

0208114150 ROANOKE RIVER AT NORTH CAROLINA HIGHWAY 45 NEAR WESTOVER, NC

Roanoke Basin
Lower Roanoke Subbasin

LOCATION.--Lat 35°54'54", long 76°43'22" referenced to North American Datum of 1983, Washington County, NC, Hydrologic Unit 03010107, elevation gage on right bank 10 ft upstream from North Carolina Highway 45 bridge. Water-quality monitor located near center of river on south bridge fender of shipping channel, 10 ft upstream from North Carolina Highway 45 bridge, approximately 1.6 mi upstream from mouth, and 2.7 mi northwest of Westover.

DRAINAGE AREA.--9,660 mi².

SURFACE-WATER RECORDS

PERIOD OF RECORD.--October 1990 to September 1993. August 1996 to current year. Records from August 1996 to September 1997 are unpublished and available from the USGS Water Science Center, Raleigh, NC.

GAGE.--Water-stage recorder. Datum of gage is at National Geodetic Vertical Datum of 1929. Satellite telemetry at streamgage.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation, 6.49 ft, August 27, 2011; minimum elevation, -1.20 ft, September 1, 1993.

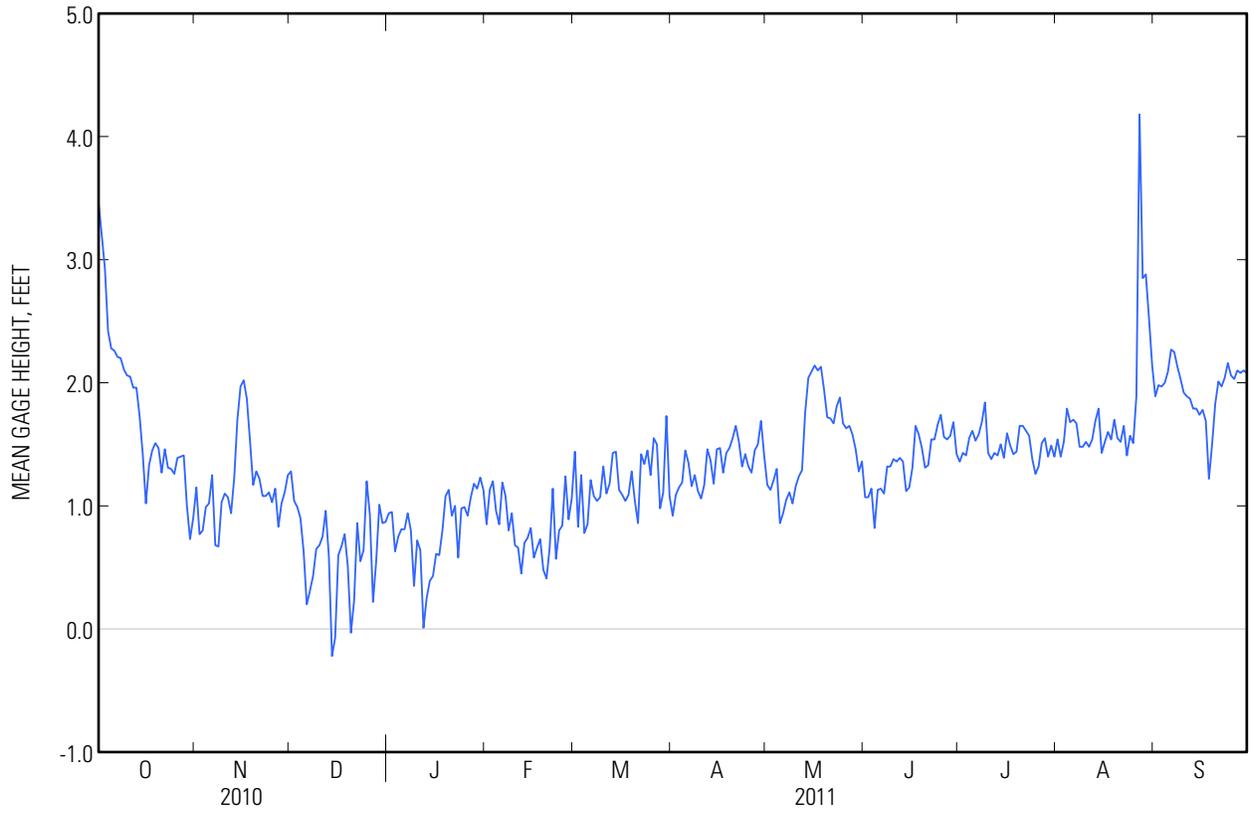
EXTREMES FOR CURRENT YEAR.--Maximum elevation, 6.49 ft, August 27; minimum elevation, -0.57 ft, December 14.

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GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011
DAILY MEAN VALUES

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	3.46	1.15	1.28	0.94	0.85	1.44	0.92	1.17	1.07	1.36	1.54	1.89
2	3.20	0.77	1.04	0.95	1.13	0.83	1.09	1.13	1.07	1.43	1.40	1.98
3	2.93	0.80	0.99	0.63	1.20	1.25	1.15	1.21	1.14	1.41	1.52	1.97
4	2.42	0.99	0.90	0.75	0.96	0.78	1.19	1.30	0.82	1.55	1.79	2.00
5	2.28	1.02	0.63	0.81	0.85	0.85	1.45	0.86	1.13	1.61	1.68	2.09
6	2.26	1.25	0.20	0.81	1.19	1.21	1.35	0.94	1.14	1.53	1.70	2.27
7	2.21	0.68	0.31	0.94	1.08	1.08	1.16	1.05	1.10	1.58	1.67	2.25
8	2.20	0.67	0.43	0.80	0.80	1.04	1.25	1.11	1.32	1.68	1.48	2.13
9	2.11	1.03	0.65	0.35	0.94	1.07	1.12	1.02	1.32	1.84	1.48	2.03
10	2.06	1.10	0.68	0.72	0.68	1.32	1.06	1.16	1.38	1.43	1.52	1.92
11	2.05	1.07	0.75	0.64	0.66	1.10	1.17	1.24	1.36	1.38	1.48	1.89
12	1.96	0.94	0.96	0.01	0.45	1.18	1.46	1.29	1.39	1.43	1.54	1.87
13	1.96	1.23	0.59	0.25	0.70	1.43	1.37	1.76	1.36	1.41	1.69	1.79
14	1.73	1.70	-0.22	0.39	0.74	1.44	1.18	2.04	1.12	1.50	1.79	1.79
15	1.42	1.97	-0.07	0.43	0.82	1.13	1.46	2.09	1.15	1.39	1.43	1.74
16	1.02	2.02	0.60	0.61	0.58	1.09	1.47	2.14	1.31	1.59	1.52	1.78
17	1.33	1.87	0.67	0.60	0.66	1.04	1.27	2.10	1.65	1.49	1.60	1.69
18	1.45	1.53	0.77	0.80	0.73	1.09	1.43	2.13	1.58	1.42	1.54	1.22
19	1.51	1.17	0.51	1.08	0.48	1.28	1.47	1.94	1.47	1.44	1.70	1.50
20	1.47	1.28	-0.03	1.13	0.41	1.04	1.55	1.72	1.31	1.65	1.55	1.83
21	1.27	1.22	0.23	0.92	0.66	0.86	1.65	1.71	1.33	1.65	1.52	2.01
22	1.46	1.08	0.86	1.00	1.14	1.42	1.52	1.67	1.54	1.61	1.65	1.97
23	1.31	1.08	0.55	0.58	0.57	1.34	1.32	1.81	1.54	1.57	1.41	2.04
24	1.30	1.11	0.64	0.98	0.80	1.45	1.42	1.88	1.66	1.38	1.57	2.16
25	1.26	1.03	1.20	0.99	0.84	1.25	1.32	1.67	1.74	1.26	1.51	2.06
26	1.39	1.14	0.93	0.92	1.24	1.55	1.27	1.63	1.56	1.32	1.89	2.03
27	1.40	0.83	0.22	1.07	0.89	1.50	1.45	1.65	1.54	1.51	4.18	2.10
28	1.41	1.02	0.55	1.18	1.06	0.98	1.50	1.58	1.57	1.55	2.85	2.08
29	1.00	1.11	1.01	1.14	---	1.11	1.69	1.46	1.68	1.40	2.88	2.10
30	0.73	1.25	0.86	1.23	---	1.73	1.41	1.28	1.42	1.49	2.52	2.08
31	0.90	---	0.87	1.13	---	1.08	---	1.36	---	1.40	2.14	---
Total	54.46	35.11	19.56	24.78	23.11	36.96	40.12	47.10	40.77	46.26	55.74	58.26
Mean	1.76	1.17	0.63	0.80	0.83	1.19	1.34	1.52	1.36	1.49	1.80	1.94
Max	3.46	2.02	1.28	1.23	1.24	1.73	1.69	2.14	1.74	1.84	4.18	2.27
Min	0.73	0.67	-0.22	0.01	0.41	0.78	0.92	0.86	0.82	1.26	1.40	1.22

0208114150 ROANOKE RIVER AT NORTH CAROLINA HIGHWAY 45 NEAR WESTOVER, NC—Continued



0208114150 ROANOKE RIVER AT NORTH CAROLINA HIGHWAY 45 NEAR WESTOVER, NC—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1998 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE (TOP): May 2000 to current year.

SPECIFIC CONDUCTANCE (BOTTOM): November 1997 to current year

pH (TOP): May 2000 to current year.

pH (BOTTOM): November 1997 to current year.

WATER TEMPERATURE (TOP): May 2000 to current year.

WATER TEMPERATURE (BOTTOM): November 1997 to current year.

DISSOLVED OXYGEN (TOP): May 2000 to current year.

DISSOLVED OXYGEN (BOTTOM): November 1997 to current year.

DISSOLVED OXYGEN, PERCENT SATURATION (TOP): May 2000 to current year.

DISSOLVED OXYGEN, PERCENT SATURATION (BOTTOM): November 1997 to current year.

INSTRUMENTATION.--Water-quality monitor with satellite telemetry from March 1998 to current year.

REMARKS.--Station operated to define water-quality characteristics in the Roanoke River Basin below Roanoke Rapids Dam. Top constituents were monitored at approximately 18 ft above the streambed and bottom constituents, 2 ft above the streambed. Dissolved oxygen, percent saturation is computed using a barometric pressure of 760 mm Hg beginning October 1, 2000. Water-quality measurements and samples for water years 2006 to 2008 were collected by the U.S. Geological Survey and the North Carolina Department of Environment and Natural Resources, Division of Water Quality.

COOPERATION.--Station operated in cooperation with North Carolina Department of Environment and Natural Resources (NCDENR), Division of Water Resources.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE (TOP): Maximum recorded, 9,880 microsiemens, February 2, 2002; minimum recorded, 66 microsiemens, June 19, 2006.

SPECIFIC CONDUCTANCE (BOTTOM): Maximum recorded, 11,700 February 2, 2002; minimum recorded, 48 microsiemens, September 21, 1999.

pH (TOP): Maximum recorded, 8.5 standard units, July 8, 2010; minimum recorded, 5.8 standard units, October 3, 4, 5, 6, 7, 2010.

pH (BOTTOM): Maximum recorded, 7.9 standard units, November 11, 12, 2009; minimum recorded, 5.7 standard units, October 4, 2010.

WATER TEMPERATURE (TOP): Maximum recorded, 33.4°C, July 26, 2010; minimum recorded, 2.0°C, January 11, 12, 2010

WATER TEMPERATURE (BOTTOM): Maximum recorded, 32.0°C, July 25, 26, 2010; minimum recorded, 2.0°C, January 11, 12, 2010.

DISSOLVED OXYGEN (TOP): Maximum recorded, 13.0 mg/L, February 3, 2008; minimum recorded, <1.0 mg/L, on many days during the period.

DISSOLVED OXYGEN (BOTTOM): Maximum recorded, 14.0 mg/L, January 6, 7, 2001, January 11, 2002; minimum recorded, <1.0 mg/L, on many days during the period.

DISSOLVED OXYGEN, PERCENT SATURATION (TOP): Maximum recorded, 148%, August 24, 2011; minimum recorded, <10%, on many days during the period.

DISSOLVED OXYGEN, PERCENT SATURATION (BOTTOM): Maximum recorded, 123%, September 15, 2005; minimum recorded, <10%, on many days during the period.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE (TOP): Maximum recorded, 3,730 microsiemens, August 27; minimum recorded, 75 microsiemens, October 1, 2.

SPECIFIC CONDUCTANCE (BOTTOM): Maximum recorded, 4,430 microsiemens, January 2; minimum recorded, 68 microsiemens, October 1.

pH (TOP): Maximum recorded, 8.1 standard units, August 24; minimum recorded, 5.8 standard units, October 3, 4, 5, 6, 7.

pH (BOTTOM): Maximum recorded, 7.6 standard units, April 20, 22; minimum recorded, 5.7 standard units, October 4.

WATER TEMPERATURE (TOP): Maximum recorded, 33.1°C, July 30; minimum recorded, 3.1°C, January 15.

WATER TEMPERATURE (BOTTOM): Maximum recorded, 31.8°C, August 5; minimum recorded, 2.6°C, December 29.

DISSOLVED OXYGEN (TOP): Maximum recorded, 12.3 mg/L, January 4, 5, 17; minimum recorded, <1 mg/L, on many days during the year.

DISSOLVED OXYGEN (BOTTOM): Maximum recorded, 13.0 mg/L, December 29; minimum recorded, <1 mg/L, on many days during the year.

DISSOLVED OXYGEN, PERCENT SATURATION (TOP): Maximum recorded, 148%, August 24; minimum recorded, <10%, on many days during the year.

DISSOLVED OXYGEN, PERCENT SATURATION (BOTTOM): Maximum recorded, 104%, July 14; minimum recorded, <10%, on many days during the year.

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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	118	75	91	182	136	150	211	171	190	165	145	153
2	82	75	77	167	137	146	194	142	173	176	147	159
3	93	81	87	154	129	139	217	148	174	179	145	162
4	102	93	99	150	126	134	213	171	190	154	122	145
5	102	100	101	146	128	133	212	155	182	164	118	140
6	108	102	104	141	122	128	159	139	146	149	133	137
7	111	107	109	129	122	125	191	150	169	151	134	141
8	127	111	117	146	123	130	199	151	168	159	136	145
9	122	114	117	158	138	142	161	138	148	155	145	149
10	123	116	119	149	124	132	157	139	146	163	147	153
11	133	118	125	152	138	144	158	134	148	174	149	164
12	160	126	134	152	125	134	149	133	140	149	130	134
13	143	125	131	---	---	---	167	138	146	172	132	142
14	198	130	146	---	---	---	198	141	159	169	136	148
15	151	120	128	---	---	---	172	133	152	176	160	165
16	143	122	132	---	---	---	151	111	131	172	139	153
17	147	127	135	---	---	---	147	131	140	154	135	145
18	154	138	145	---	---	---	144	131	135	158	137	147
19	189	154	167	---	---	---	137	129	132	166	135	148
20	225	156	190	163	140	152	144	131	137	163	134	145
21	177	153	166	163	129	142	169	136	153	152	131	141
22	199	159	170	150	135	142	178	144	157	203	143	160
23	169	154	160	179	145	160	156	137	150	162	138	148
24	173	143	157	180	144	155	156	131	136	193	131	155
25	195	164	178	158	127	137	150	137	141	167	138	145
26	200	169	185	182	153	162	149	131	139	169	131	148
27	203	165	184	177	140	155	154	130	142	148	132	139
28	173	137	157	166	136	146	181	145	159	174	133	156
29	197	146	166	202	145	163	229	179	198	215	151	189
30	209	159	177	205	163	180	206	149	163	207	166	185
31	177	142	152	---	---	---	161	146	153	188	127	149
Month	225	75	139	---	---	---	229	111	155	215	118	151

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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	139	119	128	1,270	189	462	120	113	116	149	134	137
2	197	138	168	280	157	188	126	118	121	141	132	138
3	246	175	196	223	141	177	126	118	122	136	127	132
4	241	178	196	192	134	169	125	118	122	145	135	139
5	207	177	191	190	158	176	134	119	122	143	135	140
6	216	152	180	202	158	168	132	116	123	145	135	140
7	209	157	175	230	159	203	127	116	121	143	130	135
8	192	156	171	223	138	186	131	119	123	136	132	134
9	206	156	176	188	130	163	134	125	129	143	131	137
10	191	158	170	189	157	173	130	122	124	163	138	142
11	193	162	175	186	147	164	135	122	128	155	135	141
12	213	157	172	158	137	146	142	129	135	144	136	139
13	214	154	180	141	132	136	142	131	137	143	137	140
14	181	156	167	156	120	131	157	126	133	146	134	141
15	218	167	182	145	111	123	154	121	130	141	131	136
16	200	159	175	132	118	123	169	132	141	143	130	137
17	192	161	175	128	117	121	144	136	140	154	139	143
18	210	163	178	138	120	126	148	138	142	155	122	137
19	409	170	200	142	122	126	143	129	135	148	126	141
20	409	155	182	140	119	130	150	139	144	154	124	137
21	581	185	221	129	120	125	167	134	146	151	132	138
22	475	188	207	148	120	126	147	129	135	158	131	140
23	245	159	182	148	121	125	134	127	130	158	141	149
24	205	164	194	140	120	126	137	128	132	163	144	150
25	281	193	216	140	118	122	143	134	137	176	141	158
26	1,740	183	400	142	118	122	143	132	137	157	139	145
27	230	163	177	141	111	120	142	131	136	174	147	162
28	605	164	287	119	117	118	141	130	134	165	141	154
29	---	---	---	120	115	118	144	132	137	159	143	150
30	---	---	---	137	108	117	140	132	135	180	145	166
31	---	---	---	128	113	118	---	---	---	170	140	155
Month	1,740	119	194	1,270	108	153	169	113	132	180	122	143

0208114150 ROANOKE RIVER AT NORTH CAROLINA HIGHWAY 45 NEAR WESTOVER, NC—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	176	139	154	197	164	186	366	165	245	118	108	114
2	174	149	163	197	173	184	195	176	187	116	107	112
3	207	147	168	1,610	179	494	234	180	190	127	113	123
4	160	141	150	2,490	298	1,220	1,040	181	248	132	118	123
5	161	143	152	2,860	320	1,040	256	158	190	133	119	124
6	167	144	150	2,350	327	665	195	164	176	148	126	134
7	192	150	163	718	275	392	293	150	164	144	128	137
8	177	153	160	547	213	286	1,310	160	226	142	127	134
9	179	145	159	2,350	170	536	2,720	189	525	147	131	137
10	156	141	148	194	147	171	3,100	195	590	154	139	146
11	162	135	146	169	145	155	239	172	202	166	143	156
12	152	132	141	397	160	194	301	164	190	157	139	149
13	171	132	147	227	155	182	225	164	186	194	145	170
14	175	150	163	160	149	154	874	188	252	180	158	168
15	169	144	159	160	131	151	337	195	226	170	151	159
16	166	146	157	173	141	161	412	186	230	203	149	159
17	175	156	166	185	155	172	354	182	235	179	150	165
18	179	143	158	189	156	171	261	199	239	202	152	172
19	384	144	174	480	177	211	261	172	191	179	137	160
20	216	150	173	2,010	184	680	238	163	203	204	179	195
21	191	159	177	963	194	335	185	138	156	211	158	198
22	1,040	169	258	619	219	301	1,870	171	521	220	174	194
23	3,000	266	1,080	2,260	194	493	303	205	253	186	142	161
24	3,230	409	1,150	2,960	258	531	293	213	256	212	137	156
25	3,140	385	1,320	3,080	278	832	225	210	218	168	135	143
26	2,550	272	563	1,670	292	605	411	187	213	168	145	151
27	3,240	194	753	3,670	360	2,210	3,730	411	2,500	174	155	161
28	1,080	340	573	3,670	263	1,000	1,650	219	712	184	122	154
29	2,180	203	710	2,690	292	610	219	141	159	161	122	140
30	249	176	205	3,100	265	854	162	124	147	163	128	144
31	---	---	---	650	245	391	136	117	125	---	---	---
Month	3,240	132	331	3,670	131	502	3,730	117	328	220	107	151

0208114150 ROANOKE RIVER AT NORTH CAROLINA HIGHWAY 45 NEAR WESTOVER, NC—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	117	68	90	179	135	148	210	173	189	167	146	155
2	82	71	77	165	134	144	193	144	174	4,430	148	648
3	93	82	87	152	129	137	222	150	177	2,920	146	316
4	102	93	99	150	124	134	218	173	192	3,530	147	1,470
5	103	100	101	146	128	134	211	155	185	3,540	137	1,470
6	107	102	104	138	122	128	160	140	147	151	133	138
7	112	107	109	129	122	125	191	152	171	169	134	141
8	128	112	117	144	123	131	201	152	170	159	137	145
9	122	114	118	153	138	142	163	139	150	197	144	150
10	124	116	120	150	125	134	160	141	149	1,100	147	230
11	132	118	124	153	138	145	160	136	149	173	148	164
12	158	126	134	154	126	136	151	135	142	148	129	134
13	144	126	131	---	---	---	169	139	148	171	132	142
14	204	133	149	---	---	---	195	143	160	172	136	148
15	153	126	131	---	---	---	172	134	153	176	159	166
16	144	124	134	---	---	---	153	112	133	172	138	153
17	144	129	135	---	---	---	148	133	142	155	138	146
18	153	139	143	---	---	---	145	132	137	158	136	147
19	169	153	163	---	---	---	139	130	133	166	135	149
20	220	156	190	164	140	151	146	132	138	165	133	146
21	176	152	168	164	130	142	171	137	154	152	131	141
22	205	158	172	150	135	142	180	145	158	209	143	161
23	166	148	160	180	146	160	156	138	150	161	139	148
24	168	142	154	179	143	155	159	132	137	200	132	156
25	195	161	178	160	127	138	151	138	142	169	138	146
26	198	170	185	182	153	163	149	131	140	171	130	148
27	201	163	182	178	140	155	154	131	143	148	132	139
28	169	135	155	165	136	146	182	146	161	173	133	157
29	190	146	164	203	146	164	3,020	181	556	216	152	190
30	203	156	174	204	164	180	215	150	166	211	167	188
31	173	141	150	---	---	---	163	147	154	194	130	155
Month	220	68	139	---	---	---	3,020	112	168	4,430	129	261

0208114150 ROANOKE RIVER AT NORTH CAROLINA HIGHWAY 45 NEAR WESTOVER, NC—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	144	121	130	1,710	177	668	120	113	116	148	133	136
2	230	137	173	281	163	200	125	117	120	141	133	138
3	252	176	203	419	147	185	126	118	121	137	129	133
4	245	179	199	200	135	168	125	118	122	145	136	140
5	210	177	193	190	158	178	134	119	123	144	137	141
6	220	153	184	812	157	178	132	115	123	145	137	141
7	213	157	176	232	157	205	129	116	121	144	132	137
8	193	156	171	217	143	186	131	119	123	138	134	136
9	207	156	178	186	141	167	134	124	129	147	132	138
10	197	155	170	187	155	174	130	122	124	161	139	144
11	194	156	174	185	146	164	135	122	128	157	138	145
12	215	158	173	157	135	145	142	129	136	148	132	140
13	219	154	182	142	130	134	142	131	137	142	136	139
14	182	160	170	155	118	130	158	126	133	145	133	140
15	232	167	184	144	112	121	155	121	131	141	130	134
16	203	159	177	131	117	122	169	132	140	143	128	136
17	193	161	178	128	116	120	146	135	141	153	136	142
18	1,800	163	650	137	118	125	148	138	142	155	120	137
19	1,820	175	1,040	142	120	124	143	129	135	149	126	140
20	1,020	155	222	141	118	129	151	138	144	155	123	137
21	1,630	185	348	129	118	124	168	133	146	152	131	137
22	1,650	188	294	156	121	126	146	129	135	159	127	140
23	240	158	184	156	119	124	134	128	130	158	136	148
24	209	160	195	139	119	125	137	128	132	163	143	150
25	295	182	216	139	117	122	144	135	138	182	140	159
26	2,050	183	552	144	117	121	142	134	137	161	139	147
27	1,210	168	341	140	110	120	142	132	136	174	147	164
28	2,300	1,210	1,820	119	116	118	141	130	135	166	141	153
29	---	---	---	119	114	118	145	132	138	178	144	154
30	---	---	---	137	109	116	139	131	134	179	151	167
31	---	---	---	128	113	118	---	---	---	180	154	164
Month	2,300	121	317	1,710	109	160	169	113	132	182	120	144

0208114150 ROANOKE RIVER AT NORTH CAROLINA HIGHWAY 45 NEAR WESTOVER, NC—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	180	138	154	201	182	192	426	167	257	118	108	113
2	181	148	164	2,290	188	514	209	174	196	114	107	112
3	225	147	173	2,720	204	1,880	1,320	188	286	126	113	123
4	158	145	150	3,020	2,720	2,880	2,080	210	1,200	132	117	123
5	161	143	152	3,100	817	2,810	414	165	205	133	119	123
6	169	144	151	2,880	817	2,660	240	167	184	148	125	134
7	193	150	165	2,540	393	1,460	1,750	149	266	144	127	136
8	174	154	161	2,730	406	1,770	2,440	346	1,880	143	127	135
9	184	148	161	2,750	197	1,930	3,120	2,110	2,860	149	134	140
10	156	142	150	317	146	176	3,320	342	2,140	155	140	148
11	164	135	146	177	148	162	2,940	223	1,360	168	144	157
12	152	135	143	2,120	165	1,040	841	163	249	158	140	151
13	170	133	148	2,120	156	878	385	165	200	197	146	173
14	174	152	164	162	150	155	1,540	196	833	180	159	169
15	170	144	161	161	130	151	1,380	197	380	170	151	159
16	167	147	159	175	135	159	1,790	208	766	199	149	158
17	178	158	169	185	157	173	1,830	189	989	179	150	164
18	179	143	159	182	154	168	364	228	250	201	154	175
19	2,970	144	535	1,640	178	452	637	172	253	185	149	163
20	1,490	150	228	2,210	1,570	1,920	240	162	206	202	168	194
21	188	161	177	2,260	2,010	2,170	253	140	151	214	148	199
22	3,040	178	1,970	2,450	2,180	2,300	2,470	215	1,750	226	174	211
23	3,500	1,420	3,290	2,910	2,450	2,750	1,510	241	370	187	142	163
24	3,600	2,300	3,110	3,310	2,800	3,000	673	203	289	214	137	155
25	3,550	2,740	3,400	3,630	2,180	3,400	444	212	238	169	135	144
26	3,340	2,640	3,150	3,590	3,430	3,510	719	190	242	169	145	151
27	3,570	870	2,740	3,730	3,470	3,630	3,850	719	2,620	173	156	162
28	1,840	467	1,130	3,720	3,400	3,600	1,670	217	715	187	121	154
29	2,860	367	1,930	3,590	3,530	3,560	217	138	157	159	123	140
30	1,840	176	433	3,640	1,530	3,330	161	122	146	157	128	144
31	---	---	---	2,150	309	959	135	116	124	---	---	---
Month	3,600	133	831	3,730	130	1,730	3,850	116	702	226	107	152

0208114150 ROANOKE RIVER AT NORTH CAROLINA HIGHWAY 45 NEAR WESTOVER, NC—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	6.7	6.0	6.3	7.1	6.9	7.0	7.3	7.1	7.2	7.4	7.3	7.3
2	6.0	5.9	5.9	7.2	7.1	7.1	7.2	7.2	7.2	7.4	7.3	7.4
3	5.9	5.8	5.9	7.2	7.0	7.1	7.3	7.2	7.2	7.4	7.3	7.4
4	5.9	5.8	5.8	7.2	7.0	7.2	7.3	7.2	7.2	7.4	7.3	7.3
5	5.8	5.8	5.8	7.2	7.1	7.2	7.3	7.2	7.3	7.4	7.3	7.3
6	5.8	5.8	5.8	7.2	7.2	7.2	7.3	7.2	7.2	7.3	7.0	7.1
7	6.1	5.8	6.0	7.3	7.2	7.2	7.4	7.3	7.3	7.2	7.1	7.2
8	6.2	6.0	6.1	7.2	7.2	7.2	7.4	7.3	7.3	7.3	7.2	7.2
9	6.1	6.0	6.1	7.2	7.1	7.2	7.4	7.3	7.3	7.3	7.2	7.2
10	6.2	6.1	6.2	7.2	7.1	7.2	7.4	7.3	7.4	7.3	7.2	7.3
11	6.2	6.1	6.2	7.3	7.2	7.2	7.4	7.4	7.4	7.4	7.2	7.3
12	6.3	6.1	6.2	7.3	7.2	7.2	7.5	7.4	7.5	7.3	7.2	7.2
13	6.2	6.0	6.1	---	---	---	7.5	7.4	7.5	7.3	7.2	7.3
14	6.3	6.0	6.2	---	---	---	7.6	7.4	7.5	7.3	7.2	7.2
15	6.3	6.2	6.3	---	---	---	7.5	7.4	7.4	7.4	7.3	7.3
16	6.4	6.3	6.4	---	---	---	7.4	7.3	7.4	7.4	7.3	7.3
17	6.6	6.4	6.5	---	---	---	7.5	7.4	7.4	7.4	7.3	7.3
18	6.6	6.5	6.6	---	---	---	7.5	7.4	7.5	7.4	7.2	7.3
19	6.7	6.6	6.6	---	---	---	7.5	7.4	7.5	7.3	7.1	7.2
20	6.7	6.6	6.7	6.8	6.7	6.8	7.5	7.4	7.4	7.2	7.1	7.1
21	6.7	6.6	6.6	6.9	6.8	6.8	7.4	7.3	7.4	7.2	7.0	7.1
22	6.7	6.6	6.6	7.0	6.9	6.9	7.4	7.3	7.3	7.3	7.1	7.2
23	6.7	6.6	6.7	7.1	7.0	7.0	7.4	7.3	7.3	7.2	7.2	7.2
24	6.8	6.7	6.7	7.0	6.9	7.0	7.4	7.3	7.3	7.3	7.1	7.2
25	6.9	6.8	6.8	7.0	6.9	7.0	7.4	7.3	7.4	7.2	7.2	7.2
26	6.9	6.9	6.9	7.1	7.0	7.1	7.5	7.3	7.4	7.2	7.1	7.2
27	7.0	6.9	7.0	7.1	7.0	7.0	7.5	7.3	7.5	7.2	7.1	7.2
28	7.0	6.8	6.9	7.1	7.0	7.0	7.5	7.4	7.5	7.3	7.1	7.2
29	6.9	6.8	6.9	7.2	7.1	7.1	7.5	7.4	7.5	7.3	7.2	7.3
30	7.0	6.9	6.9	7.2	7.1	7.1	7.5	7.4	7.4	7.3	7.2	7.2
31	6.9	6.9	6.9	---	---	---	7.4	7.3	7.3	7.3	7.2	7.2
Max	7.0	6.9	7.0	---	---	---	7.6	7.4	7.5	7.4	7.3	7.4
Min	5.8	5.8	5.8	---	---	---	7.2	7.1	7.2	7.2	7.0	7.1

0208114150 ROANOKE RIVER AT NORTH CAROLINA HIGHWAY 45 NEAR WESTOVER, NC—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	7.2	7.1	7.2	7.4	7.3	7.3	7.2	7.1	7.1	7.0	7.0	7.0
2	7.3	7.2	7.2	7.4	7.2	7.3	7.2	7.2	7.2	7.0	6.9	7.0
3	7.4	7.2	7.3	7.4	7.2	7.3	7.3	7.1	7.2	7.1	6.9	6.9
4	7.4	7.3	7.3	7.3	7.2	7.3	7.2	7.1	7.2	7.1	7.1	7.1
5	7.4	7.3	7.3	7.3	7.2	7.3	7.2	7.1	7.2	7.1	7.1	7.1
6	7.3	7.2	7.3	7.3	7.1	7.2	7.2	6.9	7.0	7.2	7.1	7.1
7	7.3	7.2	7.2	7.4	7.3	7.3	7.0	6.8	7.0	7.1	7.0	7.1
8	7.2	7.1	7.2	7.6	7.4	7.5	7.0	7.0	7.0	7.1	7.1	7.1
9	7.2	7.1	7.2	7.6	7.4	7.4	7.1	7.0	7.0	7.2	7.1	7.1
10	7.2	7.1	7.2	7.6	7.4	7.5	7.0	7.0	7.0	7.3	7.2	7.2
11	7.2	7.1	7.2	7.6	7.4	7.5	7.1	7.0	7.0	7.4	7.3	7.3
12	7.2	7.1	7.2	7.5	7.4	7.4	7.1	7.0	7.0	7.4	7.3	7.4
13	7.2	7.1	7.1	7.5	7.4	7.4	7.0	7.0	7.0	7.4	7.3	7.4
14	7.2	7.1	7.1	7.6	7.4	7.5	7.0	6.9	7.0	7.5	7.4	7.4
15	7.3	7.1	7.2	7.6	7.5	7.6	7.1	6.9	7.0	7.5	7.4	7.4
16	7.2	7.1	7.2	7.6	7.5	7.6	7.2	7.0	7.2	7.4	7.3	7.4
17	7.2	7.1	7.2	7.6	7.5	7.6	7.3	7.2	7.3	7.4	7.3	7.3
18	7.3	7.2	7.2	7.6	7.5	7.6	7.3	7.3	7.3	7.3	7.2	7.3
19	7.3	7.2	7.2	7.6	7.6	7.6	7.4	7.2	7.3	7.3	7.2	7.2
20	7.4	7.2	7.2	7.7	7.5	7.6	7.4	7.3	7.3	7.2	7.0	7.0
21	7.3	7.2	7.3	7.7	7.5	7.6	7.3	7.3	7.3	7.1	7.0	7.0
22	7.4	7.2	7.3	7.7	7.6	7.6	7.4	7.3	7.3	7.1	7.0	7.1
23	7.4	7.2	7.3	7.7	7.5	7.6	7.3	7.3	7.3	7.3	7.1	7.2
24	7.3	7.2	7.3	7.6	7.5	7.6	7.3	7.2	7.3	7.3	7.2	7.2
25	7.4	7.3	7.3	7.6	7.5	7.6	7.3	7.2	7.3	7.3	7.1	7.2
26	7.4	7.3	7.3	7.6	7.4	7.4	7.3	7.2	7.2	7.2	7.1	7.1
27	7.3	7.2	7.3	7.6	7.4	7.4	7.2	7.2	7.2	7.2	7.1	7.1
28	7.4	7.2	7.3	7.4	7.2	7.3	7.2	7.1	7.2	7.3	7.1	7.2
29	---	---	---	7.2	7.2	7.2	7.2	7.1	7.1	7.4	7.1	7.2
30	---	---	---	7.3	7.1	7.2	7.1	7.0	7.0	7.3	7.1	7.2
31	---	---	---	7.3	7.1	7.3	---	---	---	7.3	7.1	7.1
Max	7.4	7.3	7.3	7.7	7.6	7.6	7.4	7.3	7.3	7.5	7.4	7.4
Min	7.2	7.1	7.1	7.2	7.1	7.2	7.0	6.8	7.0	7.0	6.9	6.9

0208114150 ROANOKE RIVER AT NORTH CAROLINA HIGHWAY 45 NEAR WESTOVER, NC—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	7.3	7.1	7.1	7.5	6.9	7.0	7.1	6.9	7.0	6.2	6.1	6.1
2	7.2	7.1	7.2	7.2	6.8	7.0	7.5	7.0	7.1	6.2	6.1	6.2
3	7.3	7.1	7.2	7.2	6.8	7.0	7.3	7.0	7.1	6.3	6.2	6.3
4	7.3	7.0	7.2	7.2	6.8	7.0	7.3	6.9	7.1	6.3	6.3	6.3
5	7.2	7.0	7.1	7.3	6.8	7.0	7.4	7.0	7.1	6.4	6.3	6.3
6	7.2	7.0	7.1	7.2	6.8	7.0	7.3	7.1	7.2	6.4	6.3	6.3
7	7.2	7.1	7.1	7.3	7.0	7.1	7.3	7.0	7.1	6.4	6.3	6.4
8	7.3	7.1	7.2	7.4	7.0	7.1	7.3	7.0	7.1	6.5	6.3	6.5
9	7.2	7.1	7.2	7.3	7.0	7.2	7.5	6.9	7.1	6.5	6.5	6.5
10	7.3	7.1	7.2	7.7	7.0	7.1	7.2	6.9	7.1	6.5	6.5	6.5
11	7.2	7.1	7.2	7.8	7.0	7.2	7.2	7.0	7.1	6.6	6.5	6.6
12	7.3	7.1	7.1	7.4	7.0	7.1	7.2	7.0	7.1	6.6	6.6	6.6
13	7.3	7.1	7.1	7.2	7.0	7.1	7.3	7.0	7.2	6.7	6.6	6.7
14	7.3	7.1	7.1	7.4	7.1	7.1	7.3	6.9	7.1	6.7	6.7	6.7
15	7.3	7.1	7.1	7.5	7.1	7.2	7.3	7.0	7.2	6.7	6.5	6.6
16	7.2	7.1	7.2	7.2	7.0	7.2	7.2	7.0	7.1	6.7	6.5	6.6
17	7.3	7.2	7.2	7.3	7.0	7.1	7.7	7.0	7.2	6.9	6.7	6.7
18	7.3	7.1	7.2	7.7	7.0	7.1	7.6	7.0	7.2	6.9	6.8	6.8
19	7.2	7.0	7.1	7.4	6.9	7.0	7.5	7.0	7.2	6.8	6.7	6.8
20	7.3	7.1	7.1	7.3	6.8	7.0	7.3	7.0	7.2	6.8	6.8	6.8
21	7.3	7.1	7.2	7.3	6.8	7.1	7.4	7.0	7.1	6.8	6.8	6.8
22	7.3	7.0	7.2	7.3	6.9	7.1	7.2	6.9	7.1	6.8	6.7	6.8
23	7.3	6.9	7.2	7.5	6.8	7.2	7.4	7.1	7.2	6.8	6.7	6.7
24	7.3	7.0	7.1	7.5	6.9	7.2	8.1	7.0	7.2	6.7	6.6	6.6
25	7.4	7.0	7.2	7.6	6.8	7.2	7.8	7.1	7.3	6.7	6.6	6.6
26	7.2	6.9	7.1	7.4	7.0	7.2	7.3	7.0	7.2	6.7	6.6	6.7
27	7.5	6.8	7.0	7.2	7.0	7.0	7.3	6.8	7.0	6.8	6.7	6.7
28	7.2	6.9	7.0	7.3	6.9	7.1	6.8	6.5	6.6	6.8	6.6	6.7
29	7.1	6.9	7.0	7.3	6.9	7.2	6.5	6.3	6.4	6.7	6.6	6.7
30	7.1	7.0	7.0	7.9	6.9	7.1	6.3	6.3	6.3	6.8	6.6	6.7
31	---	---	---	7.5	7.0	7.1	6.3	6.2	6.2	---	---	---
Max	7.5	7.2	7.2	7.9	7.1	7.2	8.1	7.1	7.3	6.9	6.8	6.8
Min	7.1	6.8	7.0	7.2	6.8	7.0	6.3	6.2	6.2	6.2	6.1	6.1

0208114150 ROANOKE RIVER AT NORTH CAROLINA HIGHWAY 45 NEAR WESTOVER, NC—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	6.7	6.0	6.3	7.2	7.0	7.1	7.2	7.0	7.1	7.3	7.2	7.3
2	6.0	5.9	5.9	7.2	7.1	7.1	7.2	7.1	7.2	7.4	7.1	7.3
3	5.9	5.8	5.9	7.2	7.1	7.2	7.3	7.1	7.2	7.4	7.1	7.3
4	5.8	5.7	5.8	7.2	7.0	7.1	7.3	7.2	7.3	7.3	7.1	7.2
5	5.8	5.8	5.8	7.1	7.1	7.1	7.3	7.2	7.3	7.3	7.2	7.3
6	5.9	5.8	5.8	7.1	7.1	7.1	7.3	7.2	7.2	7.3	7.2	7.2
7	6.0	5.8	5.9	7.2	7.1	7.1	7.4	7.3	7.3	7.3	7.3	7.3
8	6.1	6.0	6.0	7.1	7.1	7.1	7.4	7.3	7.3	7.4	7.3	7.3
9	6.1	6.0	6.1	7.1	7.0	7.1	7.3	7.3	7.3	7.4	7.3	7.3
10	6.2	6.1	6.2	7.2	7.0	7.1	7.4	7.3	7.4	7.5	7.2	7.4
11	6.3	6.2	6.2	7.2	7.2	7.2	7.4	7.4	7.4	7.5	7.3	7.5
12	6.3	6.2	6.3	7.2	7.2	7.2	7.4	7.4	7.4	7.4	7.3	7.3
13	6.3	6.2	6.2	---	---	---	7.5	7.4	7.4	7.4	7.3	7.4
14	6.6	6.3	6.4	---	---	---	7.5	7.4	7.5	7.4	7.3	7.4
15	6.6	6.4	6.5	---	---	---	7.5	7.4	7.4	7.5	7.4	7.5
16	6.6	6.5	6.5	---	---	---	7.4	7.3	7.3	7.5	7.4	7.4
17	6.6	6.5	6.6	---	---	---	7.4	7.3	7.4	7.5	7.4	7.4
18	6.7	6.6	6.6	---	---	---	7.4	7.4	7.4	7.5	7.4	7.5
19	6.7	6.6	6.7	---	---	---	7.4	7.3	7.4	7.4	7.3	7.4
20	6.8	6.7	6.7	6.7	6.6	6.7	7.4	7.3	7.4	7.4	7.2	7.3
21	6.7	6.6	6.7	6.9	6.7	6.8	7.4	7.3	7.3	7.3	7.2	7.2
22	6.8	6.7	6.7	6.9	6.8	6.8	7.3	7.2	7.3	7.4	7.2	7.3
23	6.8	6.7	6.7	7.0	6.9	6.9	7.3	7.2	7.2	7.3	7.2	7.3
24	6.8	6.8	6.8	6.9	6.9	6.9	7.3	7.2	7.3	7.4	7.3	7.3
25	7.0	6.8	6.9	7.0	6.8	6.9	7.3	7.3	7.3	7.3	7.3	7.3
26	7.0	6.9	6.9	7.1	7.0	7.0	7.4	7.3	7.3	7.3	7.2	7.3
27	7.0	7.0	7.0	7.1	7.0	7.0	7.4	7.3	7.4	7.3	7.2	7.3
28	7.0	6.9	7.0	7.1	6.9	7.0	7.4	7.3	7.4	7.3	7.2	7.3
29	7.0	6.9	7.0	7.1	7.0	7.0	7.5	7.3	7.4	7.4	7.3	7.3
30	7.0	6.9	7.0	7.1	7.0	7.0	7.4	7.3	7.3	7.3	7.2	7.3
31	7.0	6.9	7.0	---	---	---	7.3	7.2	7.3	7.3	7.3	7.3
Max	7.0	7.0	7.0	---	---	---	7.5	7.4	7.5	7.5	7.4	7.5
Min	5.8	5.7	5.8	---	---	---	7.2	7.0	7.1	7.3	7.1	7.2

0208114150 ROANOKE RIVER AT NORTH CAROLINA HIGHWAY 45 NEAR WESTOVER, NC—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	7.3	7.1	7.2	7.4	7.2	7.3	7.0	6.9	6.9	7.2	7.1	7.2
2	7.3	7.2	7.2	7.4	7.2	7.2	7.1	7.0	7.0	7.2	7.1	7.1
3	7.4	7.1	7.3	7.4	7.2	7.3	7.1	7.0	7.0	7.1	7.1	7.1
4	7.4	7.3	7.3	7.3	7.2	7.3	7.1	7.0	7.0	7.1	7.1	7.1
5	7.4	7.2	7.3	7.3	7.2	7.3	7.1	7.1	7.1	7.2	7.1	7.1
6	7.3	7.1	7.2	7.3	7.2	7.2	7.1	6.9	7.0	7.2	7.1	7.1
7	7.3	7.1	7.2	7.5	7.3	7.4	7.3	6.9	7.1	7.2	7.1	7.1
8	7.2	7.1	7.2	7.5	7.4	7.4	7.3	7.2	7.2	7.2	7.1	7.2
9	7.2	7.1	7.1	7.4	7.4	7.4	7.3	7.3	7.3	7.2	7.1	7.2
10	7.2	7.1	7.1	7.4	7.4	7.4	7.3	7.3	7.3	7.3	7.2	7.3
11	7.2	7.1	7.2	7.4	7.3	7.4	7.4	7.3	7.3	7.4	7.2	7.3
12	7.2	7.1	7.1	7.3	7.2	7.3	7.3	7.3	7.3	7.5	7.3	7.5
13	7.2	7.0	7.1	7.2	7.2	7.2	7.3	7.2	7.3	7.5	7.4	7.5
14	7.2	7.1	7.1	7.3	7.2	7.3	7.3	7.2	7.2	7.5	7.4	7.4
15	7.3	7.1	7.1	7.4	7.3	7.3	7.4	7.2	7.2	7.4	7.4	7.4
16	7.2	7.1	7.2	7.4	7.3	7.3	7.4	7.3	7.4	7.4	7.3	7.4
17	7.2	7.1	7.2	7.3	7.3	7.3	7.5	7.4	7.4	7.3	7.2	7.3
18	7.2	7.1	7.2	7.4	7.3	7.3	7.5	7.4	7.5	7.2	7.1	7.2
19	7.3	7.1	7.2	7.4	7.3	7.3	7.5	7.4	7.5	7.2	7.0	7.1
20	7.3	7.1	7.2	7.4	7.2	7.3	7.6	7.5	7.5	7.1	7.0	7.0
21	7.4	7.2	7.3	7.4	7.2	7.3	7.5	7.4	7.5	7.0	7.0	7.0
22	7.4	7.2	7.3	7.4	7.3	7.3	7.6	7.4	7.5	7.0	7.0	7.0
23	7.3	7.2	7.3	7.4	7.3	7.3	7.5	7.4	7.5	7.2	7.0	7.0
24	7.3	7.2	7.3	7.3	7.3	7.3	7.5	7.4	7.5	7.2	7.0	7.1
25	7.4	7.2	7.3	7.3	7.3	7.3	7.5	7.4	7.4	7.2	7.0	7.1
26	7.4	7.2	7.3	7.3	7.2	7.2	7.4	7.4	7.4	7.0	7.0	7.0
27	7.3	7.2	7.2	7.3	7.2	7.2	7.4	7.3	7.3	7.1	7.0	7.0
28	7.3	7.2	7.2	7.2	7.0	7.1	7.4	7.3	7.3	7.1	7.0	7.0
29	---	---	---	7.0	6.9	7.0	7.4	7.3	7.3	7.1	7.0	7.0
30	---	---	---	7.0	6.9	6.9	7.3	7.2	7.2	7.1	7.0	7.1
31	---	---	---	7.0	6.9	7.0	---	---	---	7.1	7.0	7.0
Max	7.4	7.3	7.3	7.5	7.4	7.4	7.6	7.5	7.5	7.5	7.4	7.5
Min	7.2	7.0	7.1	7.0	6.9	6.9	7.0	6.9	6.9	7.0	7.0	7.0

0208114150 ROANOKE RIVER AT NORTH CAROLINA HIGHWAY 45 NEAR WESTOVER, NC—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	7.1	7.0	7.0	7.1	7.0	7.0	7.1	6.9	7.0	6.2	6.2	6.2
2	7.1	6.9	7.0	7.1	6.8	7.0	7.1	7.0	7.1	6.2	6.2	6.2
3	7.2	7.0	7.1	7.0	6.8	6.9	7.2	6.9	7.0	6.3	6.2	6.3
4	7.1	7.0	7.0	7.0	6.9	6.9	7.1	6.8	7.0	6.3	6.3	6.3
5	7.1	7.0	7.0	7.1	6.9	6.9	7.2	7.0	7.1	6.3	6.2	6.3
6	7.1	7.0	7.0	7.1	6.9	7.0	7.2	7.0	7.1	6.3	6.3	6.3
7	7.1	7.0	7.1	7.2	6.8	7.0	7.2	7.0	7.1	6.3	6.2	6.3
8	7.1	7.0	7.1	7.0	6.8	6.8	7.1	7.0	7.0	6.5	6.3	6.4
9	7.3	7.1	7.2	7.0	6.8	6.8	7.0	6.9	7.0	6.4	6.4	6.4
10	7.3	7.2	7.2	7.0	6.7	6.8	7.1	6.9	6.9	6.5	6.4	6.4
11	7.3	7.2	7.2	7.0	6.7	6.8	7.1	6.8	6.9	6.5	6.4	6.5
12	7.3	7.1	7.2	7.0	6.7	6.8	7.2	6.8	7.0	6.6	6.5	6.5
13	7.3	7.1	7.2	7.0	6.7	6.8	7.2	6.9	7.0	6.7	6.5	6.6
14	7.3	7.2	7.2	7.1	6.9	6.9	7.2	6.8	6.9	6.6	6.6	6.6
15	7.3	7.2	7.2	7.1	6.9	7.0	7.2	6.8	7.0	6.6	6.5	6.6
16	7.3	7.2	7.2	7.0	6.9	7.0	7.1	6.8	6.9	6.7	6.6	6.6
17	7.3	7.2	7.2	7.0	6.8	6.9	7.1	6.8	6.9	6.9	6.7	6.8
18	7.3	7.2	7.2	7.0	6.8	7.0	7.2	7.0	7.1	6.9	6.8	6.8
19	7.2	6.9	7.2	7.1	6.8	7.0	7.2	6.9	7.1	6.8	6.8	6.8
20	7.3	7.0	7.2	6.9	6.8	6.9	7.2	6.9	7.1	6.9	6.8	6.8
21	7.3	7.1	7.2	7.0	6.9	6.9	7.3	6.9	7.0	6.8	6.8	6.8
22	7.2	6.9	7.0	7.0	7.0	7.0	7.1	6.8	6.9	6.8	6.8	6.8
23	7.1	6.9	7.0	7.1	7.0	7.0	7.2	6.9	7.1	6.8	6.7	6.7
24	7.1	6.9	6.9	7.3	7.0	7.2	7.3	6.9	7.2	6.8	6.6	6.7
25	7.2	6.9	7.0	7.3	7.0	7.1	7.3	6.9	7.2	6.7	6.6	6.6
26	7.0	6.8	6.9	7.3	7.1	7.2	7.2	6.9	7.2	6.8	6.7	6.7
27	7.2	6.8	6.9	7.3	7.1	7.2	7.3	6.8	7.0	6.8	6.7	6.8
28	7.2	6.9	7.0	7.3	7.1	7.1	6.8	6.5	6.7	6.8	6.6	6.7
29	7.1	6.9	6.9	7.3	7.2	7.2	6.5	6.4	6.4	6.7	6.6	6.7
30	7.1	6.8	7.1	7.3	7.1	7.2	6.4	6.3	6.3	6.8	6.6	6.7
31	---	---	---	7.1	7.0	7.0	6.3	6.2	6.2	---	---	---
Max	7.3	7.2	7.2	7.3	7.2	7.2	7.3	7.0	7.2	6.9	6.8	6.8
Min	7.0	6.8	6.9	6.9	6.7	6.8	6.3	6.2	6.2	6.2	6.2	6.2

0208114150 ROANOKE RIVER AT NORTH CAROLINA HIGHWAY 45 NEAR WESTOVER, NC—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	24.1	22.2	23.0	19.3	18.7	19.0	14.2	13.4	13.9	4.3	3.8	3.9
2	22.2	21.3	21.7	18.8	17.6	18.1	13.5	12.8	13.1	4.8	4.0	4.4
3	21.3	20.2	20.7	17.6	17.1	17.3	13.0	12.3	12.5	5.0	4.5	4.8
4	20.2	19.3	19.7	17.4	17.1	17.3	12.3	11.5	11.8	4.8	4.2	4.5
5	19.3	18.6	18.9	17.2	16.8	17.0	11.5	10.4	11.0	4.7	4.2	4.5
6	18.6	18.2	18.4	16.8	16.1	16.4	10.4	9.6	9.8	4.9	4.6	4.7
7	18.5	17.7	18.0	16.1	15.4	15.7	9.6	8.7	9.0	5.2	4.8	5.0
8	18.6	17.9	18.2	15.5	15.0	15.2	8.8	8.2	8.6	5.1	4.6	5.0
9	18.8	18.0	18.3	15.2	14.8	15.0	8.6	7.6	8.1	4.6	4.1	4.3
10	19.3	18.7	19.0	15.1	14.5	14.8	7.6	7.1	7.3	4.2	3.7	4.0
11	20.0	19.1	19.4	15.0	14.5	14.7	7.6	7.1	7.3	3.9	3.8	3.8
12	20.4	19.5	19.9	14.8	14.3	14.5	7.7	7.5	7.6	4.1	3.5	3.8
13	20.4	20.0	20.1	---	---	---	7.6	6.4	7.1	3.8	3.5	3.6
14	20.4	19.9	20.1	---	---	---	6.4	5.5	6.1	3.6	3.2	3.4
15	20.1	19.4	19.8	---	---	---	5.5	5.0	5.2	3.4	3.1	3.3
16	19.8	19.2	19.5	---	---	---	5.3	5.0	5.2	3.7	3.2	3.4
17	19.9	18.9	19.2	---	---	---	5.2	4.8	5.0	3.7	3.4	3.5
18	20.2	19.2	19.5	---	---	---	5.3	5.0	5.2	4.1	3.7	3.9
19	20.4	19.4	19.6	---	---	---	5.2	4.8	5.0	4.7	3.9	4.2
20	20.3	19.6	19.8	14.0	13.4	13.7	4.9	4.6	4.7	4.4	4.0	4.2
21	20.1	19.3	19.6	14.3	13.7	13.9	4.8	4.3	4.5	5.0	4.4	4.7
22	19.7	18.9	19.3	14.4	13.8	14.0	4.9	4.5	4.8	4.7	4.0	4.3
23	19.6	18.5	19.0	14.5	13.8	14.1	4.9	4.6	4.8	4.1	3.6	3.9
24	19.5	18.4	18.9	14.2	13.9	14.0	4.7	4.3	4.5	4.0	3.5	3.8
25	19.4	18.8	19.1	14.1	13.8	14.0	4.8	4.4	4.6	4.1	3.8	4.0
26	20.2	19.2	19.6	14.3	13.9	14.1	4.7	4.0	4.4	4.4	4.0	4.2
27	21.0	20.0	20.4	14.3	13.8	14.0	4.2	3.6	3.9	4.5	4.0	4.3
28	20.9	20.5	20.7	13.8	12.9	13.3	4.0	3.3	3.7	4.8	4.2	4.4
29	20.7	19.6	20.1	13.5	12.7	13.1	4.2	3.6	3.9	4.9	4.2	4.5
30	19.7	18.6	19.1	13.7	12.9	13.3	4.1	3.8	3.9	5.6	4.3	4.7
31	19.4	18.4	18.8	---	---	---	4.3	3.8	3.9	5.3	4.7	5.0
Month	24.1	17.7	19.6	---	---	---	14.2	3.3	6.8	5.6	3.1	4.2

0208114150 ROANOKE RIVER AT NORTH CAROLINA HIGHWAY 45 NEAR WESTOVER, NC—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	6.1	4.9	5.2	12.8	11.8	12.1	10.9	10.6	10.7	20.8	20.2	20.5
2	7.1	5.6	6.3	12.6	11.6	12.0	11.1	10.4	10.8	20.9	20.0	20.4
3	7.2	6.5	7.0	12.1	11.2	11.5	12.0	10.6	11.1	21.4	20.5	20.9
4	7.0	6.6	6.7	11.8	10.5	11.1	13.1	11.3	12.1	21.1	20.4	20.9
5	6.6	6.2	6.4	12.0	11.0	11.5	14.0	13.1	13.5	20.7	19.8	20.3
6	7.4	6.4	6.8	12.5	11.8	12.1	14.0	13.2	13.6	20.8	19.8	20.3
7	7.4	6.7	7.1	12.5	12.1	12.3	14.8	13.6	14.2	20.7	19.6	20.1
8	8.1	7.1	7.5	12.9	11.8	12.2	15.5	14.6	15.0	20.8	20.2	20.5
9	7.6	6.9	7.2	12.9	11.8	12.2	15.7	15.0	15.3	20.8	19.8	20.3
10	7.1	6.7	7.0	12.8	12.0	12.4	15.6	15.1	15.4	21.4	20.2	20.7
11	6.8	6.2	6.5	12.8	12.0	12.4	16.6	15.6	16.0	21.2	20.4	20.8
12	6.8	6.1	6.4	12.8	11.8	12.2	17.4	16.4	16.7	20.9	20.4	20.7
13	7.2	6.2	6.6	13.0	11.9	12.3	17.1	16.2	16.5	21.0	20.7	20.9
14	7.8	6.3	7.0	12.4	11.3	11.8	17.4	16.2	16.6	22.4	20.8	21.4
15	7.8	6.8	7.3	11.3	10.8	11.0	18.0	16.4	17.0	22.2	21.6	21.8
16	7.8	6.8	7.2	11.4	10.9	11.0	17.4	16.8	17.2	22.1	21.5	21.8
17	8.4	6.8	7.5	12.0	11.1	11.4	17.7	16.7	17.1	22.0	21.6	21.8
18	9.6	7.6	8.4	12.7	11.4	11.9	18.0	16.9	17.4	22.1	21.4	21.7
19	9.9	8.5	9.2	13.0	11.9	12.3	18.2	17.3	17.7	21.8	21.1	21.5
20	9.7	8.6	9.1	12.9	12.2	12.6	18.7	17.6	18.0	21.9	21.1	21.5
21	10.6	9.0	9.8	13.9	12.7	13.2	18.5	18.0	18.2	22.5	21.5	21.8
22	10.4	9.6	9.9	14.4	13.3	13.8	18.0	17.5	17.7	23.8	22.1	22.4
23	10.2	9.2	9.6	14.3	13.7	14.0	18.0	17.1	17.5	23.7	22.3	22.9
24	10.0	9.5	9.8	14.7	13.8	14.2	19.4	17.8	18.4	24.4	23.1	23.6
25	11.1	10.0	10.5	14.6	13.7	14.1	19.5	18.7	19.1	25.4	23.6	24.5
26	11.0	10.2	10.7	14.2	13.2	13.8	19.6	19.2	19.4	26.2	24.8	25.5
27	12.0	10.4	11.0	13.2	12.2	12.6	20.4	19.2	19.7	26.4	25.3	25.9
28	12.8	11.2	11.8	12.2	11.3	11.7	21.0	20.1	20.5	26.8	25.7	26.2
29	---	---	---	12.0	10.9	11.3	21.5	20.5	20.9	27.8	25.8	26.4
30	---	---	---	11.5	10.8	11.1	21.2	20.6	20.9	28.0	26.2	26.7
31	---	---	---	10.8	10.6	10.7	---	---	---	28.4	27.0	27.4
Month	12.8	4.9	8.1	14.7	10.5	12.2	21.5	10.4	16.5	28.4	19.6	22.3

0208114150 ROANOKE RIVER AT NORTH CAROLINA HIGHWAY 45 NEAR WESTOVER, NC—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	28.3	26.8	27.4	30.9	29.2	29.5	30.7	30.2	30.4	24.7	24.1	24.4
2	28.5	27.4	27.7	30.4	29.5	29.8	32.6	30.5	30.9	24.7	24.1	24.4
3	28.4	27.6	28.1	30.2	29.1	29.7	32.1	30.8	31.1	25.2	24.5	24.8
4	28.2	27.1	27.5	30.1	28.3	29.1	31.7	30.7	31.3	25.5	24.6	25.1
5	27.6	27.0	27.3	30.9	28.2	29.4	32.3	31.2	31.6	25.4	25.1	25.2
6	27.6	26.8	27.2	30.5	28.7	29.8	31.6	30.8	31.1	26.3	25.2	25.7
7	27.5	26.7	26.9	30.8	29.3	29.6	31.8	30.3	30.8	26.5	25.7	26.1
8	28.1	26.6	26.9	30.8	29.4	29.8	31.4	30.3	30.8	26.7	26.1	26.3
9	27.9	26.9	27.1	30.3	28.9	29.7	32.4	30.0	31.2	27.0	26.3	26.6
10	29.0	27.6	28.0	30.8	29.7	30.0	31.8	30.0	31.2	27.0	26.4	26.7
11	28.9	27.8	28.2	30.9	29.8	30.2	31.6	30.9	31.2	27.6	26.7	27.0
12	29.4	27.9	28.3	30.5	29.6	29.9	31.4	31.0	31.1	27.2	26.7	26.9
13	29.0	28.3	28.6	30.8	30.1	30.4	31.0	30.4	30.7	27.1	26.5	26.8
14	28.3	27.7	27.9	30.8	30.0	30.4	30.7	30.0	30.4	27.2	26.6	26.8
15	27.9	27.0	27.4	30.6	29.7	30.0	30.9	29.7	30.0	27.4	26.8	27.1
16	27.7	27.1	27.3	30.0	29.3	29.6	30.0	29.7	29.9	27.2	25.2	25.9
17	28.2	26.8	27.2	30.2	28.9	29.3	30.8	29.8	30.2	25.2	23.8	24.4
18	29.1	27.1	27.6	30.5	29.1	29.4	30.7	29.9	30.2	23.9	23.5	23.8
19	28.4	27.4	27.7	30.0	28.8	29.1	30.5	29.8	30.1	23.7	23.0	23.3
20	28.5	27.8	28.1	30.6	28.0	29.1	30.1	29.5	29.8	23.9	23.6	23.7
21	28.9	27.5	27.8	31.2	29.1	30.1	30.4	29.4	29.9	24.3	23.6	23.8
22	28.7	27.6	28.2	31.9	30.0	30.5	29.9	28.9	29.4	25.0	24.0	24.3
23	29.0	26.6	27.9	32.3	28.8	30.8	30.0	29.1	29.5	24.6	24.1	24.3
24	29.0	26.8	27.8	31.8	28.8	30.8	30.5	29.2	29.4	24.3	23.6	24.0
25	29.2	27.1	28.1	32.2	28.8	30.7	29.8	28.9	29.4	23.6	23.1	23.2
26	28.9	27.5	28.5	31.1	30.1	30.6	29.7	29.1	29.5	24.2	23.3	23.7
27	30.0	27.4	28.9	30.7	29.0	29.7	29.1	25.9	26.8	24.7	24.0	24.3
28	30.2	28.4	28.9	31.5	29.0	30.5	26.4	25.4	25.9	24.8	24.0	24.3
29	29.4	28.3	28.9	31.8	29.7	31.1	26.4	25.6	26.0	24.7	24.0	24.3
30	29.6	29.0	29.2	33.1	29.5	31.4	26.1	25.4	25.7	24.8	24.1	24.5
31	---	---	---	32.8	30.7	31.5	25.4	24.7	25.0	---	---	---
Month	30.2	26.6	27.9	33.1	28.0	30.0	32.6	24.7	29.7	27.6	23.0	25.1

0208114150 ROANOKE RIVER AT NORTH CAROLINA HIGHWAY 45 NEAR WESTOVER, NC—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	24.1	22.2	23.0	19.3	18.6	19.0	14.2	13.5	13.9	4.1	3.8	3.9
2	22.2	21.3	21.7	18.8	17.5	18.1	13.5	12.5	13.0	4.7	3.4	4.3
3	21.3	20.2	20.7	17.5	17.1	17.3	12.9	12.3	12.5	5.0	4.0	4.8
4	20.2	19.3	19.7	17.5	17.2	17.4	12.3	11.3	11.7	4.7	4.2	4.3
5	19.3	18.6	18.9	17.3	16.9	17.0	11.5	10.4	11.0	4.7	4.2	4.4
6	18.6	18.2	18.4	16.9	16.0	16.5	10.4	9.5	9.8	5.0	4.6	4.7
7	18.2	17.7	18.0	16.0	15.3	15.6	9.6	8.7	9.0	5.2	4.8	5.0
8	18.4	17.8	18.1	15.6	14.9	15.3	8.8	8.2	8.6	5.2	4.7	5.0
9	18.7	17.8	18.3	15.2	14.7	15.0	8.6	7.6	8.1	4.7	4.1	4.3
10	19.2	18.6	18.9	15.0	14.4	14.8	7.6	7.1	7.3	4.9	3.8	4.1
11	19.7	19.0	19.3	15.0	14.5	14.7	7.6	7.1	7.3	4.0	3.8	3.9
12	20.0	19.4	19.7	14.8	14.3	14.5	7.7	7.5	7.6	4.2	3.4	3.9
13	20.3	19.9	20.1	---	---	---	7.6	6.4	7.1	3.8	3.5	3.7
14	20.4	19.9	20.1	---	---	---	6.4	5.5	6.0	3.7	3.3	3.5
15	20.0	19.4	19.7	---	---	---	5.5	4.8	5.2	3.5	3.2	3.4
16	19.6	18.9	19.4	---	---	---	5.4	5.1	5.2	3.7	3.2	3.4
17	19.4	18.5	19.0	---	---	---	5.3	4.8	5.0	3.8	3.5	3.6
18	19.7	19.0	19.3	---	---	---	5.3	5.1	5.2	4.2	3.8	4.0
19	19.7	19.4	19.5	---	---	---	5.2	4.8	5.0	4.6	4.0	4.2
20	19.9	19.5	19.8	13.9	13.4	13.7	4.9	4.5	4.8	4.5	4.1	4.3
21	19.7	19.3	19.4	14.3	13.6	13.9	4.8	4.3	4.6	5.1	4.4	4.7
22	19.6	18.9	19.3	14.2	13.8	14.0	5.0	4.5	4.8	4.7	4.1	4.4
23	19.2	18.5	18.8	14.4	13.8	14.1	5.0	4.6	4.8	4.2	3.6	3.9
24	19.2	18.4	18.7	14.2	13.9	14.0	4.7	4.4	4.5	4.1	3.5	3.8
25	19.4	18.8	19.1	14.1	13.8	14.0	4.8	4.5	4.6	4.2	3.9	4.0
26	20.0	19.2	19.5	14.3	14.0	14.1	4.7	4.0	4.4	4.5	4.1	4.3
27	20.9	20.0	20.4	14.3	13.8	14.0	4.2	3.6	4.0	4.6	4.1	4.3
28	20.9	20.5	20.7	13.8	12.8	13.3	4.0	3.4	3.7	4.9	4.2	4.5
29	20.7	19.6	20.1	13.5	12.7	13.0	4.2	2.6	3.8	4.9	4.3	4.5
30	19.7	18.6	19.0	13.7	12.9	13.2	4.2	3.8	4.0	5.4	4.4	4.7
31	19.2	18.4	18.7	---	---	---	4.1	3.8	3.9	5.3	4.8	5.1
Month	24.1	17.7	19.5	---	---	---	14.2	2.6	6.8	5.4	3.2	4.2

0208114150 ROANOKE RIVER AT NORTH CAROLINA HIGHWAY 45 NEAR WESTOVER, NC—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	5.6	4.9	5.1	12.3	10.6	11.7	11.0	10.6	10.8	20.8	20.1	20.5
2	7.0	5.6	6.2	11.8	11.3	11.5	11.2	10.5	10.9	20.7	19.9	20.3
3	7.3	6.5	6.8	11.8	11.1	11.4	11.6	10.7	11.1	21.3	20.4	20.8
4	6.9	6.5	6.6	11.3	10.4	10.9	13.1	11.4	12.1	21.1	20.4	20.8
5	6.6	6.1	6.3	11.7	10.8	11.2	14.0	13.1	13.5	20.6	19.6	20.1
6	7.3	6.3	6.6	12.4	11.1	11.9	14.1	13.2	13.7	20.6	19.7	20.2
7	7.2	6.6	7.0	12.6	11.6	12.2	14.8	13.6	14.1	20.6	19.5	20.0
8	7.7	7.1	7.3	12.6	11.8	12.2	15.4	14.6	15.0	20.7	20.2	20.5
9	7.4	6.7	7.1	12.4	11.9	12.1	15.4	15.0	15.3	20.5	19.8	20.2
10	7.0	6.7	6.9	12.8	12.1	12.4	15.6	15.1	15.4	21.0	20.1	20.5
11	6.7	6.1	6.4	12.9	12.1	12.5	16.5	15.6	16.0	20.9	20.4	20.7
12	6.7	5.9	6.3	12.8	11.9	12.2	17.2	16.4	16.6	20.9	20.4	20.7
13	7.1	6.0	6.5	12.6	11.9	12.3	16.7	16.2	16.4	21.0	20.7	20.9
14	7.4	6.3	6.7	12.4	11.4	11.9	16.9	16.2	16.5	22.0	20.8	21.3
15	7.7	6.7	7.2	11.4	10.8	11.1	17.6	16.4	16.9	22.1	21.6	21.9
16	7.3	6.6	7.0	11.3	11.0	11.1	17.4	16.8	17.2	22.1	21.5	21.8
17	8.0	6.8	7.2	11.8	11.2	11.4	17.2	16.6	16.9	22.0	21.6	21.8
18	8.2	7.5	7.7	12.4	11.5	11.8	17.9	16.8	17.3	22.0	21.4	21.7
19	9.8	7.6	8.2	12.7	12.0	12.3	18.1	17.2	17.7	21.8	21.0	21.4
20	9.6	8.3	8.9	12.9	12.3	12.6	18.2	17.6	17.9	21.8	21.1	21.4
21	10.5	9.0	9.6	13.8	12.8	13.2	18.4	18.0	18.2	22.1	21.5	21.7
22	10.4	9.4	9.9	14.4	13.3	13.7	18.0	17.5	17.6	22.5	22.1	22.2
23	9.8	9.1	9.4	14.4	13.7	14.0	17.9	17.1	17.4	23.7	22.1	22.8
24	9.8	9.4	9.6	14.7	13.8	14.2	19.1	17.8	18.3	23.6	23.0	23.3
25	11.1	9.8	10.4	14.4	13.7	14.2	19.4	18.7	19.0	24.7	23.3	24.3
26	11.0	10.1	10.6	14.2	13.2	13.8	19.6	19.2	19.3	26.0	24.6	25.3
27	10.8	10.3	10.4	13.2	12.3	12.7	20.3	19.2	19.7	26.4	25.3	25.8
28	11.0	10.0	10.2	12.4	11.4	11.8	20.9	20.1	20.5	26.5	25.6	26.0
29	---	---	---	11.7	11.0	11.3	21.2	20.4	20.8	26.5	25.8	26.1
30	---	---	---	11.6	10.8	11.2	21.1	20.5	20.8	26.7	26.2	26.4
31	---	---	---	10.9	10.7	10.8	---	---	---	27.8	26.6	27.0
Month	11.1	4.9	7.8	14.7	10.4	12.2	21.2	10.5	16.4	27.8	19.5	22.2

0208114150 ROANOKE RIVER AT NORTH CAROLINA HIGHWAY 45 NEAR WESTOVER, NC—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	28.0	26.8	27.2	29.3	29.1	29.2	30.8	30.0	30.3	24.7	24.1	24.4
2	28.0	27.3	27.5	29.5	28.7	29.3	30.7	30.4	30.6	24.6	24.1	24.4
3	28.2	27.6	27.9	29.6	28.4	28.8	31.2	30.1	30.8	25.1	24.5	24.8
4	27.9	27.0	27.3	28.4	27.9	28.2	31.2	29.8	30.3	25.4	24.6	25.0
5	27.4	26.9	27.2	29.9	27.8	27.9	31.8	30.7	31.4	25.4	25.0	25.2
6	27.4	26.8	27.0	29.9	28.0	28.2	31.3	30.7	30.9	26.3	25.2	25.7
7	27.2	26.6	26.8	29.5	28.5	28.9	30.8	29.9	30.3	26.5	25.7	26.1
8	26.9	26.5	26.7	30.1	28.6	29.0	30.5	29.7	29.9	26.5	26.1	26.2
9	27.5	26.8	26.9	30.0	28.6	29.0	29.9	29.7	29.8	26.8	26.2	26.5
10	28.3	27.5	27.7	30.1	29.4	29.8	31.1	29.8	30.3	27.0	26.3	26.6
11	28.3	27.7	28.0	30.3	29.5	29.7	31.2	29.9	30.6	27.2	26.6	26.9
12	28.3	27.8	28.0	30.3	29.4	29.6	31.2	30.5	30.9	27.2	26.6	26.8
13	28.7	28.1	28.4	30.8	29.3	30.0	30.9	30.3	30.4	27.1	26.5	26.7
14	28.3	27.6	27.8	30.8	30.0	30.5	30.6	29.4	30.0	27.1	26.6	26.8
15	27.7	27.0	27.3	30.4	29.6	29.9	30.1	29.3	29.8	27.2	26.8	27.0
16	27.6	27.0	27.2	30.0	29.3	29.5	29.8	28.9	29.4	27.1	25.1	25.8
17	27.2	26.7	27.0	29.5	28.9	29.1	30.3	28.9	29.4	25.1	23.6	24.3
18	27.5	27.0	27.3	29.4	29.0	29.2	30.4	29.7	29.9	23.8	23.4	23.7
19	27.8	26.6	27.4	29.4	28.1	28.8	30.3	29.5	29.8	23.5	22.8	23.2
20	28.2	27.1	27.9	28.1	27.8	27.9	30.0	29.2	29.6	23.9	23.4	23.6
21	28.1	26.9	27.5	28.0	27.9	27.9	30.1	29.3	29.5	23.8	23.6	23.7
22	27.4	26.5	27.0	28.2	28.0	28.1	29.6	28.6	28.9	24.2	23.8	23.9
23	27.7	26.3	26.4	28.3	28.1	28.2	29.4	28.8	29.1	24.5	24.1	24.3
24	27.1	26.5	26.7	28.4	28.1	28.2	29.5	28.8	29.1	24.3	23.6	23.9
25	27.2	26.5	26.8	29.0	28.4	28.6	29.5	28.8	29.1	23.6	23.1	23.2
26	27.2	26.8	26.9	28.8	28.6	28.7	29.4	28.8	29.2	24.2	23.3	23.6
27	28.7	26.9	27.4	29.0	28.7	28.9	28.8	25.8	26.8	24.6	23.9	24.2
28	29.2	28.2	28.3	29.1	29.0	29.0	26.2	25.3	25.8	24.6	23.9	24.3
29	29.1	27.8	28.2	29.0	28.9	29.0	26.3	25.6	25.9	24.5	23.9	24.2
30	29.2	28.3	29.0	30.5	28.9	29.1	26.1	25.4	25.7	24.8	24.0	24.4
31	---	---	---	31.5	30.0	30.8	25.4	24.7	25.0	---	---	---
Month	29.2	26.3	27.4	31.5	27.8	29.0	31.8	24.7	29.3	27.2	22.8	25.0

0208114150 ROANOKE RIVER AT NORTH CAROLINA HIGHWAY 45 NEAR WESTOVER, NC—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	5.9	4.0	5.0	7.7	6.8	7.3	9.0	8.7	8.8	12.0	11.7	11.9
2	4.0	2.9	3.3	8.1	7.4	7.7	9.0	8.8	8.9	12.0	11.9	12.0
3	2.9	2.6	2.7	8.1	7.7	7.9	9.1	8.7	8.9	12.1	11.8	12.0
4	2.8	2.6	2.7	8.1	7.8	7.9	9.1	8.8	9.0	12.3	11.9	12.1
5	2.7	2.6	2.6	8.2	7.9	8.0	9.5	8.9	9.2	12.3	11.9	12.1
6	2.9	2.6	2.8	8.3	8.1	8.2	9.9	9.4	9.5	12.0	11.7	11.8
7	3.1	2.8	3.0	8.6	8.3	8.4	9.9	9.7	9.8	11.7	11.5	11.6
8	3.7	3.0	3.4	8.4	8.2	8.3	9.9	9.7	9.8	11.7	11.4	11.5
9	3.8	3.3	3.5	8.5	8.2	8.4	10.4	9.8	10.1	11.8	11.5	11.6
10	4.2	3.7	4.0	8.9	8.4	8.6	10.9	10.4	10.7	11.8	11.5	11.6
11	4.4	4.0	4.2	9.1	8.8	8.9	10.9	10.8	10.8	11.7	11.5	11.6
12	4.4	3.8	4.1	9.1	9.0	9.0	11.2	10.8	11.0	11.9	11.5	11.7
13	4.1	3.7	4.0	---	---	---	11.4	11.1	11.3	11.9	11.7	11.8
14	3.8	3.2	3.6	---	---	---	11.7	11.2	11.4	12.0	11.7	11.9
15	4.2	3.7	3.9	---	---	---	11.7	11.4	11.5	12.2	11.9	12.0
16	5.0	4.0	4.4	---	---	---	11.6	11.3	11.4	12.2	12.0	12.1
17	4.9	4.2	4.5	---	---	---	11.7	11.4	11.6	12.3	12.1	12.2
18	4.9	4.5	4.7	---	---	---	11.7	11.5	11.6	12.2	11.9	12.1
19	4.9	4.3	4.5	---	---	---	11.9	11.7	11.8	12.2	11.8	12.0
20	5.2	4.5	4.7	8.4	8.0	8.3	12.0	11.7	11.9	12.0	11.6	11.9
21	5.3	4.6	4.9	8.6	8.3	8.5	11.9	11.5	11.7	11.8	11.6	11.7
22	5.4	4.8	5.1	8.7	8.4	8.5	11.6	11.3	11.4	11.7	11.3	11.6
23	6.1	5.2	5.6	8.8	8.5	8.7	11.8	11.3	11.5	11.7	11.5	11.6
24	6.3	5.8	6.0	8.9	8.6	8.8	12.0	11.7	11.9	11.7	11.4	11.6
25	6.7	6.1	6.3	9.0	8.8	8.9	12.0	11.8	11.9	11.7	11.5	11.6
26	6.7	6.2	6.5	9.0	8.7	8.9	12.0	11.8	11.9	11.6	11.4	11.6
27	7.2	6.5	6.9	8.9	8.7	8.8	12.2	11.7	11.9	11.7	11.4	11.6
28	7.2	6.6	6.9	8.9	8.7	8.8	12.1	11.8	11.9	11.6	11.4	11.5
29	6.9	6.3	6.7	8.8	8.5	8.7	11.8	11.3	11.5	11.5	11.2	11.3
30	6.8	6.5	6.7	8.8	8.3	8.6	11.9	11.3	11.7	11.4	11.1	11.3
31	7.0	6.6	6.8	---	---	---	11.8	11.6	11.7	11.8	11.3	11.6
Month	7.2	2.6	4.6	---	---	---	12.2	8.7	10.9	12.3	11.1	11.8

0208114150 ROANOKE RIVER AT NORTH CAROLINA HIGHWAY 45 NEAR WESTOVER, NC—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	11.7	11.3	11.5	10.4	10.0	10.2	9.2	8.9	9.0	6.2	5.6	5.9
2	11.4	10.9	11.1	10.8	9.9	10.3	9.5	9.1	9.3	5.9	5.6	5.8
3	11.2	10.6	10.9	10.7	10.0	10.4	9.5	9.2	9.3	6.1	5.6	5.9
4	11.2	10.7	11.0	10.9	10.3	10.6	9.5	9.2	9.3	6.1	5.8	5.9
5	11.3	11.1	11.2	10.5	10.1	10.3	9.4	8.9	9.2	6.5	5.5	6.1
6	11.3	10.7	11.1	10.4	9.9	10.1	9.1	8.8	8.9	6.7	6.2	6.4
7	10.9	10.7	10.8	10.0	9.5	9.8	9.1	8.7	8.9	6.9	6.2	6.6
8	10.8	10.5	10.6	10.3	9.6	9.9	8.9	8.6	8.7	6.9	6.4	6.6
9	10.7	10.4	10.5	10.4	9.7	10.0	8.8	8.6	8.7	7.4	6.5	6.8
10	10.7	10.5	10.6	10.1	9.5	9.8	8.7	8.6	8.7	7.8	7.2	7.4
11	10.8	10.5	10.6	10.1	9.6	9.9	8.6	8.3	8.5	8.2	7.4	7.7
12	10.8	10.6	10.7	9.9	9.6	9.8	8.4	8.0	8.2	7.9	7.5	7.7
13	10.7	10.4	10.5	9.8	9.3	9.5	8.2	7.8	7.9	7.6	7.4	7.5
14	11.0	10.4	10.6	10.3	9.6	10	8.4	7.8	7.9	7.9	7.1	7.5
15	10.9	10.6	10.7	10.3	10.2	10.3	8.7	7.7	8.0	7.8	7.4	7.6
16	11.0	10.7	10.9	10.3	10.1	10.2	8.5	7.9	8.3	7.7	7.2	7.4
17	11.2	10.8	10.9	10.3	10.0	10.1	8.9	8.3	8.6	7.3	6.9	7.1
18	11.3	10.9	11.0	10.3	10.1	10.2	8.8	8.4	8.6	6.9	6.3	6.6
19	11.1	10.8	11.0	10.3	10.0	10.1	8.9	8.3	8.6	6.4	5.8	6.1
20	11.2	10.8	11.0	10.2	9.8	10	9.0	8.6	8.7	5.9	5.5	5.8
21	11.0	10.7	10.8	10.1	9.8	10	8.7	8.4	8.5	6.0	5.4	5.7
22	10.9	10.4	10.6	10.0	9.6	9.8	8.7	8.3	8.6	6.5	5.6	6.0
23	11.0	10.4	10.6	9.8	9.6	9.7	8.6	8.3	8.5	7.2	6.0	6.5
24	10.7	10.3	10.5	9.7	9.4	9.6	8.5	8.2	8.4	7.2	6.6	6.8
25	10.7	10.3	10.4	9.4	9.2	9.3	8.4	8.1	8.2	7.3	6.6	6.9
26	10.8	10.1	10.3	9.2	8.9	9.1	8.2	7.6	7.8	7.1	6.3	6.8
27	10.7	10.1	10.4	9.3	8.9	9.2	7.7	7.3	7.5	7.1	6.0	6.6
28	10.6	10.2	10.4	8.9	8.5	8.7	7.4	7.1	7.3	7.5	6.2	6.7
29	---	---	---	8.9	8.6	8.7	7.1	6.6	6.8	8.7	6.4	7.1
30	---	---	---	9.2	8.7	8.9	6.7	5.9	6.2	8.5	6.5	7.0
31	---	---	---	9.2	9.0	9.1	---	---	---	8.0	6.0	6.8
Month	11.7	10.1	10.8	10.9	8.5	9.8	9.5	5.9	8.4	8.7	5.4	6.7

0208114150 ROANOKE RIVER AT NORTH CAROLINA HIGHWAY 45 NEAR WESTOVER, NC—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	8.0	6.3	6.7	10.4	5.2	6.3	5.3	1.3	4.1	0.0	0.0	0.0
2	7.6	5.7	6.7	8.7	4.8	6.3	10.2	4.9	6.0	0.0	0.0	0.0
3	8.3	5.8	7.0	8.9	3.5	6.1	8.4	3.3	5.9	0.0	0.0	0.0
4	8.3	6.5	7.1	7.9	1.9	5.2	7.7	2.5	5.3	0.0	0.0	0.0
5	7.7	6.0	6.8	8.4	2.1	5.5	7.7	5.2	5.9	0.0	0.0	0.0
6	7.2	6.0	6.6	7.4	2.8	5.6	7.1	5.3	6.0	0.0	0.0	0.0
7	7.3	6.2	6.7	6.9	4.0	5.5	7.1	4.6	5.8	0.0	0.0	0.0
8	8.4	6.6	7.1	7.3	4.6	5.5	7.2	3.6	5.7	0.1	0.0	0.1
9	7.2	6.0	6.6	6.8	3.2	5.5	8.2	1.7	5.4	0.3	0.0	0.2
10	6.9	5.8	6.2	9.1	5.2	5.8	7.0	1.2	5.3	0.3	0.2	0.2
11	6.7	5.9	6.3	10.2	5.2	6.9	7.2	5.0	5.7	0.3	0.2	0.3
12	7.1	6.0	6.3	8.0	4.4	5.8	7.2	5.4	6.0	0.2	0.1	0.2
13	6.9	5.3	6.2	7.1	5.0	5.9	7.1	5.3	6.2	0.2	0.1	0.2
14	7.3	5.7	6.1	8.0	5.9	6.5	7.1	2.9	5.4	0.2	0.0	0.1
15	7.4	5.9	6.4	8.4	6.1	6.7	7.0	4.8	5.5	0.1	0.0	0.0
16	7.3	6.1	6.6	7.1	4.8	6.2	6.0	4.0	5.2	2.1	0.0	1.1
17	7.8	6.1	6.6	8.0	5.2	6.1	8.8	4.3	5.8	4.1	2.1	3.0
18	8.2	6.0	6.8	9.9	4.2	6.5	8.9	5.1	6.1	4.0	3.2	3.5
19	7.0	5.8	6.4	7.7	3.0	5.2	8.6	4.4	6.5	3.7	2.7	3.2
20	7.3	5.8	6.6	7.6	0.1	4.1	7.0	5.1	6.1	3.3	2.6	2.9
21	7.8	5.6	6.7	7.2	0.1	5.0	8.5	5.7	7.0	3.9	2.3	2.7
22	8.0	6.0	6.8	8.2	1.1	5.5	7.1	1.0	5.0	4.4	2.2	3.0
23	7.6	4.6	6.3	9.7	0.2	6.2	7.9	4.1	6.2	3.9	2.8	3.2
24	8.0	5.0	6.3	8.3	0.2	5.9	11.1	3.6	6.1	3.4	2.1	2.8
25	8.8	5.9	6.9	8.6	0.2	5.2	9.4	5.8	7.2	3.8	1.8	2.8
26	7.1	5.3	6.4	6.4	1.6	4.9	7.3	5.7	6.6	3.9	3.2	3.5
27	9.7	3.5	6.6	5.5	0.5	2.5	7.3	4.7	6.6	4.0	3.2	3.5
28	7.2	4.7	5.8	6.4	0.2	3.2	4.7	2.4	3.7	3.8	2.9	3.3
29	6.3	4.1	5.5	6.9	0.1	4.6	2.4	0.1	1.1	3.8	2.9	3.4
30	6.8	5.3	5.8	10.3	0.1	4.3	0.1	0.0	0.0	4.6	3.4	3.9
31	---	---	---	8.8	3.3	5.6	0.0	0.0	0.0	---	---	---
Month	9.7	3.5	6.5	10.4	0.1	5.5	11.1	0.0	5.3	4.6	0.0	1.6

0208114150 ROANOKE RIVER AT NORTH CAROLINA HIGHWAY 45 NEAR WESTOVER, NC—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	5.9	3.9	5.0	7.4	6.5	7.1	8.7	8.4	8.5	12.0	11.7	11.9
2	3.9	2.8	3.2	7.9	7.2	7.5	8.8	8.2	8.6	12.4	11.8	12.0
3	2.8	2.5	2.7	7.9	7.5	7.7	8.8	8.3	8.7	12.1	11.8	11.9
4	2.7	2.5	2.6	8.1	7.5	7.8	9.0	8.5	8.7	12.6	11.6	12.1
5	2.6	2.5	2.6	8.0	7.8	7.9	9.3	8.7	9.0	12.5	12.0	12.2
6	2.8	2.6	2.7	8.2	8.0	8.1	9.7	9.2	9.3	12.1	11.6	11.8
7	3.0	2.7	2.9	8.4	8.1	8.2	9.7	9.4	9.6	11.6	11.4	11.5
8	---	---	---	8.2	8.1	8.2	9.7	9.6	9.7	11.6	11.3	11.4
9	---	---	---	8.2	8.0	8.1	10.3	9.7	10.0	11.7	11.3	11.5
10	---	---	---	8.6	8.1	8.4	10.8	10.3	10.6	11.7	10.4	11.5
11	---	---	---	8.7	8.4	8.6	10.8	10.6	10.7	11.7	11.5	11.6
12	---	---	---	8.7	8.6	8.6	11.0	10.7	10.9	11.9	11.5	11.7
13	---	---	---	---	---	---	11.3	11.0	11.1	11.9	11.7	11.8
14	---	---	---	---	---	---	11.5	11.1	11.3	12.0	11.7	11.9
15	3.9	3.0	3.6	---	---	---	11.6	11.2	11.4	12.3	11.9	12.1
16	4.6	3.6	4.1	---	---	---	11.5	11.1	11.3	12.3	12.1	12.2
17	4.4	3.6	4.1	---	---	---	11.6	11.3	11.5	12.4	12.2	12.3
18	4.6	4.0	4.3	---	---	---	11.7	11.4	11.5	12.3	12.0	12.2
19	4.5	4.0	4.3	---	---	---	11.9	11.7	11.7	12.2	11.9	12.1
20	4.6	4.0	4.4	8.3	8.0	8.2	12.0	11.7	11.8	12.1	11.8	12.0
21	4.7	4.0	4.4	8.4	8.2	8.3	11.8	11.5	11.6	11.9	11.7	11.8
22	5.1	3.9	4.8	8.5	8.2	8.3	11.5	11.2	11.4	11.9	11.4	11.7
23	5.9	4.9	5.1	8.6	8.2	8.5	11.8	11.3	11.5	11.9	11.6	11.8
24	6.1	5.4	5.7	8.8	8.4	8.6	11.9	11.6	11.8	12.0	11.6	11.8
25	6.5	5.9	6.1	8.9	8.5	8.7	11.9	11.7	11.8	11.9	11.6	11.8
26	6.5	5.9	6.2	8.9	8.4	8.7	11.9	11.8	11.9	11.8	11.6	11.8
27	7.0	6.3	6.6	8.6	8.2	8.4	12.2	11.7	11.9	11.9	11.5	11.7
28	7.0	6.3	6.6	8.7	8.3	8.5	12.1	11.8	11.9	11.8	11.6	11.7
29	6.7	6.3	6.5	8.6	8.2	8.3	13.0	11.3	11.7	11.8	11.4	11.6
30	6.6	6.3	6.5	8.5	8.0	8.3	11.8	11.3	11.7	11.7	11.3	11.5
31	6.6	6.4	6.5	---	---	---	11.8	11.6	11.7	12.1	11.5	11.8
Month	---	---	---	---	---	---	13.0	8.2	10.8	12.6	10.4	11.8

0208114150 ROANOKE RIVER AT NORTH CAROLINA HIGHWAY 45 NEAR WESTOVER, NC—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	11.8	11.4	11.7	10.3	9.5	10.0	9.2	8.8	8.9	6.2	5.6	5.9
2	11.6	10.9	11.4	10.1	9.3	9.8	9.4	9.0	9.2	5.9	5.5	5.7
3	11.3	10.7	11.1	10.5	9.1	10.1	9.3	9.1	9.2	6.2	5.5	5.8
4	11.3	10.8	11.1	10.6	10.1	10.3	9.4	9.0	9.2	6.2	5.9	6.0
5	11.3	11.2	11.2	10.3	9.6	10.1	9.3	8.9	9.1	6.6	5.9	6.2
6	11.2	10.8	11.0	10.2	9.5	9.9	9.0	8.7	8.9	6.8	6.0	6.4
7	10.9	10.7	10.8	9.8	8.9	9.4	9.0	8.8	8.9	6.9	6.3	6.6
8	10.8	10.5	10.7	9.9	9.4	9.6	8.9	8.6	8.7	7.0	6.4	6.8
9	10.8	10.5	10.6	9.8	9.4	9.6	8.9	8.6	8.7	7.2	6.4	6.9
10	10.7	10.6	10.6	9.8	9.3	9.6	8.8	8.5	8.7	7.8	7.1	7.4
11	10.8	10.5	10.6	9.9	9.4	9.7	8.7	8.3	8.5	8.0	7.2	7.7
12	10.8	10.6	10.7	9.7	9.5	9.6	8.5	8.0	8.3	8.0	7.3	7.6
13	10.7	10.4	10.5	9.6	9.2	9.4	8.1	7.6	7.9	7.5	7.1	7.3
14	10.8	10.4	10.5	10.1	9.5	9.8	8.2	7.6	8.0	7.5	7.0	7.2
15	10.8	10.5	10.6	10.2	10.0	10.1	8.5	7.7	8.0	7.4	7.2	7.3
16	10.9	10.6	10.7	10.2	10.0	10.1	8.6	8.0	8.3	7.4	7.0	7.2
17	11.1	10.6	10.8	10.2	9.9	10.0	8.9	8.2	8.5	7.1	6.6	6.9
18	11.1	10.5	10.9	10.2	10.0	10.1	8.8	8.2	8.6	6.7	6.1	6.4
19	11.0	10.0	10.5	10.2	9.9	10.0	8.8	8.2	8.6	6.2	5.4	5.8
20	11.0	10.2	10.8	10.1	9.7	9.9	8.8	8.6	8.7	5.7	5.2	5.4
21	11.2	10.6	10.8	10.0	9.8	9.9	8.7	8.2	8.5	5.5	4.9	5.3
22	11.1	10.3	10.5	9.9	9.5	9.7	8.7	8.2	8.5	5.9	5.3	5.5
23	10.8	10.3	10.5	9.7	9.5	9.6	8.7	8.3	8.5	6.8	5.2	6.0
24	10.6	10.2	10.3	9.6	9.3	9.5	8.5	8.1	8.3	6.8	5.9	6.3
25	10.5	10.0	10.3	9.4	9.1	9.2	8.4	8.0	8.2	6.8	5.8	6.3
26	10.6	9.9	10.1	9.2	8.8	9.0	8.2	7.5	7.8	6.5	5.7	6.2
27	10.2	9.3	9.8	9.2	8.9	9.1	7.6	7.3	7.5	6.6	5.7	6.2
28	10.0	9.3	9.6	8.9	8.4	8.6	7.4	7.0	7.3	6.9	5.6	6.2
29	---	---	---	8.7	8.5	8.6	7.1	6.4	6.7	6.7	5.5	6.3
30	---	---	---	9.2	8.6	8.8	6.7	5.8	6.1	6.7	5.6	6.2
31	---	---	---	9.1	8.9	9.0	---	---	---	6.8	5.4	5.8
Month	11.8	9.3	10.7	10.6	8.4	9.6	9.4	5.8	8.3	8.0	4.9	6.4

0208114150 ROANOKE RIVER AT NORTH CAROLINA HIGHWAY 45 NEAR WESTOVER, NC—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	7.0	5.5	6.2	4.2	0.5	3.3	5.0	0.8	3.9	0.1	0.1	0.1
2	6.8	3.8	6.0	3.6	0.1	2.4	5.4	3.2	4.4	0.1	0.1	0.1
3	7.1	5.7	6.4	3.1	0.1	0.5	6.0	0.0	4.3	0.1	0.1	0.1
4	7.0	5.7	6.2	1.3	0.1	0.3	5.3	0.0	1.7	0.1	0.1	0.1
5	6.6	5.6	6.2	---	---	---	6.6	4.7	5.4	0.3	0.1	0.2
6	6.6	5.6	6.0	---	---	---	6.1	4.6	5.5	0.3	0.3	0.3
7	6.9	5.6	6.2	---	---	---	5.8	2.9	4.9	0.3	0.3	0.3
8	6.9	6.2	6.4	5.4	1.5	3.0	4.9	2.1	2.9	0.3	0.0	0.1
9	7.0	5.8	6.2	5.3	1.9	3.2	2.5	1.0	1.6	0.0	0.0	0.0
10	6.5	4.8	5.8	6.0	4.6	5.2	4.4	0.7	2.0	0.0	0.0	0.0
11	6.5	5.6	6.0	6.3	3.8	4.6	5.0	0.0	2.3	0.0	0.0	0.0
12	6.3	4.9	5.6	6.6	1.7	4.1	6.0	3.1	5.0	0.0	0.0	0.0
13	6.5	4.9	5.7	6.7	1.0	3.9	6.1	3.6	5.0	0.0	0.0	0.0
14	6.0	5.1	5.5	7.9	5.9	6.4	5.7	0.0	2.8	0.0	0.0	0.0
15	6.0	5.2	5.6	7.0	5.9	6.5	5.3	1.7	4.0	0.1	0.0	0.0
16	6.5	3.8	5.6	7.0	5.2	6.2	4.5	0.4	2.3	2.2	0.0	1.1
17	6.2	3.6	5.4	6.7	4.7	5.5	5.2	0.0	2.1	4.1	2.0	3.0
18	6.1	3.6	5.4	6.4	4.9	5.6	5.2	1.0	3.9	4.1	3.2	3.5
19	5.9	2.1	4.9	6.2	0.9	4.7	5.3	0.0	3.4	3.6	2.6	3.0
20	6.0	3.9	5.3	1.1	0.2	0.7	4.5	1.5	3.9	3.2	2.4	2.7
21	6.2	2.6	4.9	0.6	0.0	0.1	6.5	2.0	4.6	3.1	2.0	2.5
22	4.7	3.6	4.3	0.0	0.0	0.0	5.7	0.0	0.7	2.9	1.5	2.0
23	5.0	2.4	3.2	0.1	0.0	0.0	4.9	0.0	3.2	3.9	2.8	3.1
24	4.5	1.8	3.0	0.0	0.0	0.0	5.5	0.0	3.2	3.4	2.2	2.9
25	4.6	2.0	3.6	3.0	0.0	0.1	5.9	0.0	3.6	3.8	1.8	2.9
26	3.4	0.6	2.0	0.0	0.0	0.0	5.4	0.0	3.8	3.7	2.9	3.4
27	4.6	0.5	1.9	1.2	0.0	0.3	6.3	2.6	5.0	4.0	2.9	3.4
28	4.3	0.8	2.6	1.1	0.0	0.1	3.8	1.9	2.9	3.9	3.0	3.4
29	3.2	0.6	2.2	0.0	0.0	0.0	1.9	0.2	0.9	3.7	2.8	3.4
30	4.4	0.2	3.3	0.9	0.0	0.1	0.2	0.1	0.1	5.0	3.4	4.1
31	---	---	---	5.9	0.0	2.6	0.1	0.1	0.1	---	---	---
Month	7.1	0.2	4.9	---	---	---	6.6	0.0	3.2	5.0	0.0	1.5

0208114150 ROANOKE RIVER AT NORTH CAROLINA HIGHWAY 45 NEAR WESTOVER, NC—Continued

DISSOLVED OXYGEN, WATER, UNFILTERED, PERCENT OF SATURATION
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	70	46	59	83	74	79	88	84	86	92	89	91
2	46	33	38	86	79	82	86	84	85	94	92	93
3	33	29	31	85	80	82	85	82	84	94	92	93
4	31	28	30	85	81	83	84	82	83	96	92	94
5	29	28	28	85	82	83	86	81	84	95	92	93
6	31	28	30	85	84	84	88	83	85	93	91	92
7	33	30	32	86	83	85	86	84	85	92	91	91
8	39	32	36	84	82	83	85	83	84	92	89	90
9	41	35	38	85	81	83	88	84	86	91	88	89
10	46	40	44	88	83	86	91	87	89	90	88	89
11	48	43	45	90	87	88	91	89	90	89	88	88
12	48	42	45	90	88	89	94	91	92	91	87	89
13	46	41	44	---	---	---	94	92	93	91	88	89
14	42	35	40	---	---	---	94	90	92	91	88	89
15	46	40	43	---	---	---	93	90	91	92	89	90
16	55	44	48	---	---	---	92	89	90	93	90	91
17	54	45	49	---	---	---	92	90	91	93	91	92
18	54	49	51	---	---	---	92	91	91	94	91	93
19	55	47	50	---	---	---	94	92	93	95	90	92
20	58	49	52	82	77	80	94	91	93	92	90	91
21	58	50	53	84	80	82	92	90	91	93	90	91
22	59	53	56	85	81	83	90	88	89	90	87	89
23	67	56	60	87	82	85	92	88	90	89	87	88
24	69	62	65	87	83	86	93	91	92	89	87	88
25	73	66	68	88	85	86	94	92	93	90	88	88
26	73	67	71	88	85	87	93	90	92	90	87	89
27	81	72	76	87	84	85	93	89	91	91	88	89
28	81	74	77	86	83	84	92	90	91	90	88	89
29	76	70	74	84	80	83	90	86	88	89	86	88
30	74	70	72	85	79	83	91	86	89	91	86	88
31	76	70	73	---	---	---	90	88	89	93	89	91
Month	81	28	51	---	---	---	94	81	89	96	86	90

0208114150 ROANOKE RIVER AT NORTH CAROLINA HIGHWAY 45 NEAR WESTOVER, NC—Continued

DISSOLVED OXYGEN, WATER, UNFILTERED, PERCENT OF SATURATION
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	94	90	91	99	93	95	83	80	81	69	62	65
2	94	88	90	102	91	96	87	82	84	66	62	64
3	93	88	90	99	92	96	87	84	85	69	62	66
4	92	88	90	101	93	96	91	84	87	69	65	67
5	92	90	91	98	92	95	90	86	89	73	60	68
6	94	89	91	96	86	94	88	84	86	75	68	71
7	91	89	90	94	89	92	89	85	86	77	68	73
8	92	88	89	98	89	92	88	85	87	77	71	74
9	90	86	87	99	90	93	89	86	87	83	71	76
10	89	87	88	95	89	92	88	86	87	88	80	83
11	88	85	87	96	89	93	88	84	86	92	82	87
12	89	86	87	94	90	92	88	82	85	89	84	86
13	89	84	86	92	86	89	85	80	82	86	83	84
14	93	84	88	94	90	93	88	80	82	91	80	85
15	91	87	89	94	92	93	92	79	83	90	84	87
16	93	88	90	94	92	93	89	82	86	89	82	85
17	96	89	91	95	91	93	93	86	89	83	79	81
18	98	91	94	97	93	95	93	87	90	79	72	75
19	98	93	95	97	93	95	94	87	91	73	66	69
20	99	94	95	96	92	94	97	90	93	68	62	65
21	99	93	96	98	93	95	93	89	90	70	61	65
22	98	92	94	98	94	95	91	87	90	77	65	69
23	98	91	94	96	93	95	91	86	89	85	69	76
24	95	91	93	95	92	94	93	87	90	86	78	81
25	96	92	94	93	90	91	90	88	89	88	78	83
26	98	91	93	90	86	88	89	83	85	88	77	83
27	100	91	94	88	83	86	84	80	82	88	73	81
28	100	93	96	83	78	80	83	79	81	94	76	84
29	---	---	---	82	78	80	79	74	76	111	79	88
30	---	---	---	83	79	81	75	67	69	109	81	88
31	---	---	---	83	81	82	---	---	---	103	76	86
Month	100	84	91	102	78	92	97	67	86	111	60	77

0208114150 ROANOKE RIVER AT NORTH CAROLINA HIGHWAY 45 NEAR WESTOVER, NC—Continued

**DISSOLVED OXYGEN, WATER, UNFILTERED, PERCENT OF SATURATION
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	103	80	86	140	68	83	71	17	55	0	0	0
2	98	72	86	116	63	84	140	66	81	0	0	0
3	107	74	90	119	46	81	116	45	79	0	0	0
4	107	82	91	105	25	68	105	34	71	0	0	0
5	98	76	86	113	27	73	106	71	80	0	0	0
6	92	75	83	99	37	74	97	72	82	0	0	0
7	93	78	85	91	57	72	97	62	79	0	0	0
8	108	72	89	98	61	73	98	48	77	1	0	0
9	91	76	83	91	42	73	113	23	73	4	0	3
10	90	74	80	123	69	77	96	16	72	4	2	3
11	87	75	81	138	69	93	98	67	78	4	2	3
12	93	77	81	107	58	76	98	73	81	3	1	2
13	90	69	81	96	67	80	96	71	83	3	1	2
14	94	73	78	108	79	87	95	39	72	2	0	1
15	95	74	81	113	81	89	94	63	73	1	0	0
16	93	77	84	94	63	82	80	53	69	26	0	14
17	100	77	84	106	68	80	119	57	77	49	25	35
18	107	76	86	133	55	85	119	68	82	47	38	41
19	89	74	81	102	39	69	115	58	86	44	32	37
20	94	74	85	102	1	54	93	67	81	39	31	34
21	102	71	85	96	1	66	114	75	93	47	27	32
22	104	77	87	113	15	73	94	13	66	53	26	36
23	99	58	81	134	3	83	104	54	82	47	33	38
24	105	64	81	114	3	80	148	47	81	41	25	34
25	115	76	90	119	3	70	124	76	95	45	21	33
26	92	68	83	87	21	66	96	75	86	47	38	42
27	129	45	86	74	7	34	93	58	83	48	38	42
28	96	61	76	87	3	43	58	30	46	46	34	40
29	83	53	72	94	1	62	30	1	13	46	35	41
30	90	69	76	144	1	60	1	0	0	55	41	47
31	---	---	---	123	45	76	0	0	0	---	---	---
Month	129	45	83	144	1	73	148	0	70	55	0	19

0208114150 ROANOKE RIVER AT NORTH CAROLINA HIGHWAY 45 NEAR WESTOVER, NC—Continued

DISSOLVED OXYGEN, WATER, UNFILTERED, PERCENT OF SATURATION
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	70	45	58	80	70	76	85	81	83	92	89	91
2	45	32	37	84	77	79	84	78	82	95	91	93
3	32	28	30	83	78	80	83	78	82	94	92	93
4	30	27	29	85	78	82	83	78	81	98	90	94
5	28	27	28	84	81	82	84	79	82	97	92	95
6	30	28	29	84	82	83	86	81	82	94	90	92
7	32	28	31	85	81	83	84	81	83	92	90	91
8	---	---	---	83	80	82	84	82	83	92	89	90
9	---	---	---	82	79	81	87	83	85	90	87	89
10	---	---	---	86	80	83	90	86	88	90	82	89
11	---	---	---	86	83	85	91	88	89	90	88	89
12	---	---	---	86	84	85	92	90	91	91	88	89
13	---	---	---	---	---	---	93	91	92	91	88	89
14	---	---	---	---	---	---	93	89	91	91	88	90
15	43	33	40	---	---	---	92	88	90	93	89	91
16	50	39	45	---	---	---	91	88	89	93	91	92
17	48	39	45	---	---	---	91	89	90	94	92	93
18	50	43	47	---	---	---	92	90	91	95	92	93
19	49	44	47	---	---	---	94	92	92	95	91	93
20	51	44	48	81	77	79	94	91	92	93	91	92
21	51	44	48	82	79	80	92	89	90	93	90	92
22	56	43	52	83	79	81	90	88	88	92	89	91
23	64	53	56	84	80	83	92	88	90	91	88	90
24	66	58	61	86	82	84	93	90	91	92	88	90
25	71	64	67	87	82	84	93	91	92	92	89	90
26	71	64	68	87	82	85	93	91	92	91	89	91
27	79	70	73	84	79	82	93	89	91	92	88	90
28	79	70	74	83	80	82	92	90	91	92	89	90
29	74	70	72	82	78	79	97	86	89	92	88	90
30	72	68	70	82	76	80	90	87	89	93	87	90
31	72	68	70	---	---	---	90	88	90	95	91	93
Month	---	---	---	---	---	---	97	78	88	98	82	91

0208114150 ROANOKE RIVER AT NORTH CAROLINA HIGHWAY 45 NEAR WESTOVER, NC—Continued

DISSOLVED OXYGEN, WATER, UNFILTERED, PERCENT OF SATURATION
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	93	90	92	96	86	93	84	79	81	69	62	65
2	94	89	92	93	86	90	86	81	83	66	61	64
3	93	89	91	97	84	93	85	83	84	70	61	65
4	93	88	91	97	91	93	89	83	86	70	66	68
5	92	90	91	94	87	92	89	86	88	74	65	68
6	92	89	90	94	87	92	88	83	86	76	66	71
7	90	88	90	92	83	88	89	85	86	77	69	73
8	90	88	89	93	87	90	89	85	87	78	71	75
9	90	86	88	92	87	90	89	86	87	80	70	76
10	88	87	88	93	88	90	89	85	87	88	78	82
11	88	85	87	94	88	91	88	84	86	90	80	86
12	89	85	87	92	88	90	87	82	85	90	82	85
13	88	84	86	90	85	88	83	78	81	84	79	82
14	90	84	86	93	89	91	85	78	82	86	78	82
15	90	86	88	94	90	92	89	79	83	85	82	84
16	91	87	89	93	91	92	90	83	87	85	80	82
17	94	88	90	94	90	92	92	84	88	81	75	79
18	94	88	92	95	92	93	93	85	90	77	69	73
19	97	85	90	95	92	94	93	85	90	70	61	66
20	96	87	94	95	91	93	94	90	92	65	59	62
21	101	92	95	97	93	94	92	87	90	63	56	60
22	100	90	93	95	93	94	91	86	90	68	61	64
23	95	90	92	95	92	94	91	86	89	81	60	69
24	94	89	91	94	91	93	92	86	89	80	70	74
25	94	91	92	92	89	90	90	86	89	81	68	75
26	97	89	91	90	85	87	89	82	85	80	69	75
27	92	84	88	87	83	86	84	80	82	82	70	77
28	91	83	86	84	77	79	83	78	81	86	69	77
29	---	---	---	80	78	79	79	71	75	84	68	78
30	---	---	---	83	79	80	75	65	69	84	70	77
31	---	---	---	83	80	81	---	---	---	87	68	73
Month	101	83	90	97	77	90	94	65	85	90	56	74

0208114150 ROANOKE RIVER AT NORTH CAROLINA HIGHWAY 45 NEAR WESTOVER, NC—Continued

**DISSOLVED OXYGEN, WATER, UNFILTERED, PERCENT OF SATURATION
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	90	69	79	55	7	44	67	11	52	1	1	1
2	87	48	77	47	1	31	73	43	58	1	1	1
3	91	73	82	41	1	6	81	0	57	1	1	1
4	89	72	79	17	1	4	72	0	23	1	1	1
5	84	71	79	48	1	12	90	64	73	4	1	3
6	83	71	76	---	---	---	82	62	74	4	4	4
7	87	70	78	---	---	---	78	39	65	4	4	4
8	87	70	80	72	20	40	66	28	39	4	0	2
9	88	73	78	70	25	42	33	13	21	0	0	0
10	84	61	74	80	60	69	60	9	27	0	0	0
11	84	71	77	84	50	61	68	0	31	0	0	0
12	81	63	72	88	22	55	81	42	68	0	0	0
13	84	63	74	90	13	52	82	48	67	0	0	0
14	77	65	70	104	79	85	77	0	37	0	0	0
15	76	66	71	93	78	86	70	23	53	1	0	0
16	82	48	71	92	68	81	59	5	31	27	0	14
17	78	45	69	88	61	72	69	0	28	49	24	35
18	77	46	69	84	64	73	70	13	52	49	38	42
19	75	26	62	82	12	61	70	0	45	42	30	35
20	77	49	67	14	3	9	59	20	51	38	28	33
21	79	33	62	8	0	1	86	26	61	37	24	29
22	60	46	54	0	0	0	75	0	9	35	18	24
23	64	30	40	1	0	0	64	0	42	47	33	38
24	57	23	38	0	0	0	72	0	42	41	26	34
25	59	25	45	9	0	0	77	0	47	45	21	34
26	43	8	26	0	0	0	71	0	50	44	34	40
27	60	6	24	16	0	4	80	33	63	48	35	40
28	56	10	34	15	0	2	47	24	36	47	36	40
29	42	8	29	0	0	0	24	2	11	44	34	41
30	58	3	43	12	0	0	2	1	1	60	41	49
31	---	---	---	79	0	35	1	1	1	---	---	---
Month	91	3	63	---	---	---	90	0	42	60	0	18