

Water-Data Report 2011

03062245 MONONGAHELA RIVER AT HILDEBRAND LOCK & DAM (UPPER), WV

Monongahela Basin
Upper Monongahela Subbasin

LOCATION.--Lat 39°34'54", long 80°00'35" referenced to North American Datum of 1927, Monongalia County, WV, Hydrologic Unit 05020003, and at mile 108 measured downstream from Pittsburgh, PA.

DRAINAGE AREA.--2,539 mi².

SURFACE-WATER RECORDS

PERIOD OF RECORD.--August 2010 to current year (annual maximum and minimum gage height).

GAGE.--Water-stage recorder with satellite telemeter. Datum of gage is 825.58 ft above NAVD 88 (VERTCON conversion of 826.00 ft above NGVD 29).

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 10.42 ft, Jan. 27, 2011; minimum, 8.12 ft, Feb. 25, 2011.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 10.42 ft, Jan. 27; minimum gage height, 8.12 ft, Feb. 25.

03062245 MONONGAHELA RIVER AT HILDEBRAND LOCK & DAM (UPPER), WV—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--May 2009 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: May 2009 to current year.

pH: May 2009 to current year.

WATER TEMPERATURE: May 2009 to current year.

DISSOLVED OXYGEN: May 2009 to current year.

INSTRUMENTATION.--Water-quality monitor May 2009 to current year. Water-quality monitor currently operated May to October.

EXTREMES FOR PERIOD OF RECORD.--

SPECIFIC CONDUCTANCE: Maximum recorded, 943 microsiemens/cm, Aug. 1, 2009; minimum recorded, 173 microsiemens/cm, June 8, 2009.

pH: Maximum recorded, 9.5 standard units, July 23, Aug. 18, 2009; minimum recorded, 6.8 standard units, Aug. 30, 31, Sept. 1, 2011.

WATER TEMPERATURE: Maximum recorded, 29.2°C, July 27, 2010; minimum recorded, 10.7°C, Nov. 13, 2009.

DISSOLVED OXYGEN: Maximum recorded, 14.2 mg/L, July 23, 2009; minimum recorded, 2.8 mg/L, July 6, 2010.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum recorded, 803 microsiemens/cm, June 19; minimum recorded, 184 microsiemens/cm, May 23.

pH: Maximum recorded, 8.6 standard units, June 4, Jul. 6; minimum recorded, 6.8 standard units, Aug. 30, 31, Sept. 1.

WATER TEMPERATURE: Maximum recorded, 28.8°C, July 30; minimum recorded, 13.0°C, Nov. 3.

DISSOLVED OXYGEN: Maximum recorded, 11.9 mg/L, June 4; minimum recorded, 3.0 mg/L, Aug. 30.

03062245 MONONGAHELA RIVER AT HILDEBRAND LOCK & DAM (UPPER), WV—Continued

**SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS
WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011**

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
	October			November			December			January		
1	577	486	534	396	376	385	---	---	---	---	---	---
2	495	480	488	434	395	411	---	---	---	---	---	---
3	524	492	510	---	---	---	---	---	---	---	---	---
4	504	448	473	---	---	---	---	---	---	---	---	---
5	524	460	497	---	---	---	---	---	---	---	---	---
6	546	460	506	---	---	---	---	---	---	---	---	---
7	561	544	553	---	---	---	---	---	---	---	---	---
8	552	536	544	---	---	---	---	---	---	---	---	---
9	537	517	523	---	---	---	---	---	---	---	---	---
10	540	521	530	---	---	---	---	---	---	---	---	---
11	542	522	534	---	---	---	---	---	---	---	---	---
12	550	514	531	---	---	---	---	---	---	---	---	---
13	528	466	485	---	---	---	---	---	---	---	---	---
14	491	458	471	---	---	---	---	---	---	---	---	---
15	472	449	458	---	---	---	---	---	---	---	---	---
16	528	468	505	---	---	---	---	---	---	---	---	---
17	508	468	477	---	---	---	---	---	---	---	---	---
18	504	470	491	---	---	---	---	---	---	---	---	---
19	510	485	498	---	---	---	---	---	---	---	---	---
20	501	414	438	---	---	---	---	---	---	---	---	---
21	480	418	449	---	---	---	---	---	---	---	---	---
22	531	470	493	---	---	---	---	---	---	---	---	---
23	486	343	446	---	---	---	---	---	---	---	---	---
24	397	319	345	---	---	---	---	---	---	---	---	---
25	322	316	319	---	---	---	---	---	---	---	---	---
26	342	318	330	---	---	---	---	---	---	---	---	---
27	345	337	339	---	---	---	---	---	---	---	---	---
28	348	344	346	---	---	---	---	---	---	---	---	---
29	349	334	341	---	---	---	---	---	---	---	---	---
30	378	346	362	---	---	---	---	---	---	---	---	---
31	385	360	374	---	---	---	---	---	---	---	---	---
Month	577	316	458	---	---	---	---	---	---	---	---	---

03062245 MONONGAHELA RIVER AT HILDEBRAND LOCK & DAM (UPPER), WV—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS
WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
	February			March			April			May		
1	---	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---	362	335	351
5	---	---	---	---	---	---	---	---	---	410	348	370
6	---	---	---	---	---	---	---	---	---	407	261	343
7	---	---	---	---	---	---	---	---	---	261	244	248
8	---	---	---	---	---	---	---	---	---	248	222	238
9	---	---	---	---	---	---	---	---	---	223	218	221
10	---	---	---	---	---	---	---	---	---	224	217	221
11	---	---	---	---	---	---	---	---	---	222	216	220
12	---	---	---	---	---	---	---	---	---	250	222	237
13	---	---	---	---	---	---	---	---	---	278	240	255
14	---	---	---	---	---	---	---	---	---	381	278	333
15	---	---	---	---	---	---	---	---	---	509	363	429
16	---	---	---	---	---	---	---	---	---	510	402	445
17	---	---	---	---	---	---	---	---	---	410	380	395
18	---	---	---	---	---	---	---	---	---	406	332	361
19	---	---	---	---	---	---	---	---	---	356	230	268
20	---	---	---	---	---	---	---	---	---	233	195	207
21	---	---	---	---	---	---	---	---	---	196	187	190
22	---	---	---	---	---	---	---	---	---	187	185	186
23	---	---	---	---	---	---	---	---	---	212	184	193
24	---	---	---	---	---	---	---	---	---	232	212	223
25	---	---	---	---	---	---	---	---	---	264	225	236
26	---	---	---	---	---	---	---	---	---	295	259	285
27	---	---	---	---	---	---	---	---	---	329	289	313
28	---	---	---	---	---	---	---	---	---	388	329	364
29	---	---	---	---	---	---	---	---	---	383	324	349
30	---	---	---	---	---	---	---	---	---	368	294	343
31	---	---	---	---	---	---	---	---	---	299	270	282
Month	---	---	---	---	---	---	---	---	---	---	---	---

03062245 MONONGAHELA RIVER AT HILDEBRAND LOCK & DAM (UPPER), WV—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS
WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
	June			July			August			September		
1	274	261	266	501	476	485	501	473	488	557	525	541
2	282	273	279	490	437	471	494	412	460	534	515	526
3	290	279	285	464	436	448	437	383	410	526	511	517
4	289	284	286	540	442	485	390	332	350	590	518	535
5	299	283	288	588	506	552	351	332	337	722	361	571
6	310	291	300	584	532	562	351	334	343	448	350	380
7	328	298	311	583	556	571	746	340	458	354	238	265
8	351	324	337	564	522	547	480	362	391	281	241	260
9	369	329	348	---	---	---	601	472	542	282	239	261
10	460	337	385	---	---	---	602	420	529	239	233	236
11	561	429	522	---	---	---	444	353	384	253	234	242
12	589	520	547	---	---	---	361	351	356	253	241	248
13	601	526	546	589	526	567	363	352	358	246	237	242
14	637	552	586	532	487	511	388	363	373	253	237	245
15	636	613	622	519	452	505	439	388	415	318	253	269
16	706	630	662	506	436	477	470	439	462	390	285	316
17	760	674	720	461	345	409	469	453	462	345	306	319
18	771	668	729	396	356	373	456	386	422	394	342	367
19	803	522	718	391	324	359	413	376	398	476	394	439
20	525	494	506	399	348	366	424	385	401	487	436	471
21	569	517	555	387	363	375	441	413	425	441	413	422
22	569	508	546	421	380	390	556	437	476	444	392	426
23	554	480	506	426	384	399	508	474	491	406	374	387
24	495	472	483	459	393	416	514	490	499	419	384	397
25	485	435	453	463	441	447	495	483	489	459	408	428
26	474	440	457	702	456	574	585	484	531	458	418	437
27	478	432	458	594	496	529	586	529	559	471	417	442
28	446	417	430	530	474	489	570	528	546	529	410	453
29	591	427	474	587	485	545	568	549	563	426	388	413
30	504	480	489	596	550	575	564	560	561	473	387	423
31	---	---	---	570	476	524	567	541	560	---	---	---
Month	803	261	470	---	---	---	746	332	453	722	233	383

03062245 MONONGAHELA RIVER AT HILDEBRAND LOCK & DAM (UPPER), WV—Continued

pH, WATER, UNFILTERED, FIELD, STANDARD UNITS
WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011

Day	Max	Min	Median	Max	Min	Median	Max	Min	Median	Max	Min	Median
	October			November			December			January		
1	7.2	7.0	7.1	7.8	7.2	7.3	---	---	---	---	---	---
2	7.3	7.0	7.1	7.8	7.2	7.3	---	---	---	---	---	---
3	7.1	7.0	7.1	---	---	---	---	---	---	---	---	---
4	7.1	7.0	7.0	---	---	---	---	---	---	---	---	---
5	7.1	7.0	7.0	---	---	---	---	---	---	---	---	---
6	7.1	7.0	7.1	---	---	---	---	---	---	---	---	---
7	7.3	7.1	7.2	---	---	---	---	---	---	---	---	---
8	7.6	7.3	7.4	---	---	---	---	---	---	---	---	---
9	7.7	7.4	7.4	---	---	---	---	---	---	---	---	---
10	7.7	7.4	7.5	---	---	---	---	---	---	---	---	---
11	7.7	7.4	7.5	---	---	---	---	---	---	---	---	---
12	7.7	7.4	7.5	---	---	---	---	---	---	---	---	---
13	7.9	7.5	7.6	---	---	---	---	---	---	---	---	---
14	7.9	7.5	7.6	---	---	---	---	---	---	---	---	---
15	7.9	7.5	7.6	---	---	---	---	---	---	---	---	---
16	7.8	7.4	7.5	---	---	---	---	---	---	---	---	---
17	7.8	7.5	7.5	---	---	---	---	---	---	---	---	---
18	7.6	7.3	7.4	---	---	---	---	---	---	---	---	---
19	7.6	7.4	7.4	---	---	---	---	---	---	---	---	---
20	7.8	7.3	7.4	---	---	---	---	---	---	---	---	---
21	7.7	7.3	7.4	---	---	---	---	---	---	---	---	---
22	7.8	7.3	7.4	---	---	---	---	---	---	---	---	---
23	7.6	7.3	7.3	---	---	---	---	---	---	---	---	---
24	7.8	7.2	7.3	---	---	---	---	---	---	---	---	---
25	7.3	7.2	7.3	---	---	---	---	---	---	---	---	---
26	7.5	7.2	7.2	---	---	---	---	---	---	---	---	---
27	7.6	7.2	7.2	---	---	---	---	---	---	---	---	---
28	7.6	7.1	7.2	---	---	---	---	---	---	---	---	---
29	7.3	7.2	7.2	---	---	---	---	---	---	---	---	---
30	7.8	7.2	7.3	---	---	---	---	---	---	---	---	---
31	7.8	7.2	7.3	---	---	---	---	---	---	---	---	---
Max	7.9	7.5	7.6	---	---	---	---	---	---	---	---	---
Min	7.1	7.0	7.0	---	---	---	---	---	---	---	---	---

03062245 MONONGAHELA RIVER AT HILDEBRAND LOCK & DAM (UPPER), WV—Continued

pH, WATER, UNFILTERED, FIELD, STANDARD UNITS
WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011

Day	Max	Min	Median	Max	Min	Median	Max	Min	Median	Max	Min	Median
	February			March			April			May		
1	---	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---	8.2	8.1	8.1
5	---	---	---	---	---	---	---	---	---	8.3	8.1	8.2
6	---	---	---	---	---	---	---	---	---	8.3	8.0	8.1
7	---	---	---	---	---	---	---	---	---	8.0	7.8	7.9
8	---	---	---	---	---	---	---	---	---	7.9	7.8	7.8
9	---	---	---	---	---	---	---	---	---	7.8	7.7	7.7
10	---	---	---	---	---	---	---	---	---	7.8	7.6	7.7
11	---	---	---	---	---	---	---	---	---	7.7	7.6	7.6
12	---	---	---	---	---	---	---	---	---	7.6	7.5	7.6
13	---	---	---	---	---	---	---	---	---	7.6	7.4	7.5
14	---	---	---	---	---	---	---	---	---	7.6	7.5	7.5
15	---	---	---	---	---	---	---	---	---	7.7	7.5	7.6
16	---	---	---	---	---	---	---	---	---	7.6	7.5	7.6
17	---	---	---	---	---	---	---	---	---	7.6	7.4	7.5
18	---	---	---	---	---	---	---	---	---	7.7	7.5	7.5
19	---	---	---	---	---	---	---	---	---	7.5	7.3	7.4
20	---	---	---	---	---	---	---	---	---	7.5	7.3	7.4
21	---	---	---	---	---	---	---	---	---	7.4	7.3	7.3
22	---	---	---	---	---	---	---	---	---	7.4	7.3	7.3
23	---	---	---	---	---	---	---	---	---	7.4	7.3	7.3
24	---	---	---	---	---	---	---	---	---	7.4	7.3	7.3
25	---	---	---	---	---	---	---	---	---	7.3	7.2	7.3
26	---	---	---	---	---	---	---	---	---	7.4	7.2	7.3
27	---	---	---	---	---	---	---	---	---	7.5	7.3	7.4
28	---	---	---	---	---	---	---	---	---	7.6	7.3	7.4
29	---	---	---	---	---	---	---	---	---	7.4	7.3	7.4
30	---	---	---	---	---	---	---	---	---	7.5	7.3	7.4
31	---	---	---	---	---	---	---	---	---	7.4	7.3	7.3
Max	---	---	---	---	---	---	---	---	---	---	---	---
Min	---	---	---	---	---	---	---	---	---	---	---	---

03062245 MONONGAHELA RIVER AT HILDEBRAND LOCK & DAM (UPPER), WV—Continued

pH, WATER, UNFILTERED, FIELD, STANDARD UNITS
WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011

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

03062245 MONONGAHELA RIVER AT HILDEBRAND LOCK & DAM (UPPER), WV—Continued

TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
	October			November			December			January		
1	21.4	20.9	21.2	13.6	13.4	13.5	---	---	---	---	---	---
2	20.9	20.6	20.8	13.4	13.1	13.2	---	---	---	---	---	---
3	20.8	20.3	20.6	---	---	---	---	---	---	---	---	---
4	20.3	19.5	19.9	---	---	---	---	---	---	---	---	---
5	19.5	18.7	19.1	---	---	---	---	---	---	---	---	---
6	18.7	17.9	18.3	---	---	---	---	---	---	---	---	---
7	17.9	17.7	17.8	---	---	---	---	---	---	---	---	---
8	18.1	17.6	17.7	---	---	---	---	---	---	---	---	---
9	17.8	17.3	17.5	---	---	---	---	---	---	---	---	---
10	17.9	17.2	17.4	---	---	---	---	---	---	---	---	---
11	17.7	17.1	17.3	---	---	---	---	---	---	---	---	---
12	17.5	17.1	17.3	---	---	---	---	---	---	---	---	---
13	17.6	17.1	17.4	---	---	---	---	---	---	---	---	---
14	17.4	16.9	17.1	---	---	---	---	---	---	---	---	---
15	16.9	16.5	16.8	---	---	---	---	---	---	---	---	---
16	16.5	16.1	16.3	---	---	---	---	---	---	---	---	---
17	16.8	16.2	16.4	---	---	---	---	---	---	---	---	---
18	16.6	16.0	16.2	---	---	---	---	---	---	---	---	---
19	16.2	15.8	16.0	---	---	---	---	---	---	---	---	---
20	16.2	15.7	15.9	---	---	---	---	---	---	---	---	---
21	15.9	15.2	15.5	---	---	---	---	---	---	---	---	---
22	15.4	15.0	15.2	---	---	---	---	---	---	---	---	---
23	15.3	14.7	14.9	---	---	---	---	---	---	---	---	---
24	14.9	14.4	14.6	---	---	---	---	---	---	---	---	---
25	14.6	14.4	14.4	---	---	---	---	---	---	---	---	---
26	15.2	14.4	14.7	---	---	---	---	---	---	---	---	---
27	15.7	14.9	15.1	---	---	---	---	---	---	---	---	---
28	15.3	14.9	15.0	---	---	---	---	---	---	---	---	---
29	14.9	14.3	14.7	---	---	---	---	---	---	---	---	---
30	14.3	13.9	14.1	---	---	---	---	---	---	---	---	---
31	13.9	13.5	13.7	---	---	---	---	---	---	---	---	---
Month	21.4	13.5	16.7	---	---	---	---	---	---	---	---	---

03062245 MONONGAHELA RIVER AT HILDEBRAND LOCK & DAM (UPPER), WV—Continued

TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
	February			March			April			May		
1	---	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---	14.7	14.0	14.3
5	---	---	---	---	---	---	---	---	---	14.6	14.0	14.2
6	---	---	---	---	---	---	---	---	---	14.0	13.3	13.6
7	---	---	---	---	---	---	---	---	---	14.0	13.4	13.7
8	---	---	---	---	---	---	---	---	---	14.6	13.7	14.1
9	---	---	---	---	---	---	---	---	---	15.2	14.0	14.5
10	---	---	---	---	---	---	---	---	---	15.9	14.5	15.1
11	---	---	---	---	---	---	---	---	---	16.4	15.2	15.7
12	---	---	---	---	---	---	---	---	---	16.9	16.4	16.6
13	---	---	---	---	---	---	---	---	---	17.4	16.5	16.8
14	---	---	---	---	---	---	---	---	---	18.4	17.1	17.7
15	---	---	---	---	---	---	---	---	---	19.1	18.2	18.6
16	---	---	---	---	---	---	---	---	---	18.9	18.4	18.7
17	---	---	---	---	---	---	---	---	---	18.4	17.4	18.0
18	---	---	---	---	---	---	---	---	---	17.4	14.9	16.1
19	---	---	---	---	---	---	---	---	---	14.9	14.5	14.7
20	---	---	---	---	---	---	---	---	---	15.1	14.6	14.9
21	---	---	---	---	---	---	---	---	---	15.9	14.9	15.4
22	---	---	---	---	---	---	---	---	---	16.6	15.4	16.0
23	---	---	---	---	---	---	---	---	---	17.2	15.8	16.4
24	---	---	---	---	---	---	---	---	---	17.2	16.9	17.1
25	---	---	---	---	---	---	---	---	---	18.1	17.1	17.3
26	---	---	---	---	---	---	---	---	---	19.5	17.9	18.7
27	---	---	---	---	---	---	---	---	---	19.9	18.7	19.2
28	---	---	---	---	---	---	---	---	---	20.9	19.4	20.0
29	---	---	---	---	---	---	---	---	---	20.5	20.0	20.2
30	---	---	---	---	---	---	---	---	---	20.6	19.9	20.2
31	---	---	---	---	---	---	---	---	---	20.5	19.8	20.2
Month	---	---	---	---	---	---	---	---	---	---	---	---

03062245 MONONGAHELA RIVER AT HILDEBRAND LOCK & DAM (UPPER), WV—Continued

TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
	June			July			August			September		
1	20.8	20.3	20.6	23.7	23.0	23.3	27.8	27.4	27.6	25.1	24.1	24.5
2	21.4	20.5	20.9	23.8	23.0	23.2	28.1	27.3	27.5	25.1	24.3	24.6
3	21.2	20.7	21.0	23.9	22.9	23.3	28.5	27.0	27.7	25.8	24.4	24.9
4	22.2	20.9	21.5	24.5	23.2	23.8	28.1	27.2	27.5	26.2	24.9	25.3
5	22.1	20.8	21.4	25.5	24.1	24.6	28.0	27.1	27.6	26.0	24.1	24.8
6	22.5	21.5	22.0	26.2	24.8	25.3	28.5	27.4	27.8	24.2	20.0	22.8
7	22.9	21.9	22.5	26.2	25.6	25.9	28.2	26.8	27.3	20.0	18.7	19.0
8	22.4	22.0	22.2	26.8	25.4	26.0	26.8	26.0	26.4	19.2	18.7	18.9
9	23.6	21.9	22.4	---	---	---	26.2	25.9	26.0	20.9	19.2	19.8
10	25.4	22.1	23.1	---	---	---	26.0	25.2	25.5	21.0	20.9	20.9
11	25.2	23.9	24.5	---	---	---	25.5	24.9	25.1	21.4	20.9	21.0
12	25.5	24.1	24.9	---	---	---	25.5	24.9	25.1	21.8	21.1	21.3
13	25.0	24.2	24.7	26.9	26.0	26.5	25.5	24.8	25.0	22.2	21.1	21.3
14	24.5	23.9	24.3	26.6	25.5	26.0	25.2	24.7	24.9	22.2	21.2	21.6
15	24.3	23.6	23.9	25.6	25.2	25.4	25.1	24.5	24.7	21.7	21.0	21.4
16	24.6	23.8	24.1	25.5	24.9	25.3	24.9	24.5	24.7	21.0	20.2	20.4
17	24.8	24.2	24.4	25.4	24.7	25.1	25.0	24.6	24.8	20.2	19.7	19.9
18	24.7	23.8	24.3	26.6	24.6	25.5	25.2	24.5	24.8	20.1	19.4	19.6
19	24.1	23.3	23.8	26.7	24.8	25.6	26.0	24.5	25.0	19.5	18.9	19.2
20	23.3	22.2	22.6	26.2	25.2	25.8	25.7	24.8	25.4	18.9	17.9	18.5
21	23.8	22.2	22.6	27.5	25.9	26.7	25.8	25.1	25.4	18.0	17.6	17.7
22	25.2	22.5	23.5	27.2	26.2	26.8	25.6	25.0	25.4	18.6	17.7	17.9
23	24.5	22.4	23.5	27.6	26.2	27.0	25.4	24.9	25.1	18.8	18.2	18.5
24	24.3	23.2	23.5	27.4	26.6	27.0	25.7	25.0	25.2	19.0	18.6	18.8
25	23.3	22.9	23.1	27.7	27.2	27.4	25.5	24.9	25.2	19.1	18.7	18.9
26	23.3	22.7	22.9	28.2	26.8	27.3	25.8	24.8	25.0	20.3	18.8	19.4
27	23.4	22.7	23.0	28.1	27.5	27.7	25.9	25.2	25.5	20.4	19.4	19.9
28	25.3	22.9	23.6	28.5	27.2	27.6	25.3	24.8	25.0	20.6	20.1	20.2
29	24.9	23.1	23.8	28.0	27.2	27.6	24.9	24.4	24.6	20.6	20.0	20.3
30	24.9	23.4	24.0	28.8	27.6	27.9	24.4	24.0	24.2	20.5	19.8	20.2
31	---	---	---	28.3	27.4	27.7	24.8	24.2	24.4	---	---	---
Month	25.5	20.3	23.1	---	---	---	28.5	24.0	25.7	26.2	17.6	20.7

03062245 MONONGAHELA RIVER AT HILDEBRAND LOCK & DAM (UPPER), WV—Continued

DISSOLVED OXYGEN, WATER, UNFILTERED, MILLIGRAMS PER LITER
WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
	October			November			December			January		
1	6.9	5.9	6.4	9.1	8.5	8.9	---	---	---	---	---	---
2	6.8	4.8	6.0	9.0	8.2	8.6	---	---	---	---	---	---
3	6.2	4.8	5.7	---	---	---	---	---	---	---	---	---
4	6.7	4.6	6.0	---	---	---	---	---	---	---	---	---
5	7.0	5.6	6.3	---	---	---	---	---	---	---	---	---
6	7.1	6.3	6.6	---	---	---	---	---	---	---	---	---
7	7.2	6.4	6.9	---	---	---	---	---	---	---	---	---
8	7.8	6.8	7.2	---	---	---	---	---	---	---	---	---
9	7.8	7.0	7.5	---	---	---	---	---	---	---	---	---
10	8.1	7.3	7.6	---	---	---	---	---	---	---	---	---
11	8.1	7.2	7.5	---	---	---	---	---	---	---	---	---
12	8.0	7.1	7.6	---	---	---	---	---	---	---	---	---
13	9.2	7.6	8.5	---	---	---	---	---	---	---	---	---
14	9.6	7.8	8.7	---	---	---	---	---	---	---	---	---
15	9.1	8.4	8.8	---	---	---	---	---	---	---	---	---
16	8.8	8.0	8.4	---	---	---	---	---	---	---	---	---
17	9.7	8.4	8.9	---	---	---	---	---	---	---	---	---
18	9.1	8.2	8.5	---	---	---	---	---	---	---	---	---
19	9.3	8.2	8.7	---	---	---	---	---	---	---	---	---
20	9.6	8.2	8.7	---	---	---	---	---	---	---	---	---
21	8.4	7.9	8.2	---	---	---	---	---	---	---	---	---
22	8.8	7.6	8.2	---	---	---	---	---	---	---	---	---
23	8.8	7.9	8.3	---	---	---	---	---	---	---	---	---
24	9.2	8.1	8.7	---	---	---	---	---	---	---	---	---
25	9.0	7.9	8.6	---	---	---	---	---	---	---	---	---
26	9.0	7.8	8.6	---	---	---	---	---	---	---	---	---
27	8.8	8.0	8.5	---	---	---	---	---	---	---	---	---
28	8.9	8.3	8.5	---	---	---	---	---	---	---	---	---
29	8.8	8.3	8.6	---	---	---	---	---	---	---	---	---
30	9.5	8.5	8.9	---	---	---	---	---	---	---	---	---
31	9.1	8.6	8.9	---	---	---	---	---	---	---	---	---
Month	9.7	4.6	7.9	---	---	---	---	---	---	---	---	---

03062245 MONONGAHELA RIVER AT HILDEBRAND LOCK & DAM (UPPER), WV—Continued

DISSOLVED OXYGEN, WATER, UNFILTERED, MILLIGRAMS PER LITER
WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
	February			March			April			May		
1	---	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---	10.5	10.3	10.4
5	---	---	---	---	---	---	---	---	---	10.5	10.3	10.4
6	---	---	---	---	---	---	---	---	---	10.9	10.4	10.7
7	---	---	---	---	---	---	---	---	---	10.9	10.7	10.8
8	---	---	---	---	---	---	---	---	---	10.9	10.6	10.7
9	---	---	---	---	---	---	---	---	---	10.8	10.6	10.7
10	---	---	---	---	---	---	---	---	---	10.7	10.5	10.6
11	---	---	---	---	---	---	---	---	---	10.6	10.3	10.5
12	---	---	---	---	---	---	---	---	---	10.5	9.9	10.2
13	---	---	---	---	---	---	---	---	---	10.0	9.7	9.8
14	---	---	---	---	---	---	---	---	---	9.9	9.4	9.7
15	---	---	---	---	---	---	---	---	---	9.7	9.3	9.4
16	---	---	---	---	---	---	---	---	---	9.4	8.7	8.9
17	---	---	---	---	---	---	---	---	---	9.2	8.8	9.0
18	---	---	---	---	---	---	---	---	---	10.3	9.0	9.8
19	---	---	---	---	---	---	---	---	---	10.6	10.3	10.5
20	---	---	---	---	---	---	---	---	---	10.7	10.6	10.6
21	---	---	---	---	---	---	---	---	---	10.7	10.4	10.6
22	---	---	---	---	---	---	---	---	---	10.7	10.4	10.6
23	---	---	---	---	---	---	---	---	---	10.5	10.1	10.4
24	---	---	---	---	---	---	---	---	---	10.1	9.6	9.9
25	---	---	---	---	---	---	---	---	---	9.7	9.0	9.5
26	---	---	---	---	---	---	---	---	---	9.4	8.9	9.1
27	---	---	---	---	---	---	---	---	---	9.5	8.8	9.1
28	---	---	---	---	---	---	---	---	---	9.3	8.7	8.9
29	---	---	---	---	---	---	---	---	---	8.9	8.6	8.7
30	---	---	---	---	---	---	---	---	---	9.6	8.8	9.0
31	---	---	---	---	---	---	---	---	---	9.4	9.0	9.2
Month	---	---	---	---	---	---	---	---	---	---	---	---

03062245 MONONGAHELA RIVER AT HILDEBRAND LOCK & DAM (UPPER), WV—Continued

DISSOLVED OXYGEN, WATER, UNFILTERED, MILLIGRAMS PER LITER
WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
	June			July			August			September		
1	9.3	9.0	9.2	8.4	6.2	7.2	8.6	6.2	7.4	9.8	3.5	5.6
2	9.4	8.3	9.1	9.6	5.9	7.3	9.3	5.8	7.6	8.6	4.3	6.2
3	9.6	8.7	9.2	9.9	6.9	8.3	8.7	6.2	7.3	9.3	5.3	7.5
4	11.9	9.0	10.5	9.9	7.0	8.5	7.8	6.4	7.2	8.8	5.3	7.0
5	10.6	8.7	9.6	11.3	7.1	8.7	8.8	6.4	7.8	8.0	4.9	6.1
6	9.9	8.8	9.5	11.6	8.3	9.6	8.6	6.6	7.7	8.0	6.2	7.0
7	10.4	9.1	9.6	10.4	8.2	9.6	8.3	5.7	6.8	8.3	7.7	8.1
8	10.2	7.9	8.8	10.0	7.8	8.9	6.8	5.9	6.4	8.9	8.2	8.5
9	11.8	8.0	9.5	---	---	---	7.1	6.2	6.6	9.0	8.5	8.8
10	11.5	9.4	10.5	---	---	---	6.9	5.9	6.3	8.7	8.3	8.5
11	11.0	8.7	9.7	---	---	---	6.7	5.8	6.3	8.7	7.9	8.4
12	10.2	8.4	9.1	---	---	---	7.5	6.1	6.7	8.4	7.8	8.1
13	9.2	7.2	8.5	8.9	6.0	7.2	7.6	5.2	6.1	8.3	7.6	7.9
14	8.7	6.5	7.9	8.9	5.8	7.8	8.5	5.0	6.0	8.3	7.5	7.9
15	8.2	7.1	7.6	8.4	6.0	7.1	7.4	5.8	6.5	8.1	7.4	7.8
16	8.7	5.8	7.3	8.6	5.9	7.2	7.9	6.6	7.4	8.9	7.6	8.2
17	8.7	7.1	8.0	9.0	6.2	7.6	9.0	6.3	7.7	8.9	8.1	8.5
18	8.1	6.3	7.3	8.9	6.4	7.8	9.6	6.8	7.9	9.2	8.0	8.5
19	7.9	6.0	7.0	8.0	6.5	7.3	10.4	5.8	7.6	9.0	8.3	8.7
20	7.7	6.5	7.0	8.2	6.2	7.1	10.5	6.5	8.9	8.8	7.9	8.3
21	8.2	6.3	7.1	9.2	7.0	8.0	9.0	6.5	7.7	8.4	7.4	7.9
22	8.7	6.1	7.4	10.0	7.5	8.2	8.5	5.2	6.7	9.3	7.4	8.3
23	8.9	6.3	7.5	8.9	7.0	7.9	8.0	6.2	7.3	9.2	7.6	8.7
24	8.2	7.0	7.5	9.5	5.7	7.4	8.3	6.0	7.1	9.1	8.4	8.7
25	7.7	6.8	7.3	8.6	6.8	7.4	8.0	6.4	7.3	9.2	7.9	8.4
26	8.5	5.9	6.9	7.9	5.8	6.7	7.8	5.2	6.6	9.8	7.6	8.4
27	9.8	6.1	8.0	8.6	6.9	7.8	8.5	5.8	7.1	9.3	7.6	8.3
28	10.6	6.9	8.4	8.9	6.0	6.9	7.4	4.9	6.3	8.7	8.3	8.5
29	9.3	6.1	7.7	9.2	5.1	7.3	6.3	4.0	5.2	8.7	7.7	8.3
30	9.7	6.8	8.0	9.7	7.1	8.2	5.2	3.0	4.3	8.3	6.7	8.0
31	---	---	---	11.8	6.2	8.3	7.6	3.5	5.2	---	---	---
Month	11.9	5.8	8.4	---	---	---	10.5	3.0	6.9	9.8	3.5	8.0