVED OXYGEN, WATER, UNFILTERED, MILLIGRAMS PER LITER
WATER YEAR OCTOBER 2008 TO SEPTEMBER 2009

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
	February			March			April			May		
1	---	---	---	---	---	---	---	---	---	10.2	9.8	10.0
2	---	---	---	---	---	---	---	---	---	10.0	9.8	9.9
3	---	---	---	---	---	---	---	---	---	9.8	9.4	9.5
4	---	---	---	---	---	---	---	---	---	9.9	9.3	9.7
5	---	---	---	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	10.1	9.2	9.9
11	---	---	---	---	---	---	---	---	---	10.0	9.4	9.9
12	---	---	---	---	---	---	---	---	---	10.1	9.8	10
13	---	---	---	---	---	---	---	---	---	10.3	10.0	10.2
14	---	---	---	---	---	---	---	---	---	10.2	10.1	10.2
15	---	---	---	---	---	---	---	---	---	10.2	9.9	10.1
16	---	---	---	---	---	---	---	---	---	10.1	9.6	9.9
17	---	---	---	---	---	---	---	---	---	9.8	9.4	9.6
18	---	---	---	---	---	---	---	---	---	9.7	9.4	9.6
19	---	---	---	---	---	---	---	---	---	9.7	9.2	9.5
20	---	---	---	---	---	---	---	---	---	9.8	8.5	9.5
21	---	---	---	---	---	---	---	---	---	10.0	9.3	9.6
22	---	---	---	---	---	---	---	---	---	10.4	9.4	9.7
23	---	---	---	---	---	---	---	---	---	10.0	9.5	9.7
24	---	---	---	---	---	---	---	---	---	9.9	9.2	9.6
25	---	---	---	---	---	---	---	---	---	9.6	9.0	9.4
26	---	---	---	---	---	---	---	---	---	9.1	8.5	8.8
27	---	---	---	---	---	---	---	---	---	8.9	7.8	8.6
28	---	---	---	---	---	---	---	---	---	9.1	8.3	8.7
29	---	---	---	---	---	---	---	---	---	8.9	8.2	8.5
30	---	---	---	---	---	---	---	---	---	8.8	7.9	8.4
31	---	---	---	---	---	---	---	---	---	9.1	8.3	8.7
Month	---	---	---	---	---	---	---	---	---	10.4	7.8	9.5

03075070 MONONGAHELA RIVER AT ELIZABETH, PA—Continued

DISSOLVED OXYGEN, WATER, UNFILTERED, MILLIGRAMS PER LITER
WATER YEAR OCTOBER 2008 TO SEPTEMBER 2009

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
	June			July			August			September		
1	9.2	8.3	8.8	8.0	7.0	7.4	8.1	7.2	7.6	8.0	7.3	7.7
2	9.1	8.5	8.8	7.7	7.0	7.4	8.3	7.5	7.8	8.1	7.8	7.9
3	8.9	8.4	8.6	7.7	7.2	7.4	8.3	7.6	8.0	8.2	7.7	8.0
4	8.8	7.3	8.3	7.8	7.1	7.5	8.4	7.9	8.1	8.5	7.8	8.1
5	8.8	7.7	8.3	7.9	7.4	7.6	8.3	7.9	8.0	8.9	7.9	8.3
6	8.9	8.6	8.8	8.0	7.5	7.8	8.4	7.7	8.0	8.3	7.8	8.1
7	8.9	8.4	8.7	7.9	7.3	7.6	8.5	7.8	8.1	7.9	7.4	7.6
8	9.0	7.5	8.6	7.9	7.2	7.6	8.4	7.9	8.2	8.0	7.4	7.7
9	9.0	8.4	8.8	8.0	7.4	7.7	8.1	7.6	7.9	8.5	7.5	7.8
10	9.0	8.5	8.8	8.0	7.4	7.6	8.2	7.4	7.8	8.1	7.3	7.7
11	9.0	8.3	8.8	7.9	7.4	7.6	8.2	7.2	7.7	8.2	7.5	7.8
12	8.8	8.4	8.6	7.8	6.9	7.4	7.8	7.1	7.5	8.0	6.8	7.7
13	8.7	8.4	8.6	7.6	6.9	7.3	7.9	7.0	7.5	8.5	7.6	7.9
14	8.8	7.4	8.5	8.0	6.8	7.4	8.4	7.3	7.8	8.5	7.8	8.0
15	9.0	8.3	8.6	7.9	7.0	7.6	8.0	7.3	7.7	8.9	8.3	8.6
16	9.2	8.1	8.7	7.6	7.0	7.4	7.9	7.0	7.6	8.4	7.9	8.2
17	9.0	8.3	8.7	7.8	7.0	7.4	7.7	6.7	7.3	8.1	7.6	7.8
18	8.7	8.2	8.4	7.6	7.0	7.3	7.8	6.8	7.4	8.2	7.7	7.9
19	8.6	8.2	8.4	8.3	7.0	7.5	7.6	6.7	7.1	8.0	7.7	7.8
20	8.5	7.8	8.2	7.8	6.9	7.3	7.7	6.7	7.3	8.1	7.6	7.9
21	8.4	7.9	8.2	8.6	7.3	7.7	7.2	6.7	7.0	8.0	7.6	7.8
22	8.8	8.2	8.4	8.5	7.9	8.2	7.6	6.9	7.2	7.9	7.4	7.6
23	8.8	7.9	8.3	8.2	7.2	7.8	7.4	6.9	7.2	8.0	7.5	7.7
24	8.8	7.8	8.2	8.0	7.4	7.7	7.5	6.9	7.1	8.0	7.4	7.7
25	8.7	7.6	8.1	7.9	7.3	7.7	8.2	7.2	7.6	7.7	7.4	7.5
26	8.4	7.5	8.0	8.0	7.5	7.8	8.2	7.4	7.7	7.6	7.3	7.5
27	8.2	7.3	7.7	8.3	7.4	7.7	8.0	7.2	7.6	7.5	7.3	7.4
28	7.9	7.1	7.5	8.0	7.4	7.7	7.7	7.3	7.5	7.9	7.2	7.6
29	7.7	6.8	7.5	7.8	7.2	7.6	7.6	7.1	7.3	8.2	7.6	8.0
30	7.7	6.9	7.3	7.8	7.2	7.5	8.0	7.1	7.4	8.0	7.3	7.8
31	---	---	---	7.9	7.2	7.6	8.0	7.3	7.6	---	---	---
Month	9.2	6.8	8.4	8.6	6.8	7.6	8.5	6.7	7.6	8.9	6.8	7.8